

PD-AAS-204

ISN 42336

UNCLASSIFIED

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

GRENADA

PROJECT PAPER

RELIEF AND RECONSTRUCTION
(and Amendment # 1)

003864

AID/LAC/P-234

Project Number:543-0010

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT DATA SHEET

1. TRANSACTION CODE
 A = Add
 C = Change
 D = Delete
Amendment Number _____

DOCUMENT CODE 3

2. COUNTRY/UNITY GRENADA

3. PROJECT NUMBER 543-0010

4. BUREAU/OFFICE Latin American and the Caribbean [] 5 []

5. PROJECT TITLE (maximum 40 characters) Grenada Mental Health Services Project

6. PROJECT ASSISTANCE COMPLETION DATE (P.A.C.D.) MM DD YY 11/30/86

7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4)
A. Initial FY 85 B. Quarter 2 C. Final FY 85

8. COSTS (\$000 OR EQUIVALENT \$1 =)

A. FUNDING SOURCE	FIRST FY 85			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	790	10	800	2,262	1,000	3,262
(Grant) ESF	(790)	(10)	(800)	(2,262)	(1,000)	(3,262)
(Loan)	()	()	()	()	()	()
Other U.S. 1.						
2.						
Host Country		420	420		784	784
Other Donor(s)						
TOTALS	790	430	1,220	2,262	1,784	4,046

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF				0		800		3,262	
(2)									
(3)									
(4)									
TOTALS				0		800		3,262	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODES

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
A. Code _____ B. Amount _____

13. PROJECT PURPOSE (maximum 480 characters)

The Project purpose is to assist the Ministry of Health (MOH) of Grenada in the construction of an inpatient psychiatric facility to replace the destroyed Richmond Hill Mental Hospital and to up-grade the MOH capacity to best utilize the new facility within the existing hospital and community based mental health services delivery system.

14. SCHEDULED EVALUATIONS
Interim MM YY 04/86 Final MM YY 01/87

15. SOURCE/ORIGIN OF GOODS AND SERVICES
 000 941 Local Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

* Originally submitted in draft form to AID/w on October 1984

17. APPROVED BY
Signature: James S. Holtaway
Title: Director
Regional Development Office/Cbean

Date Signed MM DD YY 11/01/85

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET	1. TRANSACTION CODE <input checked="" type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number <u>1</u>	DOCUMENT CODE <u>3</u>
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2. COUNTRY/ENTITY Grenada	3. PROJECT NUMBER <u>543-0010</u>
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4. BUREAU/OFFICE Latin America and the Caribbean	5. PROJECT TITLE (maximum 40 characters) <u>Relief and Reconstruction</u>
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <u>11/30/86</u>	7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4) A. Initial FY <u>85</u> B. Quarter <u>2</u> C. Final FY <u>85</u>
--	--

8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY <u>85</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	1,800	2,100	3,900	1,800	2,100	3,900
(Grant)	(1,800)	(2,100)	(3,900)	(1,800)	(2,100)	(3,900)
(Loan)	()	()	()	()	()	()
Other U.S.						
1.						
2.						
Host Country		420	420		784	784
Other Donor(s)						
TOTALS	1,800	2,520	4,320	1,800	2,884	4,684

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF	520	580		800	-	3,100	-	3,900	-
(2)									
(3)									
(4)									
TOTALS				800	-	3,100	-	3,900	-

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each) <u>510</u>	11. SECONDARY PURPOSE CODE <u>530</u>
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12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)									
A. Code									
B. Amount									

13. PROJECT PURPOSE (maximum 480 characters)

The purpose of the Grenada Mental Health Services sub-project is to assist the Ministry of Health (MOH) of Grenada in the construction of an inpatient facility to replace the damaged Richmond Hill Mental Health Facility and to up-grade the MOH capacity to best utilize the new facility within the existing hospital and community based mental health services delivery system.

14. SCHEDULED EVALUATIONS Interim MM YY MM YY Final MM YY <u>04/3/86</u> <u>01/8/87</u>	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input checked="" type="checkbox"/> Other (Specify) <u>935</u>
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment.)

This action provides funding for Phase II (construction) of the Grenada Mental Health Services sub-project.

17. APPROVED BY	Signature: <i>[Signature]</i> Title: Director, RDO/C Date Signed: MM DD YY <u>07/18/85</u>	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY _____
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PROJECT AUTHORIZATION

Name of Country: Grenada
Name of Project: Relief and Reconstruction/Grenada Mental Health Services, Phase I
Number of Project: 543-0010(A)

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Relief and Reconstruction/Grenada Mental Health Services Project for Grenada (the "Grantee") involving planned obligations not to exceed eight hundred thousand United States Dollars (US\$800,000) in grant funds ("Grant") over a thirty month period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project.

2. The Project consists of assistance to the Grantee in a program to provide funds for improvement in the effective delivery of mental health services to the Grenadian population. Specifically, the Project is designed to : (a) assist the Ministry of Health (MOH) in the design of an inpatient psychiatric facility to replace the destroyed Richmond Hill Mental Hospital; and (b) upgrade the MOH institutional capacity to best utilize the facility within the existing hospital and community-based mental health services delivery system. Support will include resources for: (1) designing the mental health replacement facilities; (2) improvement of community mental health services; and (3) pharmaceutical procurement and administration. The Project will also fund short and long term technical assistance for staff development.

3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

A. Source and Origin of Goods and Services

Except for ocean shipping, and except as set forth in Section D below, goods and services financed by A.I.D. under the Project shall have their source and origin in the United States and Grenada. Ocean shipping financed by A.I.D. under the Project shall be procured in the United States, except as A.I.D. may otherwise agree in writing.

B. Conditions Precedent to Disbursement

(1) First Disbursement. Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) An opinion of counsel satisfactory to A.I.D. that the Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms;

(b) A statement of the name of the person holding or acting in the office of the Grantee specified as a representative, and of any additional representatives, together with a specimen signature of each person specified in such statement.

(c) Evidence of adequate arrangements securing title to the land identified for building of the replacement facilities.

(2) Disbursement In Excess of \$100,000: Prior to any disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, in excess of \$100,000, the Grantee shall appoint a Ministry of Health official, or other appropriate GOG official, as Project Administrator responsible for the execution and coordination of all Project activities.

C. Covenants

Except as A.I.D. may agree otherwise in writing, the GOG shall:

(1) Assign the requisite management and technical staff to adequately carry out the Project objectives at all levels;

(2) Make staff available for training in accordance with the training plan which is part of this Project;

(3) Establish and budget a full-time psychiatrist position in the MOH to serve the needs of the Treatment and Rehabilitation, Acute Psychiatric Care Unit, and community mental health services;

(4) Reduce the number of patients at the Richmond Hill Mental Hospital before site preparation begins and continue to discharge patients to be maintained in the community through the

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community health services until the number of inpatients at the Richmond Hill Mental Hospital is reduced to a level that can be maintained at the new Treatment and Rehabilitation Center;

(5) Establish and budget for additional positions in order to provide adequate inpatient services in both the Acute Psychiatric Care Unit and the Treatment and Rehabilitation Center, as well as outpatient services in the districts;

(6) Provide General Hospital patient services such as laundry, food, X-rays, laboratory, and pharmaceuticals adequate for the Acute Psychiatric Care Unit;

(7) Provide the budget necessary to finance the recurrent costs of the Acute Care and Treatment and Rehabilitation Facilities for the Life of the Project.

D. Waiver

I hereby approve procurement of two project motor vehicles in an amount not to exceed a total of US \$50,000 from A.I.D. Code 935 source/origin.

Smashed Brown

Nov 23, 1984

Date

Attachment: Financial Plan for Phase I

✓

Financial Plan for Phase I

1. Design and Supervision		
a) A & E	\$265,000	
2. Technical Assistance		
a) Long Term	364,350	
b) Short Term	70,900	
c) Caribbean Resource Pool	<u>5,000</u>	
	440,250	
3. Training		
a) Hospital Management	20,320	
b) Hospital and Field Staff	4,630	
c) Audio Visual Aids	1,000	
d) Other Training	<u>5,000</u>	
	30,950	
4. Commodities		
a) Vehicles	10,000	(estimated)
b) Pharmaceuticals	48,000	
c) Contingency (10%)	<u>5,800</u>	
	63,800	

Phase I Total \$800,000

RELIEF AND RECONSTRUCTION

Project No. 543-0010

GRENADA MENTAL HEALTH SERVICES

SUB-PROJECT

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MENTAL HEALTH SERVICES PROJECT

Illustrative Financial Plan

1. Design/construction supervision	\$3,365,000
2. Technical Assistance	440,250
3. Training	30,950
4. Commodities/Equipment	63,800
	<hr/>
Total	\$3,900,000

PROJECT AUTHORIZATION

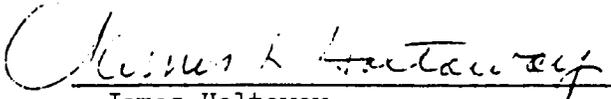
(Amendment No. 1)

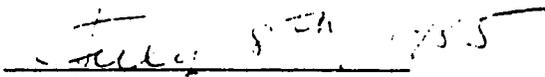
Name of Country: Grenada
Name of Project: Relief and Reconstruction
Grenada Mental Health Services
Number of Project: 543-0010

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended, the Relief and Reconstruction/Grenada Mental Health Services Project for Grenada was authorized on November 23, 1984. That authorization is hereby amended as follows:

- a. In the first sentence of paragraph 1 delete "eight hundred thousand United States Dollars (\$800,000)" and substitute in lieu thereof, "Three Million Nine Hundred Thousand United States Dollars (\$3,900,000).
- b. In the second sentence of paragraph 2 add the words "and construction" following the words "in the design".
- c. In the third sentence of paragraph 2 add the words "and constructing" following the word "(1) designing".

2. The Authorization cited above remains in full force except as hereby amended.


James Holtaway
Director, RDO/C


Date

Attachment: Project Financial Plan

ANNEXES FOR PHASE I

- A. (Deleted)
- B. Letter of Request
- C. PP Cable
- D. Statutory Checklist
- E. 611 (e) Certification
- F. Social-Economic Analysis
- G. Environmental Assessment (Provisional)
- H. Technical Analysis-Buildings (Provisional)
- I. Conceptual Designs (Provisional)
- J. Scope of Work: A&E
- K. Procurement List: Equipment and Supplies
- L. Technical Analysis - Pharmaceuticals
- M. Scopes of Work: Technical Assistance
- N. Training Program
- O. Job Descriptions
- P. Project Outputs Description

ANNEXES FOR PHASE II

- A. Implementation Plan
- B. Technical Plan
- C. Cost Estimate and Financial Plan
- D. Construction Cost Estimates
- E. Cost Estimates for Medical Technical Assistance
- F. Project Checklist

I. SUMMARY AND RECOMMENDATIONS

A. Recommendations

USAID/Grenada recommends approval of the Grenada Mental Health Services Sub-Project as described in this PP and the immediate authorization of an ESF grant of US\$800,000 to the Government of Grenada (GOG) to fund training, technical assistance and limited pharmaceutical procurement under Phase I of the Project. It is further recommended that an additional ESF grant of US\$2,253,000 be authorized as Phase II for financing construction, additional technical assistance, training, evaluations and commodity procurement.

B. Project Summary

On October 25, 1983, one wing of the Richmond Hill Mental Hospital was accidentally destroyed by U.S. Forces who had no means of distinguishing gunfire from this structure from that coming from the adjacent fort. The destroyed wing contained the Mental Hospital infirmary of approximately 80 beds. An adjacent office block was also destroyed, electricity and telephone service were interrupted for the entire hospital, and the kitchen was buried in rubble.

USAID and the GOG have cooperated in the development of a Project design which focuses not only on replacement of the destroyed facilities, but also addresses related problem areas limiting adequate mental health care and treatment: training and technical assistance to improve diagnosis, treatment, and follow-up, and funding for pharmaceutical procurement and appropriate training in drug administration. This approach which addresses broader needs of the mental health system, is consistent with the Project development guidance provided in State 131945 and accompanying memorandum (Annex C). AID/Washington requested that the Project address the needs of restoring or establishing the capacity of satisfying complete mental health care services and that the Project design process take a comprehensive look at the needs for improved mental health services.

The Project goal is to improve effective delivery of mental health services to the Grenadian population. The Project purpose is to assist the Ministry of Health (MOH) in the design and construction of an inpatient psychiatric facility to replace the destroyed Richmond Hill Mental Hospital and to up-grade the MOH institutional capacity to best utilize the facility within the existing hospital and community based mental health services delivery system.

To achieve the goal and purpose, Project resources will be used to support three major activities: (1) replacement of treatment facilities; (2) improvement of community mental health services; and (3) pharmaceutical procurement and administration. Two treatment facilities will be constructed, a 26-bed Acute Psychiatric Care Unit at General Hospital and an 80-bed residential Treatment and Rehabilitation Center. In addition to design and construction costs, Project resources will provide for all equipment and supplies required for operating the new mental

health facilities. The Project will also fund technical assistance for staff development in the following areas of expertise: Psychiatry, Psychiatric Supervision, Psychiatric Nursing Education, Medical Records Administration, Psychiatric Therapeutic Activities, Pharmacy, and Social Work. Additional staffing requirements will be provided as part of counterpart costs.

A comprehensive community mental health services delivery system is essential for reducing the inpatient census and maintaining it at an acceptable level. The services are also essential for prevention of mental illness. The Project will fund the technical assistance services of a Psychiatric Social Worker to develop a strong community services program including training for up to 44 employed Community Health Aides and seven Community Mental Health Workers to be recruited and assigned to seven health districts.

Because the role of psychiatric drugs is essential in the treatment and stabilization of the chronic mental patient, the Project will provide for the purchase of a two year supply of pharmaceuticals. Complementary to this activity, the Project will fund ten weeks of technical assistance of a Pharmacist to aid GOG counterparts in the establishment of a safe, efficient and accountable drug procurement and distribution system. Training will be provided to the Chief Pharmacist, the Medical Supply Officer, the Richmond Hill Institute's Pharmacist, one pharmacist from St. George's and eleven district pharmacists.

At the end of the Project, Grenada is expected to have improved mental health care facilities and a more effective community mental health services delivery system. The inpatient census will have been significantly reduced and readmissions will be less as a result of more effective mental health treatment and care practices.

SUMMARY BUDGET

(000 US Dollars)

	<u>Phase I</u>		<u>Phase II</u>		<u>Total</u>	
	<u>AID</u>	<u>GOG</u>	<u>AID</u>	<u>GOG</u>	<u>AID</u>	<u>GOG</u>
Design & Construction	265	53	1,938	--	2,203	53
Technical Assistance	440	--	175	--	616	--
Training	31	--	11	--	42	--
Commodities	64	--	312	--	376	--
Evaluation	--	--	26	--	26	--
Operation and Maintenance	--	<u>352</u>	--	<u>380</u>	--	<u>732</u>
TOTAL	<u>500</u>	<u>405</u>	<u>2,462</u>	<u>380</u>	<u>3,262</u>	<u>785</u>

C. Summary Findings

The Project Review Committee has reviewed all aspects of the proposed Mental Health Services Project and finds that it is financially, economically, technically, environmentally, and socially sound, and consistent with the development objectives of Grenada and of USAID. The Project Review Committee has further determined that the participating institutions are institutionally capable of administering the Project as designed and explained in the Project Paper.

D. Project Issues

1. Recurrent Costs - As discussed in Section IV.D., the Project will require that the Ministry of Health (MOH) increase its staff by 28, including 7 professionals and provide additional maintenance and operating funds which will total approximately US\$366,000 per annum. This represents a total increase in the Ministry's budget of 1.5 % and the Mission believes this modest increase is fully justified by the expected gains from the Project. The MOH has reviewed these increases carefully and fully supports the requirements. The MOH is currently reviewing its staffing pattern to determine if a significant number of the new positions identified for the Project could be staffed using personnel already employed by the Ministry. A search will also be conducted for transfers from other Ministries.

2. Project Scope - The proposed Project design is considerably more sophisticated than existing mental health care delivery systems in the Eastern Caribbean. However, as discussed in Section IV.A., the approach is based on considerable research and analysis of what has worked and not worked in the past. The Mission believes that the GOG's strong commitment to the Project will ensure its completion and long-term maintenance.

II. BACKGROUND

A. Problem and Rationale

The Richmond Hill Mental Hospital is housed in what was originally Fort Mathew, built by the French a century ago. On October 25, 1983, one wing of the hospital was accidentally destroyed by U.S. forces who had no means of distinguishing gunfire from this structure from that coming from the adjacent fort. The destroyed wing contained the Mental Hospital infirmary of approximately 80 beds. In addition to total destruction of this wing, the doors, windows, and furnishings were destroyed in an adjacent office block, which contained records, the pharmacy, and the offices of the matron, the social worker, the doctor, and the administrative staff. Electricity and telephone service were interrupted for the entire hospital, and the kitchen was buried in rubble. Twelve seclusion cells were also buried.

In November 1983, shortly after the rescue mission operation which resulted in damage to the Richmond Hill Mental Hospital, AID requested the technical assistance of a U.S. psychiatrist to assist Grenada's Ministry of Health (MDH) in an assessment of the status of mental health services, including outpatient and inpatient services. The assessment was to acquire the information required for formulation of a strategy for refurbishing and/or reconstruction of this facility. The consultant observed that despite the importance of the mental illness problem ^{1/}and efforts to address the problem, Grenada has one of the largest mental inpatient census per population in the Eastern Caribbean. Severely substandard facilities is one factor cited as contributing to this condition.

^{1/} Mental illness is listed as fifth among the ten most important medical problems in the clinics and hospitals of Grenada in the 1983-85 Health Sector Plan, Pg. 25, Dec. 1982.

The consultant describes the Mental Hospital:

"A dark and gloomy place, complete with dungeons now used to seclude violent or runaway patients, it was a singularly unsuitable place for hospitalization of the mentally ill when I visited in May 1983, well before the recent damage. Like several other hospitals for the mentally ill in the small Caribbean islands, this hospital was poorly designed and not equipped for humane or effective treatment. In addition to crowded dormitories, unsanitary non-functioning plumbing, few therapeutic activities, and a demoralized staff, this hospital was badly overcrowded -- housing some 180 patients at the time of the blast." 2/

In addition to substandard facilities, the consultant advised, Grenada's limited success in addressing the mental illness problem can be attributed to inadequate treatment practices including little attention to either primary care or non-medical psychiatric interventions. Three major problem areas were identified: 1) lack of regular psychiatric rounds and rehabilitation activities in the hospital; 2) poor drug prescribing patterns, including excessive use of anticholinergics and inadequate doses or flexibility; and 3) inadequate community follow-up, education, and prevention, with efforts largely limited to drug refills and injections an essential but incomplete element of a community program.

The consultant concluded the assessment concurring with the MOH recommendation for construction of a new facility, but with an important caveat: "It must be recognized, however, that a new hospital in a new site will not cure the most fundamental ills of this mental institution, which are, as noted: lack of responsible psychiatric leadership, lack of maintenance, lack of a trained well-supervised staff, and lack of a treatment program". Only replacing the destroyed structure, then, would provide at best little or no improvement in mental health care. To realize the benefits of such an investment requires provision of sufficient resources to address the three problem areas cited above. The major deficiencies in facilities, staffing, and treatment practices comprising Grenada's mental health service system are described in detail below.

2/ Janice Stevens, M.D., "Mental Health System - Grenada, Draft Report to the United States Agency for International Development", November 23, 1983.

Overview:

Diagram 1 describes Grenada's present psychiatric service delivery system from point of entry to discharge and follow-up. The system consists of three principal components: 1) the Mental Hospital and adjacent institutions for geriatric and retarded persons (Richmond and Kennedy Homes), and a tuberculosis sanitarium 2) a seven-bed psychiatric unit housed in a small building on the grounds of the St. George's General Hospital; and 3) community services consisting of visits by a 5-6 member team from the Mental Hospital staff at three-week intervals to outlying parish community health centers for followup drug treatment of patients discharged from the Mental Hospital. In addition, outpatient clinics for follow-up drug refills are held on several days each week at Richmond Hill Mental Hospital, and psychiatric referrals are seen at the General Hospital Psychiatric Unit by the Acting Chief of Mental Health Services, who is not a psychiatrist.

Mental Health services are administered by the Ministry as shown in Diagram 2. Implementation is the responsibility of the Chief Medical Officer under the direct supervision of the Permanent Secretary. The Chief Medical Officer, in turn supervises the District Medical Officer who is the Acting Chief of Mental Health Services, while the Matron is responsible to the Chief Nursing Officer. The Chief Administrative Officer at the Hospital supervises the pharmacy, the purchase of supplies, maintenance, and dietary-kitchen. The Matron and a Nurse supervise a staff of nursing attendants and ward maids and laundresses. Two Seamstresses, a social worker, an assistant pharmacist, four grounds men, four maintenance men, and three clerical workers complete the Mental Hospital staff.

Psychiatric Unit in General Hospital

The Psychiatric Unit in St. George's General Hospital has seven beds in an old wooden building, a dayroom, and a staff of three graduate general duty nurses (none with psychiatric training), eight nursing assistants rotate from the Mental Hospital (with no or minimal training in nursing or psychiatry), plus two to four student nurses. Psychiatric services, provided until October 1983 by a Cuban psychiatrist, are now rendered by a general practitioner who spends 2-3 hours at the Unit and Mental Hospital on Tuesdays and Thursday mornings. The physician has not had psychiatric training.

The Psychiatric Unit is not presently accomplishing its objective of reducing the number of chronically hospitalized patients in the General Hospital. The principal constraints have been: 1) lack of facilities for patients requiring restraints or seclusion; 2) the habit of sending all previously hospitalized patients from the Mental Hospital back there when they require admission; and 3) failure to use the facility sufficiently for transfer of patients from the Mental Hospital to the Psychiatric Unit for better care and more rapid replacement in the community.

Diagram 1

Description of the Present Psychiatric Service Delivery System

The chart illustrates the flow of existing mental health services from the point of entry to hospitalization and back into the community.

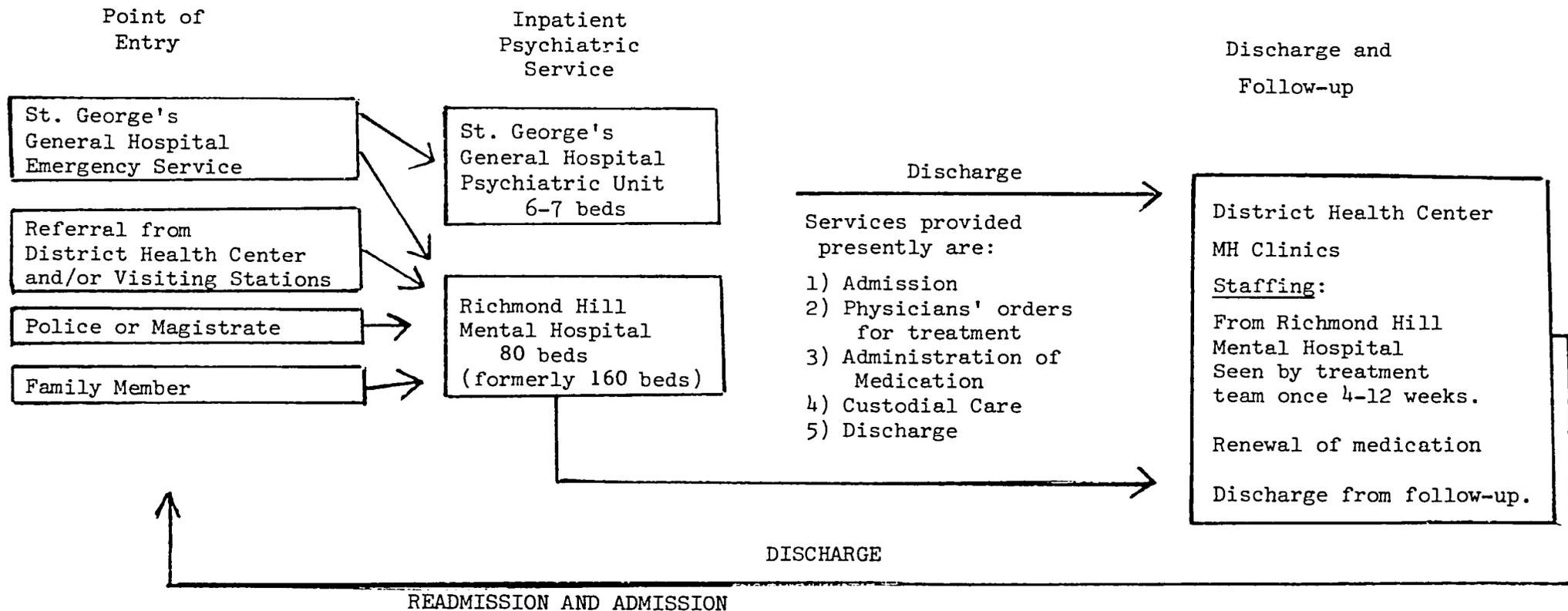
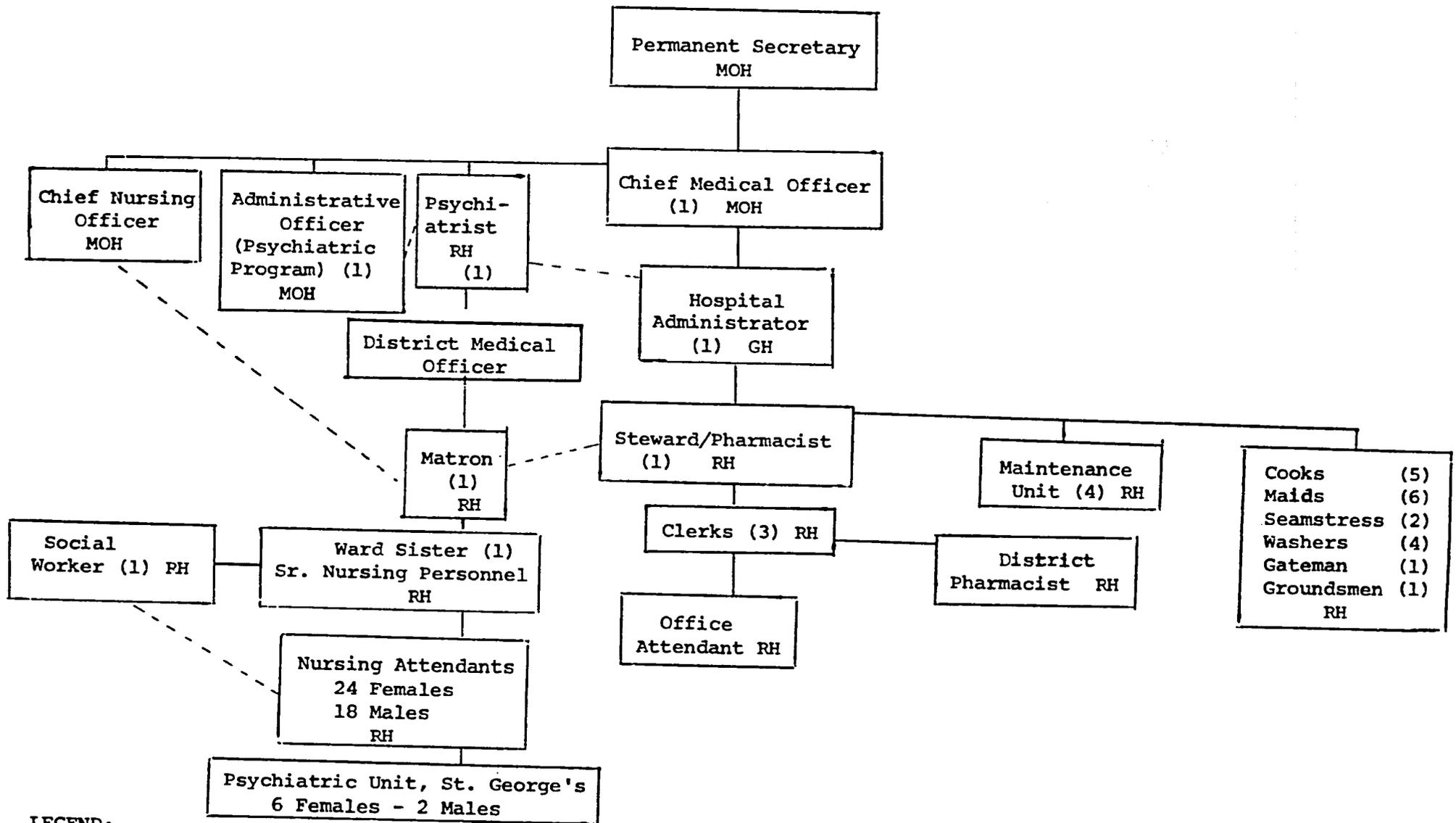


Diagram 2

ORGANOGRAM
RICHMOND HILL MENTAL HOSPITAL



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LEGEND:

MOH = Ministry of Health

GH = General Hospital

RH = Richmond Hill

The Ward Sister serves as the Deputy Matron

The Unit's capacity to serve also as an outpatient clinic for patients referred for psychiatric evaluation and treatment is greatly diminished for lack of a trained psychiatrist or psychiatric nurse.

The Richmond Hill Mental Hospital

Of the 180 patients previously housed in the Mental Hospital, 18 died as a result of the blast, 25 were transferred to the General Hospital, 15 were transferred to the Richmond Home, and approximately eleven were discharged and 68 absconded. All of the injured and discharged/absconded have since reentered. The Mental Hospital currently houses 139 patients in two large dormitories, one for males and one for females, each with 50 closely spaced beds and 20 seclusion rooms. The seclusion rooms are dungeons with high barred windows, no beds or mats, and no toilet facilities or furnishings.

All basic patient services are substandard. Water is available only from 6-9:00 a.m. and from 4-7:00 p.m. daily. In between, drinking, washing and cooking are accomplished using water collected in plastic buckets. There are two showers in one stall to accommodate 60 men. The showers are located in damp dark stone basements, without shower heads, warm water or privacy. Similar facilities close to the toilets are provided for women.

Toilets consist of a row of four closely spaced open holes cut into a wooden board placed over an unflushable tank and a urinal trench -- all without the privacy of doors or adequate ventilation. The septic tank frequently overflows or blocks up.

A day yard for male patients consists of a 40 x 60 foot level grassy area surrounded by high stone walls on one side and a pavillion on the other. Except for two or three benches and a dilapidated serving table in a covered shed, there are no seating facilities. There are no games, tools for carpentry or gardening, books, magazines, or activities of any kind. The enclosed day yard for female patients lacks the grassy courtyard and consists of a small open cement area with a covered 15 x 20 foot pavillion where food is served and where patients can crowd into when it rains.

Following the burial of the previous kitchen in rubble, cooking for the Mental Hospital has been combined with that in Richmond Home in a 40 x 5 foot concrete cookshed of a similar vintage and adequacy to that destroyed. There, meals are prepared for 139 patients and 127 Richmond Home residents on one four-burner gas stove and in three 20-25 gallon tubs sunk into a clay fireplace heated by wood. While minor repairs have been carried out on an emergency basis to better equip the kitchen and provide protection from rodents and flies, the kitchen remains totally inadequate.

In general, the Mental Hospital is well staffed, but the relationship of psychiatric services to patients is dismal. A principal deficiency is the absence of a full or even half-time psychiatrist who can assume leadership of the treatment and training programs as well as assure minimum standards of patient care and plant maintenance.

The Acting Chief of Mental Health Services limits his work to brief admission and discharge examinations and prescriptions for medication. He assumes little responsibility for making regular rounds of the wards or general supervision of the hospital plant, therapy, or staff training programs.

The two nurses head a staff of up to 61 nursing attendants. The Matron spends most of her time in the administrative office overseeing records and the needs of the nursing attendants for patient treatment, ordering supplies, and distributing drugs to patients and nursing attendants who visit the office. There are no regular scheduled rounds for inspection or supervision of plant and patients. Decisions for seclusion, treatment change, or discharge are left to the discretion of nursing attendants who report their recommendations to the matron or nurse.

Nursing attendants are hired without previous nursing or hospital training. Training is on-the-job and during a six-month rotation through the Psychiatric Unit of the General Hospital. Nursing attendants are chosen by the MOH. Pay is low, career structure is not promising, and much dirty work and custodial concerns are assigned to them as cleaners and janitors, as well as jailers. These workers, who carry the brunt of hospital labor and treatment, are also not infrequently injured or subject to injury by violent or unpredictable patients. Working with inadequate water, light, or emergency equipment, they work under awesome constraints. In general, they show humane and considerate interest in patients but in the absence of supervision and training, they seem unable to function in more than custodial capacity and do not engage in therapies -- group or vocational -- with the exception of one or two who were charged with the now defunct Occupational Therapy Program.

The Social Worker had been employed at the Mental Hospital for 20 years, and has recently retired. When on staff, he accompanied the community team on its weekly visits to outlying district clinics, where he refilled medication, supervised injections of prolixin and made domiciliary visits to give medicines and injections as well as to resettle patients in the community.

The pharmacist, who also serves as the Chief Administrator of the Mental Hospital, is responsible for obtaining necessary supplies and repairs. He is a trained pharmacist and had a 50-hour course in hospital management. He does not generally make regular hospital rounds or oversee plant deficiencies, but he attempts to rectify problems brought to his attention.

Community Mental Health Services

As noted, Grenada's inpatient census is one of the highest in the Eastern Caribbean. In 1982, there were 66 first admissions, 275 discharges, 222 readmissions, 4 deaths, 8 transfers and 7 AWOLs. A good portion of readmissions could be prevented and consequently the inpatient census reduced with a good community care program. However, a comprehensive community mental health service delivery system is non-existent in Grenada.

Four out of every five patients admitted to the Richmond Hill Mental Hospital are readmissions. Four out of five of these readmissions were readmitted because they lapsed treatment or started abusing marijuana or alcohol again. Thus, proper followup, education, and community activity could vastly decrease the work and census of the hospital. Current resources, however, limit follow-up activities.

The current staffing for the outpatient Mental Hospital clinics consists of staff from the Mental Hospital, namely, the Medical Officer, the Psychiatric Social Worker (when on staff), the Deputy Nurse Matron and three attendants. This team is only able to make two visits per month to the District Health Centers. In addition to providing coverage for the present St. George's General Hospital Psychiatric Unit and the Richmond Hill Mental Hospital, the Medical Officer also provides services to the Kennedy Home for the Mentally Retarded, and on-call service to the Geriatric Home and the TB Sanitarium.

The community health caretakers are primarily community health aides who have had no training in mental health. The Public Health and District Nurses focus upon primary health care delivery with little or no time to provide services to the mentally ill population.

B. Strategy

As noted, immediately following the blast which destroyed the 80-bed wing of the Richmond Hill Mental Hospital, AID contracted an American psychiatrist to assess the status of mental health services and to formulate a strategy for re-furbishing and/or reconstruction of the facility. The consultant evaluated the two options of renovating the existing premises or relocating a new mental hospital in a more desirable, less isolated area. The consultant concurred with the MOH's recommendation of construction of a new hospital on a new site; the reasons given for the recommendation are discussed in the Project Analyses. Furthermore, and consistent with the foregoing recommendation, the consultant recommended only the minimum emergency repairs necessary for effective care and treatment within the existing Richmond Hill Mental Hospital facility. In response the United States Government provided emergency technical and economic assistance to restore electricity, improve plumbing and sanitation, restore telephone service, clean up rubble and dangerous structural remains, carry

out kitchen and dormitory repairs, and provide clothing and kitchen equipment.

In defining the Project strategy, AID/Washington concurred in the view of the initial psychiatrist that a detailed account of the mental health care system was necessary and that AID resources should be used to contribute to the broader scale upgrading of that system. With those parameters in mind and following the decision to replace the existing mental hospital, the size or patient capacity of the replacement facility had to be determined. The Project Design Team Consultants advise that current practice in psychiatry encourages, when possible, treatment of patients without removing them from the community. The emphasis is on minimizing the practice of institutionalizing people. Data from the National Institutes of Mental Health, the Department of Health and Human Services, project that for a population of 100,000, mental health services will be needed by 15,000 persons. To ensure that institutionalization is only for those persons in real need, community mental health services are essential. In Grenada, approximately 185 persons are presently on active outpatient treatment. Consistent with the Community Mental Health approach, the project design calls for replacement of the existing long-term treatment facility, which housed 180 patients at the time of the blast, with an 80-bed Treatment and Rehabilitation Center. Concurrently, a major effort must be undertaken to reduce the present inpatient census from 139 to 80 patients.

Reducing the inpatient census requires the development and administration of community care alternatives to hospitalization. Just as primary health care in district clinics is designed to decrease the number of individuals who receive services in outpatient clinics and wards of the General Hospital, community mental health clinics should decrease the need for psychiatric hospitalization. The functions of a good community health program are prevention, treatment, and referral. In the area of prevention, the Community Mental Health Worker (CMHW) ideally seeks, counsels, and organizes activities helpful to the potentially mentally ill and their community. Such activities include organization of Alcoholics Anonymous groups, drug abuse education and rehabilitation programs, social programs for elderly and isolated individuals, youth programs, employment and self-help projects, as well as education of the community about mental illness. In the area of treatment, the CMHW follows up discharged patients and helps in maintaining them in the community. This entails regular visits, good records, medication delivery, and regular surveillance of home conditions including discussions with patients and family, and, when necessary, vocational advice or assistance. In the area of referral, the CMHW can be effective in assisting individuals to obtain schooling, training programs, employment, or hospitalization when indicated.

Encouragingly, patient census reduction has been achieved in Grenada in the past. A plan for maintaining discharged mentally

ill patients in the community (modeled after a program in Trinidad) was implemented under the direction of a Grenadian psychiatrist in 1969-70. The effort resulted in a reduction of the census at the Richmond Hill Mental Hospital from 200 to 70 patients. The process requires intensive records review and patient assessment. Most importantly, direct responsibility for maintaining discharged patients resides with the health workers in health centers and clinics in the Districts. The health workers must monitor the patient compliance with use of appropriately prescribed medications, an indispensable element of a community-based mental health program. The role of an acute care facility such as the existing Psychiatric Unit at the General Hospital is also critical. The unit is responsible for treating acute psychiatric conditions including those related to drug and alcohol abuse. If the unit were properly staffed with a psychiatrist it would be capable of serving as an outpatient clinic for patients referred for psychiatric evaluation and treatment.

Thus, in addition to construction of an 80-bed replacement facility for long term treatment, any mental health services intervention must build on the existing program to reduce and maintain the inpatient census at the recommended level of 80. Therefore, the Project design focuses on three principal activities: 1) Building Construction to replace the Richmond Hill Mental Hospital and the Acute Psychiatric Care Unit at General Hospital; 2) Technical Assistance and Training to improve diagnosis, treatment, and follow-up through a community health services program; and 3) Funding for drug procurement along with appropriate training in drug administration.

III. DETAILED PROJECT DESCRIPTION

A. Statement of Objectives

The Project goal is to ensure effective delivery of mental health services to the Grenadian population. The Project purpose is to assist the MOH in the construction of an inpatient psychiatric facility to replace the destroyed Richmond Hill Mental Hospital and to up-grade the MOH institutional capacity to best utilize the new facility within the existing hospital and community based mental health services delivery system.

To achieve the goal and purpose, the Project will provide adequate inputs for the development of physical infrastructure and human resources to permit improved mental health care from diagnosis, through treatment, to re-integration into the community. Mental illness prevention will also be an area for project assistance efforts. Specifically, Project resources will be used to support three major activities:

1. Replacement of Treatment Facilities and Improved Operations
2. Community Mental Health Services Improvement
3. Pharmaceutical Procurement and Administration

The three principal activities form the Project Elements. Each Project Element is complementary to the other and indispensable to the achievement of expected project outputs and improved effectiveness of the entire mental health care delivery system.

Expected outputs are summarized in Diagram 3, which describes the flow of services to be provided when a person requires mental health care and treatment. The diagram tracks the patient from the point of entry through the inpatient service to discharge and community follow-up. The Project design calls for improved diagnosis and treatment practices and links together psychiatric care and treatment provided in the General Hospital setting (or acute care), intermediate and chronic services, as well as community health services (Parish and District). The system, as designed, has considerable flexibility to meet the needs of patients requiring counseling and primary intervention at the community level. Diagram 4 indicates full staffing of the residential Treatment and Rehabilitation Center expected at the end of the Project. The functions, operation, and interrelationships of the system parts as expected upon project completion are described in detail in Annex P.

B. Project Elements

1. Replacement of Treatment Facilities:

a. Design and Construction

(i) Acute Psychiatric Care Unit - To provide acute psychiatric and substance abuse care, and to serve as the point of entry into the mental health services system, the Project proposes to fund the design and construction of a 26-bed Acute Psychiatric Care Unit on the site of the Rathdune Building at General Hospital. The Rathdune Building is presently being used as a residence for male medical officers. The development of the proposed facility would entail demolition of the existing structure and construction of a new 26-bed facility. The building is an integral part of the hospital site and is easily accessible to other buildings on the site. It is served by electricity and telephone but has its own sewage outfall directly into the sea beneath the site. As shown in Annex I Exhibit 11, the facility has two floors. The ground floor will contain the six-bed substance abuse services and detoxification unit, shared patient activity areas, and a medical records section. The top floor accommodates twenty patients, a nurses office, a patient lounge, and a consultation/visiting room.

Diagram 3 - Project Intervention

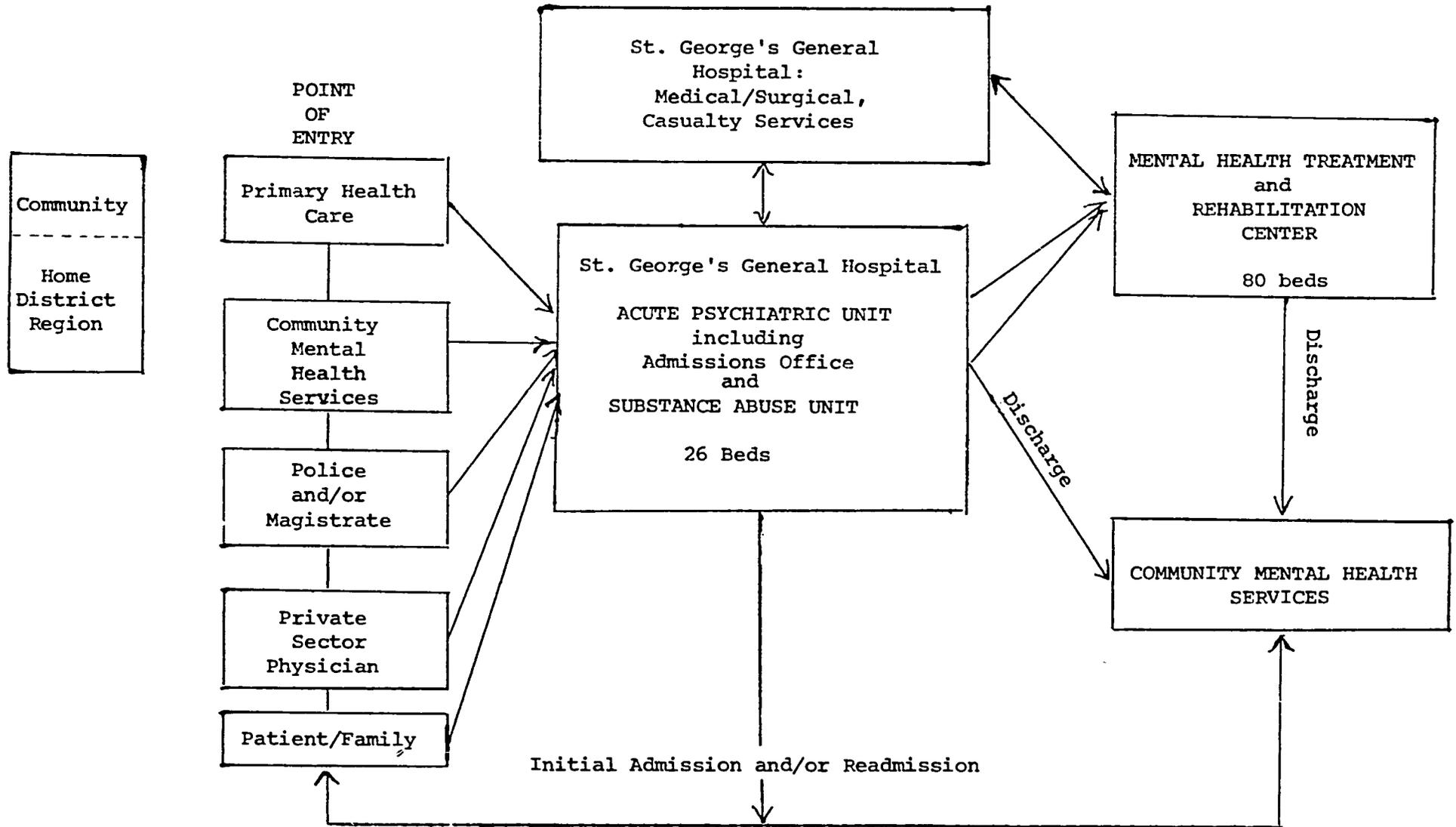
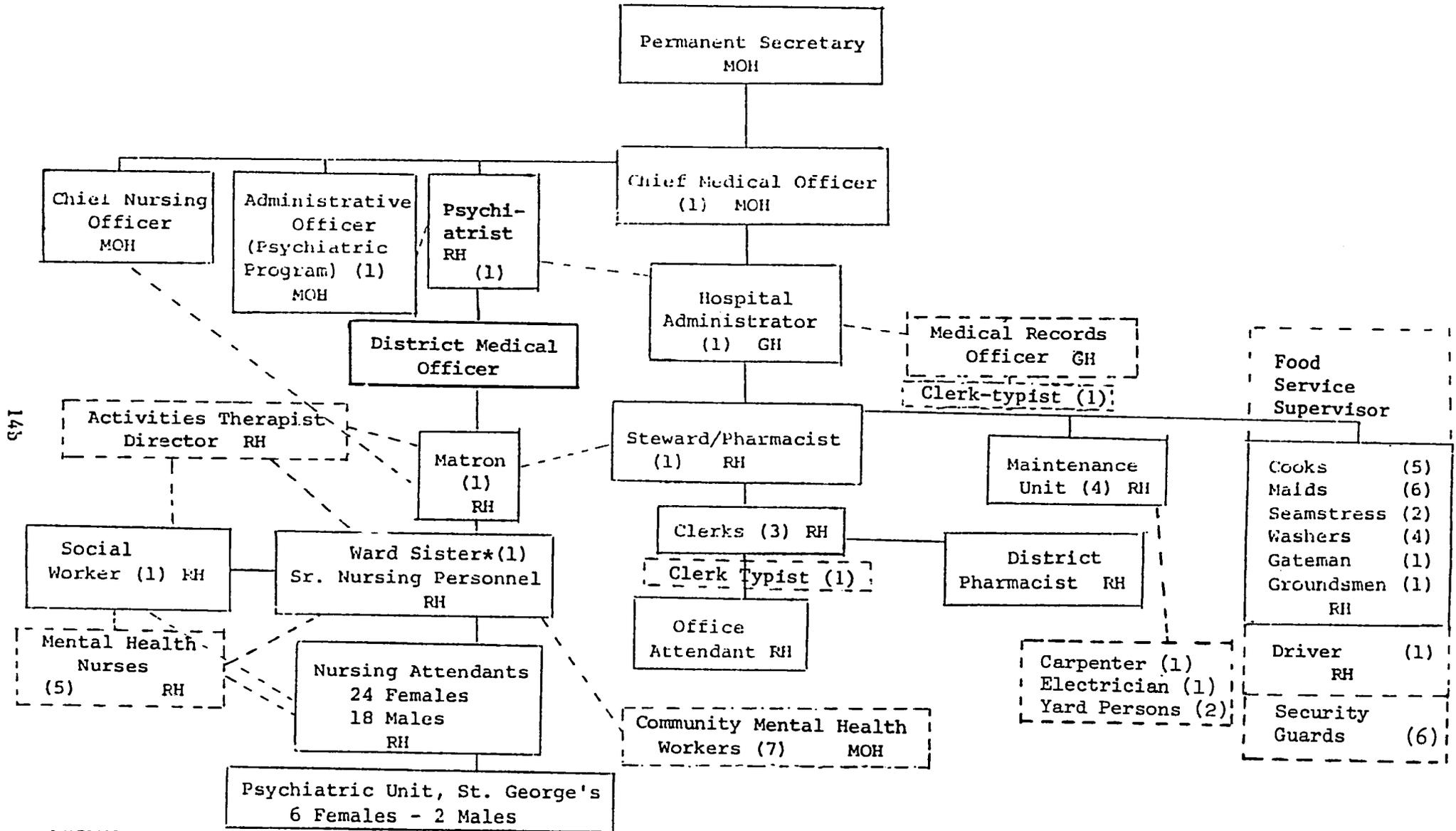


Diagram 4

ORGANOGRAM
RICHMOND HILL MENTAL HOSPITAL



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LEGEND:

MOH = Ministry of Health

GH = General Hospital

RH = Richmond Hill

*Ward Sister serves as Deputy Matron

Table 1 lists estimated US and GOG contributions. Included in the GOG contributions are land, site preparation, utilities, recurrent costs, appropriate staffing, some pharmaceuticals, and alternate housing for Rathdune building residents. AID-funded construction costs are estimated at US\$ 522,000.

(ii) Treatment and Rehabilitation Center - The Project also proposes to fund the design and construction of a new 80-bed residential mental health care Treatment and Rehabilitation Center. The construction site is located at Mt. Gay Estates on the North side of the St. John's River in the area of St. George's Known as River Road (see map in Annex G).

Consultants on the Project Design Team provided the development plan for the mental health facilities.

As shown in Exhibits 1 and 2 of Annex I, the Center consists of five separate modular units: three two-story patient cottages, an Administration Building, and a combined Kitchen and Warehouse. The site plan provides for an access road, parking area, walk ways, grass courtyards, drainage, fencing, and an athletic field. The design also provides for all cabinets and built-in equipment, as well as a stand-by generator.

The Administration Building "A" (Exhibit 3) includes office space for the Center's Administrator, Matron, Psychiatrist, Social Worker, Nurse Tutor, and Pharmacist. In addition, space is provided for a receptionist, a waiting area, a treatment-examination room, a pharmacy, pharmacy storage, and a conference room.

Each of the smaller Patient Cottages B and C (Exhibit 4-7) house twenty patients. In addition to patient housing each unit's 7,900 square feet of space also provides general Center facilities. Patient Cottage D (Exhibits 8 and 9) will house 40 patients in 8,732 square feet of space. The unit design also provides for two patient lounges, a utility area, two nurse rooms, a consultation room, sanitation facilities, and a storage area.

The combined Kitchen and Maintenance Building E (Exhibit 10) includes food storage space and a warehouse area in addition to the kitchen and a dishwashing area. Cost of the entire facility is estimated at US\$ 1.9 million.

Construction of the two facilities will be competitively contracted. An Architecture and Engineering (A&E) firm will be selected for design work and to supervise construction. The A&E firm will prepare an architectural program for the design of the facilities and present the program to the GOG and USAID for approval. The program will include guidelines for the design of all spaces for equipment, furnishings, their locations and specialities related to a mental health facility. The firm will:

- develop architectural preliminary phase studies, layouts, specifications, and cost estimates;

- provide design drawings, contract documents, and cost estimates for construction;
- develop a complete set of drawings for foundations, structures, mechanical works, gradings, drainage, water collection systems, roads, walkways, sewage disposal, recreational areas, and fire fighting systems; and
- supervise construction.

The A&E firm will be required to prepare full specifications for all equipment and supplies to be procured under the Project, except pharmaceuticals and vehicles. A&E services are estimated to cost US\$ 441,450.

b. Equipment and Supplies - Annex K lists all supplies and equipment required for operating the new mental health facilities. The list is preliminary and will be finalized subject to specifications prepared by the A&E firm responsible for building design and for construction supervision. The list also includes estimated costs which total US\$ 195,550. Two vehicles (a 15-passenger mini bus and a double-cab transport van) will be procured locally for the Project. The vehicles are budgetted for US\$ 19,500. The van will serve to transport patients as well as to provide support for staff participation in the Community Mental Health Services program.

c. Staffing - The present staffing pattern of the two facilities is shown in Table 5. As noted in the Administrative Analysis, the staffing of the two psychiatric facilities is presently uneven and inadequate. While the Acute Psychiatric Unit at General Hospital presently has one certified nurse and one nursing student for every five to seven patients around the clock, the Richmond Hill Mental Hospital must rely on untrained staff. One untrained male attendant is responsible for 3.45 patients, while one untrained female attendant is responsible for 1.39 patients. The skewed distribution of male and female attendant coverage is summarized in Table 6. Table 7 shows the change expected under the Project. In total, 28 individuals must be recertified or recruited to fill additional positions:

5 Mental Health Nurses	7 Community MHWs
1 Medical Records Officer	6 Security Guards
1 Therapeutic Activities Director	1 Food Supervisor
2 Clerk Typists	1 Carpenter
1 Driver	1 Electrician
2 Yard Persons	

Table 8 lists the proposed staffing for all units. Diagram 4 indicates the functional positions of new personnel.

Where expected duties will be significantly different from existing positions (medical records officer, activities therapist director, mental health nurse) new job descriptions are included in Annex O. Total additional staffing costs for the new facilities are expected to be US\$ 66,660 per annum (Table 9), and will be provided from GOG counterpart Project resources.

d. Training and Technical Assistance - The new staff identified above as well as existing staff will receive substantial training. The presently employed Hospital Administrator and the newly hired Psychiatrist will benefit from technical assistance provided by a Psychiatrist and a Psychiatric Supervisor. The five new Mental Health Nurses and the presently employed 58 Mental Health Attendants will benefit from the technical assistance of a Psychiatric Nursing Educator, who will develop an appropriate training program. Finally, a Medical Records Administrator and a Therapeutic Activities Specialist will assist in developing training programs and providing technical assistance to GOG counterparts. The technical assistance requirements are briefly discussed below. A training and technical assistance implementation plan is included in Section III.D.2. Terms of reference for the specialists along with their work plans are included in Annex M.

(i) Psychiatrist - The Project will support 42 person days of a Senior Grenadian Psychiatrist to : 1) assist in screening patients at the Richmond Hill facility for selection of those to be discharged; 2) recommend curriculum content for training the community mental health workers and aides and to establish the criteria for selection of the workers and aides; 3) conduct two 2-week seminars on substance abuse (alcohol and drugs) for mental health system personnel; and 4) develop a schedule for inclusion of seminars to be conducted by psychiatrists in the training program. The estimated cost of the technical assistance is \$16,685. (Table 4)

(ii) Psychiatric Supervisor - The services of another experienced Grenadian psychiatrist, presently based in Barbados, will be contracted to provide technical assistance and training for the psychiatrist, psychiatric nurse attendants, and community mental health workers. A professor of the University of the West Indies, Barbados Campus, this consultant has had experience demonstrating that reduction of the inpatient census is possible when carried out using professional methods and competent staff. Specifically, the consultant will: 1) conduct a series of teaching and supervision seminars for all personnel involved in the mental health system; 2) conduct quarterly personnel evaluations; 3) review and identify problems with the prescribing practices of physicians 4) develop guidelines and drug protocols to promote the rational prescription of psychotropic medication; and 5) develop monitoring parameters to identify and treat adverse drug reactions. Approximately 48 days of assistance (2 days per month) will be provided during the life of the Project. Estimated cost is US\$ 22,600.

(iii) Psychiatric Nursing Educator - One of two long term technical assistance effort will be the provision of a Psychiatric Nursing Educator. The majority of the nursing personnel presently working in the system have experience in the field but little training in mental illness and mental health. The nursing educator will provide technical assistance to the psychiatric inpatient nursing staff, design and conduct a training program for certified nurses, and, in general, upgrade mental health nursing skills and improve the quality of psychiatric care and treatment.

The Psychiatric Nursing Educator will work in close cooperation with the chief nursing officer, the Council on Nursing, and the Director of the Grenada School of Nursing. The consultant will develop a curriculum and training plan based on a needs assessment of the staff that will be trained. The cost of the technical assistance is estimated at US\$ 182,177.

(iv) Medical Records Administrator - Of all the deficient aspects of the present mental health system, medical records is by far the one in greatest need of upgrading. The medical record is a most important instrument for initial assessment of a patient, to follow his/her history and his/her movements between bouts of illness, and to provide continuity of care for interrupted periods of treatment. The information on the record should provide guidelines to a psychiatrist or a nurse as to what treatment plans are needed by the patient, what factors might trigger a crisis, what are the danger indicators that adversely affect the patient's well-being. Given the importance of the medical record, the design and implementation of a clinical record system is imperative. It is also essential that a Medical Records Officer be trained to ensure the continued utilization and safe-keeping of the system. This input will be implemented during the last five months of facility construction. The Medical Records Administrator will train a Grenadian Medical Records Officer over a four-month period. Estimated cost of the technical assistance and training is US\$ 81,671.

(v) Psychiatric Therapeutic Activities Specialist - Approximately 5 person months of consultancy will be required to assist the psychiatric inpatient staff in the design and implementation of a therapeutic activities program for patients. Specific tasks include development of an assessment form, performance of basic skills and interest assessments on a sample of long term patients, implementation of a hospital-wide training seminar on the formulation of a therapeutic activities plan, and development of a therapeutic activities program. Estimated cost of the technical assistance is US\$ 81,671.

To the extent possible, the Project will support participation in relevant mental health training opportunities in the United States or the Caribbean region. US\$10,000 has been budgeted for these training opportunities.

To coordinate and integrate the teaching efforts of the

technical assistance staff, a Team Leader will be designated. The Team Leader will be expected to become familiar with other programs in operation, monitor teaching efforts to ensure the delivery of the content of the curriculum of the program, set up a regular meeting schedule with other technical assistance programs, and be responsible for responding to complaints submitted to the USAID Representative by the GOG concerning the training program.

2. Community Mental Health Services

a. Staffing - As discussed in Section II.B, a comprehensive community mental health service delivery system is essential for reducing the inpatient census and maintaining the census at an acceptable level. Also, a good community health program can be instrumental in mental illness prevention activities. To develop a strong community mental health service program, the Project will fund technical assistance and a training program for up to 44 Community Health Aides (CHAs) and for seven Community Mental Health Workers (CMHWs) to be recruited and assigned to seven health districts.

b. Training - There are presently 38 CHAs working out of 22 health stations in the six parishes of Grenada. They have been trained to recognize and to administer to a wide variety of health needs. The CHAs will receive training designed and managed by an experienced social worker. The training will be provided in two 8-week blocks of time with up to 22 CHAs in each training block. The CHAs will be taught to recognize signs and symptoms of the commonly occurring forms of mental disorder, signs of chemical substance abuse, and to recognize their limitations to effectively communicate with the district nurse and refer those problems in which extensive help is needed.

The seven CMHWs to be hired and trained will deal more narrowly with mental health problems. The CMHW will be administratively responsible to the Primary Health Nurse through the District Nurse. Clinical reporting of health problems will be to the District Medical Officer through the District Nurse and/or Public Health Nurse.

The job description for the CMHW is indicated in Annex O. The CMHW must be knowledgeable of the difficulties of all persons in his/her district who have been discharged from either of the mental health facilities. The CMHW's functions will include: 1) participation in the discharge planning of patients reentering the District after hospitalization; 2) monitoring of patient's progress in the home setting; and 3) development of mental health illness prevention activities.

A 24-week training plan for the CMHWs is summarized in Annex N. CMHWs will receive didactic lectures on patient and family interaction and behavior, community reactions; problems of the poverty level family; patient, family, and community education in mental health principles; and behavioral characteristics of

specific illnesses. Training will include classroom discussions on dealing with patient-family problems and community problems and crisis. All training costs are estimated at US\$ 41,551. (Table 4)

c. Technical Assistance - The services of a Psychiatric Social Worker with supervision and management experience will be utilized to assist the Ministry of Health in strengthening its ability to effectively deal with the problems associated with the deinstitutionalized mental patients. Terms of reference for the consultant are included in Annex M. The Social Worker will be one of two long-term technical assistance inputs and will serve as the Team Leader for the entire technical assistance package to be provided by AID. The Social Worker will carry out an initial needs assessment of the mental health system and specific skill levels for existing personnel. The consultant will also participate in the interview of the prospective community mental health workers, develop training plans and curricula, and identify the needed didactical material for the implementation of the overall training component. The Social Worker will travel throughout the country assessing the facilities where the community health aides and mental health workers will practice, visiting homes of patients, talking with families, and becoming knowledgeable of the social and cultural practices which will impact on the patients' progress and the development of their treatment plans. The Social Worker will participate extensively in case conferences and participate in the developing of patient treatment plans. Most importantly, the consultant will ensure that trainees become knowledgeable of tested methodologies for identifying crisis, working with families and patients in the community, and recognizing when and if patients need readmission. The estimated cost of the technical assistance is US\$ 182,177.

3. Pharmaceutical Procurement and Administration:

a. Procurement - Because the role of psychotropic drugs is so critical in the treatment and stabilization of the chronic mental patient, the Project Design Team Consultants have recommended that USAID provide essential psychotropic drugs for these patients. The technical analysis of the pharmaceuticals to be used is in Annex L.

Approximately 60 to 80% of mentally ill patients receiving long-term hospitalization are diagnosed as schizophrenic; the primary modality of treatment for these patients (as well as many others) is drug therapy. After discharge, through the effective and continued use of the psychiatric drugs, many mental patients are maintained in the communities with minimal symptoms of their illness. Without continued drug therapy, 70% of these patients will relapse within 12 months, however, if drug therapy is continued only 15 to 20% tend to relapse. Outpatient compliance with prescribed psychotropic medication is extremely poor. Drug noncompliance is not only a costly problem but results often in an exacerbation of psychiatric symptoms, family and community disruptions, and hospital re-admissions.

Several factors are known to potentiate the problem of noncompliance: the most obvious is financial. When patients and their families are required to purchase drugs, the problem of noncompliance may easily double or triple. Most psychotropic drugs are expensive and many are not supplied in private pharmacies. As an example, the wholesale (Red-Pook) price to a private pharmacy for 1,000 amitriptyline 50 mg tablets is \$103.78. The cost to the GOG is \$20.99. Therefore, the projected purchase price to the patient for a month's supply of amitriptyline 50 mg is \$6.00, including a \$3.00 dispensing fee for the pharmacist. Most mental patients because of their illness are unemployed and are, therefore, viewed as a financial burden to their families. Adding the purchase of pharmaceuticals not only increases drug non-compliance but will increase the problem of families refusing to accept the patient back in the home after hospitalization. Providing drugs for community maintenance is less costly than providing long-term inpatient psychiatric care. Therefore, the consultants recommend that during the life of the Project AID finance psychotropic drugs for mental patients in Grenada. The proposed 24 month budget is as follows:

January 1 - December, 1985:	\$48,000
January 1 - December, 1986:	52,800

TOTAL:	\$100,800

The distribution of these drugs will be the responsibility of the Chief Pharmacist.

d. Technical Assistance and Training - The consultants further recommend that a Pharmacy consultant be used to assist the MOH in developing a modern system of drug procurement, storage, distribution, and accountability. Approximately ten person weeks of assistance will be provided to assist the Chief Pharmacist and other pharmacy personnel in establishing a safe, efficient and accountable drug procurement and drug distribution system to mental health patients. Specifically, the consultant will: 1) assist in developing an efficient and quality drug procurement system for mental health; 2) assist in developing a system for the storage and delivery of all psychotropic drugs distributed to mental patients; 3) assist in developing a modern, accountable distribution system for psychotropic drugs in the community mental health program; 4) assist in establishing a safe, modern and accountable drug distribution system in the inpatient setting; 5) educate nurses and other mental health staff in appropriate use of the new drug distribution system; and collaborate with other pharmacy-related donors, including Project HOPE. Estimated cost of the technical assistance is US\$38,655.

All pharmacists who are involved in the procuring and dispensing of pharmaceuticals to mental patients will be involved in one or more facets of the Pharmacist Technical Assistance. The pharmacists include: the Chief Pharmacist, the

Medical Supply Officer, the Richmond Hill Institute's Pharmacist, one pharmacist from St. George's and eleven district pharmacists. Other pharmacists (pharmacy tutors) may be included at the discretion of the consultant and the chief pharmacist.

The Chief Pharmacist, the Medical Supply Officer and the Richmond Hill Institute's Pharmacist will receive training in the area of drug procurement and pharmaceutical storage; drug inventory control; distribution and proper accountability of psychotropic drugs dispensed to the hospitals and the district clinics; purchase of quality pharmaceuticals and an appropriate return's policy to drug manufacturers will be discussed, and whenever possible this program will be implemented and evaluated. It is recommended that a system be developed to insure that psychotropic drugs purchased for the intended use of mental patients are not diverted to other patients.

The Chief Pharmacist and the Richmond Hill Institute's Pharmacist will receive additional consultation on the storage, distribution and drug-inventory control of large volumes of psychotropic drugs. These drugs will be stored at the Richmond Hill Institute and later at the 80-bed hospital and distributed from that location to the district pharmacists and to the 26-bed Acute Psychiatric Care Unit at General Hospital.

The Chief Pharmacist and the District Pharmacists will receive consultation in developing a modern, safe, and accountable drug distribution system for patients in the community mental health program. The District Pharmacists will be responsible for dispensing psychotropic drugs to outpatients in their district. The practice of dispensing drugs to patients via the Matron's office will be discontinued. The consultant will also develop a medication profile - a patient record system for all drugs (not just psychotropic) dispensed to mental outpatients by the district pharmacists. The consultant will assist the pharmacists in patient communication technique.

The Chief Pharmacist, the Richmond Hill Institute's Pharmacist and one pharmacist from St. George's will receive consultation in the planning and implementation of a safe, modern and accountable drug distribution system, i.e., a modified unit dose system for psychiatric patients. In-service consultation of nursing staff involved in the drug distribution to psychiatric patients shall be accomplished at Mt. Gay's 80-bed facility.

The Consultant Pharmacist will review the reports of other pharmacy consultants and will work in collaboration with other donors in the pharmaceutical area including Project HOPE.

C. Cost Estimate and Financial Plan

The Project Cost Estimate and Financial Plan appears as Table 1. Table 2 lists AID and GOG contributions for budget design and construction. Table 3 summarizes GOG contributions totaling US\$ 784,400. Table 4 disaggregates AID costs by budget items.

D. Administrative Arrangements:

1. Management and Monitoring - The Government of Grenada counterpart agency for Project implementation will be the Ministry of Health. USAID/Grenada will assign a direct-hire U.S. employee as the Project Officer responsible for routine monitoring and supervision. The Project Officer will coordinate all contracting activities with the Regional Contracting Officer in the Regional Development Office, Caribbean/Barbados. All contractors for design, construction, technical assistance, and training will report directly to the USAID/Grenada Project Officer routinely and upon completion of all activities.

For all design and construction activities monitoring, an AID Engineer will provide support and assistance to the Project Officer. All construction plans will be subject to the final approval and recommendations of AID.

A periodic and/or final report will be submitted for all technical assistance and training activities with recommendations for any modifications to the technical assistance or training plans. All recommendations for modifications will be reviewed with the GOG and would be subject to AID and GOG mutual agreement.

2. Implementation Plan - Detailed Implementation Plans for procurement of design, construction, technical assistance and training, Project inputs are attached as Charts 1 and 2. The major implementation events and dates for design and construction activities are:

Project Agreement Signed	15 Jan 85
CP's Met	15 Feb 85
A&E Contract Signed	31 Jan 85
CBD Advertises for Construction	31 Mar 85
USAID Submits IFB to Prequalified Bidders	15 May 85
USAID Reviews Construction Bids and Selects Contractor	30 Jun 85
USAID Executes PIO/C for Procurement of Equipment and Supplies	30 Jan 86
Construction Completed	28 Oct 86

The major implementation events and dates for Technical Assistance and Training activities are:

<u>Technical Assistance</u>	<u>Beginning</u>	<u>Duration</u>
Psychiatrist	Feb 84	42 days
Psychiatric Supervisor	June 85	48 days
Psychiatric Nursing Educator	March 85	12 months
Social Worker	March 85	12 months
Psychiatric Therapeutic Activities Specialist	Nov 86	5 months
Medical Records Administrator	Oct 86	5 months
Pharmacy	June 85	10 weeks

Training

Mental Health Nurses	Mar 85	6 mths
Nursing Attendants	Nov 85	3.5 mths
Medical Records Officer	Sep 86	4 mths
Community Mental Health Workers	Sep 85	6 mths
Community Health Aides	June 85	16 weeks
Activities Therapy Specialist	Oct 86	5 mths
Hospital Administrator	Jan 85	12 mths

3. Procurement Plan - The Project will require the procurement of A&E services, technical assistance, training, construction and commodities (including pharmaceuticals and vehicles). All contracts will be AID direct contracts.

A&E Services - Design and construction supervision services are required for the two new mental health facilities. USAID will consider procurement of these services through the selection of an economically and socially disadvantaged firm under 8(a) procedures. The 8(a) company selected will be encouraged to subcontract some of the services to a Grenadian A&E company. The A&E company will prepare the construction specifications. The IFB and contract documents for hospital construction will be prepared by USAID/Grenada. The GOG and USAID will develop a list of hospital medical and office equipment to be procured.

Construction - The IFB for the construction work will be advertised in the U.S. and Grenada and be restricted to U.S. and Grenadian firms. Subcontracting with Grenadian firms will be encouraged.

Technical Assistance - Technical assistance is required for upgrading the capability of the Ministry of Health's mental health program personnel. U.S. universities are considered to be the most qualified organizations to provide this technical assistance. Therefore, technical proposals will be solicited from the university community to provide the bulk of the technical assistance. The contractor selected will also be responsible for providing the required formal training of hospital staff. Approximately 36.5 person-months of technical assistance will be procured from a university. Another 3 person-months of technical assistance will be obtained through PSC with two (2) Grenadian psychiatrists.

Commodities - The equipment necessary to outfit the mental hospital will be procured by USAID/Grenada. Pharmaceuticals will be procured utilizing the services of SER/Com, GSA and/or SER/CM in accordance with standard AID procurement procedures.

Vehicles - Two vehicles need to be purchased for this Project, a

15 passenger minibus which will be used to transport the mental health team to make regular clinic visits and a double cab/4 door transport van which will be used to move pharmaceuticals and other supplies from the MOH's medical stores to the new hospital facility. Approval is required to authorize (1) a source/origin waiver from Geographic Code 000 (U.S. only) to Geographic Code 935 (Special Free World) and (2) a waiver of the provisions of Section 636 (i) of the Foreign Assistance Act, as amended, to permit procurement of the two vehicles for the Project.

Waiver Justification - It is essential that the Grenada Mental Health Service staff has adequate mobility to perform the tasks required. The sum of US\$19,500 over the life of the project has been budgeted for the purchase of vehicles to provide this mobility. Limiting the procurement of the vehicles to U.S. source and origin raises three serious problems: (1) traffic in Grenada flows on the left-hand side of the road and due to the mountainous conditions and narrow roads, left-hand driving vehicles are considered unsafe, but right-hand driving vehicles are not available from the United States; (2) spare parts and proper maintenance service for U.S. vehicles are not readily available and are difficult to obtain in Grenada; and (3) because of poor road construction, particularly in rural areas, the lack of adequate maintenance capability for American-made vehicles could be a major impediment to project implementation.

In addition to the general source/origin limitations on the procurement of commodities cited above, Section 636 (i) of the Foreign Assistance Act prohibits the procurement of vehicles of non-U.S. manufacture. However, the provisions of Section 636 (i) may be waived when special circumstances permit it. Under supplement B to AID Handbook 1, Chapter 4, Section C2 (d), special circumstances are deemed to exist if there is (a) an "inability of U. S. manufacturers to provide a particular type of needed vehicle; e.g., light weight motorcycles, right-hand drive vehicles; or (b) "present or projected lack of adequate service facilities and supply of spare parts for U.S. manufactured vehicles."

there are

It has been determined that special circumstances that justify a waiver of Section 636 (i) of the Foreign Assistance Act. In addition it has been determined that exclusion of procurement from Free World countries other than Grenada and countries included in Code 941 would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program. Therefore, it is recommended that the Project authorization include a waiver for a motor vehicle source/origin waiver from AID Geographic Code 000 (U.S. only) to AID Geographic Code 935 (Special Free World) for two right-hand drive vehicles at an approximate cost of US\$19,500 to be utilized in Grenada under the proposed Project.

4. Evaluation Plan - The Project requires a single interim evaluation to be conducted during a period of approximately three weeks. The

scope of work for the evaluation activity will include:

- a. Assessment of the training and deployment of mental health nurses, community mental health workers, a medical records administrator, hospital manager and community health aides who work within the mental health services system;
- b. Examination of utilization of pharmaceuticals procured in the Project;
- c. Assessment of the utilization of the two new mental health facilities; and
- d. Overall assessment of the changes in the delivery of mental health services to the Grenadian population as a result of AID's assistance.

The evaluation team will measure to what degree the GOG complied with the covenants of the Project. The team will focus on management issues and human resources development. The evaluation will be conducted on the basis of field trips, interviews with personnel at various levels, administrative and technical reports, including PAHO, if applicable. The technical assistance required is expected to include three persons: A psychiatric nursing advisor (3 weeks), a pharmacist (2 weeks), and an engineer (1 week). Ideally, the psychiatric nursing advisor may be the same consultant from the U.S. Institute of Mental Health who participated as a member of the Project Paper design team. The interim evaluation is scheduled for April 1986.

IV. PROJECT ANALYSES SUMMARIES

A. Social Economic

The Social-Economic Analysis of the Project is attached as Annex F. The conclusion is that the Project design is socially sound for the following reasons: (1) the concept is based upon previous regional experience in mental health programs, (2) West Indians have had a major participatory role in project development, thus ensuring significant commitment of the GOG to implementation; (3) the facility designs have taken into account patient and community needs; and (4) the Project could have a significant spread effect as other island governments have the opportunity to observe the Project implementation and impact.

Trinidad and Tobago in 1975, launched a successful mental health program based on the principles of returning patients to the community as soon as possible, promotion of educational programs in communities, and integration of mental health care with general health care to the extent possible. Important leaders in psychiatry connected with the University of the West Indies conceived and developed that program. Some of the same individuals have taken an active role in the design of the proposed project. An evaluation of the Trinidad Program

noted the following broader lessons for designing similar programs:

- (1) Dehospitalization requires the provision of support facilities which should not be less costly than hospital care;
- (2) Dehospitalization should not proceed faster than the rate of provision of community care facilities;
- (3) A well run mental hospital is still the critical element of any community care program, although its size should be kept to a minimum;
- (4) Continuing public dialogue will be needed about the balance between individual rights and collective rights; and
- (5) Linkage (Health/Mental Health) is not achievable by the mere delivery of services side by side in the same Health Centers-- multi-purpose training at the primary care level is essential.

All the above mentioned "lessons" have been carefully considered during design of the proposed Project.

As mentioned, West Indians have taken a major interest in project development. In addition, the newly appointed Dean of Medical Science at the University of the West Indies, Trinidad Campus, has made a commitment to explore two options for ensuring the long term viability of the proposed Project: (1) Establishment of a Psychiatric Resident position in Grenada and one at the U.W.I. which will permit rotation of Psychiatric Residents to do a portion of their field training in Grenada; and (2) The possibility of field supervision of residents to be provided in Grenada by faculty traveling from Trinidad and Barbados on a bi-weekly basis. Both options will ensure continuation of changes introduced under the Technical Assistance component of the Project.

Building conceptual designs have taken into account a number of criteria related to patient needs, the needs of patient visitors, and the needs of the broader community. An important observation is that proper, timely, and sensitive notification of the location and use of the new residential facility should be given to local residents in order to minimize any misconceptions or undue concern regarding the facility and its residents. Also, replacement housing will be required for two medical officers who will be displaced as a result of construction of the 26-bed Acute Psychiatric Care Unit.

A profile of the direct beneficiaries of the Project, the patients, is difficult for a lack of properly maintained records, and lack of routine data collection measures. A comparison with the similar patient populations in St. Lucia and St. Vincent

suggests that 50 to 70 percent are chronic long-stay patients, approximately half of whom could go home if their families would have them. The other half of the chronic long-stay patients are so disabled, principally by severe schizophrenia, as to be unable to function without considerable supervision and protection. The remaining third of inpatients are relatively acute cases who enter and leave the hospital several times annually. Readmission were nearly four times the number of first admissions in 1983. The large number of readmissions suggests that many patients returned for lack of adequate community care alternatives, a critical need to be addressed in the proposed Project.

A number of indirect benefits of the Project are suggested: (1) To the extent that the presence of the hospital relieves relatives of mentally ill patients of the responsibility of physically caring for the disturbed, the relatives would be free to engage in productive activity; (2) The hospital would prevent patients from interfering with the economic pursuit of other citizens; (3) The economic benefits of patients involved in economic activities; and (4) The savings to society in terms of care, as a result of the cured patient returning to function normally in society.

In summary, the Project concept and preliminary building designs have taken into account major observations and experiences in mental health care in the West Indies. Some major issues mentioned in this analysis will not be resolved with any Project design -- no matter how thorough and careful -- the issues require continued vigilance. However, the region's important leaders in the field of psychiatry have contributed significantly to the proposed effort and will continue to have active roles in project implementation. Thus, there can be expected a strong incentive for lasting government commitment to project implementation consistent with the project design, a critical concern in determining the project's social soundness.

B. Technical

1. Findings

A Technical Analysis for Building Construction is included in Annex H. The principle findings of the Analysis are: the option to build a replacement facility at a separate location from the existing Richmond Hill Mental Hospital, the choice of the site on which to build the new facility, the design considerations, and the cost estimates are based on technically sound analyses. Moreover, the Project's design is consistent with the body of knowledge about possible solutions to the mental health care problem existing within the cognizant professional community. The only outstanding issue is the question of cost effectiveness. The modular unit design was selected as the best means of implementing the dehospitalization concept, a fundamental principle of the Project design. The design is more costly than a single unit. Whether the effectiveness of the

modular unit design will be as much greater relative to cost than the single unit design will be difficult to determine. Therefore, an A&E firm will be contracted to examine the existing concept against alternative designs, looking, to determine the least cost design means of achieving the Project's objectives.

2. General Considerations

The proposed Project design is based on the recommendations of a multidisciplinary team comprised of six consultants, including the most prominent mental hospital architect in the field. The Project design has three distinct areas of technical concern: (1) community mental health services delivery, along with technical assistance and training to improve health care; (2) pharmaceutical administration practices and requirements; and (3) design and construction of replacement mental health care and treatment plant. The first two areas are technically analyzed in Annexes F and L, respectively. The technical analysis in Annex H focuses on the third area of concern, building design and construction, the findings of which are briefly summarized below.

The code and standards used in formulation of the preliminary building concepts for the 80 bed Rehabilitation and Treatment Center and for the 26 bed Acute Psychiatric Care Unit are as follows: (1) Standards of the Accreditation Council for Psychiatric Facilities, of the Joint Commission on Accreditation of Hospitals; (2) Life Safety Code 101 of the National Fire Protection Association; and (3) Minimum Requirements for Construction and Equipment for Hospital and Medical Facilities, Department of Health, Education, and Welfare (Publication HRA 79-14500).

3. Site Consideration

Among the site locations, the first option considered was rebuilding on the existing premises of the Richmond Hill Mental Hospital. The option was rejected for the following reasons: (1) the present hospital is poorly designed for care of the mentally ill; (2) access to the General Hospital for laboratory and medical services is limited; (3) transport for visitors is difficult, further isolating patients; (4) water supply is inadequate, leading to highly unsanitary toilet and shower facilities; (5) parking is inadequate; and (6) renovation to meet even minimum standards of humane and sanitary care would be extremely costly, perhaps half the cost of erecting a new, more satisfactory facility. Of five alternative sites evaluated, the Mt. Gay Estates site was judged to be the most suitable.

4. Architectural Design Considerations

The Project design is actually a development plan including building units, types of required space, and a functional relationship of spaces. The design contains facilities for 106 patients; a 26 bed Acute Psychiatric Care Facility located on the General Hospital premises at St. George's and an 80 bed

Rehabilitation and Treatment Center at Mt. Gay. The total gross area for both locations is 38,314 sq. ft. The 80 bed facility consists of an arrangement of five separate units surrounding a grassy courtyard. The units include an Administration Building, a Kitchen/Maintenance building, and three double floor patient cottages (see diagrams in Annex I). The design also provides for all internal cabinets and builtin equipment, a standby generator, an access road, parking area, walkways, grass courtyards, drainage, fencing, and an outdoor athletic field for the patients. Preliminary costs of the design are shown in Table 4 pp 1-3. Implementation of the conceptual designs will require selection of an Architecture and Engineering firm to design and supervise construction at two sites and competitive selection of a construction contractor to construct the physical facilities cost effectively. The scope of work for the A&E contractor is found in Annex J.

C. Environmental Assessment

The environmental assessment of the project is attached as Annex G. An Environmental Assessment (EA) was conducted as an integral part of this project. The purpose of this analysis was to identify any significant adverse impacts that would occur as a result of the implementation of the proposed action, i.e., the construction of new 80-bed Treatment and Rehabilitation Center and a new 26-Bed Acute Care Psychiatric Unit. Recommendations for mitigation of all impacts were also formulated.

As part of this study an examination of several alternative locations for the 80-bed Treatment and Rehabilitation Center was also made. However, none of the examined locations provided significant or distinct advantages compared to the site preferred by the Government of Grenada at Mt. Gay Estates. It is thus recommended, from an environmental standpoint, that construction of the 80-bed facility take place at the Mt. Gay Estates location.

A number of potential environmental impacts were identified and measures for mitigation were drafted and are presented below. The most serious of these problems are associated with treatment and disposal of wastewater. Recommendations for design of proper collection and treatment using passive but effective technological methods are presented.

1. Recommendation for 80 Bed Treatment and Rehabilitation Center.

- a. Proper soil erosion control measures should be undertaken during construction of the facility to assure minimum loss of top soil. This should include rapid replanting of ground cover after site preparation.
- b. The wastewater drainage system designed for the facility should allow separate collection of grey water and black

water with proper disposal of grey water for irrigation and other similar uses.

- c. Black wastewater should be treated in a properly sized and installed septic system with construction of an adequate leach field (e.g., mound system) for effluents to assure that contaminated water does not reach ground or surface water resources.
- d. Regular periodic maintenance should be given the wastewater disposal and treatment system.
- e. Proper timely and sensitive notification of the construction and use of the new facility should be given to local residents in order to minimize misconceptions or undue concern regarding the facility and its residents.
- f. Study should be made of needed improvements to the single-lane bridge on the access road to the site. Any rehabilitation, or replacement if necessary, should be completed before opening of the new facility.
- g. Provision should be made for a safe bus stop opposite the bridge leading to the pedestrian entrance of the site on the St. George's-Grenville Road.
- h. Long-term consideration should be given to direct pedestrian access for patients to Queen's Park in order to avoid the unsafe route along the narrow and winding main road.

2. Recommendations for Acute Psychiatric Care Unit

- a. The wastewater drainage system designed for the facility should allow separate collection of grey water and black water with proper disposal of grey water for irrigation or directly into the Sea.
- b. Black water (i.e., toilet) should be drained into a properly sized septic tank installed on the hillside below the new facility. Periodic pumping (every 2-3 years) of this tank should be undertaken as a regular maintenance activity.
- c. Long-term planning should be conducted for complete collection and proper treatment of wastewater at the General Hospital complex. Consideration should be given to on-site treatment or tie-in to an upgraded municipal system.

Other impacts requiring mitigation are minor and revolve around concerns of local residents, road improvements and access and construction activities. In summary, implementation of the Proposed Action can be carried out in an environmentally sound manner if measures outlined in this study are incorporated into the development plans.

D. Administrative-Financial

The GOG estimates health expenditures to total EC\$13,372,000 or 11.8 percent of all government expenditures in 1984 (Table 10). Although health expenditures increased from \$11,137,000 in 1983, the Health Sector's total share of government expenditures continued to decline from a high of 15.43 percent in 1982 (Table ii). As a portion of total government expenditures, health actually was less in 1984 than in any year since 1978, at which time the health sector received 12.6 percent of all government budget resources.

Operating and maintenance costs of the facilities to be constructed under the proposed project (Table 9) are estimated at US\$366,000, per annum. Utilities and other related costs are not expected to increase significantly from the costs of operating the existing facilities; however, the addition of 28 new mental health services positions is expected to result in a net increase in direct personnel costs of EC\$ 179,200 (US\$ 66,660). The majority of the new positions are expected to be filled with personnel transferred within the MOH or from other ministries. However, even if all positions are recruited from outside the civil service, the increase in annual direct personnel costs would represent only a two percent increase in all MOH direct personnel costs and only a 1.3 percent increase in the total MOH operating budget.

The Ministry of Health provides health services virtually free to its patients. The patients are charged a "peppercorn" charge of EC\$ 1 (US\$.37) for each pharmaceutical prescription filled. This fee schedule has not changed since the 1960's. There are exceptions to this rule, including children under 14, adults over 60, and the indigent. The budget for pharmaceuticals in 1984 is EC\$ 750,000, which represents an increase of EC\$ 50,000 since 1983. Less than one percent (EC\$5,000) of the pharmaceutical budget is anticipated to be recovered in 1984 through drug fees to patients. All revenue collected by the MOH is forwarded directly to the central government treasury. In 1984, collections for services are expected to be less than in 1982.

St. George's Hospital has 18 private beds. Fees are collected for the use of these beds, however, cost recovery (revenue) is estimated to be only EC\$50,000 in 1984, or EC\$2,778 per private bed per year. A private room costs EC\$15 per day (US\$5.62) while a bed in a 10-bed partitioned private ward is EC\$10 per day (US\$3.75). This schedule of hospital charges (rates) was set in the 1960s and has not been changed even though the cost to government of providing national health services has increased 115 percent since 1978.

Taking into account current GOG expenditures on health, previous annual budgets for the sector, and recurrent cost estimates for existing facilities, the proposed project is well within the GOG's capacity to finance. The number of new personnel is significant, but is expected to have a minor impact on the overall MOH budget, particularly if the GOG fills the new positions using existing personnel in the MOH or from other ministries where possible. The GOG commitment to health services is evident in the generous policies toward user charges. However, if the system is to maintain physical plant investments, the GOG should re-examine user charges with an eye towards adjusting the charges to reflect increased ability of users to pay and higher health maintenance costs for the GOG.

V. CONDITIONS, COVENANTS, AND NEGOTIATING STATUS

A. Negotiating Status

USAID/Grenada has developed the Project in close cooperation with the Councilor for Health, the Permanent Secretary, the Chief Medical Officer, other officials of the Ministry of Health, and the Director of Planning. Detailed discussions of Project components, identification of issues, problems, and proposed solutions have taken place. In addition, the Project Development Team has benefited from consultations with two Grenadian psychiatrists internationally recognized in the field of Mental Health.

The substance of the Project, including the proposed terms and conditions of the Grant assistance have been discussed, and no difficulties are foreseen in concluding negotiations of the Project's grant agreement.

The following Conditions and Covenants will be included in the Project Grant Agreement:

B. Conditions Precedent to Disbursement

(1) First Disbursement

Prior to the first disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

(a) An opinion of counsel satisfactory to AID that the Agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms;

(b) A statement of the name of the person holding or acting in the office of the Grantee specified as a representative, and of any additional representatives, together with a specimen signature of each person specified in such statement.

(c) Evidence of adequate arrangements securing title to the land identified for building of the replacement facilities.

(2) Disbursement in Excess of \$100,000

Prior to any disbursement under the Grant, or to the issuance by AID of documentation pursuant to which disbursement will be made, in excess of US\$100,000, the Grantee shall appoint a Ministry of Health official, or other appropriate GOG official, as Project Administrator responsible for the execution and coordination of all Project activities.

C. Covenants

Except as AID may agree otherwise in writing, the GOG shall:

(1) Assign the requisite management and technical staff to adequately carry out the Project objectives at all levels;

(2) Make staff available for training in accordance with the training plan which is part of this Project;

(3) Establish and budget a full-time psychiatrist position in the MOH to serve the needs of the Treatment and Rehabilitation Center Acute Psychiatric Care Unit, and the community mental health services;

(4) Reduce the number of patients at the Richmond Hill Mental Hospital before site preparation begins and continue to discharge patients to be maintained in the community through the community health services until the number of inpatients at the Richmond Hill Mental Hospital is reduced to a level that can be maintained at the new Treatment and Rehabilitation Center;

(5) Establish and budget for additional positions in order to provide adequate inpatient services in both the Acute Psychiatric Care Unit and the Treatment and Rehabilitation Center, as well as outpatient services in the districts;

(6) Provide General Hospital patient services such as laundry, food, X-rays, laboratory, and pharmaceuticals adequate for the Acute Psychiatric Care Unit;

(7) Provide the budget necessary to finance the recurrent costs of the Acute Care and Treatment and Rehabilitation Facilities for the life of the Project.

Table 1
COST ESTIMATE AND FINANCIAL PLAN
 (US Dollars)

	<u>AID GRANT</u>		<u>TOTAL</u>	
	<u>Phase I</u>	<u>Phase II</u>	<u>AID</u>	<u>GOG</u>
1. <u>Design and Construction</u>				
1.1 Land and Utilities Hook-up	-	-	-	52,500
1.2 80 Bed Facility/Mt. Gay	-	1,239,000	1,239,000	-
1.3 26 Bed Facility/St. George's	-	522,390	522,390	-
1.4 A & E	265,000	176,450	441,450	-
SUB-TOTAL	265,000	1,937,840	2,202,840	52,500
2. <u>Technical Assistance</u>				
2.1 Long Term (24 p/m)	364,350	-	364,350	-
2.2 Short Term (15.5 p/m)	70,900	170,380	241,280	-
2.3 Caribbean Resource Pool	5,000	5,000	10,000	-
SUB-TOTAL	440,250	175,380	615,630	-
3. <u>Training</u>				
3.1 Hospital Management	20,320	-	20,320	-
3.2 Hospital and Field Staff	4,630	4,100	8,730	-
3.3 Audio Visual Aids	1,000	1,500	2,500	-
3.4 Other Training	5,000	5,000	10,000	-
SUB-TOTAL	30,950	10,600	41,550	-
4. <u>Commodities</u>				
4.1 Health Equipment	-	25,920	25,920	-
4.2 Facility Furniture & Equipment	-	195,550	195,550	-
4.3 Vehicles	10,000	9,500	19,500	-
4.4 Pharmaceuticals	48,000	52,800	100,800	-
4.5 Contingency (10%)	5,800	28,380	34,180	-
SUB-TOTAL	63,800	312,150	375,950	-
5. <u>Operations & Maintenance (2 yrs)</u>				
5.1 Personnel	-	-	-	513,250
5.2 Administrative Support (including Utilities)	-	-	-	195,600
5.3 Grounds Care & Building Maint.	-	-	-	9,000
5.4 Vehicle Maintenance & Operations	-	-	-	14,060
SUB-TOTAL	-	-	-	731,910
6. <u>Evaluation (30 p/d)</u>	-	26,100	26,100	-
GRAND TOTAL	800,000	2,462,070	3,262,070	784,410

Table 2

MENTAL HEALTH SERVICES PROJECT

USAID CONTRIBUTION	GOVERNMENT OF GRENADA CONTRIBUTION
I. 80 Bed Treatment and Rehabilitation Facility/Mt. Gay	I. 80 Bed Treatment and Rehabilitation Facility/Mt. Gay
Architectural and Engineering Design Site Preparation and Grading Construction (to withstand high velocity hurricane winds) Supervision of Construction Hook-up of Utilities, a) water b) electricity c) telephone Step-down Transformer Emergency Generator Building Materials Equipment/Supplies Initial Landscaping Wastewater Disposal System Water Storage Tanks Electrical/Lighting Installation (including outside lighting on stairsteps, etc.) Security Fence and Wall Gatehouse, Access steps (South entrance) Vehicles Walkways, Parking Area Pharmaceuticals	LAND Appropriate Staffing Provide utilities to Site a) water b) electric c) telephone Recurrent utility costs a) water b) electricity c) telephone d) cooking gas Access route to hospital from access road Ongoing maintenance of buildings and grounds Maintenance of Vehicles Vehicle Operating Costs (gasoline, oil, etc.)
II. For 26 Bed Acute Care and Substance Abuse Unit at Rathdune Site	II. For 26 Bed Acute Care and Substance Abuse Unit at Rathdune Site
Site Preparation at Rathdune for new facility Architectural and Engineering Design Construction Construction Supervision Hook-up of utilities a) water, b) electric c) telephone Building Materials Equipment, Supplies Electrical Installation Security (fence) Wastewater Disposal System Pharmaceuticals	Appropriate Staffing Tear Down Current Rathdune Structure Provide utilities to the Site a) water b) electricity c) telephone Recurrent utility costs a) Water, b) electricity c) telephone Ongoing maintenance of building Relocation of House Officers now resident at Rathdune
III. Community Mental Health Services	III. Community Mental Health Services
	Appropriate Staffing
IV. Other	IV. Other
Technical Assistance Training	

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TABLE 3

GOVERNMENT OF GRENADA CONTRIBUTIONFINANCIAL

<u>Source</u>	<u>Total EC\$</u>	<u>Year 1 EC\$</u>	<u>Year 2 EC\$</u>	<u>Total US\$</u>
<u>1. Construction Costs</u>				
1.1 Land at Mt. Gay	125,100	125,100		46,537
1.5 Rathdune demolition				
1.6 Relocation of house ofcra				
1.7 Hook-up of utilities	16,000	16,000		5,952
Subtotal	141,100	141,100		52,489
<u>3. Training</u>				
3.2 Hosp. & Field Staff				
<u>4. Operating & Maintenance Costs</u>				
4.1 Personnel	1,379,719	664,507	715,212	513,250
4.2 Adm Support Costs	525,804	252,387	273,417	195,597
4.3 Maint. Bldgs. & Grounds	24,200	11,000	13,200	9,002
4.4 Oper. & Maint. of Vehicles	37,800	18,000	19,800	14,061
Subtotal	1,967,523	945,894	1,021,629	731,910
<u>Grand Total</u>	<u>2,108,623</u>	<u>1,086,994</u>	<u>1,021,629</u>	<u>784,400</u>

ESTIMATED COST OF CONSTRUCTION

80 BED PSYCHIATRIC HOSPITAL

Site Work

Rough Grading of Site (includes road within 3 acre property only)	EC\$	15,000
Water Drainage System (600 lin. ft. x 25.00)		15,000
Fine Grading (5 days of work)		5,000
Planting of Grass (2 acres of grass)		7,000
Asphalt Paving of Road and Parking Areas (749 sw. yards at EC\$45.00)		33,705
Outdoor Concrete Walks and Stairs		43,981
Walks (4,320 sq. ft.)		40,000
Fence (7 ft. x 740 lin. ft. x 25.00)		18,500
Path (220 lin. ft., 5 cu. yds of gravel and 4 days labor)		350
Concrete Stairs at Cliff (estimated height at 60 ft.)		15,000

Mechanical Services

Electrical hook-up by Government of Grenada		---
Stand-by Electric Generator		75,000
Sewage Disposal System (estimated allowance, site conditions unknown at this time)		20,000
Water Supply (Government to bring water to site)		
Water Hook-up with 4 fire hydrants (550 lin. ft. of 2-inch water main)		13,750
Water Collection System		
2 - 600 gal. Storage Tanks		60,000
pump		2,000
feeder tanks		6,000
collection system		10,000
Fire Fighting System--16 fire extinguishers 8 reel hoses		2,000
Hot Water Heating (conventional system) (solar options, EC\$12,000)		2,150
Heating (none)		10,000
Telephone Services (4 lines, 10 extensions)		1,200

Construction

Foundations, contingency (unknown soil supporting conditions)		50,000
Administration Building "A" (enclosed building at EC\$160 per sq. ft.)		494,720
porch at \$50 per sq. ft.		16,200
Patient Cottage, Building "B" first floor construction		631,400
porch and stair roof		19,875
concrete stairs		2,500
concrete porch		2,000

Patient Cottage, Building "B" ground floor construction	664,000
Patient Cottage, Building "C" first floor construction	655,775
Patient Cottage, Building "C" ground floor construction	664,000
Patient Cottage, Building "D" first floor construction	698,560
porch and stair roof	7,250
stair	2,500
Patient Cottage, Building "D" ground floor construction	698,560
Kitchen and Maintenance, Building "E"	
Kitchen 380 sq. ft. at \$160 per sq. ft.	60,800
Dishwashing Area, 96 sq. ft. at \$160	15,360
Toilet and Janitor's Closet, 72 sq. ft. @\$160	11,520
Garbage Area, 72 sq. ft. at \$110.	7,920
Warehouse, 778 sq. ft. at \$110.	85,580
Office, 100 sq. ft. @ \$160.	16,000
Built-in Freezer	2,500
Cooler Storage	9,600
<u>Built-in Equipment</u>	
Ranges, as (4 units)	4,000
Base Cabinets with plastic lim. work surface	6,850
Wall-hung Cabinets	2,400
Shelving	600
Range Hood and Exhaust	1,500
<u>Estimated Total Building Cost</u>	<u>EC\$5,227,606</u>
	<u>US\$1,944,649</u>

26 BED ACUTE PSYCHIATRIC AND SUBSTANCE ABUSE FACILITY

Site Work

Rough Grading	EC\$	2,500
Water Drainage System (300 lin. ft.)		7,500
Fine Grading (2 days)		2,000
Planting Grass		500
Paving Asphalt for Road Entrance		10,000
Bridge Connection		5,000
Fence		5,000

Mechanical Services

Electrical Hook-up (by Government)	--
Water Supply Hook-up and 1 fire hydrant	3,000
Fire Fighting System, 4 fire extinguishers	500
2 hose reels	500
Water Heaters	2,000
Heating (none)	
Telephone Services (1 line, 4 extensions)	450

Construction

Foundations, contingency	EC\$ 30,000
Acute Admissions Unit, first floor construction	664,000
Substance Abuse Unit, first floor construction	664,000
Concrete Stairs	2,500
Terrace	1,250
Concrete Walk	1,000

Built-in Equipment

Base Cabinets with plastic lim. work surface	1,700
Wall-hung Cabinets	850

Estimated Total Building Cost

EC\$1,404,300

US\$ 522,394

TOTAL ESTIMATED COST FOR ALL BUILDING CONSTRUCTION

US\$2,467,043

10% Contingency Fund 246,704

5% Inflation per Year, 1½ years + 7.5% 185,029

Subtotal

US\$2,898,776Architects and Engineers Work

Site Survey with contours, Mt. Gay Site	EC\$ 3,500
St. George's Hospital Site	2,000

Soil testing, estimated 10 borings EC\$ 10,000

Architects and Engineers fees at 15% of construction costs includes Project Manager, Resident Engineer and Assistant Resident Engineer

EC\$1,171,195

EC\$1,186,695

US\$ 441,446

TOTAL ESTIMATED COST

US\$3,340,222

Table 4TECHNICAL ASSISTANCE

(Long Term)

<u>Psychiatric Nursing Educator (12 person months)</u>	<u>US\$</u>
Salary and Overhead	110,354
FICA (Govt. share)	3,876
Post Differential	5,518
COLA	1,890
Transportation to Post	3,200
Per Diem - Wash. D.C., enroute	414
Shipment of PE - Air	1,225
Shipment of HHE - Sea	5,000
Shipment of Car	1,500
Storage of HHE	3,000
Temporary Lodging Allowance	9,000
Leased Housing	18,000
Utilities	3,150
Educational Allowance	13,550
Consumerables	2,000
Misc. Costs (medical exam., tel. calls, etc.)	500
	<u>182,177</u>
Total	<u>182,177</u>
(Estimate based on family of (4) members. Man and wife and (2) children. The child goes to school at Post, the other goes away to school from Post.)	
<u>Psychiatric Social Worker (12 person months)</u>	<u>182,177</u>
(Same breakdown as above.)	
Long Term Technical Assistance Total	<u>\$364,354</u>

Table 4TECHNICAL ASSISTANCE

(Short Term)

<u>Psychiatrist</u> (42 person days)	<u>US\$</u>
Dr. Michael Beaubrun	
Honorarium (\$150 x 42 days)	6,300
Per Diem (\$130 x 70 days)	9,100
Travel (Trinidad/Grenada) 8 trips @ EC\$230=EC\$1840	685
Health Insurance, other direct costs	300
Contingency	<u>300</u>
Total	16,685
<u>Psychiatric Supervisor</u> (48 person days)	
Dr. George Mahy	
Honorarium (\$150 x 48 days)	7,200
Per Diem (\$130 x 96 days)	12,480
Travel (Barbados/Grenada) 2 days/month, 24 trips @ EC\$260=EC\$6,240	2,320
Health Insurance, other direct costs	300
Contingency	<u>300</u>
Total	22,600
<u>Psychiatric Therapeutic Activities Specialist</u> (5 person months)	
Salary and Overhead (110 days)	55,000
Post differential	2,750
FICA (Govt. portion)	1,966
International Airfare	1,000
Per Diem (156 days x \$130)	20,280
Direct Costs	375
Contingency	<u>300</u>
Total	81,671
<u>Medical Records Administrator</u> (5 person months)	
Same costs as above)	81,671
<u>Pharmacy Consultant</u> (10 person weeks)	
3 trips (2 weeks, 2 weeks, 6 weeks)	
Salary and Overhead (50 days)	25,000
Per Diem (\$130 x 76 days)	9,880
International Airfare (3 trips)	3,000
Direct Costs	375
Contingency	<u>400</u>
Total	38,655
Total Short Term Technical Assistance	<u>\$241,282</u>
Caribbean Resource Pool	10,000

TRAINING

	<u>US\$</u>
Mental Health Nurses (5)	
Books @ \$50/nurse	250.
Didactic Material	250.
	500
Attendants (58)	
Training Material @ \$50/person	2,900
Medical Records Officer (1)	
Forms, records, ledgers, etc.	4,000
Community Mental Health Workers (7)	
Didactic Material & books @ \$50/person	350
Community Health Aides (44)	
Training Material @ \$20/aide	880
Activity Therapeutic Specialist (1)	
Books & didactic material	100
Sub-Total	<u>8,730</u>
Audio-visual supplies (films, video tapes, slides)	<u>2,500</u>
Total	11,230
<u>Training Overseas</u>	
Hospital Administrator (9 months) assuming Sept. 85-May 86	
International Travel	2,000
Participant Training Cost	18,021
\$1700/mo. + 11% inflation/85 x 4 mos.	7,548
\$1887/mo. + 11% " /86 x 5 "	10,473
Contingency	300
Total	<u>20,321</u>
Other Training in U.S. or Caribbean Region	10,000
All Training Costs	\$41,551

Table 4EVALUATION TECHNICAL ASSISTANCE

<u>Psychiatric Nurse (3 weeks)</u>		<u>US\$</u>
Salary and Overhead (15 days)		7,500
Per Diem (\$130 x 24 days)		3,120
International Travel		1,000
Direct Costs		375
Contingency		<u>300</u>
	Total	12,295
 <u>Engineer (1 week)</u>		
Salary and Overhead (5 days)		2,500
Per Diem (\$130 x 9 days)		1,170
International Travel		1,000
Direct Costs		375
Contingency		<u>100</u>
	Total	5,145
 <u>Pharmacist (2 weeks)</u>		
Salary and Overhead (10 days)		5,000
Per Diem (\$130 x 16 days)		2,080
International Travel		1,000
Direct Costs		375
Contingency		<u>200</u>
	Total	8,655
	Total Evaluation and Technical Assistance	<u>\$26,095</u>

Table 5

Present StaffingPsychiatric Unit of St. George's Hospital
and Richmond Hill Mental Hospital plus OP Clinics

Job Category				Per Unit St. George's Hospital (N=5-7 Pts.)	Richmond Hill Mental Hospital (N=129 Pts.)	OP (2) and Clinics (7)
				FTEs	FTEs	FTEs
	Nurse Matron			.2	1.0	1.0
	Ward Sister			2.0	.8	.2
	Nursing Student			4.5	0	0
	Sr. Medical Officer	1		←-----→		
	Steward Pharmacist	1		←-----→		
	Social Worker	1		0	.8	.2
Gr B (N=8)	Nurse Attendant	M		0	4.0	0
	" "	F		0	4.0	0
	" "					
Gr A (N=11)	Nurse Attendant	M		0	5.0	0
	" "	F		0	5.0	1.0
Jr. (N=37)	Nurse Attendant	M		0	12.0	0
	" "	F		0	25.0	0
					(+ 2 temporaries)	
	Woodcutter			0	1.0	0
	Helpers			Provided	17.0	0
	Messenger/Driver			by	.8	.2
	Gateman			St. George's	1.0	0
	Seamstress			Hospital	1.0	0
	Clerical Officer				2.0	0

TABLE 6

Positions (Richmond Hill)

Present:

	Male	Female
Class B	4	4
Class A	5	6
Junior	12	22 (plus 2 temporary)
Total Staff	21	37
Patients	90	49 Total = 139
Staff : Patient Ratios	1 to 3.4	1 to 1.39

TABLE 7

Proposed Staffing of Attendants

Rathdune Site	Male	Female	Total	Mt. Gay	Male	Female	Total
Grade B (Sr.)	0	0	0	Grade B (Sr.)	4	4	8
Grade A (Mid-L)	3	3	6	Grade A (Mid-L)	2	2	4
Jr.	6	6	12	Jr.	14	14	28
Total Number			18	Total Number			40

Coverage - 2 wards

Coverage - 4 cottages

Full-time Complement of 58 Attendants

(Grades B, A and Junior)

TABLE 8

Proposed Staffing* for

Acute Psychiatric Unit, Substance Abuse Unit and

Mt. Gay Treatment and Rehabilitation Facility

Job Category			Acute Psychiatric Unit (N=20 Pts)		Substance Abuse Unit (N=4.6 Pts)		Mt. Gay Treatment and Rehabilitation Facility (80 Beds)				
			FTEs	FTEs	(Male Pts) Cottage #1	(Male Pts) Cottage #2	(Female Pts) Cottage #3	(Female Pts) Cottage #4	OP/Clinics		
Psychiatrist		1	.6		.4	0	0	0	0	0	
Senior Health Officer		1	--		--	.2	.2	.2	.2	.2	
Psych SW		1	.3		.1	.1	.1	.1	.1	.2	
Activities Therapist (OT)	1/	1	.2		0	.2	.2	.2	.2	0	
Nurse Matron		.5	.5		0	0	0	0	0	0	
Ward Sister		1	0		0	.2	.2	.2	.2	.2	
M H Nurse A.M.	1/	1	.6		.4	0	0	0	0	0	
M H Nurse P.M.	1/	1	.6		.4	0	0	0	0	0	
M H Nurse (1 A.M., 1 P.M.)	1/	3	0		0	.75	.75	.75	.75	0	
1 Relief/Float											
Gr B Nurse Attendant	M	4	0		0	2.0	2.0	0	0	0	
" " " "	F	4	0		0	0	0	2.0	2.0	0	
Gr A Nurse Attendant	M	5	3.0	←→		1.0	1.0	0	0	0	
" " " "	F	5	3.0	←→		0	0	1.0	1.0	0	
Jr Nurse Attendant	M	20	6.0	-----		7.0	7.0	0	0	0	
" " " "	F	20	6.0	-----		0	0	7.0	7.0	0	
Hospital Administrator		1	3/		3/						
Med Records Officers	1/	1	.5		.1	.25	.25	.25	.25	0	
Pharmacist		2	3/		3/	.1	.1	.1	.1	0	
Clerk Typist	1/	2	1.0	←→		.25	.25	.25	.25	0	
Food Service Supervisor	1/	1		←		.25	.25	.25	.25	0	
Maids		7	3/		3/						
Laundress		4	3/		3/	1.75	1.75	1.75	1.75	0	
Cooks		4	3/		3/	1.0	1.0	1.0	1.0	0	
Driver	1/	1	3/		3/	1.0	1.0	1.0	1.0	0	
Security Guards	1/	6	0		0	.2	.2	.2	.2	.2	
Carpenter	1/	1				1.5	1.5	1.5	1.5	0	
Electrician	1/	1									
250 persons		2									

*NOTE: To assure 24 hour/7 days per week coverage (including days off) with 2 attendant persons on duty for each shift for each ward, it requires: 8 Full-time Equivalent (FTEs) attendants for each ward. (This does not include staff for supervision.)

- 1/ Newly created posts.
- 2/ Redeployment of Attendant Staff to assure equitable distribution of female and male attendant staff for coverage of male and female wards.
- 3/ St. George's General Hospital will provide service for Acute Psychiatric Unit and Substance Abuse Unit.

Community Mental Health 1/
Workers

2/9

Table 9

MENTAL HEALTH SERVICES PROJECT

Estimated dollar value of GOG Contribution (EC\$)

<u>Staffing</u>		Estimated Salary	Est. Salary
<u>No. and Position</u>	<u>Status</u>	<u>1985</u>	<u>1986</u>
1 Psychiatrist		21,372	22,092
1 Sr. Health Officer		20,652	21,372
1 Psychiatric Social Worker		18,495	19,095
1 Hospital Administrator		17,976	18,576
1 Nurse Matron		17,315	17,715
1 Ward Sister		11,400	11,800
1 Medical Records Officer	New		11,000
1 Activities Therapist	New		12,000
5 Mental Health Nurses	New	37,500	39,100
2 Pharmacists		24,000	24,720
4 Grade B Attendants (M)		30,768	31,872
4 Grade B Attendants (F)		30,768	31,872
5 Grade A " (M)		33,180	34,560
5 Grade A " (F)		33,180	34,560
20 Junior Attendants (M)		102,000	107,520
20 Junior Attendants (F)		102,000	107,520
2 Clerk Typists	New	14,472	15,012
1 Food Service Supervisor	New	9,204	9,480
4 Cooks		13,536	14,064
7 Maids		23,688	24,612
4 Laundresses		13,536	14,064
1 Driver	New	4,200	4,340
6 Security Guards	New	20,304	21,906
7 Community Mental Health Workers	New	28,000	29,400
1 Carpenter	New	13,200	13,200
1 Electrician	New	15,840	15,840
2 yard persons	New	7,920	7,920
		US\$ 664,506	US\$ 715,212
		247,194	266,056

A. 80 Bed Treatment and Rehabilitation Facility

1. Cost of bringing utilities to the site: Costs are all in EC\$.

water 3,500
 electricity 3,500
 telephone 3,000

2. Recurrent utility costs (estimated for year)

water \$14,000
 electricity 12,000
 telephone 8,000
 cooking gas 12,000
 sewerage -0-

3. Ongoing maintenance of Buildings and Grounds 8,000

4. Vehicle Maintenance (repairs, tires, etc.) 8,000

5. Vehicle Operating Costs (Insurance, gas, oil, servicing) 10,000

B. 26 Bed Acute Care Facility at General Hospital & Substance Abuse Center

1. Cost of bringing utilities to site

water 2,000
 electricity 2,000
 telephone 2,000

2. Recurrent utility costs (estimated for year)

water 8,000
 electricity 6,000
 telephone 3,000
 sewerage -0-

3. Maintenance of building 3,000

4. Relocation of House Officers resident at Rathdune

5. Pharmaceuticals

Mental Health Services Project

Costs are all in EC\$

Page 3

4. Value of land at Mt. Gay facility EC\$125,100 (see note below)
5. Access route to hospital from access road (Mt. Gay) _____
6. Tear down current Rathdune Structure _____
7. Relocate house officers now resident at Rathdune _____
-

Note: Land at Mt. Gay

GOG is purchasing 8.75 acres at Mt. Gay at EC\$15,000 per acre. A \$50,000 down payment was made on July 14, 1984. The second payment of \$50,000 is due October 14, 1984 and the final payment in the amount of \$25,100 will be due on January 14, 1985.

GOG has a three-year option from July 14, 1984 to purchase the remaining 10.75 acres of this 18 acre parcel at the same price of EC\$15,000 per acre.

Table 10

MINISTRY OF HEALTH 1984 OPERATING BUDGET

(EC\$)

<u>Program</u>	<u>Program Budget</u>	<u>% MOH Budget</u>	<u>Direct Personnel Costs ^{1/}</u>		<u>No. ^{2/} Positions</u>	<u>% of All Positions</u>
			<u>Amount</u>	<u>% of Program Budget</u>		
1. Administration	1,822,100	14	512,100	28	56	4.6
2. Hospital Services	7,320,600	55	5,179,700	70	848	69.0
(a) General Hosp.	(4,830,700)	36	(3,578,000)	74	(618)	50.0
(b) Richmond Hill Institution	(1,736,200)	13	(1,169,600)	67	(169)	14.0
(c) Princess Alice Hospital	(530,000)	4	(309,900)	58	(40)	3.3
(d) Princess Royal Hospital	(223,700)	2	(122,200)	55	(21)	1.7
3. Community Health Services	2,015,000	15	1,520,200	75	195	16.0
4. Environmental Health	1,813,200	14	1,460,400	80	115	9.4
5. Insect Vector Control Unit	304,000	2	215,000	71	8	.6
6. Rabies Rodent Control Unit	99,100	1	68,300	69	1	.08
TOTAL	13,372,000		8,955,700	67	1,223	

^{1/} Includes "General Labor" (non-salaried, day workers)

^{2/} Excludes "General Labor"

Table 11

HEALTH CARE SPENDING:

MOH SHARE OF GOVERNMENT EXPENDITURE

<u>Year</u>	<u>Total Government Expenditure (EC\$ '000)</u>	<u>Ministry of Health Expenditure (EC\$ '000)</u>	<u>Health Expenditure as % of Total Government Expenditure</u>
1978	49.4	6.214	12.58
1979	53.902	7.650	14.19
1980	59.564	8.602	14.44
1981	63.831	9.835	15.41
1982	63.332	9.771	15.43
1983	79.810	11.137	13.95
1984	113.050	13.372	11.83

- Source:
- (1) Report on the National Economy for 1981 and the prospects for 1982.
 - (2) Report on the National Economy for 1982 and the Budget Plan for 1983 and beyond, February 24, 1983.
 - (3) National Budget Estimates for 1984.

26TH JUNE, 1984

Mr. Ralph Oglivie,
Mt. Gay,
ST. GEORGE'S.

Dear Sir,

MT. GAY HOSPITAL COMPLEX

Please refer to my earlier letters of 13th and 25th June, 1984 addressed to you.

As a follow-up to the meeting held at this Ministry on the afternoon of Wednesday 27 June, 1984 by Mr. Ray Smith, Member responsible for Health and Telecommunications, yourself and the Permanent Secretary to discuss the purchase of 18.75 acres of land at Mt. Gay for siting of the hospital complex I hereunder list the points on which agreement was reached between yourself and Mr. Smith:-

- (1) The Government of Grenada will purchase from you approximately 8 acres of land from the escarpment to the access road at the rate of EC\$15,000 per acre said land being bounded on the West and South by Crown lands and Kirpalani's Ltd., on the East by Mt. Gay Estate and on the North by the access road.
- (2) The Government of Grenada will hold a future option to purchase the remaining 10.75 acres at a price to be agreed. A price of EC\$15,000 per acre is offered for consideration.
- (3) It is the intention of both parties that the conveyance relating to the purchase of the 8 acres referred to at (1) be signed by 14 July, 1984.

I trust that the above accurately reflects the substance of yesterday's meeting.

Yours faithfully,

JE:yb
cc. Attorney-General ✓

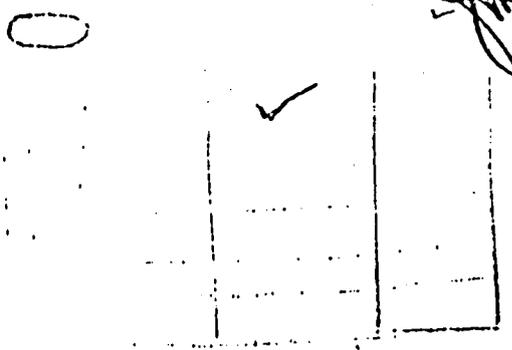
PERMANENT SECRETARY



OFFICE OF THE CHAIRMAN
P.O. Box 315
St. George's
GRENADA, West Indies

November 15, 1984

Mr. James W. Habron
AID Representative
USAID
P.O. Box 445
ST. GEORGE'S.



Dear Mr. Habron,

Grenada Mental Health Services Project

As you are aware, on October 25, 1983, one wing of the Richmond Hill Mental Hospital was accidentally destroyed by US forces who had no means of distinguishing gunfire from this structure from that coming from the adjacent fort. The destroyed wing contained the Mental Hospital infirmary of approximately 80 beds. USAID provided emergency assistance for immediate repairs. Then, in June of this year USAID funded a multi-disciplinary team to collaborate with Ministry of Health officials in the design of a project which would address the requirements, not only of replacing the destroyed facilities, but also the broader needs of Grenada's mental health services delivery system.

The Project development team has prepared a three-component effort involving (1) replacement of treatment facilities and staff development; (2) improvement of community mental health services; and (3) pharmaceutical procurement and training.

I understand that the preliminary Project-design includes the construction of two treatment facilities: a 26-bed Acute Psychiatric Care Unit at General Hospital and an 80-bed residential Treatment and Rehabilitation Centre, including all equipment and supplies required for operating the new facilities. I also understand that preliminary cost estimates must be evaluated to ascertain that the design represents the optional least cost means of effectively addressing Grenada's mental health care and treatment needs.

12.
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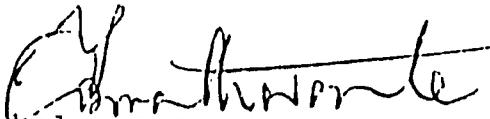
2.

Mr. James W. Habron

Because of the critical importance of this Project, I hereby request on behalf of the Government of Grenada a grant of approximately US \$4 million which would be made available in two phases. Under Phase I, US \$800,000 would be made available for engineering and design services as well as for initial technical assistance and training needs. With the second phase, the remainder of funds required for constructing and equipping the two proposed facilities and for technical assistance and training would be made available based upon the design and cost estimate developed under Phase I.

I look forward to an early initiation and completion of this project.

Sincerely,



Nicholas A Brathwaite
CHAIRMAN,
ADVISORY COUNCIL OF GRENADA.

CC: Dr. Allan Kirton

UNCLASSIFIED
Department of State

OUTGOING
TELEGRAM

ANNEX C
page 1 of 3

PAGE 01 OF 02 STATE 131945
ORIGIN A10-00

4810 027505 A103436

STATE 131945
PREFERENCE AS SOON AS POSSIBLE.

4810 027505 A103436

ORIGIN OFFICE LADR-03
INFO AALA-01 LADP-04 PPCE-01 PUPR-01 PPPB-02 GC-01 GCLA-03
GCF, 71 C-02 CALI-02 CMGT-02 CPS-02 CTR-02 PASA-02
RELO-01 MACT-01 LACP-03 /034 A4 305

INFO OCT-00 EB-00 ARA-00 L-03 /811 R

DRAFTED BY AID/LAC/DR: MJUNE: ATB: 0418M
APPROVED BY AID/A-AA/LAC: MDEROWN
AID/LAC/CAR: JHOLTAVAY (DRAFT)
AID/LAC/DR: VSTICKEL/PFEENEY (DRAFT)
AID/LAC/DR: RHACDONALD (DRAFT)
AID/LAC/DR: SESHITH (DRAFT)
AID/LAC/DR: DBJOHNSON
AID/CC/LAC: RHEIGHAN (DRAFT)
AID/LAC/OP: DERBE (DRAFT)
AID/PFC/OPR: VMCVIKERS (DRAFT)

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E.O. 12356: N/A
TAGS: N/A
SUBJECT: RELIEF AND RECONSTRUCTION PROJECT NO. 543-0010

1. IN RECOGNITION OF USAID'S HEAVY WORKLOAD AND LIMITED NUMBER OF PERSONNEL, A PID EQUIVALENT FOR THE SUBJECT WAS COMPILED IN AID/W AND REVIEWED BY DAEC ON APRIL 25, 1984. THE PID EQUIVALENT COMPRISED A SUMMARY OF THE PROJECT, AN EXCERPT FROM KOTVEDT'S 12/31/83 MEMO ON GRENADA TELECOMMUNICATIONS, PRELIMINARY COST ESTIMATES ON GRENADA RADIO PROJECT BY KERSHNER AND WRIGHT DATED FEBRUARY 1984, AND THE 11/23/83 MENTAL HEALTH SYSTEM REPORT BY JANICE STEVENS. COPIES OF THE PID EQUIVALENT ARE BEING SENT UNDER SEPARATE COVER. THE PURPOSE IN REVIEWING THIS INFORMATION WAS TO PROVIDE GUIDANCE FOR THE FINALIZATION OF PROJECT DESIGN, DEVELOPMENT AND AUTHORIZATION.

2. THE FIVE COMPONENTS OF THE PROJECT, DISCUSSED BELOW, WILL BE APPROVED SEPARATELY. AID/W WILL PROCESS THE AUTHORIZATION DOCUMENTATION FOR BOTH THE PLESSEY-METEX AIRPORT EQUIPMENT LOSSES AND THE PRIVATE CLAIMS COMPONENTS. FOR AUTHORIZATION OF THE RADIO STATION AND TELEPHONE EXCHANGE COMPONENTS, THE MISSION SHOULD PREPARE

FOR EACH AN ACTION MEMORANDUM WHICH PROVIDES DETAILED COST ESTIMATES, TECHNICAL DATA AND OTHER DESCRIPTIVE INFORMATION OR ATTACHMENTS, AS PERTINENT TO APPROVAL FOR THAT ACTIVITY. BECAUSE OF THE ACCELERATED SCHEDULES REQUIRED FOR THESE TWO ACTIVITIES, THE ACTION MEMORANDUM SHOULD BE PREPARED AS SOON AS POSSIBLE. THE ABBREVIATED P/P FOR THE MENTAL HEALTH SERVICES COMPONENT SHOULD ALSO BE PREPARED BY MISSION.

THE DAEC NOTED THE DEMAND ON RDO/C STAFF TIME THAT REVIEW AND APPROVAL OF THESE PROJECT COMPONENTS WOULD ENTAIL. SHOULD RDO/C DETERMINE THAT IT DOES NOT HAVE THE STAFF RESOURCES TO DEVOTE TO PROJECT REVIEW AND AUTHORIZATION ANOTHER OPTION WOULD BE TO REVIEW ANY OR ALL OF THESE COMPONENTS IN AID/W. RDO/C AND USAID/GRENADA ARE URGED TO CONSIDER THESE ALTERNATIVES AND ADVISE AID/W OF THEIR

3. CONSIDERATIONS IN THE DESIGN AND DEVELOPMENT OF EACH PROJECT COMPONENT ARE AS FOLLOWS:

A. RADIO STATION. AS SOON AS THE SITE FOR A PERMANENT RADIO STATION HAS BEEN SELECTED AND APPROVED BY THE GOG, THE BROADCAST FREQUENCY IDENTIFIED, A DETERMINATION MADE THAT THE GOVERNMENT HAS APPROPRIATE LAND USE RIGHTS FOR THE SITE, NECESSARY DATA SUCH AS COORDINATES AND HEIGHT OF LOCATION CAN BE DETERMINED. AN IOC (TELECONSULT) HAS BEEN IDENTIFIED WHO WILL PROVIDE TDY ASSISTANCE OF A COMMUNICATIONS ENGINEER IN THE DEVELOPMENT OF SPECIFICATIONS FOR A PERMANENT 20 KW STATION, INCLUDING A BUILDING, TRANSMITTER, ANTENNA, TOWER ABLE TO WITHSTAND WINDS UP TO 200 MPH, STANDBY GENERATOR AND STUDIO TRANSMISSION LINK. IT IS ANTICIPATED THAT THE IOC ASSISTANCE WILL COVER A ONE-WEEK TDY IN GRENADA FOLLOWED BY A WEEK HERE TO DEVELOP THE IFB. AS THERE ARE ONLY TWO U.S. COMPANIES WHICH MANUFACTURE THESE COMPLETE RADIO STATION PACKAGES, AN INFORMAL BIDDING PROCESS MAY BE USED, ALTHOUGH THE ACTIVITY MUST STILL BE ADVERTISED.

PROJECT PAPER ANALYSES WILL NOT BE REQUIRED FOR THIS ACTIVITY, BUT DETAILED COST ESTIMATES PLUS TECHNICAL INFORMATION DEVELOPED BY TELECONSULT AND EVIDENCE THAT THE GOG HAS ACCESS TO CHOSEN SITE SHOULD BE SUBMITTED TO

AID/W FOR REVIEW AND APPROVAL. THE TARGET DATE FOR INSTALLATION OF THE STATION IS AUGUST 1.

B. WESTERHALL TELEPHONE EXCHANGE. A PERMANENT EXCHANGE FACILITY WILL NEED TO BE INSTALLED AT WESTERHALL SINCE IT WILL COST LESS AND WILL PROVIDE LOWER COST EXPANSION CAPABILITY. THE EXCHANGE BUILDING WHICH WAS DAMAGED DURING THE RESCUE MISSION MAY BE ADEQUATE FOR THIS PURPOSE WITH PROPER REPAIRS MADE TO THE STRUCTURE. A TRAILERIZED EXCHANGE UNIT, SUCH AS THE ONE NOW IN USE AT WESTERHALL, MAY NOT SATISFY THE REQUIREMENTS.

AID/W IS PREPARING A SCOPE OF WORK FOR TELECONSULT UNDER SAME IOC AS DESCRIBED ABOVE TO PROVIDE A TELECOMMUNICATIONS ENGINEER TO HELP THE MISSION DEVELOP AN IFB FOR COMPETITIVE BIDDING. EXCLUDED FROM THIS SCOPE, BUT REQUIRED BEFORE WE CAN PROCEED TO FINAL APPROVAL OF THIS SEGMENT, IS A DETERMINATION WHETHER AND AT WHAT COST THE DAMAGED BUILDING CAN BE REPAIRED AND AIR CONDITIONING INSTALLED. WE EXPECT MISSION CAN UNDERTAKE THIS ANALYSIS AND OBTAIN LOCAL COST ESTIMATES. A ONE-WEEK TDY TO GRENADA FOLLOWED BY A WEEK HERE TO FINALIZE THE IFB IS BEING REQUESTED WITH TELECONSULT.

PROJECT PAPER ANALYSES WILL NOT BE REQUIRED FOR THIS ACTIVITY, HOWEVER, DETAILED COST ESTIMATES AND APPROPRIATE TECHNICAL INFORMATION PROVIDED BY TELECONSULT SHOULD BE SUBMITTED TO AID/W FOR REVIEW AND APPROVAL.

C. MENTAL HOSPITAL. BEFORE A HOSPITAL FACILITY TO REPLACE THE ONE DAMAGED AT RICHMOND HILL CAN BE DESIGNED, THE SELECTION OF A NEW SITE APPROVED BY THE GOG WILL BE NECESSARY, AND THE APPROPRIATE LEGAL ACTIONS TAKEN TO ACQUIRE THE LAND WHERE THE HOSPITAL WILL BE BUILT. AT THIS TIME THE AVAILABILITY OF A ROSSA (PUBLIC HEALTH SERVICE) TEAM IS BEING DETERMINED TO ASSIST THE MISSION IN THE DESIGN AND DEVELOPMENT OF THIS ACTIVITY, FOR WHICH AN ABBREVIATED PROJECT PAPER WILL BE REQUIRED. THE ABBREVIATED PP SHOULD INCORPORATE THE FINDINGS AND RECOMMENDATIONS OF THE TEAM AND SHOULD ADDRESS THE NEEDS OF RESTORING OR ESTABLISHING THE CAPABILITY OF SATISFYING COMPLETE MENTAL HEALTH CARE SERVICES (HOSPITAL BUILDING,

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Department of State

OUTGOING ANNEX C
TELEGRAM page 2 of 3

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EQUIPMENT, PERSONNEL AND TRAINING NECESSARY. WHILE IT IS RECOGNIZED THAT THE DOLS ONE MILLION BUDGETED FOR REPLACEMENT OF THE RICHMOND HILL FACILITY MAY NOT BE ADEQUATE TO FINANCE ALL THESE ELEMENTS, IT ALSO APPEARS

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IMPOSE ON THE MISSION. AID/W STAFFS READY TO MODIFY OR INCREASE PROPOSED ASSISTANCE UPON ADVICE OF MISSION. PLEASE ADVISE ESPECIALLY RE NEEDED FOR TOY SUPPORT BY PROJECT DEVELOPMENT OFFICER OR ENGINEER.

EVIDENT THAT ADDITIONAL ASSISTANCE MAY BE REQUIRED TO UPGRADE GRENADA'S MENTAL HEALTH SERVICES AND THE PP DEVELOPMENT TEAM SHALL TAKE A COMPREHENSIVE LOOK AT THE NEEDS FOR IMPROVED MENTAL HEALTH SERVICES. DEPENDING ON THE TEAM'S FINDINGS, THE MISSION MAY WANT TO CONSIDER FINANCING SUCH ASSISTANCE UNDER ITS 0011 HEALTH PROJECT AND THROUGH AVAILABLE REGIONAL TRAINING PROGRAMS.

7. AID/W WILL LIKEWISE HANDLE PROCESSING OF AUTHORIZATION DOCUMENTS AND ANY PROCUREMENT ADVERTISING THAT IS REQUIRED. SHULTZ

THE PROPOSED TEAM WILL INCLUDE EXPERTISE IN HOSPITAL PLANNING/ARCHITECTURE, AND PSYCHIATRIC SERVICES. SCOPES OF WORK FOLLOW SEPTEL. DETAILED COST ESTIMATES WILL BE DEVELOPED FOR ALL ACTIVITIES, AND SPECIFICATIONS FOR HOSPITAL CONSTRUCTION AND APPROPRIATE EQUIPMENT PROVIDED. WHILE MUCH OF THE CONSTRUCTION COSTS WILL PROBABLY BE LOCAL CURRENCY FINANCED, THERE MAY BE U.S. SOURCE INTEREST IN CONSTRUCTION MANAGEMENT AND PROCUREMENT OF EQUIPMENT SO THE ACTIVITY WILL BE ADVERTISED BOTH LOCALLY AND IN THE U.S.

IN TERMS OF PROJECT ANALYSES, THE PP SHOULD FOCUS ON TECHNICAL, INSTITUTIONAL AND FINANCIAL EVALUATION, AND SHOULD INCLUDE DRAFT BIDDING DOCUMENTS TO ASSURE PROMPT CONTRACTING.

D. POINT SALINES AIRPORT PROJECT LOSSES. THE COST ESTIMATES FOR REPLACING AIRPORT EQUIPMENT THAT WAS DAMAGED OR LOST DURING THE RESCUE MISSION ARE BEING NEGOTIATED WITH PLESSEY, METEX AND THE GOC. THIS ACTIVITY OF THE SUBJECT PROJECT IS IN THE FINAL STAGE OF COMPLETION AS REPLACEMENT OF THE EQUIPMENT IS ESSENTIAL TO CARRYING OUT THE AIRPORT PROJECT AND MEETING THE OCTOBER DEADLINE FOR INITIATING FLIGHT OPERATIONS. FUNDS FOR THIS WERE AUTHORIZED APRIL 27 TOGETHER WITH THE DOLS 19.8 MILLION FOR AIRPORT COMPLETION, AS ADVISED SEPTEL.

E. PRIVATE CLAIMS. THE PROCESSING OF CLAIMS FOR DAMAGE TO PRIVATE AND COMMERCIAL PROPERTY WILL BE CARRIED OUT BY THE U.S. ARMY CLAIMS SERVICE ON CONTRACT (PASA) TO A. I. D. THE PASA CONTRACT COST IS ESTIMATED AT DOLS 200,000 WHICH WILL BE FINANCED FROM THE DOLS 1.8 MILLION BUDGETED FOR THIS COMPONENT. THE CLAIMS SERVICE HAS SUBMITTED TO A. I. D. A PROPOSAL FOR THE EVALUATION AND APPROVAL OF REIMBURSEMENT REQUESTS, COPIES OF WHICH WERE DELIVERED TO THE MISSION. MISSION VIEWS ON DISBURSEMENT AND CERTIFICATION PROCEDURES, PARTICIPATION WITH REGARD TO RESPECTIVE A. I. D. AND DOD ROLES ARE ENCOURAGED.

4. THE TOTAL ESTIMATED BUDGET FOR THIS PROJECT IS AS FOLLOWS IN DOLS THOUSANDS:

--RADIO STATION	800
--TELEPHONE EXCHANGE	350
--MENTAL HOSPITAL CONSTRUCTION	800
--MENTAL HOSPITAL EQUIPMENT	150
--PLESSEY EQUIPMENT	1,600
--METEX EQUIPMENT	500
--PRIVATE CLAIMS	1,800
-- TOTAL	6,800

5. A LETTER FROM THE GOVERNMENT REQUESTING THIS ASSISTANCE SHOULD BE SUBMITTED AS A CONDITION OF AUTHORIZATION.

6. THE ABOVE TOY ASSISTANCE IS PROPOSED IN VIEW OF THE STAFFING BURDEN THAT DEVELOPMENT OF THIS PROJECT WILL

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GRENADA MENTAL HOSPITAL

NIMH TEAM PARTICIPANTS

- 1) Charles Wilkinson, M.D., psychiatrist and team leader
- 2) Clyde Dorsett, architect/facilities planner
- 3) Alvira Brands, D.N.Sc., psychiatric nurse
- 4) Peggy E. Hayes, Phm.D., pharmacist
- 5) William Novak, environmental planner
- 6) Paula Feeney, AID/W, LAC/DR

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance Funds, B.2. applies to projects funded with Development Assistance loans, and B.3. applies to projects funded from ESP.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees 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 amount)?

A Congressional Notification has been forwarded to Congress for the Phase I obligation.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,00, will there be

Obligations in the Phase I will permit development of appropriate plans and cost estimates.

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(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

- 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 legislative action required.

- 4. FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.) N/A

- 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 and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project? Yes

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. No.
7. FAA Sec. 601(a). 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; and (c) encourage development and use of cooperatives, and 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. N/A
8. FAA Sec. 601(b). Information and conclusions 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). Except where justified, US source goods and services will be used in the Project.

- 9. FAA Sec. 612(b), 636(h);
FY 1982 Appropriation
Act Sec. 507. 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
in lieu of dollars.

The Host Country is contri-
buting staff, recurrent costs,
land, and other resources in
support of this Project.

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

No.

- 11. FAA Sec. 601(e). Will
the project utilize
competitive selection
procedures for the
awarding of contracts,
except where applicable
procurement rules allow
otherwise?

Yes.

- 12. FY 1982 Appropriation Act
Sec. 521. If assistance
is for the production of
any commodity for export,
is the commodity likely
to be in surplus on world
markets at the time the
resulting productive
capacity becomes
operative, and is such
assistance likely to
cause substantial injury
to U.S. producers of the
same, similar or
competing commodity?

N/A

- 13. FAA 118(c) and (d).
Does the project comply
with the environmental
procedures set forth in
AID Regulation 16? Does

Yes.

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the project or program take into consideration the problem of the destruction of tropical forests?

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? N/A

B.. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria N/A

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (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; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

N/A

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

N/A

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e. 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, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

N/A

f. FAA Sec. 122(b). 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?

N/A

g. FAA Sec. 281(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

N/A

institutional development;
and supports civil
education and training in
skills required for
effective participation in
governmental processes
essential to self-government.

2. Development Assistance Project
Criteria (Loans Only)

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest. N/A
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, 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
- c. ISDCA of 1981, Sec. 724 (c) and (d). If for Nicaragua, does the loan agreement require that the funds be used to the maximum extent possible for the private sector? Does the project provide for monitoring under FAA Sec. 624(g)? N/A

3. Economic Support Fund
Project Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic or political Yes.

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stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities? No.

- c. FAA Sec. 534. Will ESP funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? No.

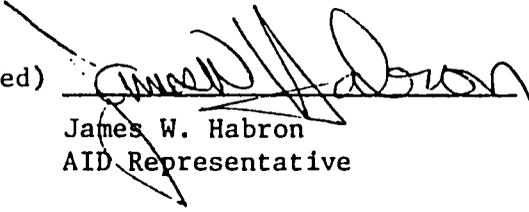
- d. FAA Sec. 509. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

CERTIFICATION PURSUANT TO SECTION 611 (E) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, James W. Habron, as AID Representative of the United States Agency for International Development Mission to Grenada having taken into account, among other things, the maintenance and utilization of projects in the Caribbean region previously financed or assisted by the United States, do hereby certify that in my judgement Grenada has both the financial capacity and human resources capability to effectively utilize and maintain goods and services procured under the proposed capital assistance grant project entitled Grenada Mental Health Services.

This judgement is based upon the implementation record of externally financed projects including AID-financed projects, in Grenada, the commitments from the Government of Grenada, and the quality of the planning which has gone into this new project.

(Signed)


James W. Habron
AID Representative

(Date) _____

SOCIAL-ECONOMIC ANALYSIS

1. Socio-Cultural Context

Mental illness ranks number five in order of importance in the top ten health problems in Grenada. The prevalence of the problem notwithstanding, mental health, is not an area of concern normally addressed in AID programs. AID's involvement in the proposed project is the result of the United States Government's commitment to compensate for an accidental bombing of the existing facility, Richmond Hill Mental Hospital, on October 25, 1983. The project's purpose then, is not to achieve quantifiable economic development objectives such as raising income levels, but rather, to provide an appropriate replacement facility which will allow for humane treatment of mentally ill members of the community. As designed, the project will both contribute to the Government of Grenada's ability to provide improved health services to individuals and provide protection for citizens.

2. Socio-Cultural Feasibility

(a) Social Soundness of the Project Concept - The Project concept actually represents years of psychiatric study and program development in the West Indies. From a range of proposals based on earlier experience and submitted to the 5th Caribbean Health Ministers Conference at Roseau, Dominica in 1973, a resolution was adopted that urged Governments, in collaboration with the University of the West Indies, to develop Comprehensive Community Mental Health Programs integrated with General Health Care. Among other items, the resolution recommended the provision of psychiatric units at major general hospitals and special attention to alcoholism and drug dependence.

In June 1975 Trinidad and Tobago launched a program of Sectorized Comprehensive Community Care which closely approximated the goals of the Roseau resolution, including the following elements: (1) the provision of psychiatric care as near as possible to the patient's own home and wherever possible through the existing health facilities; (2) upgrading the facilities of the Mental Hospital--reducing its size and returning to the community as many of the patients as possible; (3) promotion of educational programs in communities; and (4) the integration of mental health care with general health care as much as possible.

The "sectorization" plan divided Trinidad and Tobago into five catchment areas of approximately 200,000 persons each. Responsible for each sector was a multi-disciplinary team (Social Worker, Nurses, Occupational Therapists, etc) headed by a consultant Psychiatrist. Thus the program approximated a viable approach for a population the size of Grenada. A study conducted jointly by the World Health Organization and the Department of Legal Medicine, Harvard University, on the "Harmonization of Law and Program" found that the Trinidad program was among the three best in the world (Curran and Harding, 1977).

The participation of important leaders in psychiatry in Trinidad and the Caribbean in an advisory role has permitted the Project design to benefit from experience with what has worked and not worked in the region. In addition,

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much time and thought has been given to how to recognize and address the weak links which permitted earlier programs to crumble. For example, in the Trinidad experience, the following factors contributed to the program achieving less than its original objectives: (1) the Head of the program returned to the University when the Program was barely one and a half years old and the replacement appointed was not trained in psychiatry; (2) changes in the training program for Registered Mental Health Nurses resulted in an inadequate supply of trained and dedicated nurses; and (3) the lack of logistical support for Mental Health Officer staff.

There are other important issues of more universal applicability which any mental health program must be prepared to address. First, there is a potential conflict between patients' rights and patients' needs. The patient's rights (including the right not to be treated) sometimes conflict with his need to be treated and his right to humane management in his own interest when he does not know he is ill. The only criterion for locking a man away must be for his own safety or for the safety of others. Second, it is true that the cost of good community care should be no less.

The broader lessons from previous W.I. experience which have been taken into account in the project design are:^{1/}

- (1) Dehospitalization required the provision of support facilities which should not be less costly than hospital care;
- (2) Dehospitalization should not proceed faster than the rate of provision of Community Care facilities - nor faster than the public will tolerate;
- (3) A well run mental hospital is still the critical element of any community care program, although its size should be kept to a minimum;
- (4) Continuing public dialogue will be needed about the balance between individual rights and collective rights; and
- (5) Linkage (Health/Mental Health) is not achievable by the mere delivery of services side by side in the same Health Centers - multipurpose training at the primary care level is essential.

In summary, the Project concept incorporates the accepted psychiatric care methodologies promulgated for fourteen sovereign territories served by the University of the West Indies at the Conference of Health Ministries in 1973. These concepts have been tested and are in various stages of implementation in Grenada and neighboring West Indies Islands. Most importantly,

^{1/} Michael H. Beaubrun, "How does the Community Care?. an Historical Review and Current Perspectives in Health/Mental Health Models in the Commonwealth Caribbean," Keynote address delivered at Runaway Bay, Jamaica, April 24, 1983.

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the Project concept incorporates valuable lessons learned from evaluation of earlier, similar program efforts. An important benefit to be derived will be the possible spread effects of a successful Project concept. The success of the Program in Grenada will provide an important example for other East Caribbean Islands. Thus, the considerable attention focused on the Project design and involvement of psychiatric leaders of the region will provide benefits beyond the life of the project and beyond the boundaries of Grenada.

(b) Social Soundness of the Project Design - The Project's building sites have been selected taking into account the following criteria: (1) good access to General Hospital; (2) good access for patients, employees, and visitors; (3) stimulating environment with opportunities for visual and actual contact with the surrounding community; (4) space for outdoor recreational and skill development activities; (5) aesthetically pleasing natural environment including good micro-climate conditions.

Located on a hillside above the Sans Souci residential area, the selected site for the Treatment and Rehabilitation facility offers patients a direct view of the surrounding community but not direct contact with it. This will lessen the concerns of local residents about potential problems associated with a mental health facility. At the same time, patients could, with proper supervision, make excursions into the community. Of special importance is the nearby Queen's Park recreational and sports area offering a number of potential activities. The use of modular units fits into the dehospitalization concept.

While few advantages or adverse affects on the local community are expected, proper, timely, and sensitive notification of the location and use of the new facility should be given to local residents in order to minimize any misconceptions or undue concern regarding the facility and its residents. The proposed 26-bed Acute Psychiatric Care Unit will replace the current six bed facility at the site of an old wooden structure currently used to house two medical officers. Replacement housing must be located in order to continue good and important access these officers currently have to the hospital.

3. Impact

(a) Direct Benefits - A description of the type of patients admitted to the Grenadian psychiatric facilities from which extrapolations can be made about the prevalent mental health problems in the country is not possible. This is because psychiatric diagnoses are not recorded on patients' charts and are provided only erratically elsewhere in the system. Nor for that matter can diagnoses be deduced from available chart information; basic minimum data are not obtained or routinely collected. A less accurate method of deduction, i.e., speculation on the type of illness being treated by examining records of the medication used, is also not possible, as the same drugs appear to be given everyone regardless of types of illness.

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Because of the absence of data, the characteristics of patients currently entering the mental health system can only be provided from an anecdotal rather than from a scientific point of view. A comparison with the similar patient populations in St. Lucia and St. Vincent suggests that 50-70 percent are chronic long stay patients, approximately half of whom could go home if their families would have them.^{2/} The Mental Hospital is for them a permanent residence because of nowhere to go. The other half of the chronic long stay patients are so disabled, principally by severe schizophrenia, as to be unable to function without considerable supervision and protection. The remaining third of inpatients are relatively acute cases who enter and leave the hospital several times annually. In 1982, there were 66 first admissions and more than three times as many (222) readmissions. The relationship of first admissions to readmissions is similar in 1983, with 77 first admissions and 279 readmissions.

Readmissions may in large part be attributed to patient noncompliance (failure to take prescribed medicine or keep clinic appointments) a problem that can be considerably ameliorated with proper community follow-up. In addition, knowledgeable persons in the mental health system believe that long standing cultural beliefs in folk medicine and the curative powers of spiritualists as opposed to western medicine is a major reason for noncompliance. The poverty level at which the families of many patients exist creates additional problems in that their resources are often extremely limited and the "non-productive" patient becomes an unwanted burden. Some mentally ill patients residing at home are allowed to wander off during the day and family members set out to find them at nightfall. In other instances, family members who are leaving the island have deposited their elderly parents at the facilities, giving spurious symptoms in order that they may be admitted. Nevertheless, it is reported that many families do remain interested in their emotionally ill relatives and are grateful for any time given them to discuss the illness.

Considering the enormous number of readmissions, it is apparent that many patients return only because of the absence of alternatives to hospitalization. This is particularly the case for patients admitted for substance abuse. Alcohol and drug abuse are the chief problems of the disproportionate inpatient male population in the 18-26 years age group. Marijuana when laced with a belladonna compound produces a florid psychosis, and alcohol is often made in rural stills. Substance abuse is an area singled out for immediate assistance by the UWI Director of the Caribbean Institute on Alcoholism and other Drug Problems. A modest program has been recently funded. It is clear evidence of the commitment of West Indians to the larger Grenada program. A six month project costing \$6,000 will be initiated in January of 1985 to assist with the development of hospital and community services for alcoholism and other forms of substance abuse and to stimulate the revival and further development of Alcoholics Anonymous, which had been started in Grenada in

^{2/} Janice Stevens, M.D., "Draft report to USAIL," Part I, Preliminary Report, p. 2, November 23, 1983.

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1963 and has gradually lost ground. Serious inquiry and data collection should provide a sound basis on which to design follow-up interventions.

(b) Indirect Benefits - Normally, in undertaking cost-benefit analysis costs are specified and benefits projected, an internal rate of return is calculated. For this project involving the replacement of the mental health hospital, however, benefits are extremely difficult to quantify. Moreover, there is a paucity of economic data in part attributable to a lack of skilled manpower in the GOG.

Consequently, to assess economic viability with costs specified, we calculated the annual benefit stream required to yield a 10 percent rate of return. Ten percent has been used as the minimum required return because the cost of capital in Grenada has been estimated at roughly that level. Annual benefits would have to total a little over \$150,000 a year to generate the requisite 10 percent return.

A number of economic benefits can be defined. One, to the extent that the presence of the hospital relieves relatives of mentally ill patients of the responsibility of physically caring for the ill, then the relatives would be free to engage in productive activity. Second, the hospital also would keep the individuals from interfering with the economic pursuits of others. Third, if the rehabilitative process includes the patients' involvement in economic activities (i.e., some sort of cottage industry) this would be considered an economic benefit. Fourth, where a patient is sufficiently cured and is able to return to work this too would be a benefit.

Under this Project, a total of 106 beds will be furnished. To generate the \$150,000 in benefits required to yield the 10 percent requisite rate of return, benefits would have to total roughly \$1,400 a year per bed. That Grenada's per capita income is now \$1,260 and is expected to increase significantly in the near future with the opening of the airport augurs well for this Project's economic viability. The \$1,260 per capita income provides an indication of the magnitudes of some of the benefits specified above. For instance, we would expect a relative freed of the responsibility of caring for a patient to earn monies roughly equivalent to the per capita income, a level of compensation that would compare favorably to the \$1,400 per bed required to assure Project viability.

4. Conclusion

In summary, the Project concept and preliminary building design have taken into account major observations and experiences in mental health care in the West Indies. Some major issues mentioned in this analysis will not be resolved with any Project design no matter how thorough and careful, they require continued vigilance. However, the region's important leaders in the field of psychiatry have contributed to the proposed effort, and will continue to have active roles in project implementation, thus providing a strong incentive for lasting government commitment to Project implementation consistent with the Project design, a critical concern in determining the Project's social soundness.

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Estimated Census of outpatients receiving mental health services
as of June 1984.

<u>HEALTH DISTRICT</u>	
ST. GEORGE'S (outpatients at Richmond Hill Psychiatric Hospital)	24
ST. JOHN'S	30 +
ST. MARK'S	2
ST. PATRICK'S	40 +
ST. ANDREW'S	30 - 33
ST. DAVID'S	22
CARRIACOU	30 +
	<hr/>
TOTAL	124 - 192 +

Patterns of morbidity* of
Ten Principal Medical Conditions,
as seen at the clinics in 1981.

Rank order	Medical Conditions
1	Worm infestation
2	Sexually transmitted diseases
3	Diabetes Mellitus
4	Nutritional Deficiencies
5	Mental Disorders
6	Skin infections, including ulcers
7	Hypertension
8	Influenza
9	Diseases of the eye
10	Salpingitis and Cervicitis

*The above data was secured after indepth interviews and
consultation with health professionals

Source page 25, The three year Health Sector Plan 1983-85
Ministry of Health, Grenada, Carriacou and Petit Martinique,
December 1982.

MINISTRY OF HEALTH'S
INSTITUTIONAL CARE PHYSICAL FACILITIES

	<u>Bed Capacity</u>
St. George's General Hospital	240
- includes 7 bed Psychiatric Unit.	
- includes 8 bed medical/surgical Private Block (single rooms)	
- includes 10 bed private Duncan Ward (partitioned cubicles)	
Princess Alice Hospital (located in St. Andrews District)	40
Princess Royal Hospital (located in Carriacou)	32
Subtotal	<hr/> 312
Richmond Hill Institutions	
I. Psychiatric Hospital	160
II. Geriatric Hospital (Richmond Home)	137
III. Sanatorium	25
Subtotal	<hr/> 322
Grand Total	634

Source: Pgs. 18 and 19, The Three Year Health Sector Plan, 1983-85,
Ministry of Health, Grenada, Carriacou and Petit Martinique,
December, 1982.

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DISTRIBUTION OF POPULATION AND PHC FACILITIES
PER CATCHMENT AREA

HEALTH DISTRICT	NO. OF VILLAGES	TOTAL ^{1/} POPULATION	HEALTH CENTERS	VISITING STATIONS
St. George's	40	34,624	1	9
St. John's	10	9,481	1 ^{2/}	2
St. Mark's	7	6,359	-	1
St. Patrick's	20	11,491	1 ^{3/}	4
St. Andrew's	33	24,104	1	4
St. David's	20	11,077	1	3
Carriacou and Petit Martinique	20	8,375	1	4
TOTAL	150	105,511	6	27

Source: P. 51, The Three Year Health Sector Plan 1983-85,
Ministry of Health, Grenada, Carriacou and Petit Martinique,
December, 1982.

^{1/} The population

^{2/} The Health Center at Gouyave includes a maternity unit.

^{3/} The Health Center at Sauteurs includes a maternity unit.

HEALTH MANPOWER PER HEALTH DISTRICT

HEALTH DISTRICT	P.H.N.	D.N.M.	C.H.A.	D.M.O.	Pha.	F.N.P.	E.H.O.	TOTAL
St. George's	2	8	13	4	4	-	5	36
St. John's) St. Mark's)	1	7	4	1	1	1	1	12
St. Patrick's	1	5	5	1	1	1	1	15
St. Andrew's	1	5	6	1	1	1	1	16
St. David's	1	4	8	1	1	1	1	17
Carriacou and Petit Martinique	1	2	5	1 (1 Pediatrician) (1 Dentist)	1	-	-	10
TOTAL	7	27	41	9	8	4	9	105

- LEGEND:
- DHN - Public Health Nurse
 - DNM - District Nurse Midwife
 - CHA - Community Health Aide
 - DMO - District Medical Officer
 - FNP - Family Nurse Practitioner
 - Pha.- Pharmacist
 - EHO - Environmental Health Officer

Source: Page 52, The Three Year Health Sector-Plan 1983-85,
Ministry of Health, Grenada, Carriacou and Petit Martinique,
December, 1982.

ENVIRONMENTAL ASSESSMENT: GRENADA MENTAL HEALTH PROJECT

I. SUMMARY

An Environmental Assessment (EA) was conducted as an integral part of this project. The purpose of this analysis was to identify any significant adverse impacts that would occur as a result of the implementation of the Proposed Action, i.e., the construction of a new 80-bed Residential Mental Health Care, Treatment and Rehabilitation Facility and a new 26-bed Acute Care Psychiatric Unit. Recommendations for mitigation of all impacts were also formulated.

As part of this study an examination of several alternative locations for the 80-bed Residential Facility was also made. However, none of the examined locations provided significant or distinct advantages compared to the site preferred by the Government of Grenada at Mt. Gay Estates. It is thus recommended, from an environmental standpoint, that construction of the 80-bed facility take place at the Mt. Gay Estates location.

A number of potential environmental impacts were identified and measures for mitigation were drafted and are presented in Section VII of the EA. The most serious of these problems are associated with treatment and disposal of wastewater. Recommendations for design of proper collection and treatment using passive but effective technological methods are presented.

Other impacts requiring mitigation are minor and revolve around concerns of local residents, road improvements and access and construction activities.

In summary, implementation of the Proposed Action can be carried out in an environmentally sound manner if measures outlined in this study are incorporated into the development plans.

II. PURPOSE

2.1 Purpose and Need

The Agency has prepared this Environmental Assessment in response to the need to replace a mental health facility at Richmond Hill, St. George's, Grenada, which was substantially damaged during the intervention actions of October 1983. Also examined within this study is a new psychiatric unit to be constructed on the grounds of the existing General Hospital in St. George's. The types and sizes of the proposed facilities indicate that environmental problems may arise during construction and especially during operation of these health care units. This assessment focuses on most significant of these problems, identifies expected impacts, discusses possible mitigative measures and makes a series of recommendations that, if implemented, would assure avoidance or minimization of adverse effects of the proposed action.

2.2 Scoping

An initial review of the concept of the proposed action indicated several specific potential areas of environmental concern including water supply, wastewater treatment and psychological effects on neighboring communities. With this initial list in hand, members of the AID Project Team, which included

outside consultant assistance, met with staff members of the Ministry of Health and the Ministry of Construction in Grenada to discuss a fuller range of concerns as the general proposed action took shape and as potential sites for the new facility were identified.

The outcome of these scoping efforts was a list of major environmental concerns. These concerns are:

1. Water supply
2. Wastewater disposal
3. Access and transportation
4. Land use
5. Neighboring communities
6. Availability of recreational opportunities
7. Noise
8. Micro-climate

A number of other environmental issues were identified and briefly discussed but were regarded as minor considerations or not applicable to the project at hand. These issues included such areas as air quality which was considered of minor concern because of the very low volume of traffic to be generated by the facilities and terrestrial impacts associated with rare or endangered species because of past history of use of each of the proposed areas for the new hospital. As a consequence, the assessment conducted for this project has focused on the major concerns listed above.

The scoping process and execution of the environment assessment was carried out simultaneously with preparation of conceptual and preliminary plans by other members of the project team. This allowed for extensive exchange of ideas and concerns between team members responsible for: environmental issues; design of architectural and engineering elements; formulation of operational and therapeutic elements; and calculation of construction, operation and maintenance costs. As critical issues and concerns were identified in one discipline adjustments or responses were quickly formulated in other affected disciplines. This close working relationship allowed for quick and effective formulation of the proposed action.

III. ALTERNATIVES

3.1 Proposed Action

As noted above, the Proposed Action consists of the construction of a new 80-bed residential mental health care, treatment and rehabilitation facility and construction of a 26-bed psychiatric unit at the Rathdune site at the General Hospital. Construction of the Residential Facility entails selection of a new location away from the Richmond Hill location of the existing damaged facility, which consists of a totally inadequate facility about approximately 100 years old. Part of this analysis thus consists of an examination of alternative locations for the new Residential Facility. The Psychiatric Unit to be built at the General Hospital can only be constructed on one site at that location (site of the Rathdune Building) and consequently consideration of alternative locations for that facility are not possible. A No Action Alternative is discussed below but is not considered a viable alternative because of the critical and immediate need to construct a replacement facility for the Mental Hospital damaged on Richmond Hill.

3.2 Residential Facility: Alternative Locations

In selecting a location for the new Residential Facility, a list of major concerns, or locational criteria, was assembled by members of the Project Team responsible for therapeutic and operational activities. The identified concerns are:

1. Good access to the General Hospital
2. Good access for patients, employees and visitors
3. Stimulating environment with opportunities for visual and actual contact with the surrounding community
4. Space for outdoor recreational and skill development activities
5. Aesthetically pleasing natural environment including good micro-climatic conditions

Additional site considerations were identified by the Project Architect and Project Engineer and include topography, soils/geology, availability of utilities and opportunities for installation of a proper wastewater disposal system.

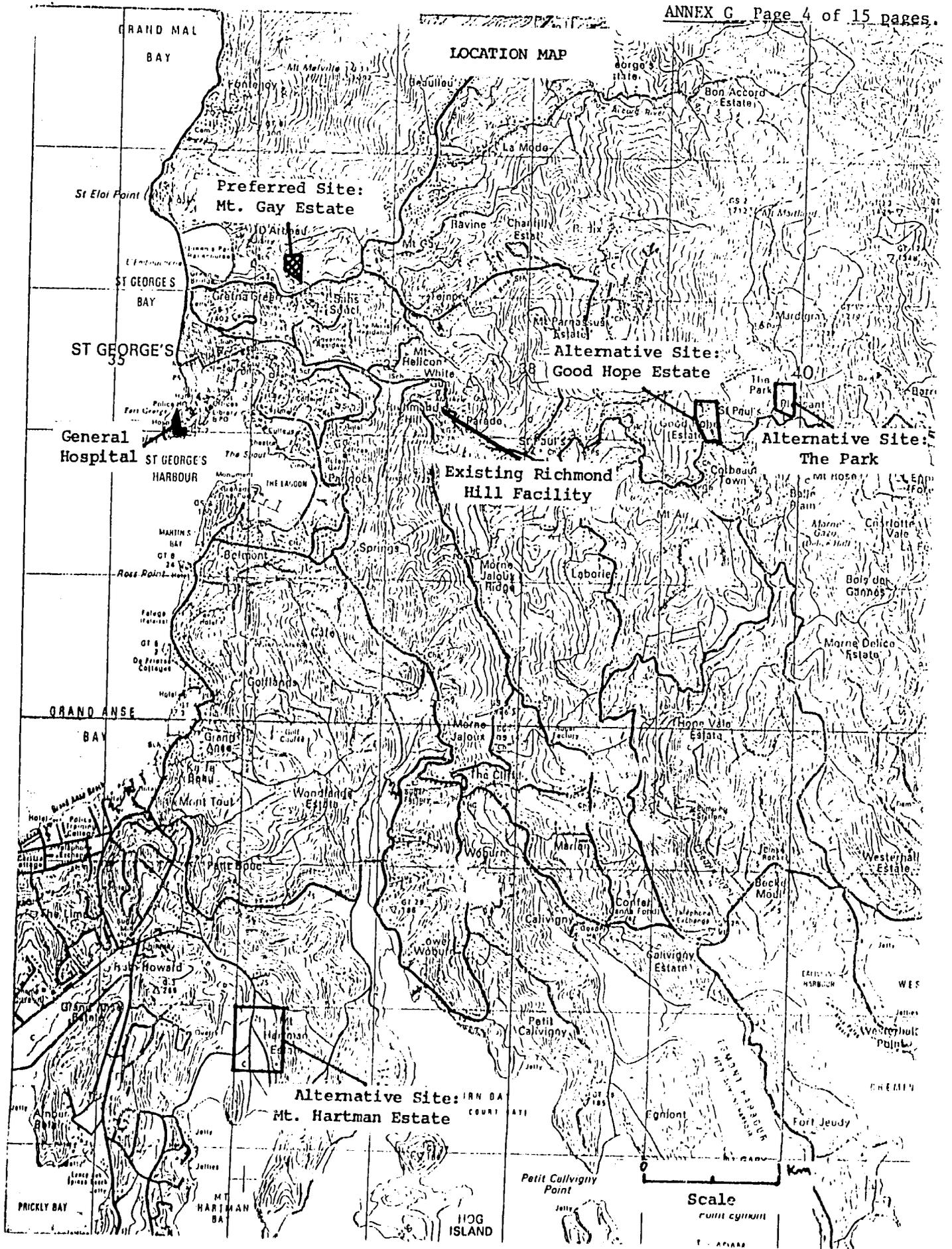
A selection of candidate sites for the Residential Facility was conducted by the Ministry of Health. This was done by designation first of a preferred site--with follow-up identification of three alternative locations.

The site preferred by the Ministry of Health is located at Mt. Gay Estates on the north side of the St. Johns River in the area of St. George's known as Sans Souci. (See following Location Map). The site is part of a large parcel of undeveloped land. (A detailed site description is presented in the next section.) The three alternative sites for location of the Residential Facility are:

1. Good Hope Estate in the St. Paul's area of St. George's
2. The Park, also in the St. Paul's area of St. George's
3. Mt. Hartman Estate, presently a pig-raising and agricultural area approximately three miles due south of the center of St. George's.

An earlier study suggested location of a new residential facility at the Police Bandstand beside Fort George. However, this location is severely limited in size even though it is located adjacent to the General Hospital. Also, because of historic, including recent, events that occurred at the Fort, it is expected to be declared an official historic site. Based on these reasons the Project Team and Ministry of Health jointly concluded that the site is inappropriate for the Residential Mental Health Care Facility.

The Acute Psychiatric Unit at the General Hospital would be located on a site which presently is occupied by a wooden structure known as Rathdune. This building is being used as a residence for male medical officers. The Proposed Action would entail the demolition of this existing structure and construction of a new 26-bed facility.



3.3 No Action Alternative

The urgency and high priority placed on the construction of a new Residential Facility to provide minimum decent and safe housing for residents of the Mental Hospital at Richmond Hill dictate that the No Action Alternative (i.e., doing nothing) cannot be considered a truly viable alternative. In any case, by not taking action for provision of a new facility, the present grossly inadequate conditions existing at Richmond Hill can be expected to continue with little chance for meaningful improvement seen. (See Section II. A for a fuller discussion of existing conditions at the Richmond Hill facility.)

Because of the commitment by the Agency and Government of Grenada to replace the existing facility no additional consideration is given to the No Action Alternative in this analysis.

IV. AFFECTED ENVIRONMENT

A description of the existing environment at the preferred location of the Residential Facility is presented below along with a brief picture of similar conditions at the alternative locations and at the Rathdune site at the General Hospital.

4.1 Preferred Location: Mt. Gay Estates

The preferred site at Mt. Gay Estates is located on gently-to-moderate sloping parcel of land overlooking the St. Johns River. The site is bordered on the south and west by an escarpment approximately 75 feet high leading down to the river. On the east and north it's bordered by forested and brush-covered land. The site itself, as well as the areas to the north and east, were formerly used for agricultural purposes. At present some limited farming activity is taking place on scattered plots throughout the area but the site itself is predominantly covered by second growth shrub and herbaceous vegetation ranging in height from two to ten feet. A few mango, nutmeg, and other trees are scattered throughout the site or are located on its periphery. Bordering the site on its north edge is also a set of dual high voltage power lines.

Soil in the area is comprised mainly of tiff, a gravelly soil of volcanic origin which offers excellent drainage and is also a good agricultural soil. Areas of exposed tiff, even on moderate slopes, show little signs of erosion. Depth to bedrock is not known but because of the outcropping of volcanic bedrock on the top of the escarpment on the south and west edge of the site it is expected to be relatively close to the surface.

Because the site is generally above the surrounding terrain on three sides it is in a good location in terms of natural air currents moving from the east. Likewise, the site is only one mile from, and in direct sight of the sea along the open St. Johns River valley thus placing it in an excellent position to realize the benefits of cool on-shore winds.

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4.1.2. Description of Surrounding Environment

The preferred site is a part of a larger parcel of land located in an area experiencing pressure for residential development. Such development is expected to eventually occur on the hillside areas to the north of the present east-west access road leading to the site and in areas to the east where expressions of interest in such development have already been made. Generally, however, the right bank, or north side of the St. Johns River is still only lightly developed and at present remains forested or in agricultural production.

In contrast, the left bank or south side of the river is heavily developed. Houses stretch along the road following the river and also extend up the valley side. A small industrial complex, where both water and telephone service are available, is located near the junction of the east-west access road and the main road (the St. George's-Grenville Road). Other industrial and commercial activities, as well as the Queen's Park recreational and sports complex, are also found along this road in the direction of St. George's. Much of this development, and especially the residential areas lining the valley side, are easily viewed from the preferred site.

4.1.3. Existing Access

Access to the site is possible in two ways: (1) by road from the main highway via a small old (c. 1890) bridge crossing the St. Johns River and an east-west direct access road to approximately 400 feet north of the site; or (2) by foot along a pathway leading from the main road across a bridge over the St. Johns River and up the escarpment leading to the south edge of the site. The site is approximately 1 1/4 miles from the General Hospital or a seven-minute drive by car. Private minibus service is available in both directions along the main St. George's-Grenville Road.

4.1.4. St. Johns River

The St. Johns River, located at the bottom of the escarpment, is subjected to considerable pressure from urban activities located in its watershed. Although no water quality data is available, visual observations indicate questionable water quality, especially in light of the lack of central sewage collection and treatment in the area and the reported high failure rate of on-site systems and resultant and observed off-site flow of effluents. Regardless of questionable water quality in the stream, local residents were observed washing clothes and bathing in it.

In the past this river has flooded its banks and in doing so completely inundated the small bridges leading over it as well as the main road alongside it. A local long-term resident near the preferred site indicated that such flooding occurs once every year or two and lasts only an hour or less. Such flooding is attributable to short duration heavy rainfalls. The effects on flooding of prolonged heavy rainfall from hurricanes is not known but are expected to be significantly greater in terms of depth and duration.

4.2. Alternative Locations

4.2.1. Good Hope Estate

The alternative site at Good Hope Estate consists of a parcel of land containing an existing large residential structure and land covered by cocoa, mango and nutmeg trees that are in need of considerable rehabilitation because of long-term neglect. The parcel is a moderately sloping piece of land similar to the Mt. Gay Estates parcel and it has similar tiff soils. Depth to bedrock is unknown but boulder-size rocks were observed at the site.

The area surrounding the Good Hope Estate site is comprised mainly of low density residential uses including similar quasi-agricultural estates. Moderate density housing lines the various roads in the area with small commercial centers located at many crossroads. The view from the upper portions of the parcel is of the surrounding hillsides covered mainly by trees but with occasional houses in view as well.

Minibus service is available on the local road passing the parcel but mainly at morning and evening rush-hour times only. The distance to the General Hospital is approximately 3 1/2 miles, or a twelve minute drive.

4.2.2. The Park

The alternative site at the Park is located along the same road as the Good Hope Estate at a half mile further distance from St. George's (see Location Map, page 4). It is a now unoccupied estate consisting of a one-story building and groves of nutmeg, banana and mango trees. Slope of the land is moderate but in this case distinct and numerous outcrops of bedrock are in evidence.

The area surrounding this site is of low density residential and agricultural use. The view from the upper portions is primarily of green hillsides and an occasional house. Several small outbuildings are also on the site and have potential for use as part of any health care facility that may be located there.

4.2.3. Mt. Hartman Estate

This site is now occupied by the "Julien Fedon" Livestock Production and Genetic Center, which is used mainly for the raising of pigs and is operated by the Ministry of Industrial Development and Fisheries. This site is located in a shallow north-south valley at the head of Mt. Hartman Bay (see Location Map). The valley bottom is void of any vegetation except for crops raised for pig production. The valley sides and ridge lines along it are covered by herbaceous vegetation with very few trees in sight. (Rainfall in this area is less than 50" per year compared to average rainfalls near 70" per year at all other sites considered in this study.)

Soils in the area are comprised of red clays and are of alluvial origin. Waterlogged soils may exist in the lower areas. Depth to bedrock is unknown and no outcrops of bedrock were observed during field investigations. The only contact with the outside community from this site is either visual

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(scattered distant homes lining Mt. Hartman Bay) or with the low income, mainly squatter homes lining the road east and west of the site. The site is 5 1/2 miles from the General Hospital - a 20 minute drive.

Generally, the site is a barren parcel with few if any amenities in terms of an aesthetically pleasing environment. Additionally, significant noise levels are expected to impact the southern portion of the site once the Point Salines Airport becomes operational.

4.3. Rathdune Site at the St. George's General Hospital

The site proposed for the Acute Psychiatric Unit at the General Hospital is now occupied by an older wooden building being used as a doctor's residence. The building is an integral part of the hospital site and is easily accessible to other buildings on the site. It is served by electricity and telephone but has its own sewage outfall directly into the sea beneath the site. The remaining buildings at the hospital also lack any sewage treatment facilities and discharge untreated sewage directly into the sea via other pipelines and outfalls.

The site slopes slightly toward the sea and consists of either exposed bedrock or concrete foundations of the existing building. Although limited in size, the site is large enough for the proposed facility. Views from this area are of the sea and distant shores and are some of the best in the city of St. George's.

V. ENVIRONMENTAL CONSEQUENCES

5.1. Proposed Action

Construction and operation of a new 80 bed Treatment and Rehabilitation Facility at Mt. Gay Estates and a new 26 bed Acute Psychiatric Unit at the St. George's General Hospital will have a number of effects on the environment. The most significant of these effects are discussed below with a follow-up discussion of measures that can be employed to mitigate any adverse impacts that may arise.

5.1.1. Mt. Gay Estates

Vegetation and Runoff

Construction of an 80 bed facility at Mt. Gay Estates will require clearing of land, grading of the site, and other construction activities which will result in loss of low quality second-growth vegetation. None of this vegetation is considered unique or of special value. Although the potential for soil erosion exists during the construction period it is not expected to be severe because of the gravelly characteristics of the tiff soils on the site.

Proper site design can minimize long-term runoff problems which are expected to be minor because of the low proportion of impervious surface expected on the minimum three acre site. The location of grass and other

unpaved surfaces located downhill from the paved areas will also help in decreasing runoff to the St. Johns River below the site.

Wastewater Disposal

While the apparent shallow depth to bedrock will be a certain advantage in design of foundations for the proposed buildings, this same condition may complicate disposal of wastewater. It is envisioned that the wastewater disposal system be designed as a passive septic or similar system with disposal of effluent taking place on-site. However, if a shallow soil layer is found to exist in the lower potential disposal area effluent may enter the groundwater through fissures and cracks in the rocks and then quickly reappear at the face of the escarpment along the St. Johns River. Such an occurrence has the high probability of further degrading that stream which is used for a number of contact activities including bathing.

In order to avoid such contamination, it is suggested that a septic system be designed and installed that allows chlorination and sufficient leaching to remove all harmful pathogens. Such a system may require construction of an elevated mound of sand and use of proper vegetation on it to increase evapotranspiration. This will increase leaching time and distance for any effluent reaching ground or surface waters.

Other innovative methods for decreasing wastewater generation are also available and should be considered in design of the facility. For instance, installation of separate drainage systems for grey water (i.e., water used for washing, laundries, showers, etc.) and black water (i.e., wastewater from toilets). Grey water can be used for irrigation or watering of lawns with little or no treatment thus substantially decreasing the amount of water needed to be treated. The septic and treatment system can thus be sized and designed to handle the lower volume of black water. Water conservation fixtures and measures such as low-volume toilet tanks and showerheads can also be incorporated into the design of the structure thus decreasing total water use and generation of wastewater.

Because of the difficulty of maintaining and operating electro-mechanical wastewater disposal systems in Grenada, it is suggested that a passive system be properly designed and incorporated into the site.

Community Effects

The Mt. Gay Estates site for the 80 bed Residential Facility offers an excellent opportunity to locate a mental health facility in close proximity to an existing community while at the same time minimizing encroachment into the community. As noted in the discussion of the existing environment, patients at the facility will be able to enjoy a direct view of the surrounding community. At the same time, because the facility will be located on a hillside above the Sans Souci residential area it will not be in direct contact with it. This should lessen the concerns of local residents about potential problems associated with a mental health facility.

Just as important as the view of the surrounding community is the opportunity for patients, under proper supervision, to make excursions into the community. Because the Mt. Gay site is in close proximity to residential, commercial, recreational, and even industrial activities it will be possible for a variety of such excursions to take place. Of special importance is the nearby Queen's Park recreational and sports area which offers a number of potential activities for patients at the residential facility.

In summary, few disadvantages or adverse effects on the local community are expected. Proper, timely, and sensitive notification of the location and use of the new facility should be given to local residents in order to minimize any misconceptions or undue concern regarding the facility and its residents.

Water Supply

Sufficient water is available from a major pipeline located near the junction of the access road and the main St. George's-Grenville Road. Tapping into a branch of that line down-line from a pumping station that supplies the Grand Anse area should provide sufficient quantities of water to the site.

The actual pipeline feeding the site can be located along the access road and should be sized for possible future expansion of the Residential Facility as well as for other future development along the road that may tap into it. A water storage tank will be provided at the facility for emergency use during periods of interruption of service.

In summary, no adverse or unusual problems associated with water supply are expected.

Access and Transportation

Access to the Mt. Gay site by vehicle is available along the main road bordering the St. Johns River and then via the access road which crosses the river on a single lane bridge. The access road is a dirt road approximately 1 1/2 years old in good condition. A new driveway from that road to the site will need to be cut through the existing second growth vegetation. Additionally, rehabilitation or possible replacement of the single lane bridge may be required. This will need to be determined during the design stage. Such upgrading of the river crossing point will result in minor temporary impacts on aquatic resources in the stream.

Vehicular traffic to the Residential Facility is expected to be light; perhaps only five or six vehicles per day since nearly the entire staff commutes by bus. Any adverse effects associated with vehicular traffic are expected to be negligible. Overall access to other areas of Grenada are good due to the location of the main cross-island road.

Pedestrian access to the site will be possible via a stairway leading down the escarpment to the bridge crossing the St. Johns River. This bridge connects an automobile sales/repair establishment located on the right bank of the river with the main road located on the left bank. From that point

employees, visitors and patients can either walk along the main road or catch any of the numerous minibuses running along it.

The only concern regarding pedestrian access is related to safety along the narrow winding main road. Walking along it is difficult because of the heavy traffic and catching or departing from minibuses oftentimes creates traffic hazards. Consideration should be given to provision of a pull-off in the south side of the road to allow buses to safely pick up and discharge passengers. The entrance to the bridge over the river provides such a place on that side of the road.

Noise

Noise, either affecting the Residential Facility or generated by it, is not expected to be of any great consequence. The facility is sufficiently isolated from nearby residences whereby the local community will hear little of sounds and noise generated by operations and activities. It is possible to hear at the proposed site sounds of daily life in the Sans Souci area-- barking of dogs, cars and trucks passing on the main road, children at play, etc. These noise levels noted during field observations were not considered annoying. Such sounds may, in fact, assist in creating an element of contact with the world and community surrounding the Residential Facility.

Micro-climate

Location of the facility on the bluff overlooking the St. Johns River at the Mt. Gay Estates site will essentially provide exposure to open areas to the west, south and east. This should prove extremely valuable for taking advantage of natural cooling air currents whether originating from the east (prevailing winds) or west (cool on-shore evening breeze). The facility will not obstruct such air circulation for any residential areas.

5.1.2. Rathdune Site of the Acute Psychiatric Care Facility

The location of the Acute Psychiatric Care Facility at the Rathdune site at St. George's General Hospital results in few environmental impacts. The proposed facility would replace an old wooden structure currently used as a residence by two male medical officers. Of concern to the Health Ministry is replacement housing for these officers. It has been requested that such housing be provided elsewhere on the hospital grounds in order to continue the good and important access these officers currently have to the hospital. This request will need to be explored more fully in the overall design of the project and in light of the limited space available for building on the hospital grounds.

The 26 bed unit will increase the total capacity of the 230 bed hospital by only 11.3 percent. Because this unit will not incorporate any unusual activities or equipment it is not expected to generate any adverse environmental impacts. Traffic to and from the building will be minimal-- on average less than one patient turnover per day. Consequently the site is ideally situated on the hospital grounds being to the rear and out of the main flow of traffic.

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Electric, telephone and water service are all available at the site. Untreated wastewater is presently being disposed of via a direct pipe and outfall to the sea below the existing Rathdune building. This is also the means of disposal of all wastewater (again untreated) for the entire hospital complex. The balance of such flow is directed to a second pipeline and outfall to the west of the outfall serving the Rathdune building.

Operation of a 26 bed unit on the site will result in an increase in untreated wastewater flowing into the sea. Using an estimated rate of 50 gallons per day (GPD) per patient (about that amount equal to consumption per guest at a vacation cottage) a total of 1,300 GPD of wastewater would be generated. This would compare to an estimated total of 150 GPD generated by the existing residence. A substantial increase in untreated sewage entering the sea at the outfall point would thus occur.

A number of potential measures are available to mitigate this problem. First, as with the 80 bed Residential Facility, it is possible to design a dual system of drainage in the new building. Grey water used in washing, showers, etc., can be disposed of directly into the sea with little adverse effect especially in terms of health hazards. Black water from toilets can be directed to a septic tank where solids would settle out, a certain degree of anaerobic action would occur and chlorination and final discharge of the partially treated effluent would be directed to the sea outfall. (Leaching of the effluent would not be possible because of rocky cliff location of the building site.) Periodic (every 2-3 years) removal of solids from the septic tank would be required as well as installation of chlorine tablets or liquid.

Although electro-mechanical package treatment systems are available they are not recommended in the short-term for this facility because of problems associated with electric blackouts on an almost daily basis, difficulty in obtaining spare parts and lack of adequate trained operational personnel. Nonetheless, a long-term solution to wastewater treatment and disposal could entail either a sufficiently sized package system for the entire hospital complex, or tie-in to a municipal system of treatment. This last alternative would probably require pumping of sewage to the north side of Ft. George Point and should be considered in any improvement to the municipal system of sewage collection, treatment and/or disposal.

No other potentially significant environmental impacts were identified at the proposed Rathdune site for the Acute Psychiatric Care Facility.

5.1.3. Alternative Sites

A field examination was conducted at each of the three alternative sites. This examination provided an opportunity to identify a number of the most obvious environmental constraints and benefits that would be encountered if any of these sites were utilized for the proposed 80 bed Residential Facility. (Certain questions of land ownership, which remain unanswered, are not a part of, nor are addressed in this study.)

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Good Hope Estate

Benefits - This site offers a tranquil setting comprised of a tree-covered parcel of land with a residential structure of good quality. The site has electricity, water and telephone service available and is located within a larger residential area--all distinct benefits for the location of the 80 bed facility. Access to St. George's and the General Hospital is reasonable although more distant than the preferred Mt. Gay Estates site. The existing house on the site can be used as an administrative building thus reducing construction expenditures. However, because of the moderate slope in terrain at the house site it may be difficult to properly position the residential wards near it.

Constraints - The major constraints associated with this site are the lack of continuous bus service throughout the day on the road leading past it, its close proximity to neighboring residents who may perceive the facility as a major intrusion into their community and a question of suitable soils for treatment and disposal of wastewater. Any off-lot flow of effluents will end up in the roadside ditches running through the community.

The Park

Benefits - Benefits to use of this site for the Residential Facility are similar to those of the Good Hope Estate site. However, it is located an additional one-half mile further from St. George's. The house on the site is a modern one-story building of good condition and several sizable outbuildings are also available. Use of these structures would again result in lower construction costs for the new facility.

Constraints - As with the previous alternative site a lack of good bus service, close proximity to neighboring residential areas and poor soil conditions are all evidenced. This last condition is most critical because of the numerous outcrops of bedrock throughout the area thus indicating the difficulty that would be encountered in proper disposal of wastewater.

Mt. Hartman Estate

Benefits - Few distinct benefits are envisioned in use of this site for the Residential Facility. Only the cleared agricultural land which slopes gently to the sea to the south would be seen as a cost saving benefit when considering construction costs. All other benefits to the use of this site are negligible when considering the preferred site or the other alternative sites.

Constraints - Constraints to the use of this site are numerous. First, it is the most distant from St. George's and offers very poor access to other areas of Grenada. The site would require considerable landscaping and other amenities to make it a livable and therapeutic environment for patients. Although not in direct contact with the neighboring residential areas to the north it still offers little opportunity for patients to observe community life or participate in nearby activities.

7.2. Rathdune Acute Care Facility

1. The wastewater drainage system designed for the facility should allow separate collection of grey water and black water with proper disposal of grey water for irrigation or directly into the sea.
2. Black water (i.e., toilet water) should be directed to a properly sized septic tank installed on the hillside below the new facility. Periodic pumping (every 2-3 years) of this tank should be undertaken as a regular maintenance activity.
3. Long-term planning should be conducted for complete collection and proper treatment of wastewater at the General Hospital complex. Consideration should be given to on-site treatment or tie-in to an upgraded municipal system.

TECHNICAL ANALYSIS

1. General Consideration

The proposed Project design is based on the recommendations of a multi-disciplinary team comprised of six consultants, including the most prominent mental hospital architect in the field. The project design has three distinct areas of technical concern: (1) Community Mental Health service delivery, along with technical assistance and training to improve Health Care; (2) Pharmaceutical administration practices and requirements; and (3) Design and construction of replacement Mental Health Care and treatment plant.

With respect to the Community Mental Health services and the technical assistance and training aspects of the Project, evaluations of similar programs were considered and experts in psychiatry, nursing, and psychiatric therapy were members of the Project Development Team. As experiences in the region and related aspects of design of the referenced project components are treated in some detail in the Social-Economic Analysis (Annex F), they will not be included in this analysis.

Pharmaceuticals are an important part of mental illness treatment. Therefore, a separate analysis of drugs currently used in Grenada and current drug treatment practices is included as Annex L. The analysis includes a discussion and recommendations for use of seven major categories of drugs: Antipsychotics/Neuroleptics, Antidepressants, Antianxiety Drugs, Sedative-Hypnotic Drugs, Antiparkinson/Anticholinergic Drugs, other Psychotropic Drugs - Lithium, and Anticonvulsants (non-psychotropic Drugs). In addition to a list by therapeutic category of pharmaceuticals currently used in Mental Health, the analysis includes: (a) proposed additions to the drug formulary; (b) drugs recommended by a WHO expert Committee; and (c) additional drug items recommended for USAID projects. The clinical setting where the drugs will be used is also noted.

This analysis will focus on the Project's facility construction component and the options considered and choices made during project design. The codes and standards that have been used in the formulation of the preliminary building concepts for the 80-bed Rehabilitation and Treatment Center and for the 26-bed Acute Psychiatric Care Unit are as follows:

- (1) Standards of the Accreditation Council for Psychiatric Facilities, of the Joint Commission on Accreditation of Hospitals;
- (2) Life Safety Code 101 of the National Fire Protection Association; and
- (3) Minimum Requirements for Construction and Equipment for Hospital and Medical Facilities, Department of Health, Education, and Welfare (Publication HRA 79-14500).

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2. Site Considerations

Several alternative site locations were considered for replacement facilities, and a number of criteria were used in evaluating the options. Members of the Project Development Team responsible for providing recommendations related to therapy and facility operations suggested the following criteria: (a) availability of water supply; (b) Waste-water disposal requirements; (c) Access and availability of transportation; (d) Land use; (e) The psychological effect on neighbouring communities; (f) the availability of recreational opportunities; (g) Noise; and (h) The micro-climate. The Project Architect and the Project Engineer added additional criteria & including topography, soils/geology, availability of utilities, and the opportunity for installation of an appropriate waste-water disposal system.

Among the site locations, the first option considered was rebuilding on the existing premises of the Richmond Hill Mental Hospital. This option was rejected early in project development for the following reasons:

- (1) The present hospital is poorly designed for care of the mentally ill;
- (2) Access to General Hospital laboratory and medical services is limited;
- (3) Transport for visitors is difficult, further isolating patients;
- (4) Water supply is inadequate, leading to highly unsanitary toilet and shower facilities;
- (5) Parking is inadequate; and
- (6) Renovation to meet even minimum standards/humane and sanitary care would be extremely costly, perhaps the cost of erecting a new, more satisfactory facility.

Five alternative sites were evaluated using the referenced criteria: (a) Mt. Gay Estates; (b) Good Hope Estate in St. Paul's; (c) The Park, St. Paul's; (d) Mt. Hartman Estates; and (e) The Police Band's land beside Fort George. The site selected was Mt. Gay Estates, mostly for the advantage that it offered close proximity to a community while minimizing encroachment into the community.

3. Architectural - Design Consideration

A thorough review was made of the preliminary architectural drawings which form a part of Dr. Stevens' report "Mental Health System - Grenada 11-23-83". The physical facility, as proposed by Stevens, was considered inadequate in size and design, by the consulting team for the new hospital.

The Team concluded that Stevens' design did not contain the type or arrangement of spaces required for a therapeutic treatment program. Nor were the sizes of spaces large enough to meet international standards for sizes of rooms in mental hospitals. The plan does not provide for the life safety of the patients as recommended by international authorities. The plan provided insufficient privacy for the patients and the toilet accommodations were less than standards allows.

A new design was developed by the Consulting Team which forms the basis for this Project Paper. The design should not be considered as preliminary design drawings, but as a development plan showing the consultant's basic recommendations for a new mental hospital complex. The plans include building units, types of required space, and a functional relationship of spaces. The intent of the design is to provide a realistic plan from which to establish an estimated cost of construction and equipment.

The design considers the local social and environmental characteristics, the sites' conditions, the climate, local building materials, local methods of construction and the conditions in Grenada. The program goals require that the design be flexible and adaptable to upgrading mental health care to basic minimum standards in Grenada.

4. Design Criteria

The recommended design contains facilities for 106 patients. Twenty-six acute patient facility located on the General Hospital premises at St. George's and an 80 bed Psychiatric Hospital located at Mt. Gay. The total gross area for both locations is 38,314 sq. ft. The breakdown is as follows:

(a) Administrative building	3,092	sq. ft
(b) Patient Cottage "B" (2 floors)	7,900	" "
(c) " " "C" (2 floors)	7,900	" "
(d) " " "D" (2 floors)	8,732	" "
(e) Kitchen and Maintenance building	1,486	" "
(f) Acute care service/admissions Unit (2 Floors)	9,204	" "
TOTAL	38,314	sq. ft

The basic facility consists of an "L" shape modular design which will simplify construction efforts. To provide for fire protection and to comply with the design/construction requirements in Grenada for high density buildings, recommends the use of concrete floors and ceilings with concrete block walls finished with plaster. The building design has an administrative block, patient cottages, kitchen and warehouse. It also provides for all internal cabinets and built-in equipment. A stand-by generator is also included as the electricity in Grenada is not reliable. The site plan provides for an access road, parking area, walk-ways, grass court yards, drainage, fencing and an out-door athletic field for the patients. (See schematic diagrams in the Annex).

5. Operation and Maintenance (O & M)

In order to maintain the hospital buildings in good repair, it is estimated that a building maintenance crew will have to be provided by GOG to work full time on maintaining the premises. The crew will consist of the following individuals:

<u>Capability</u>	<u>Annual Salary (EC\$)</u>
One Carpenter	\$13,200
One Electrician	15,840
Two yard persons	7,920
	<u>\$36,960</u>

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6. Cost Estimate

Originally a set of preliminary floor-plan drawings were prepared by a Grenadian firm (Creative Design and Building Construction). The design consisted of only one 2-story building with gross area of 11,230 sq. ft. The cost for this design was estimated to be about US\$1 Million. The above design was presented to the consulting team upon arrival for their review and consideration.

Meetings were held between the originator of the initial drawings, GOG representatives and the U.S. Consulting Team. In conclusion, the original design, which contained Dr. Stevens' concepts, was rejected and a new design concept representing the views and requirements of the consulting team was submitted. The new design, as stated earlier, consists of 38,314 sq. ft. gross area. As it can be seen, the new design contains 3.4 times more space than the preliminary concept. The cost estimate for the new design is US\$3.39 Million, or about 3.4 times that of the original cost estimate. The increase in the cost compares almost exactly with the increase in the recommended space by the consulting team.

7. Technical Feasibility

Within the means described above it appears technically feasible to implement and construct such a facility. Implementation would consist of (a) selection of an A & E firm to design and supervise construction at two sites; and (b) competitive selection of a construction contractor to construct the physical facilities cost effectively. USAID/G with assistance from the GOG and support from RDO/C will assume the responsibility to monitor the design and construction activity.

The new design concept proposes construction of one 26 bed building at the St. George's site and five separate buildings at the Mt. Gay site. Technically, it would be most cost effective if the total activities could be housed in one structure. The new concept provides for six different structures which has an element of increasing several construction functions (i.e., more roofing, more plumbing, more concrete works, more electrical works, etc.). However, the new design concept incorporate views of several experts in the psychiatric field which concluded developing the new design concept.

1. Treatment and Rehabilitation Center, Richmond Hill Site

A thorough investigation was made of the existing structures at the Fort Matthew, Richmond Hill Site to determine the renovations, alterations and new construction needed to provide adequate facility space for the treatment and rehabilitation of 80 mentally ill patients. Each building and complexes of buildings were studied.

The buildings were divided into three areas as follows:

- 1) The Administrative Area
- 2) The Entrance Area
- 3) The Patient Areas
- 4) The Recreational Field

The Administration Area will require alterations and minor additions to the existing buildings. The Gate Entrance Area will remain the same as the old fort entrance with bridge and stone walls. Change to this area is impossible because of the steep terrain, network of entrances and a single approach road.

Prefab buildings can be used for a 40 bed facility divided into two 20 bed units. This will be a single story building constructed on the foundation of the demolished building. A dining room and patient kitchen can be constructed of 2 prefab buildings and located central to all patient areas. A central kitchen can be located in the existing structure below the dining room because it is outside the patient use area. Warehouse and laundry can be in the existing building adjacent to the kitchen.

The existing barracks type buildings can be renovated to provide fire protection for 20 patients on each floor. One prefab building added to the first floor and a masonry ground floor will contain toilets, bath, nurses stations, seclusion rooms and utility storage. There is a small area for patient lounge.

Two existing buildings containing detention cells can be demolished to provide space for four prefab building which will house the Adjunctive Therapies, Group Therapy, office spaces for the Occupational and Recreational Therapist and other programs such as grooming and clothing storage.

The demolition of one building can make an opening in the fort wall for an entrance to an athletic field. Rubble from the demolition can be used to fill in the athletic field.

Minimum number of buildings for the 80 bed Treatment and Rehabilitation Services can be constructed on this site. The quality of the environment will be the major factor causing this facility from being a successful facility for the Treatment and Rehabilitation of the mentally ill.

The positive and negative characteristics of this building complex is as follows:

- PROS 1. This site will require less new construction and site work such as paving, walks, water and electrical services.

CONS 1. The environment of this facility will be harmful to a Mental Health Program. This existing facility was constructed with massive stone walls and dark damp cells, barracks and an interior court yard for maximum protection of its occupants. This overpowering feeling of containment cannot be eliminated by renovation or the addition of new structures.

Research by recognized scientist, Erving Goffman, in his book titled Asylums, he has shown that contained environments have a reverse effect on the treatment and rehabilitation of the mentally ill.

2. There is insufficient space in each patient unit for adequate social interaction programs.
3. Arrangement of patient wards can cause an increase in staffing requirements.
4. The barracks type buildings have no possibility of flexibility in the grouping of patients according to degree of illness nor age of patient.
5. Fort Matthew has been designated by the Government of Grenada as a national monument and the construction recommended would require parts of this complex to be demolished.

2. Mental Health Services Project's Proposed Construction, Mt. Gay Site

Consideration was given to change in design of the proposed Project. Reduction of the square footage would prove inadequate space for future adaptability in providing 6 person and 2 person bedrooms rather than ward type occupancy. A selection of different building materials would provide a less than fireproof construction and would add cost for maintaining the building.

A review of the estimated cost showed that the cost of all work and materials would be almost the same except for the construction of the buildings where prefab buildings are used. Certain less expensive materials can be used for finish floor and less quality acoustical barriers can be provided. We also found that the grading estimate is low.

Therefore the decision was made to use the original estimated cost with the suggestion that the cost can be reduced a small amount.

3. Treatment and Rehabilitation Center, Mt. Gay Site

A thorough investigation was made for the use of prefab steel structures. It was found that this type of construction can be used in the construction of the Treatment and Rehabilitation Center on the Mt. Gay Site.

The design of the buildings can be similar in its functional arrangement of spaces as the original design made in June 1984 by the Mental Health Consulting Team. The prefab building design will dominate the exterior appearance of the complex of buildings. With creative design the buildings can be attractive. Interiors will be residential in scale and arrangement of spaces. The built environment could be therapeutic for the patients and functional for the staff. It could provide a moderately safe, healthful and stimulating environment that will enhance improvement of the patient's mental condition.

The positive and negative characteristics of this type of construction is as follows:

- PROS
1. The prefab building structures can be erected in minimum construction time.
 2. The 20 foot clear span of the prefab structures will allow for arrangement of large open spaces needed for activities, crafts and group rooms.
 3. This site has been purchased by the Government for the specific use as the Treatment and Rehabilitation center site.
- CONS
1. The prefab buildings will provide a fire resistant building.
 2. The width of the prefab building does not allow for an 8 foot corridor egress in the event of an emergency patient evacuation. (An 8 foot wide corridor is required for life safety standards for evacuation of bed ridden patients.)
 3. The fixed width of 20 foot outside dimension of the prefab building does not allow for future flexibility in changing the patient bedroom ward into single and double occupancy bedrooms. Current psychiatric treatment requires 1 patient and 2 patient occupancy bedrooms. Patient privacy is essential in the treatment of the mentally ill, a principle for accreditation for Psychiatric Facilities, Joint Commission on Accreditation of Hospitals.
 4. The prefab buildings provide no flexibility in the size of window openings.
 5. The behavioral control rooms (seclusion rooms) will have minimum acoustical privacy. Patients may disturb other patients causing the total unit to be a behavioral problem.
 6. The non-changeable dimensions of the prefab building cause additional space for some functions and not enough space for other functions.

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4. Turn-Key Construction Type

Turn-key construction utilizing competitive bids for prefabricated structures was studied. The conceptual layout would provide for adequate standards of medical care for mental patients. The layout would be the same as the original design.

5. Acute Psychiatric Unit including Admissions Office and Substance Abuse Unit, St. George's General Hospital

The Acute Psychiatric Treatment Unit

The proposed Acute Psychiatric Services facility consists of two 10 bed wards and 4 private bedrooms which can be used for patient behavioral control. They will be constructed as seclusion rooms. Each ward and the seclusion rooms will have access to a toilet with shower, two water closets and three lavatories. A bathroom with tub is shared by the two wards. Clean linen and materials storage and soiled utility rooms are located central to the wards. An open nurse's station is located central to all rooms with visual observation of entrance, patient lounge, seclusion rooms, corridor and entrance into each ward.

A room is provided for treatment planning meetings, patient group meetings, meetings with families and discharge planning. The rooms are so arranged to provide social activities including tables for occupational therapy and table top games in the patient lounge. Tennis courts and walking paths are available for supervised outdoor recreational activities.

The architecture of the facility will be 4 connected steel frame prefabricated fire resistant buildings. The interiors of the unit will be residential in scale and character. The environment will encourage social interactions and provide minimum supervision by staff.

Accessibility to the unit is directly available by a foot bridge from an access road. The location of the building is so that it will not interfere with the normal traffic flow of the hospital. Patients and disturbances made by the patients will not disturb the general hospital's patients.

The positive and negative characteristics of this building type is as follows:

- PROS
1. The prefab building structure can be erected in minimum time.
 2. The 20 ft. clear span allows for the arrangement of large spaces for dayroom activities.
- CONS
1. The fixed width of the prefab building does not allow for future flexibility in changing ward design into single or double occupancy bedrooms.
 2. The width of the prefab building does not allow for an 8 foot corridor egress in the event of an emergency patient evacuation. (An 8 foot wide corridor is required for life safety standards for evacuation of bed ridden patients. In most cases there will be no bed ridden patients who cannot walk from building in the event of an emergency.)
 3. The prefab building provides no flexibility in size of window openings.
 4. The behavioral control rooms (seclusion rooms) will have minimum acoustical privacy-patients may disturb other patients causing the total unit to be a behavioral problem.

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5. The building exterior appearance will be different from the other hospital buildings. This may not be a problem because no two buildings at the hospital are alike. To make a homogeneous fit with the hospital architecture it can be painted similar to the other buildings.
6. Specific spaces are not available for occupational therapy nor recreational therapy programs. An additional unit will not fit on site. Therefore space is not available. Additional space for outpatient activities are not available.

Substance Abuse Services and Detoxification Unit

The Substance Abuse Service and Detoxification Unit consist of 6 single occupancy bedrooms, a patient lounge and a fenced-in outdoor terrace area overlooking the harbor. Patient toilets and bath are available. The open nurse's station is central to bedrooms and all bedroom doors can be observed from the station. Utility rooms are available to staff.

A treatment-examination room is available to the unit and to the Acute Psychiatric Unit. The size of the room will allow for patient interviews.

Direct accessibility is from a reserved parking space to the main entrance of the facility. The interior environment is highly structured and encourages social interactions.

Shared Facilities

Facilities common to all services include patient records, central utility storage rooms, Nurse's office, Conference room (for staff conferences, family conference, AA & NA meetings and staff lounge.) A dining room is available for multi use for large meetings, activities and therapies. Kitchen facilities are provided for preparation of meals. A small patient kitchen is available for Therapy and Training programs.

Basic Laboratory work including CPC, urinalysis, serological test, X-Ray and PAP smears are not available in this building. It is intended that these services will be available from the hospital laboratory.

The positive and negative characteristics of this building type is as follows:

- | | |
|------|---|
| PROS | <ol style="list-style-type: none">1. The lower floor is designed to be constructed of masonry units with plaster surfaces, bedrooms with adequate acoustical privacy.2. Special entrance for acting-out patients is provided. |
| CONS | <ol style="list-style-type: none">1. The staff lounge is shared with staff conference, family conferences and other types of meetings.2. Spaces for future day hospital and outpatient programs are not available unless patient areas are shared.3. There is no laundry located in building. It is intended that the hospital will provide laundry services. |

SUMMARY OF COST ESTIMATES OF ALTERNATIVE STRATEGIES
FOR PROVIDING MENTAL HEALTH FACILITIES-GRENADA

1)	PP Estimated cost of construction		<u>US DOLLARS</u>
	Mt. Gay Buildings: \$2,016,174		
	Rathdune Building: 532,000		
	<u>2,548,174</u>		<u>2,548,174</u>
2)	<u>Richmond Hill Facility</u>		
	Cost to demolish several of existing structures and remove rubble-build new buildings using prefab metal Butler buildings with interior cement plaster walls and ceiling, insulation, all new toilet fixtures, kitchen, cold storage and laundry equipment, new athletic field in south court, new septic tank, plus landscaping and park benches		<u>786,000</u>
	Richmond Hill Butler Solution plus Rathdune Butler Solution		<u>1,080,000</u>
3)	<u>Mount Gay Site-Possible cost reductions in PP Estimated Costs:</u>		
		<u>E.C.</u>	
	a) Delete water collection system from roofs	60,000	
	b) Pump	2,000	
	c) Feeder Tanks	6,000	
	d) Collection System	10,000	
	e) Delete covered walks	108,000	
	Total Possible Cost Reductions:	<u>E.C. 186,000</u>	= <u>70,454</u>
	PP Estimated Cost of Mt. Gay Building:	\$2,016,174	
	Total Possible Reductions:	- 70,454	
	Reduced Cost:	<u>\$1,945,720</u>	<u>1,945,720</u>
	PP Est. Cost of Rathdune Building:	\$532,000	
	TOTAL	<u>\$2,477,700</u>	<u>2,477,700</u>
4)	<u>Mt. Gay Site</u> utilizing concrete block and structural concrete buildings combined with prefab metal Butler buildings		<u>1,239,000</u>
5)	<u>Turn-key construction</u> utilizing competitive bids for prefabricated structures. A cost estimate based on the original conceptual drawings of the PP design was obtained from <u>one supplier</u> for the 80 bed and 26 bed facility		
	Total Est. Cost:		<u>2,584,600</u>
6)	<u>Rathdune Building</u> -the present building was investigated and it is recommended that it be demolished. The cost of a new structural concrete with prefab metal Butler Buildings is estimated at:		<u>294,800</u>
	Mt. Gay plus Rathdune Butler Solution = (para. 4 plus 6) =		<u>1,533,800</u>

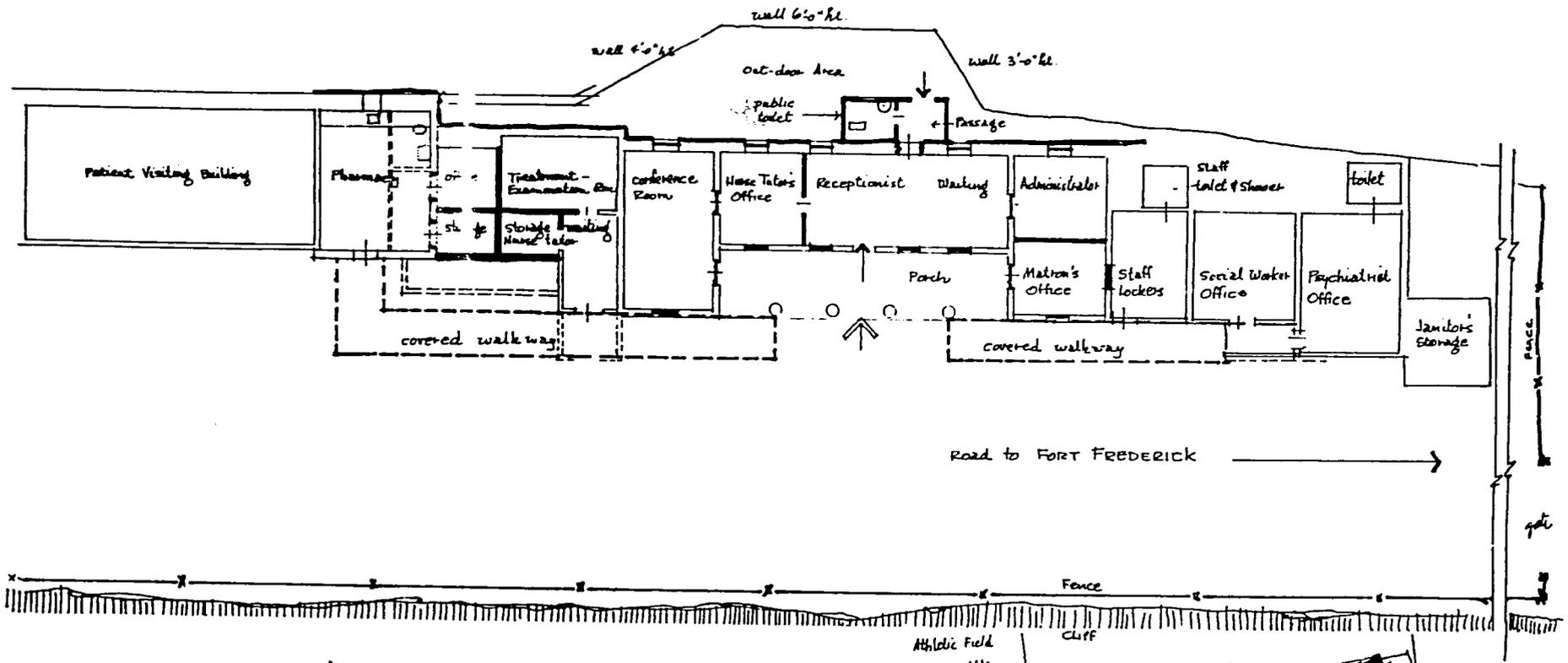
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The following is a summary of the work done during the year 1918.

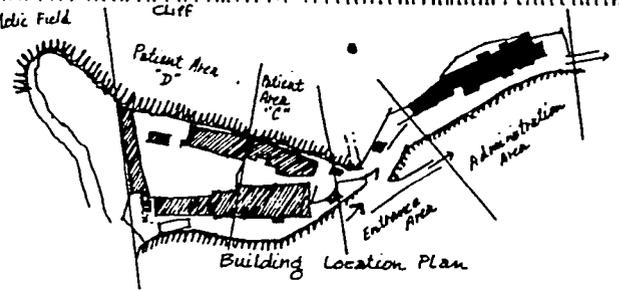
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WATER DISTRIBUTION																			
SEWER COLLECTION																			
ELECTRICAL DISTRIBUTION																			
SEPTIC TANK																			
CONCRETE SIDEWALKS																			
COVERED SIDEWALKS																			
CONCRETE STAIRWAY AT CLIFF																			
STONE PATH																			
FENCE																			
TOPSOIL & SEEDING																			

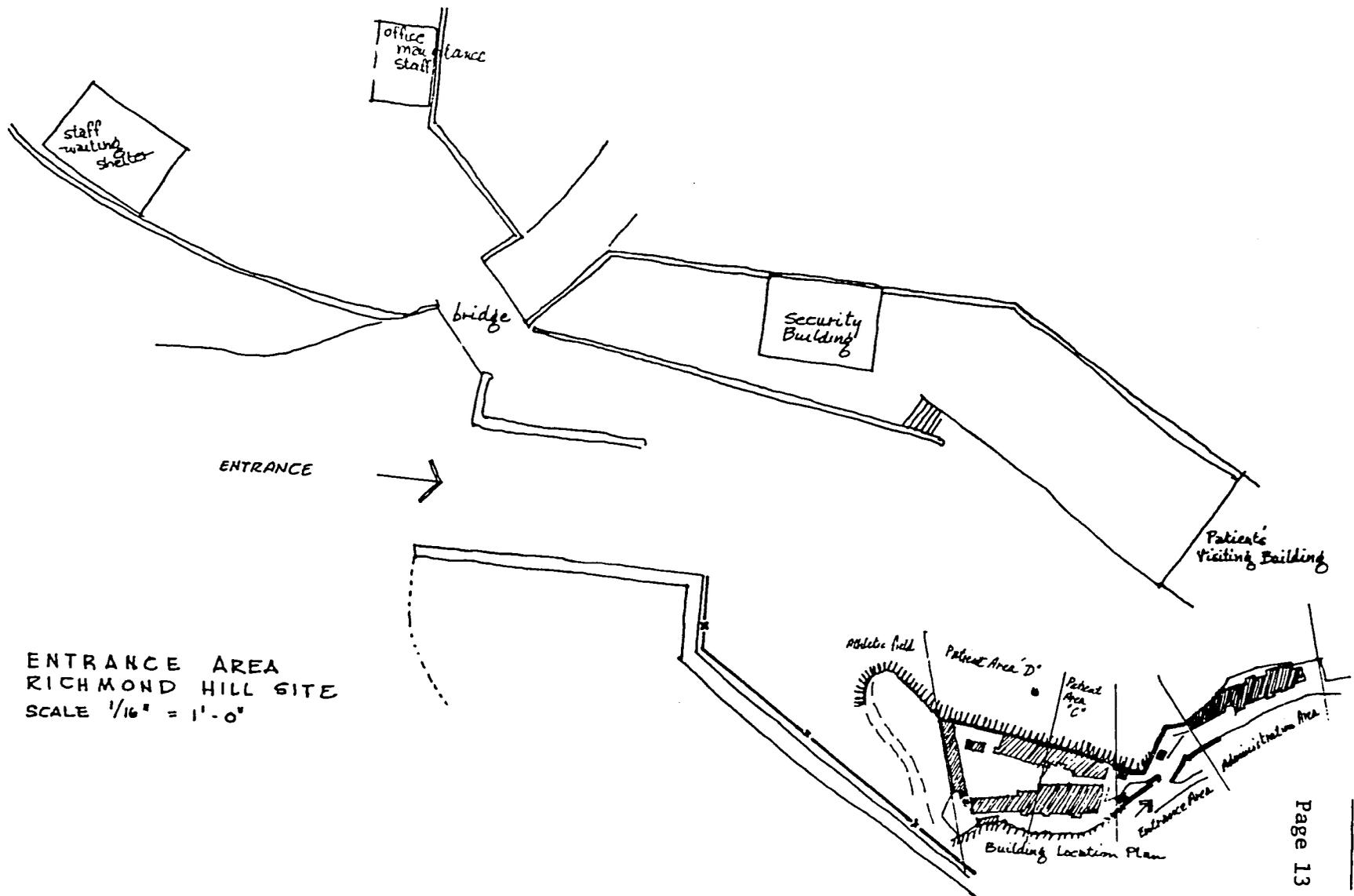
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ADMINISTRATION AREAS
 RICHMOND HILL SITE
 SCALE 1/8" = 1'-0"

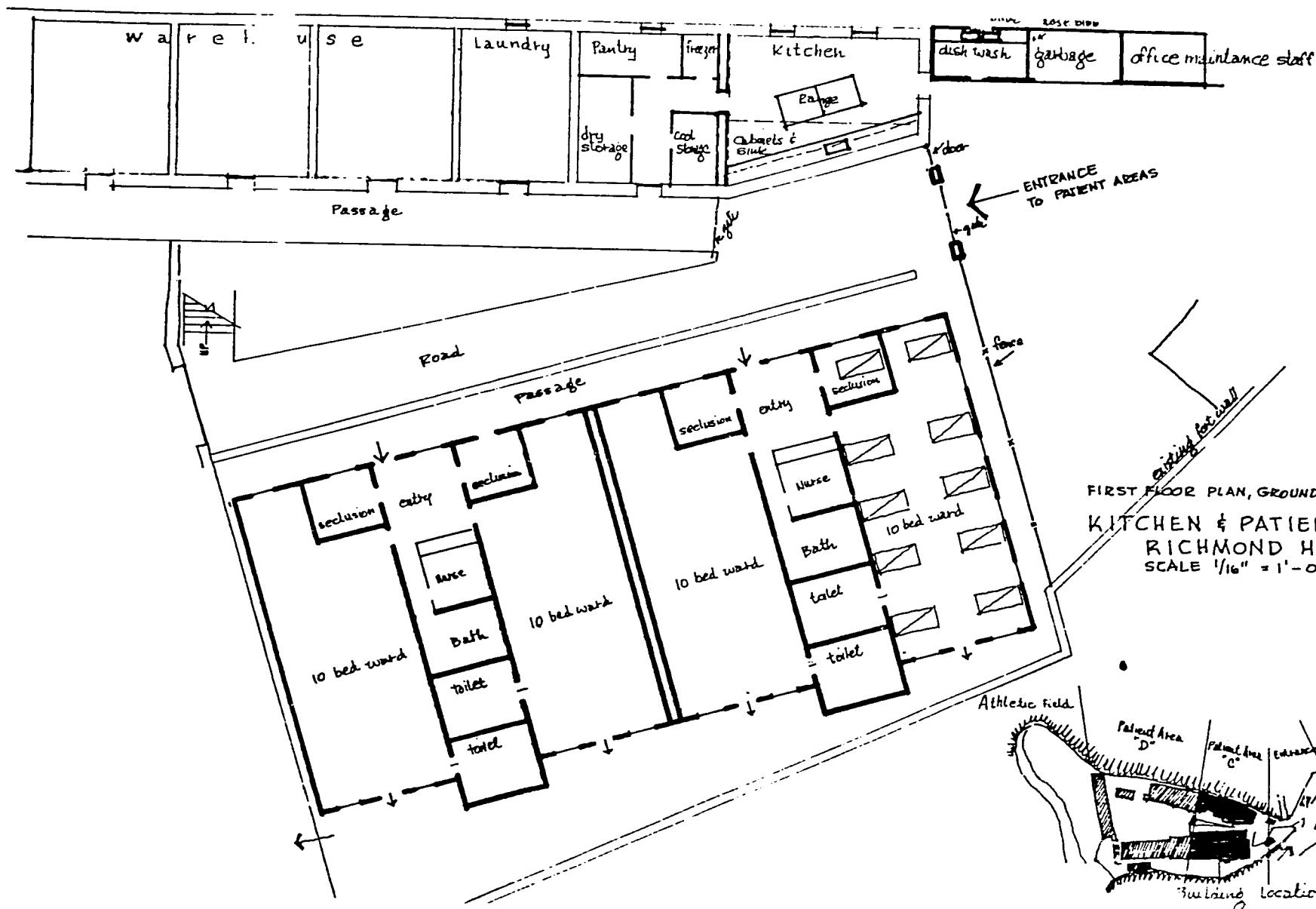


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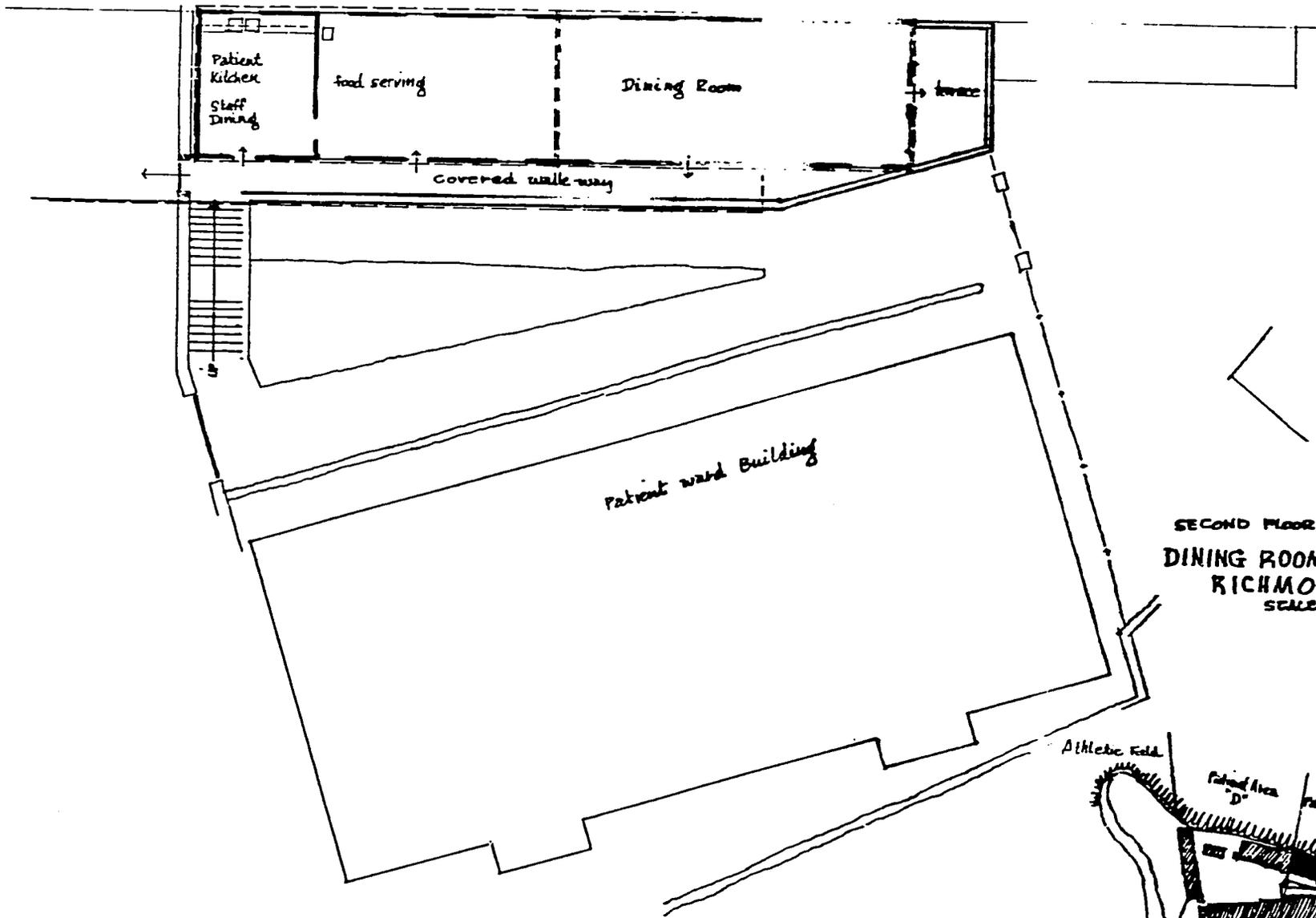


ENTRANCE AREA
 RICHMOND HILL SITE
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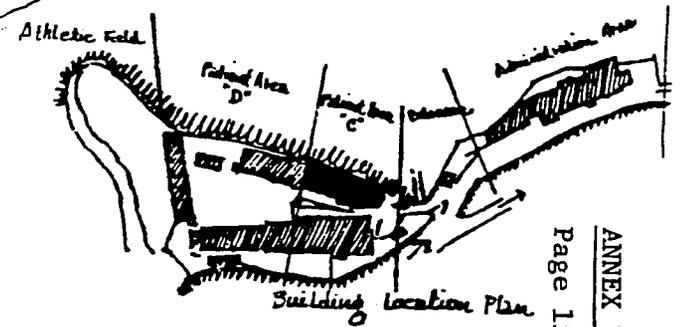
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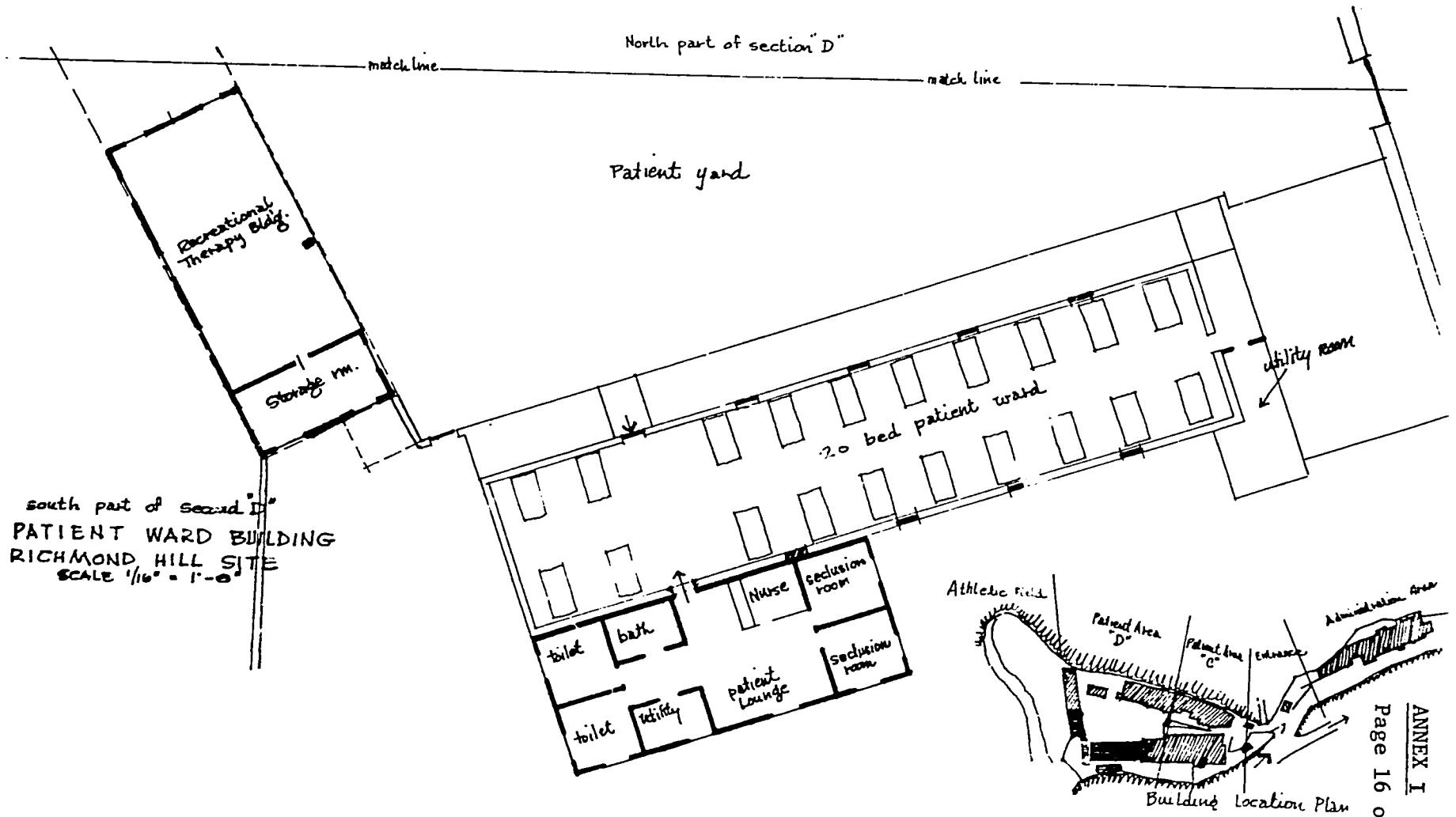


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SECOND FLOOR PLAN SECTION "C"
 DINING ROOM & PATIENT KITCHEN
 RICHMOND HILL SITE
 SCALE 1/16" = 1'-0"

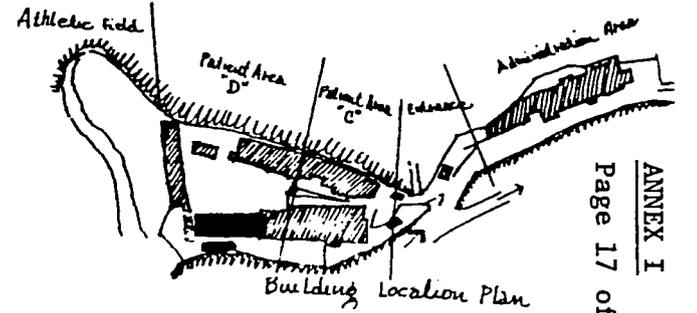
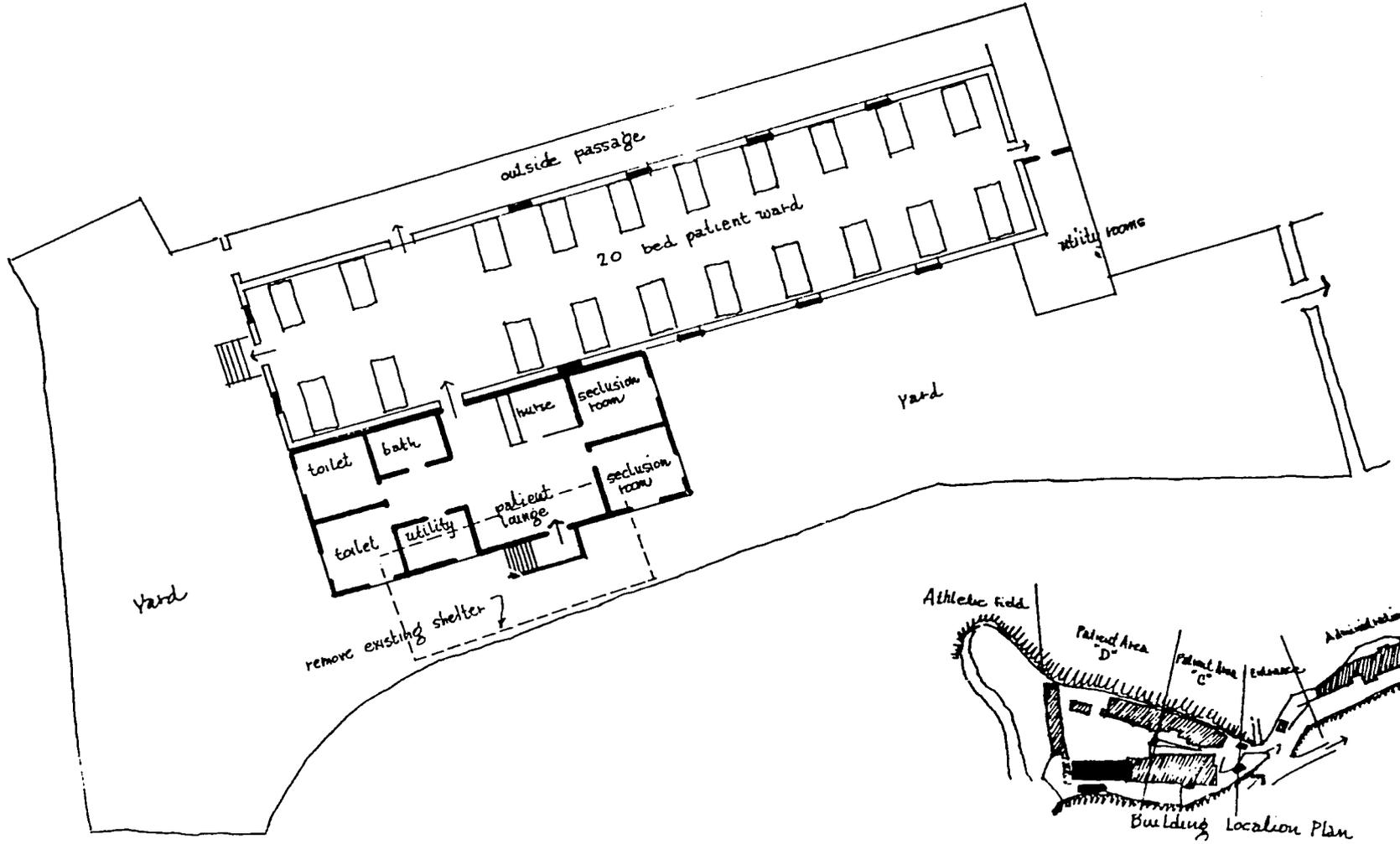




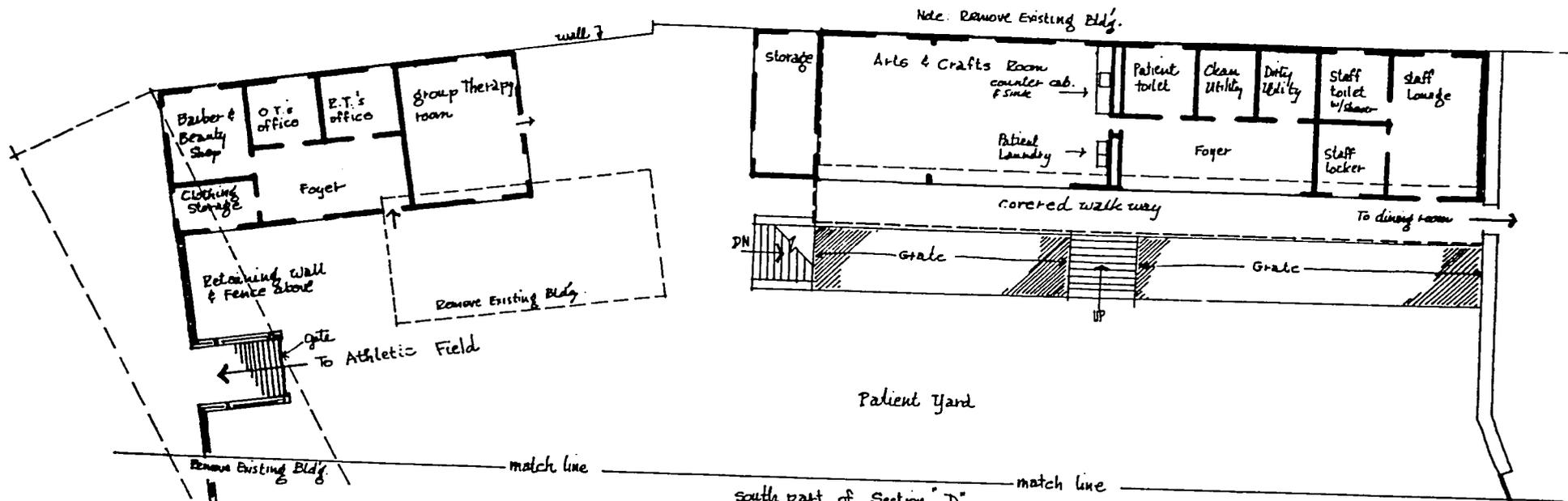
South part of section D
PATIENT WARD BUILDING
 RICHMOND HILL SITE
 SCALE 1/16" = 1'-0"

1/2

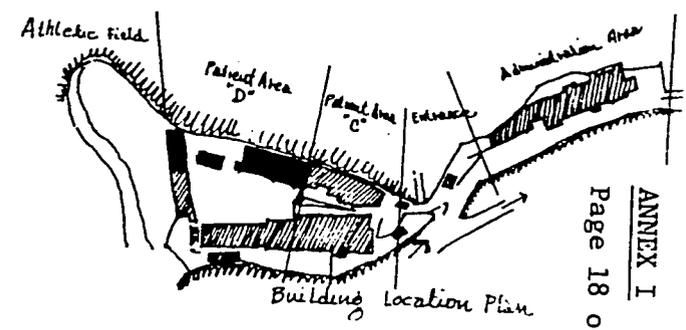
lower level south part of second "D"
 PATIENT WARD BUILDING
 RICHMOND HILL SITE
 SCALE 1/16" = 1'-0"

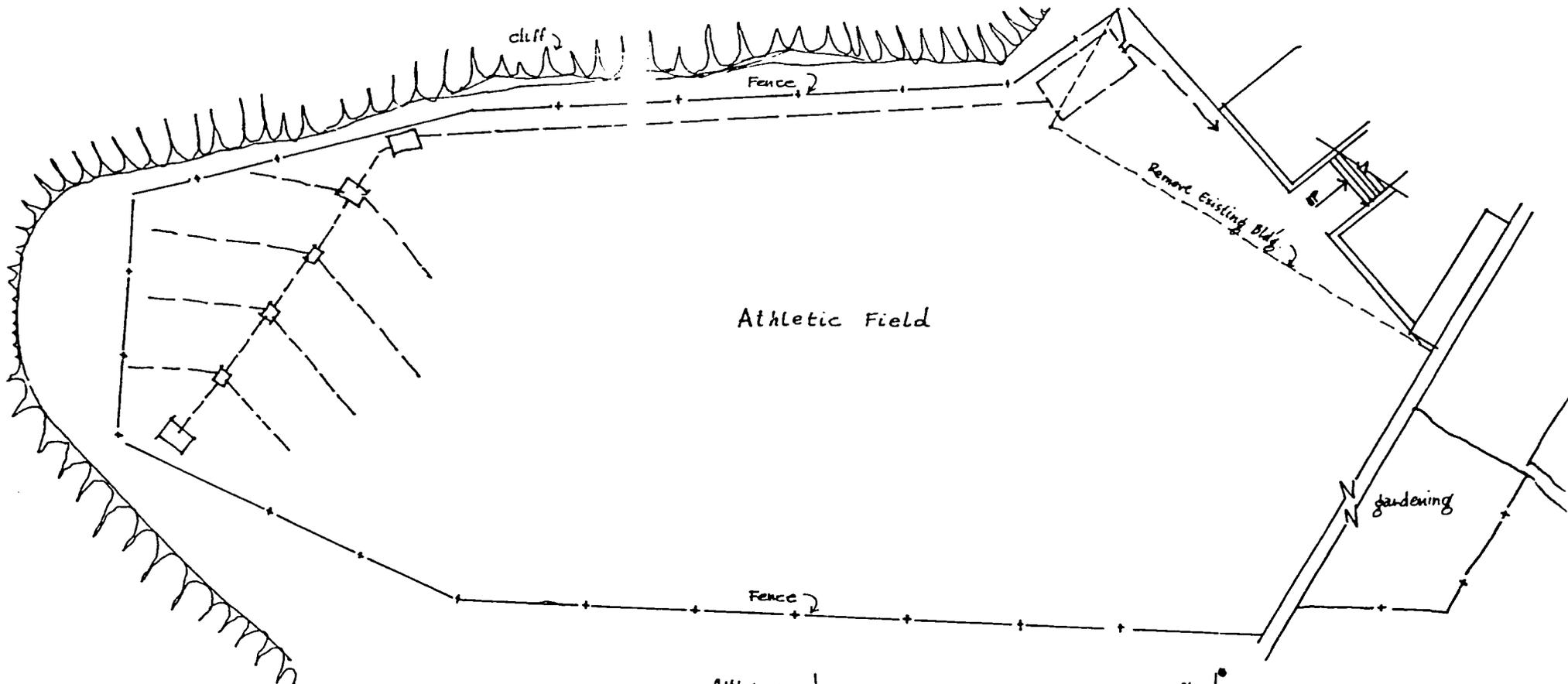


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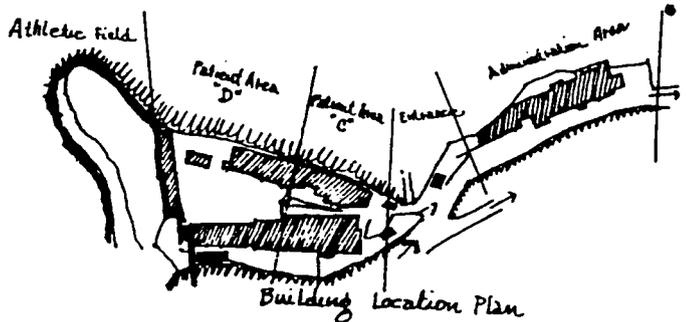


north part of section "D"
 PATIENT & STAFF BUILDINGS
 RICHMOND HILL SITE
 SCALE 1/16" = 1'-0"

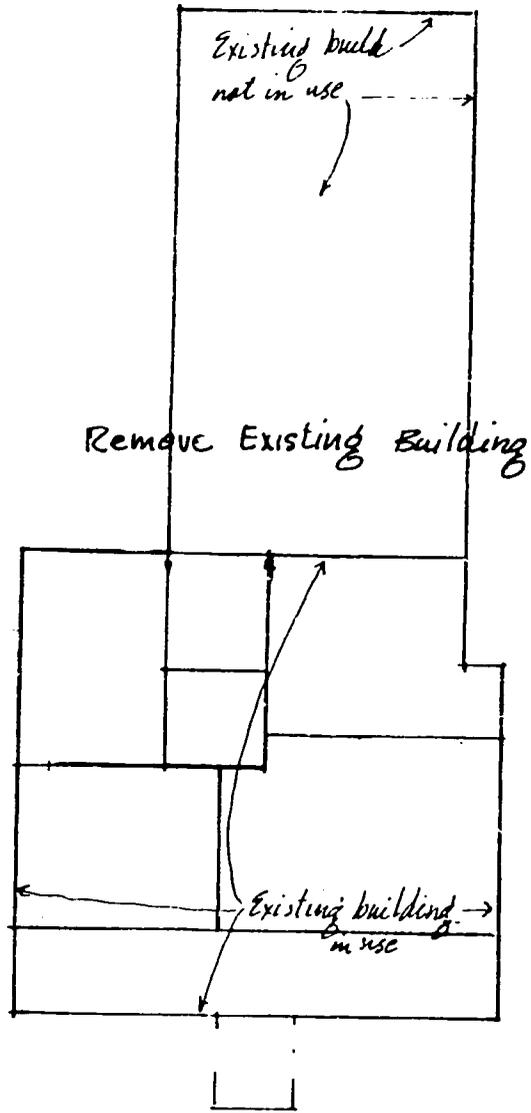




ATHLETIC FIELD
 RICHMOND HILL SITE
 SCALE 1/16" = 1'-0"



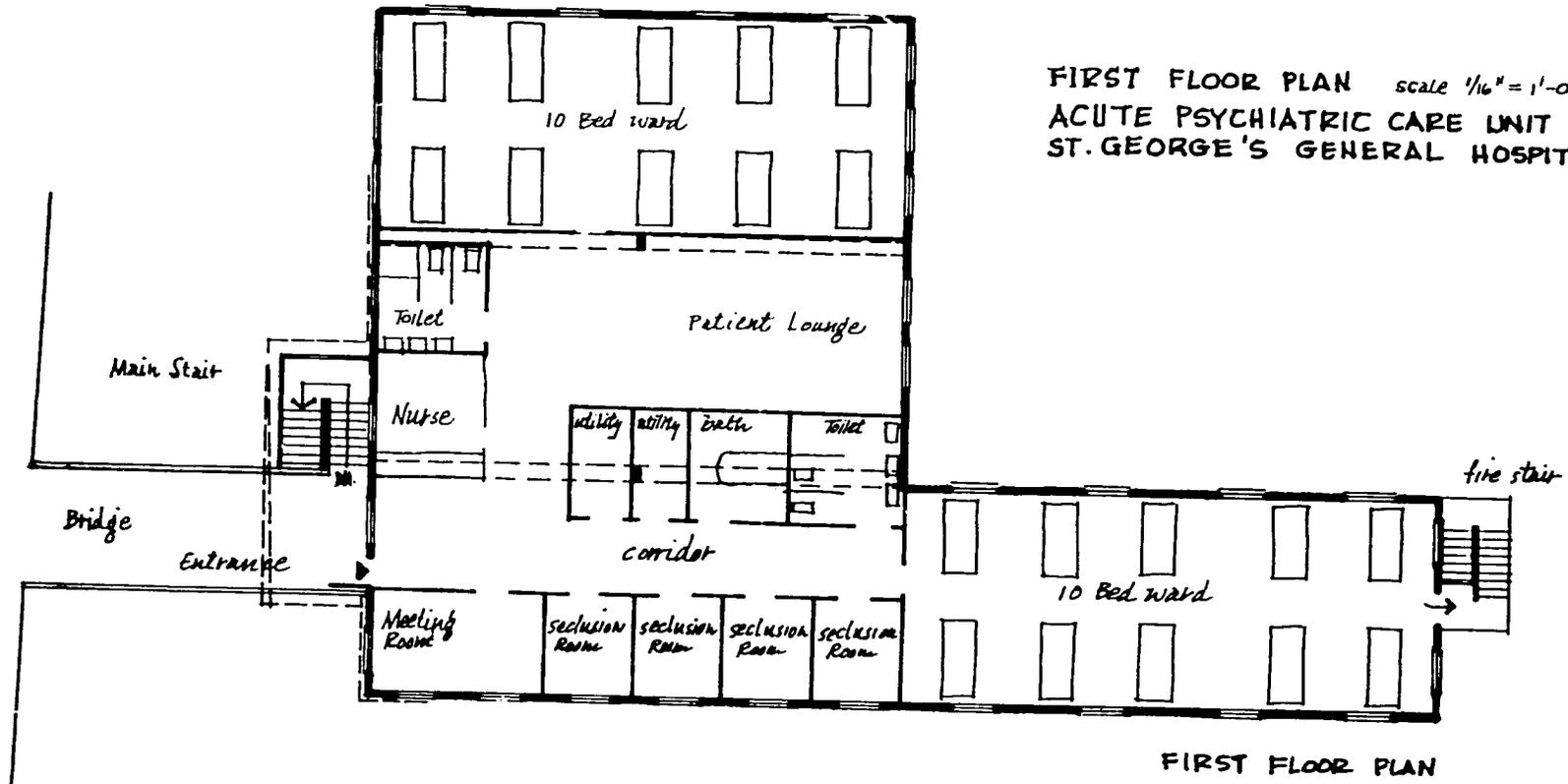
loc. St. George's Ambulance



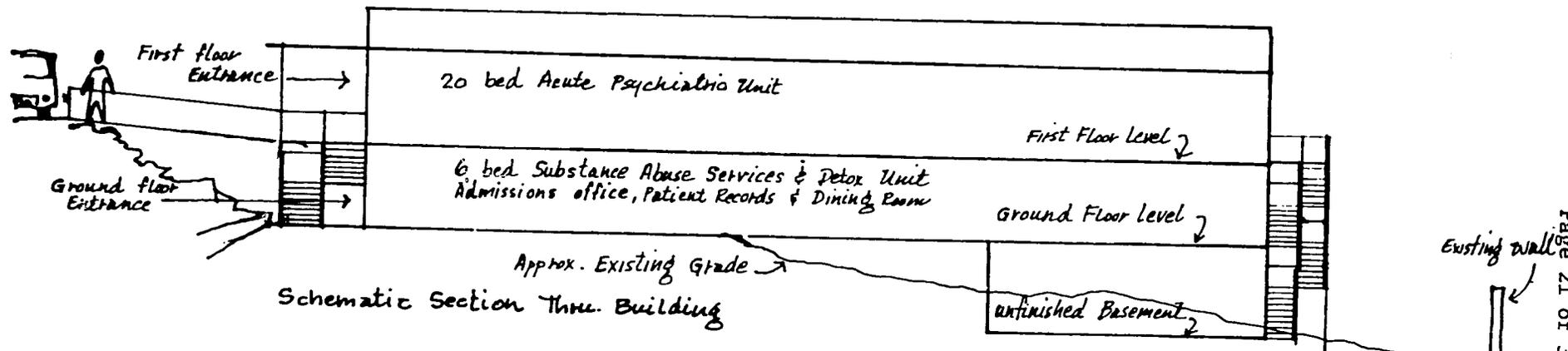
edge of lawn

Ratnoue Building Site
St. George's General Hospital
Scale 1/16" = 1'-0"

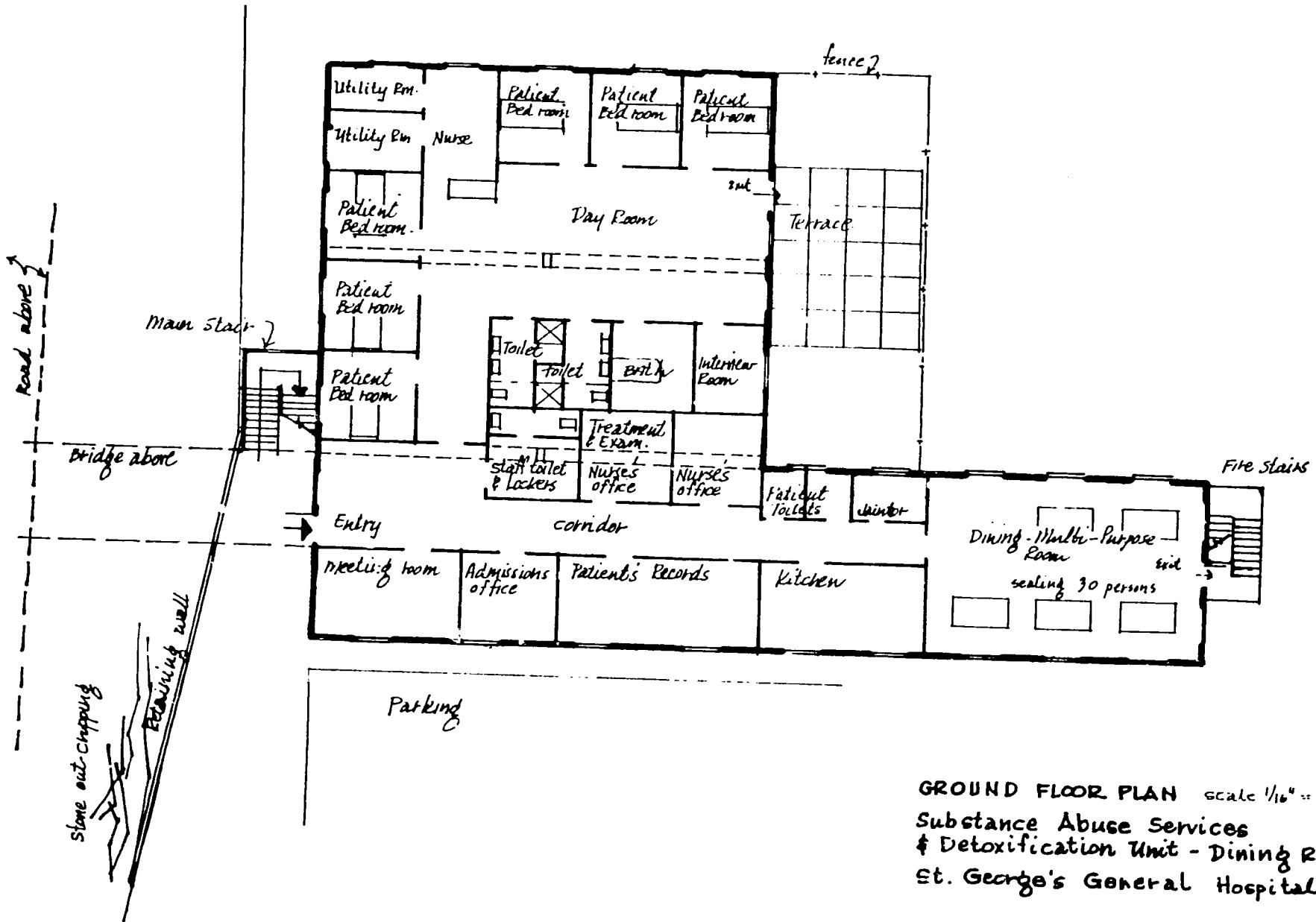
FIRST FLOOR PLAN scale 1/16" = 1'-0"
 ACUTE PSYCHIATRIC CARE UNIT
 ST. GEORGE'S GENERAL HOSPITAL



FIRST FLOOR PLAN

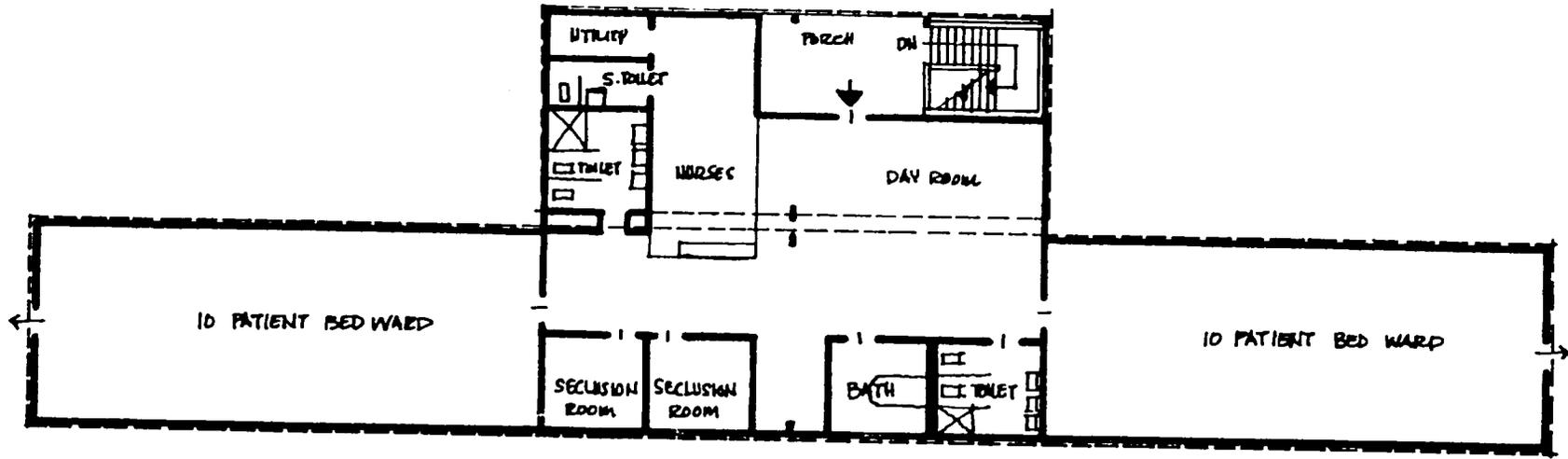


Schematic Section Thru Building

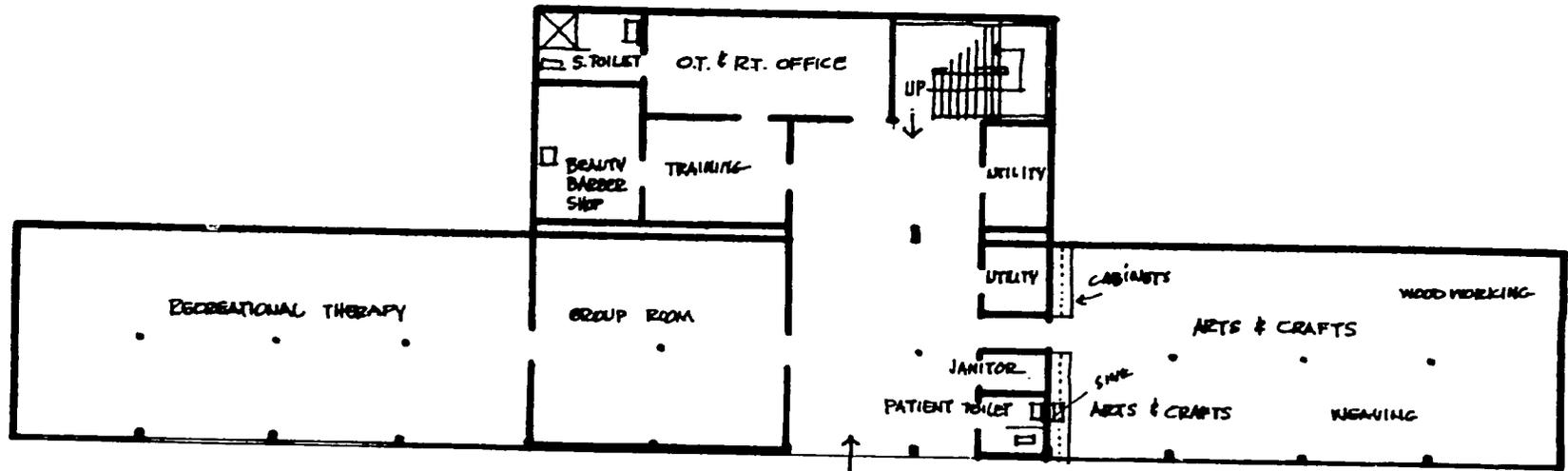


GROUND FLOOR PLAN scale 1/16" = 1'-0"
 Substance Abuse Services
 & Detoxification Unit - Dining Rm. & Kitchen
 St. George's General Hospital

1. Main Building
 2. Workshop
 3. Storehouse
 4. Office
 5. Kitchen
 6. Living Room
 7. Dining Room
 8. Bedroom
 9. Bathroom
 10. Hallway
 11. Staircase
 12. Porch
 13. Garden
 14. Parking Area
 15. Driveway
 16. Fences
 17. Walls
 18. Windows
 19. Doors
 20. Roofs
 21. Foundations
 22. Foundations
 23. Foundations
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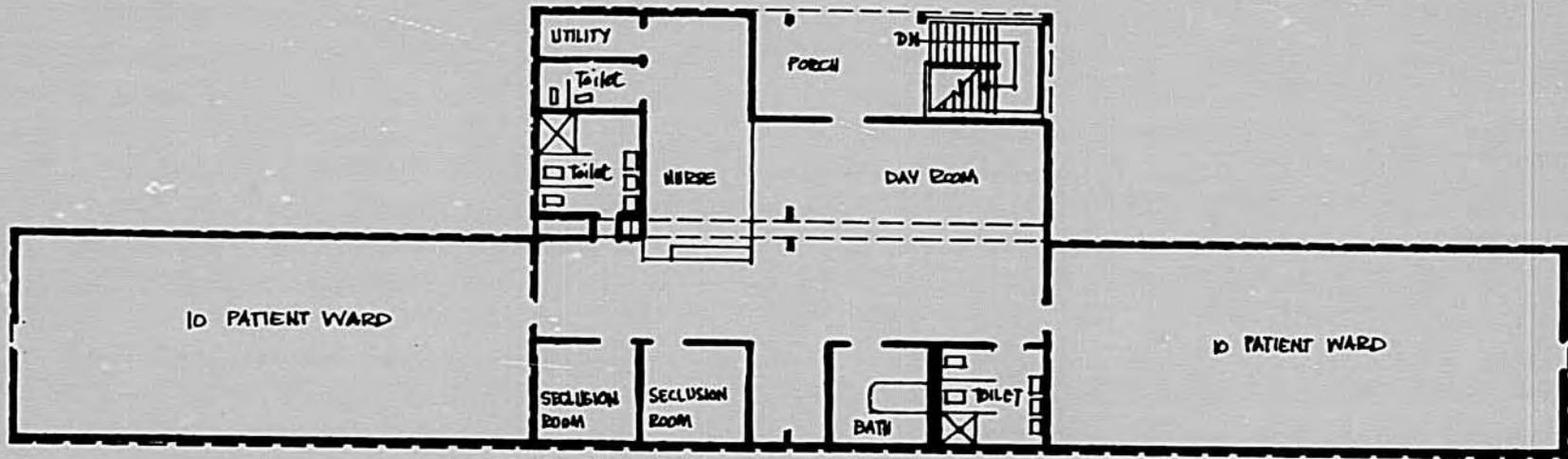
FIRST FLOOR PLAN



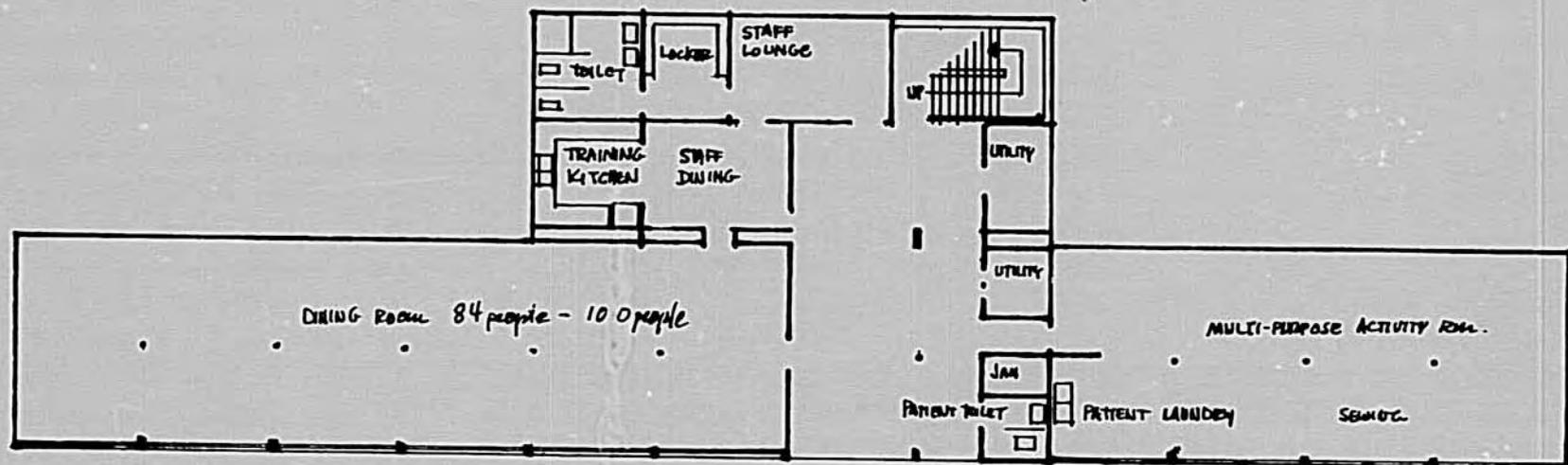
GROUND FLOOR PLAN

PATIENT COTTAGE BUILDING "C"
 SCALE 1/16" = 1'-0" 7,680 gross sq. ft

12



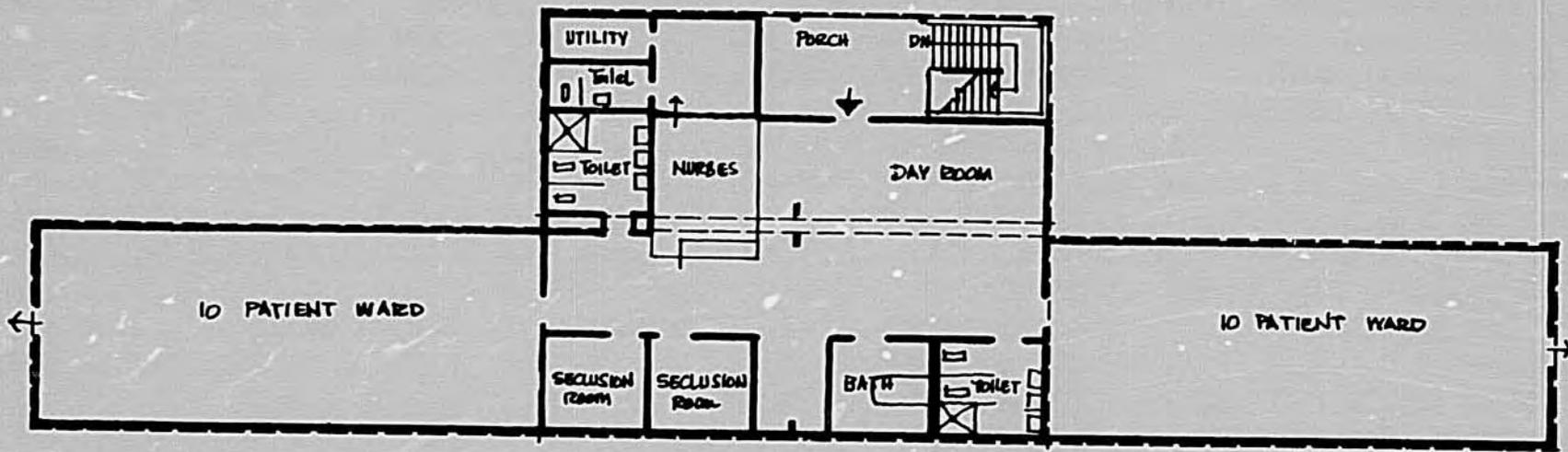
FIRST FLOOR PLAN



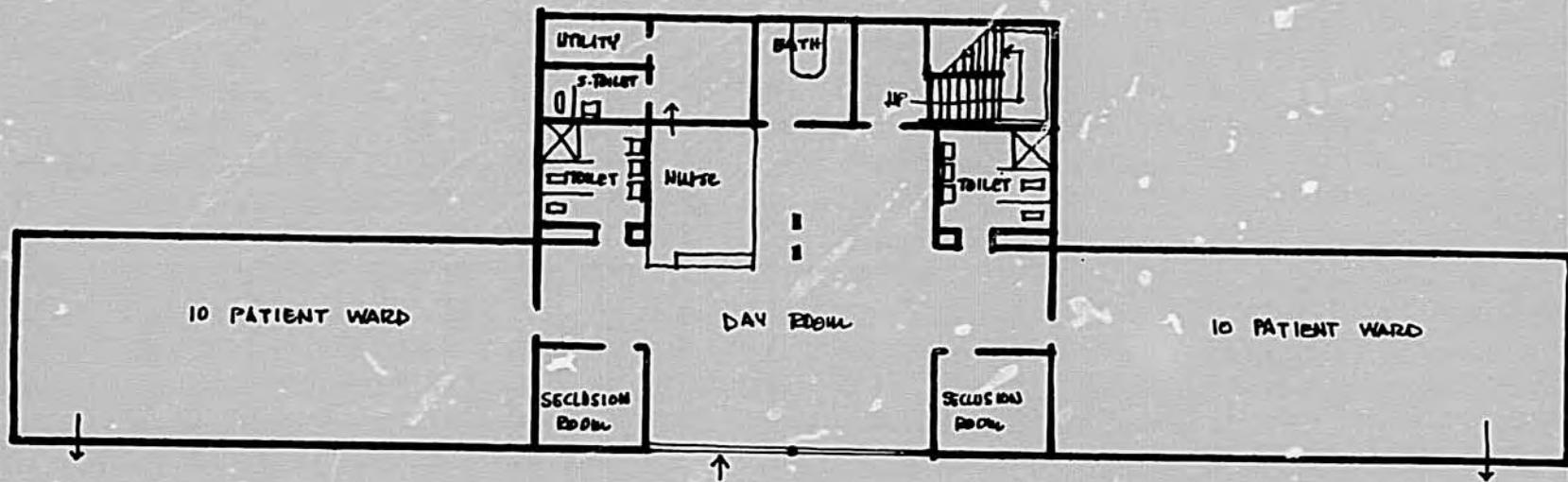
GROUND FLOOR PLAN

PATIENT COTTAGE BLDG. "B"
 SCALE 1/16" = 1'-0" 7,68 gross sq. ft.

122



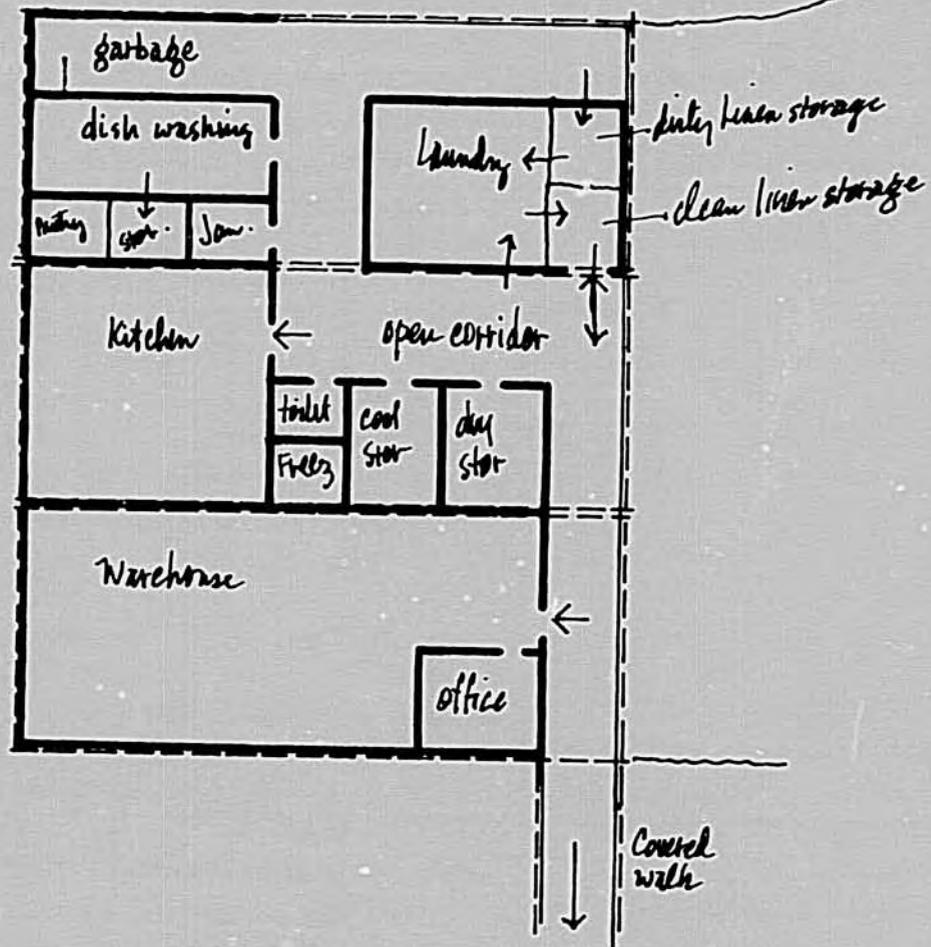
FIRST FLOOR PLAN



GROUND FLOOR PLAN

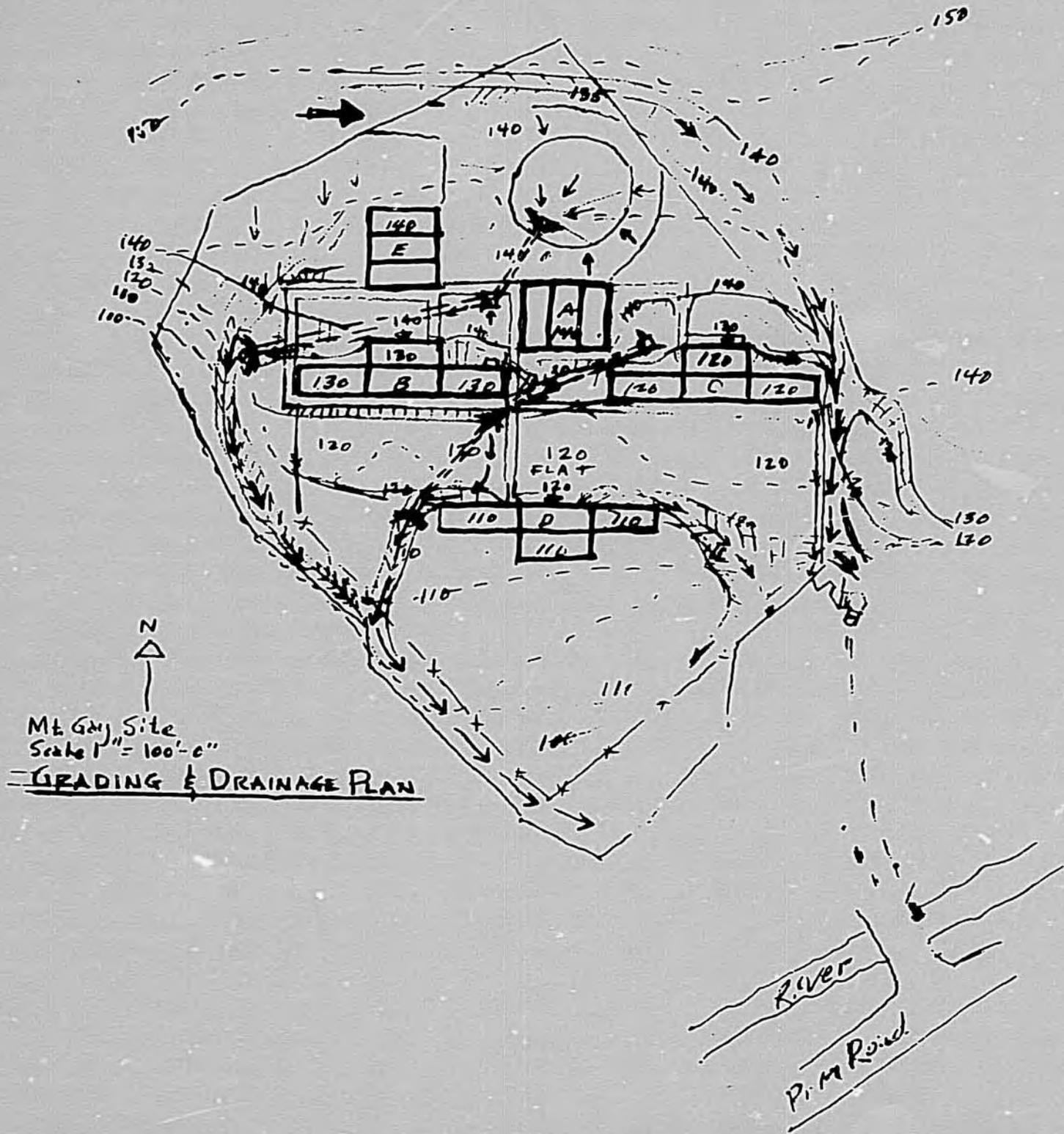
COTTAGE BUILDING "D"
 SCALE 1/16" = 1'-0" 7,680 gross sq. ft.

123

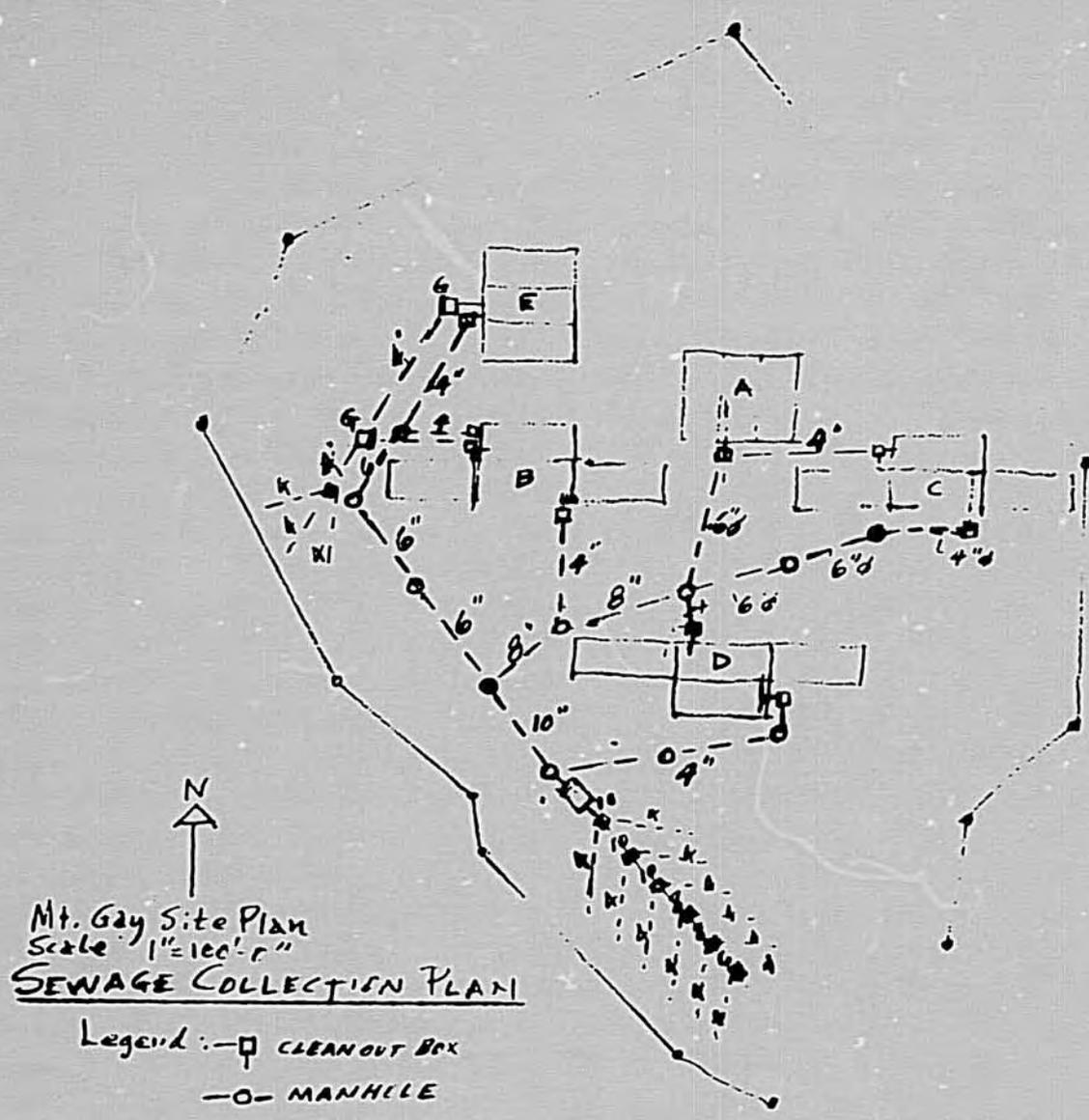


KITCHEN & WAREHOUSE BUILDING "E"
 Mt. Gay Site - Prefabricated Building Scheme
 scale 1/16" = 1'-0" 2880 gross sq. ft.

124



123

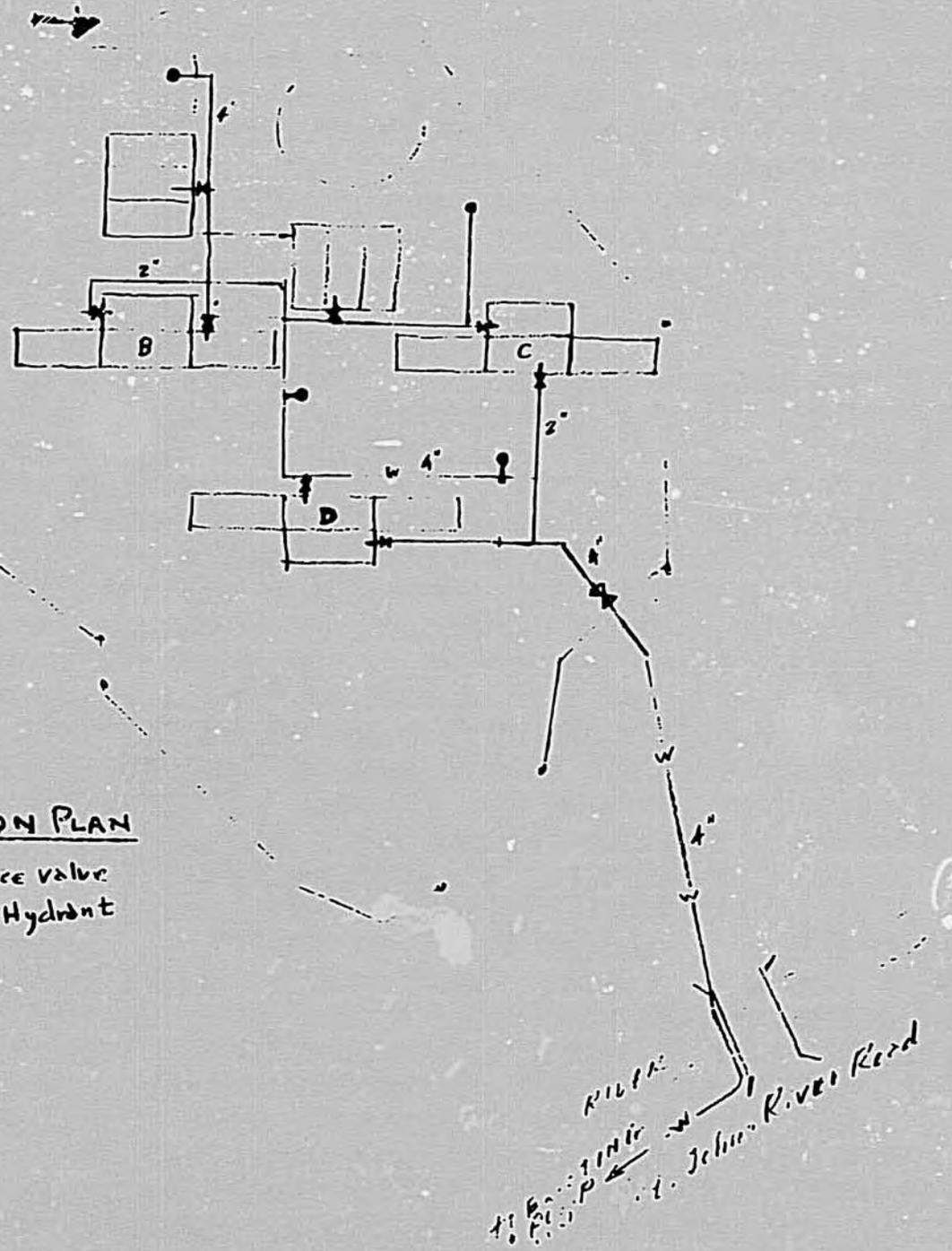


Mt. Gay Site Plan
 Scale 1"=100'-r"
SEWAGE COLLECTION PLAN

- Legend:
- CLEANOUT BOX
 - MANHOLE
 - ▭ SEPTIC TANK
 - DISTRIBUTION BOX
LEACHING FIELD
 - ⊕ GREASE TRAP

River
 Road

12/6



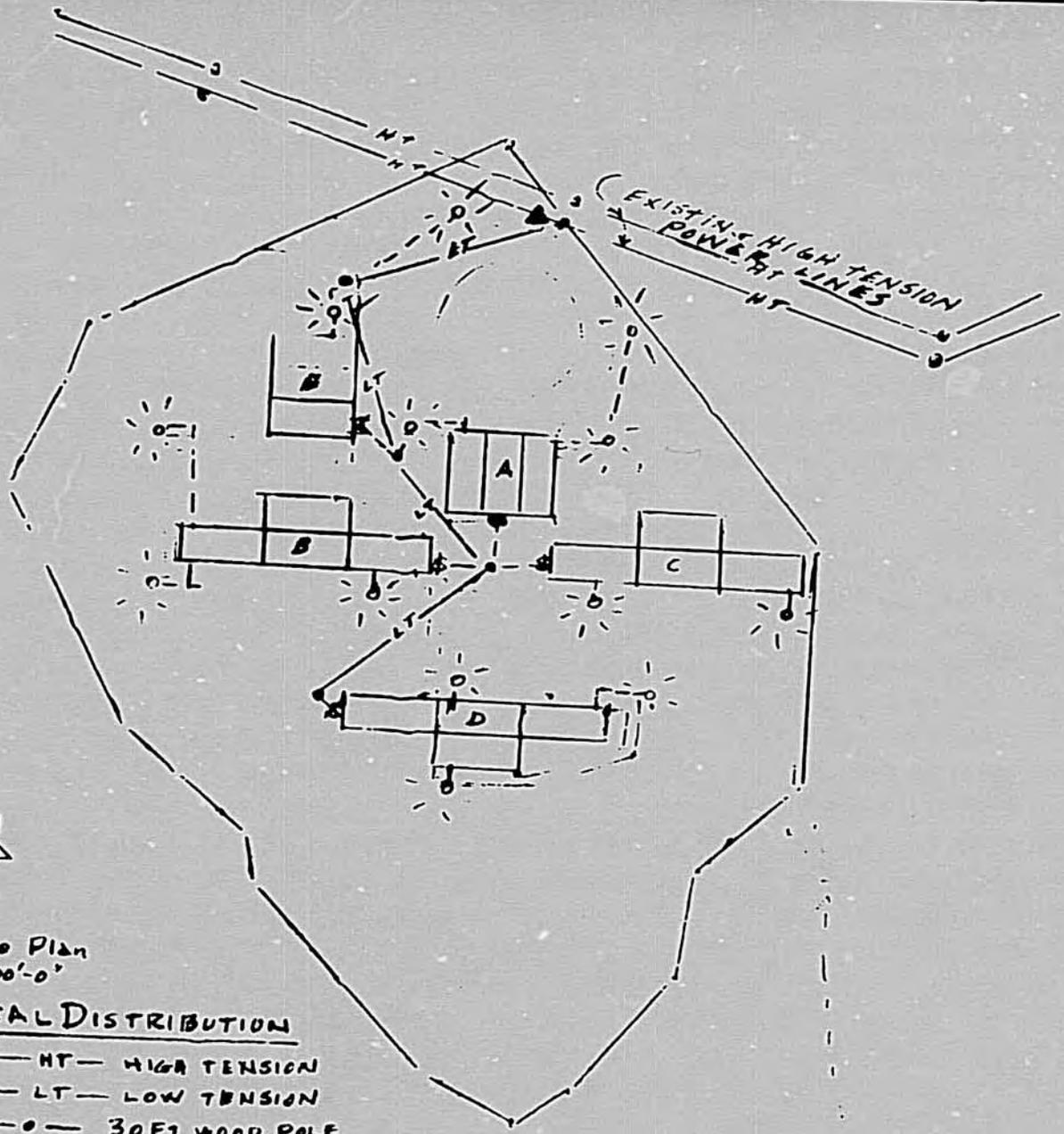
Mt. Gay Site Plan
Scale 1" = 100' 0"

WATER DISTRIBUTION PLAN

Legend: —| service valve
 ● Fire Hydrant

11 P. 100' P
 RIVER
 John River Road

127

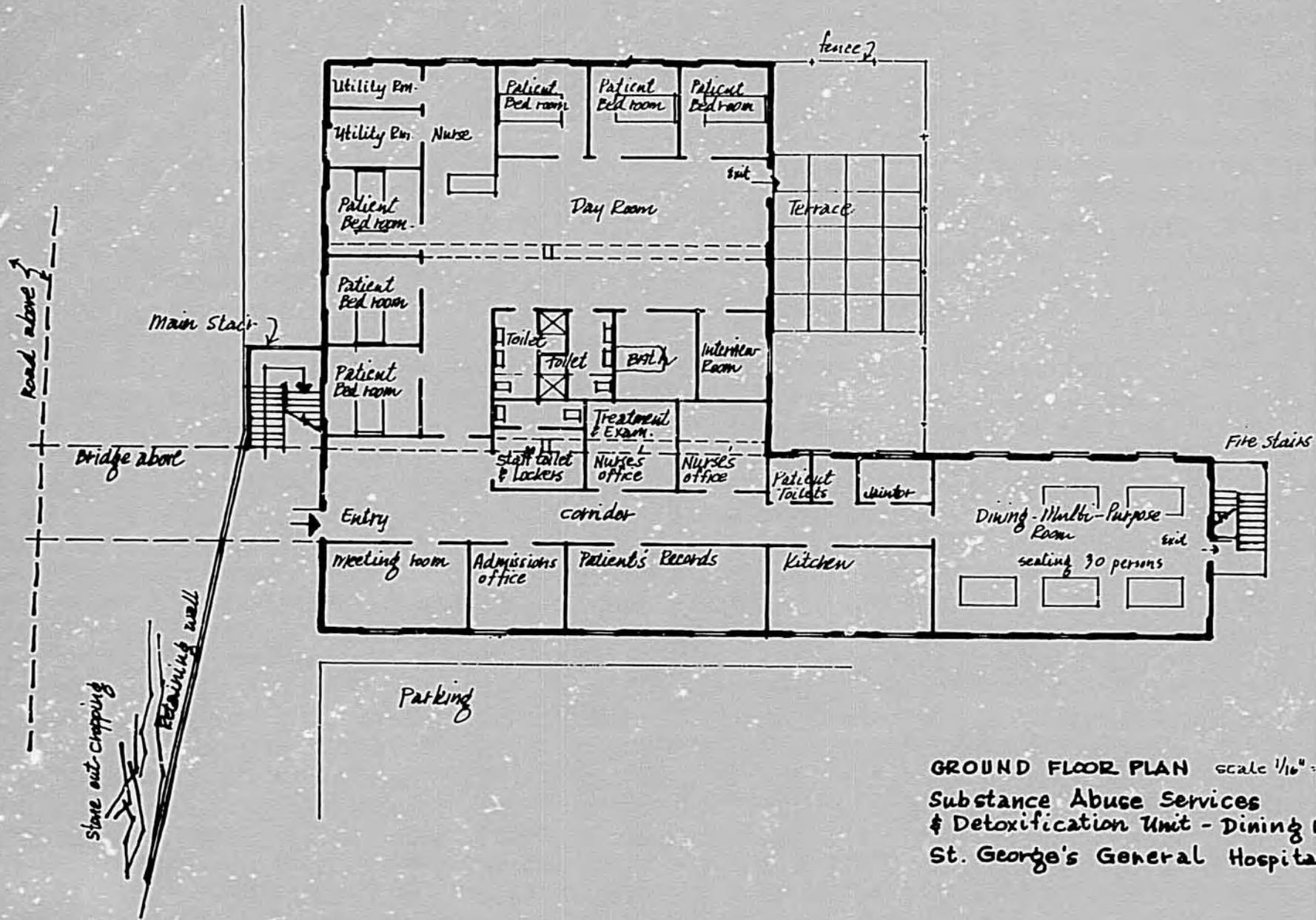


Mt. Gay Site Plan
Scale 1"=100'-0"

ELECTRICAL DISTRIBUTION

- LEGEND:
- HT — HIGH TENSION
 - - - LT — LOW TENSION
 - — 30 FT WOOD POLE
 - ⊕ — BUILDING SERVICE ENTRANCE
 - ☼ — 7 FT LIGHT POLE WIRE UNDERGROUND

128

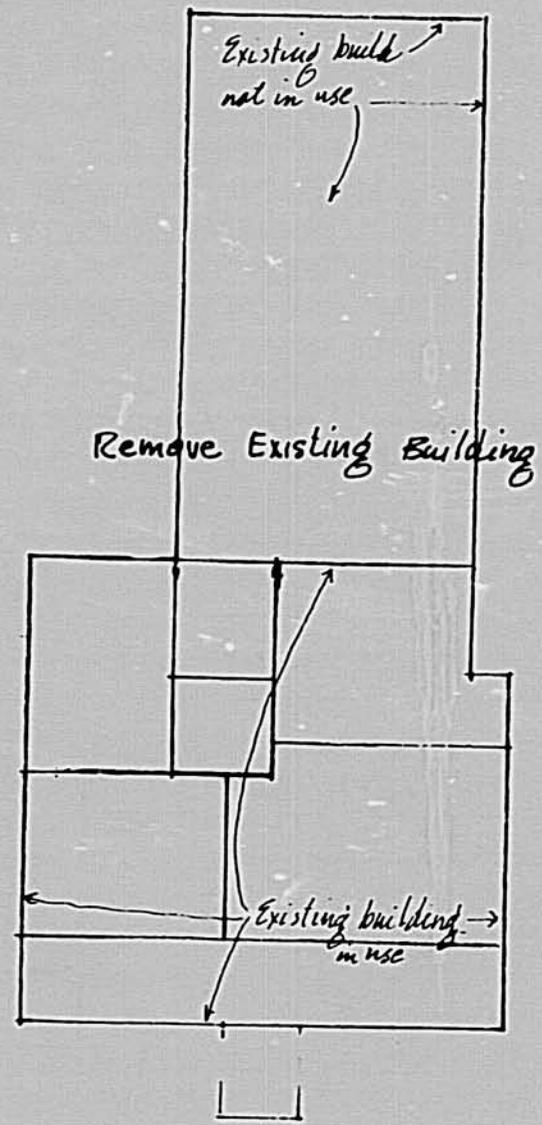


GROUND FLOOR PLAN scale $\frac{1}{16}'' = 1'-0''$

Substance Abuse Services
 & Detoxification Unit - Dining Rm. & Kitchen
 St. George's General Hospital

129

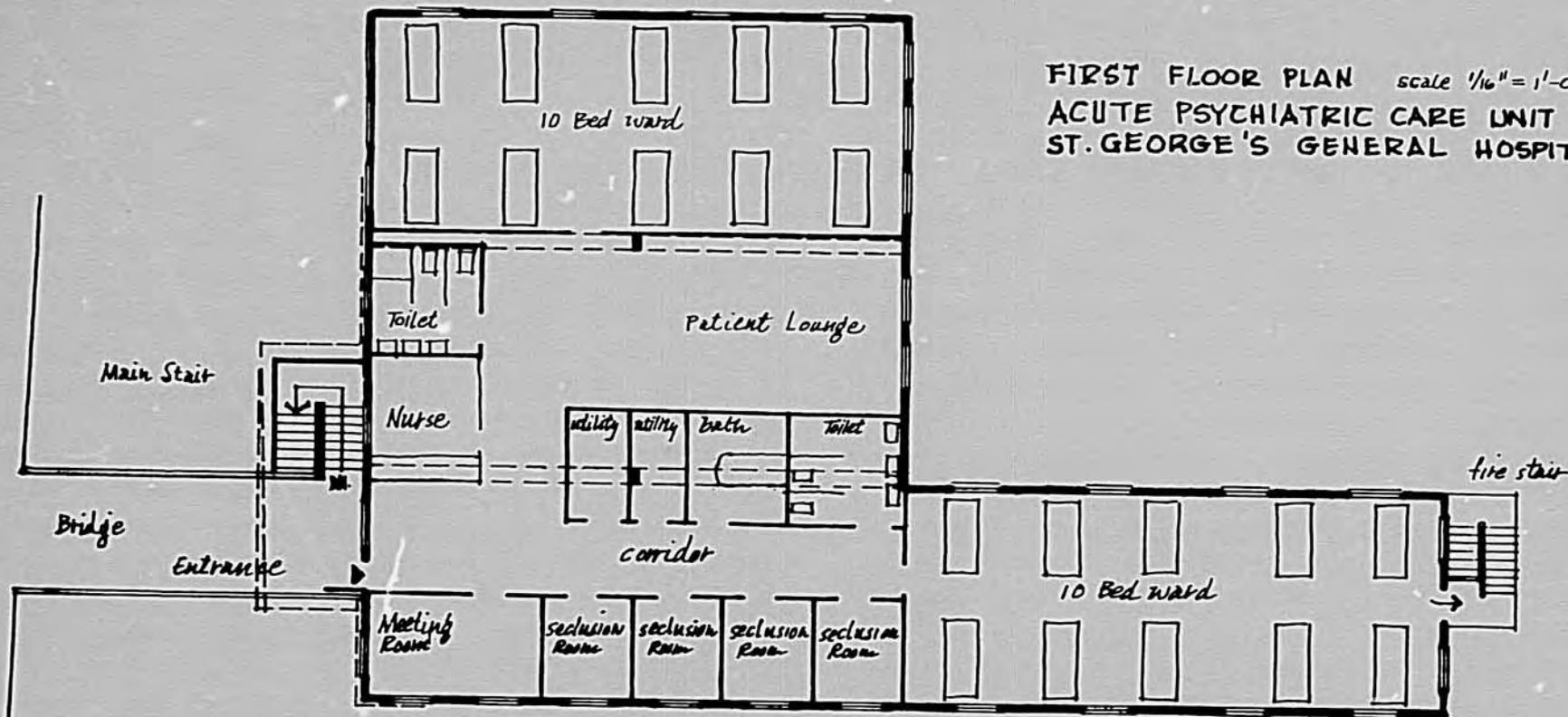
Low Stairs of Amphitheatre



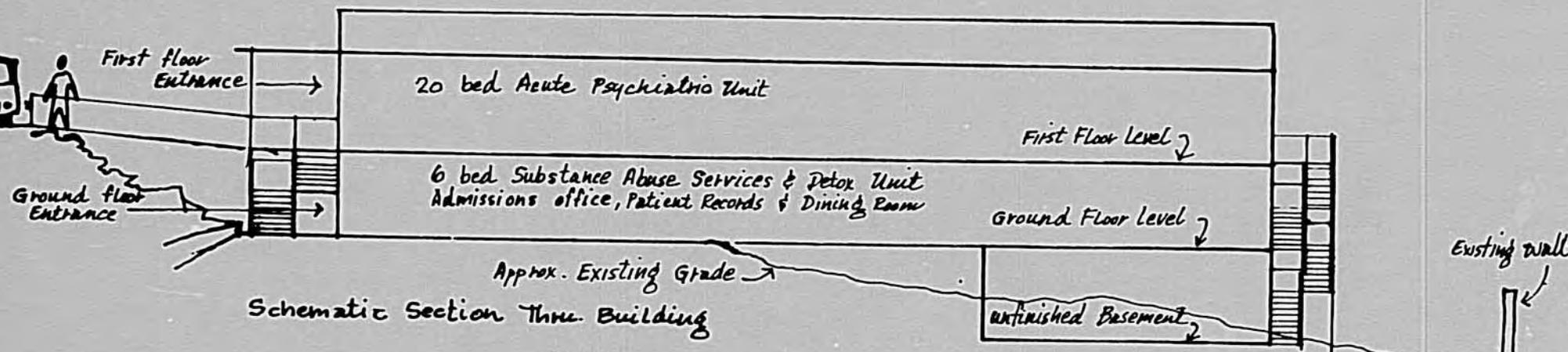
edge of lawn

Rathoune Building Site
St. George's General Hospital
Scale 1/16" = 1'-0"

FIRST FLOOR PLAN scale 1/16" = 1'-0"
 ACUTE PSYCHIATRIC CARE UNIT
 ST. GEORGE'S GENERAL HOSPITAL



FIRST FLOOR PLAN



Schematic Section Thru Building

131

SCOPE OF WORK AND ESTIMATED COST FOR ARCHITECTURAL AND ENGINEERING SERVICES

This mental hospital presents special and complex design problems requiring the services of a specialist with experiences and knowledge in the field of designing therapeutic environments for the mentally handicapped. This architectural project will require the special knowledge to understand the requirements of the mental health services as presented by the consulting team. This Mental Health Architectural Programmer should also have first-hand knowledge of the social, environmental and construction characteristics of the country of Grenada.

Scope of Work

1. To prepare an Architectural Program:

(a) An Architectural Consultant in the field of Mental Health Environments, who will prepare an architectural program for the design of this facility. This programmer will prepare an approvable architectural environmental response to the Mental Health Services as prepared by the consulting team. This response will include the programs and their intentions, staffing, and activities as they relate to the proposed design. The consultant will prepare guidelines for the design of all spaces including equipment and furnishing and their locations and specialties related to a mental health facility. Functional relationships of spaces will be given. Flow charts of patients, staff, records, medications and services such as food, linens and trash will be made. Building units will be established. Finishes of all services including paint color selection will be provided. Plumbing, electrical and solar heating needs will be established. All building codes and standards will be identified. The completed programs will be presented in a written report for approval by the Government of Grenada. This project will not have mental health staff available for the architect to consult with for the requirements of the design. This Architectural Programmer will take the place of the mental health component and the architect will depend on the consultant for advice and guidance in the design of the facility. This consultant can be a member of the architectural team or a private consultant who prepares the architectural program and presents it to AID or to the Government of Grenada.

2. The Architectural and Engineering Services (A&E)

(a) The architect will prepare architectural preliminary phase studies, layouts, and cost estimates of the 80 bed Mental Hospital and the 26 bed Acute Care Unit. These studies, layouts and cost estimates will be presented to AID and/or Government of Grenada for their approval before continuing with the Design phase of the project.

(b) The architect will prepare design drawings, outline specifications, and cost estimates for all architectural and engineering work. These designs will be presented to AID and/or Government of Grenada for their approval before continuing into the preparation of contract documents.

(c) The architect will prepare all contract documents including working drawings of all architecture foundations, structural and mechanical drawings

and specifications required to construct the building. He will prepare all drawings and specifications for grading, drainage, water collection system, roads, walkways, recreational areas and fire fighting systems.

The architect will furnish 10 complete sets of drawings and specifications for the purpose of bidding, he will also furnish 10 complete sets of drawings for the selected contractor for the construction of the hospital.

(d) The architect will receive bids from contractors. He will answer all questions from the bidding contractors relating to the construction documents prior to the bidding date. He will tabulate and receive all bids and make his recommendations to AID. He will provide consultation with advice to AID as to the acceptability of subcontractors.

(e) The architect will supervise the construction. The architect will have an engineer, who is available, to make periodic visits to project sites at intervals appropriate to the various stages of construction and to be available at all times to answer questions concerning the project. Supervision will include the following:

- (1) Provide consultation and advice to AID as to the acceptability of substitute materials.
- (2) Provide elementary and supplementary drawings, sketches, and written specifications to resolve problems due to the actual field conditions encountered.
- (3) Check all detailed construction drawings, shop drawings, and provide approval to the contractor.
- (4) Review laboratory, shop and mill test reports on materials and equipment.

3. The Resident Engineer (Clerk-of-the-works)

Will assist AID in the construction administration and resident engineering required for the works being implemented by the contractors and in the inspection and acceptance of materials and equipment being incorporated into the works. Assist in acceptance tests and start-up of the works completed by contractors and provide certified project final record drawings (based on contractor's as-built drawings), manuals and guides for operation and maintenance.

The Estimated Cost of the Following:

(a)	Architectural Consultant in Mental Health.... Fee	\$ 29,700
(b)	Architectural and Engineering Fee.....	442,400
(c)	Clerk-of-the-Works.....	24,000

Mt. Gay Treatment and Rehabilitation Center

Non-fixed Equipment and Supplies

Cost Source Code

A - Page # - American Hospital Supply 1982

B - Page # - abco, Hospital Equip. & Supplies 1983

Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Patient Wards (8)</u>						
1	beds, dormitory type, single	74	200.00	14,800.00	estimate	
2	mattresses, to fit dormitory beds	74	53.50	3,959.00	"	
3	sheets, hospital bed size	400	6.00	2,400.00	"	
4	pillow cases	200	3.00	600.00	"	
5	pillows	100	10/82.00	820.00	B268	stock #961925
6	bedside cabinets	74	206.00	15,244.00	B297	stock #4A009122
7	ashtrays	72	72/78.76	78.76	B307	stock #2666B3
8	chairs, straight back with arms, vinyl seat	74	94.50	6,993.00	B291	stock #4L015112
9	bath towels	400	3.00	1,200.00	estimate	
10	wash clothes	400	.50	200.00	"	
11	curtains, 36" wide x 48" high	74	20.00	1,480.00	"	
12	curtain rods, type that supports less than 60 lbs.	74	10.00	740.00	"	
<u>Seclusion Bedrooms (6)</u>						
13	beds, hospital, manual operated w rails	6	328.50	1,971.00	B291	stock #4B832112
13a	side rails for beds	6	123.00	738.00	A-F3	catalog #56313 - be sure side rails fit beds, line 13.
14	mattresses, hospital type, 80"	6	53.50	321.00	B291	stock #4B222
15	mattress cover, waterproof, 36"x80"x6"	12	12/120.00	120.00	B267	stock #254042
16	bed restraints, for overly aggressive patients	3	20.00	60.00	estimate	
<u>Patient Baths (3)</u>						
17	chairs, straight back, water resistant	3	60.00	180.00	estimate	
<u>Nurses' Stations (4)</u>						
18	tables, 30" wide x 60" long, for staff charting	4	200.00	800.00	"	
19	chairs, straight back	8	94.50	756.00	B291	stock #4L015112
20	bookcases, 48" long x 36" high x 12" deep	4	400.00	1,600.00	estimate	
21	patient chart racks, 20 charts	4	250.95	1,003.80	A-F10	catalog #58180-010
22	bulletin boards, 48" wide x 36" high	4	25.00	100.00	estimate	
23	clocks, electric, wall hung, 220 volts	4	49.20	196.80	A-F9	catalog #57663-012
24	beds, dormitory type	4	200.00	800.00	estimate	
25	mattress for beds, dormitory type	4	53.50	214.00	"	
26	cabinets, medication	4	316.50	1,266.00	A-F14	catalog #58960
27	refrigerators, standing, 220 volts	4	303.85	1,215.40	A-F14	catalog #58818 WAL
28	chart holders, 3/4" capacity	100	11.70	1,170.00	A-F11	catalog #58222-010

Mt. Gay Treatment and Rehabilitation Center

Non-fixed Equipment and Supplies

Cost Source Code

A - Page # - American Hospital Supply 1982

B - Page # - abco, Hospital Equip. & Supplies 1983

Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
29	carts, medication distribution	4	825.00	3,300.00	B-317	
30	laundry hampers	4	98.00	392.00	B276	stock #5MC-4032
31	truck, linen	1	1,317.00	1,317.00	B347	stock #555802
32	wheel chairs	2	250.00	500.00	B338	stock #5CLT4S2460C2
33	stretcher	1	384.00	384.00	B326	stock #910296
34	cabinets, filing, 4-drawer with lock	4	150.00	600.00	estimate	stock #621220
35	flashlight, 2 cell, size D batteries	8	3.54	28.32	A-A238	catalog #27598-010
36	batteries, flashlight, size D	48	12/15.60	62.40	A-A238	catalog #27614-010
37	paper towel dispenser	4	10.00	40.00	estimate	
<u>Patient Lounge, Cottage A & B (2)</u>						
38	sofas with arms, upholstered	4	800.00	3,200.00	B305	no prices listed in catalog
39	chairs, upholstered	12	94.50	1,134.00	B291	stock #4L015112
40	chairs, rocking (for women's side only)	12	195.50	2,346.00	A-F7	catalog #57368
41	curtains, pairs, 36" x 48" long, opening	10	20.00	200.00	estimate	
42	curtain rods, type that supports under 50 lbs.	10	10.00	100.00	estimate	
43	tables, card, game type (36" square)	2	100.00	200.00	estimate	
44	clocks, wall hung type, electric, 220 Volts	2	49.20	98.40	A-FJ	catalog #57663-012
45	calendars, wall hung, flip type	2	5.00	10.00	estimate	
46	bookcases, 48" long, 36" high, 12" deep	2	400.00	800.00	estimate	
47	chairs, straight back	4	94.50	378.00	B-291	stock: #4L015112
48	bulletin boards, 48" x 36"	2	25.00	50.00	estimate	
<u>Patient Lounge, Cottage C (1)</u>						
49	sofas, upholstered with arms	4	800.00	3,200.00	B-305	no prices listed in catalog
50	chairs, upholstered	12	94.50	1,134.00	B291	stock #4L015112
51	chairs, straight back	8	94.50	756.00	B291	stock #4L015112
52	tables, card, 36" square	4	100.00	400.00	estimate	
53	bookcases (48" wide, 36" high, 12" deep)	2	400.00	800.00	estimate	
54	clocks, wall hung type, electric, 220 Volts	2	49.20	98.40	A-F9	catalog #57663-012
55	calendars, wall hung, flip type	2	5.00	10.00	estimate	
56	bulletin board (48" x 36")	2	25.00	50.00	estimate	
57	curtains, pairs, 36" w x 48" l w opening	10	20.00	200.00	estimate	
58	curtain rods, type that supports under 50 lbs.	10	10.00	100.00	estimate	

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Mt. Gav Treatment and Rehabilitation CenterCost Source CodeNon-fixed Equipment and Supplies

A - Page # - American Hospital Supply 1982

B - Page # - abco, Hospital Equip. & Supplies 1983

Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Patient Recreation Area (2)</u>						
59	tables, table tennis	2	150.00	300.00	estimate	
60	tables, round, 36" diameter	8	100.00	800.00	estimate	
61	chairs, straight back	32	94.50	3,024.00	B291	stock #4L015112
62	piano, upright	1	1,400.00	1,400.00	estimate	
<u>Patient Dining Room (1)</u>						
63	table, dining type, 36" wide x 72" long	14	600.00	8,400.00	estimate	
64	chairs, dining, stacking type	84	100.00	8,400.00	estimate	
65	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
<u>Patient Kitchen (training) (1)</u>						
66	kitchen utensils	assorted	1,000.00	1,000.00	estimate	
<u>Patient Laundry and Sewing Room (1)</u>						
67	washing machine, heavy duty, elec., 220 Volts	2	500.00	1,000.00	estimate	
68	laundry tubs	4	100.00	400.00	estimate	
69	ironing board	3	25.00	75.00	estimate	
70	iron, h.a.d, electric, 220 Volts	3	35.00	105.00	estimate	
71	sewing machine, electric, 220 Volts	4	250.00	1,000.00	estimate	
72	table, 48" wide x 72" long (laundry room)	1	400.00	400.00	estimate	
73	chairs, straight back	6	94.50	567.00	B291	stock #4L015112
<u>Janitor's Closet (3)</u>						
74	bucket, mop with mop wringer	6	35.00	210.00	estimate	
75	mops, heavy duty	6	5.00	30.00	estimate	
76	brooms, push	6	10.00	60.00	estimate	
77	soap, disinfectant, etc.		100.00	100.00	estimate	
78	waste baskets 14 3/4" x 10 1/4" x 15" high	6	4.10	24.60	B279	stock #729561
<u>Corridor at Nurses' Station (4)</u>						
79	mirror, full length, nonbreakable plastic	4	75.00	300.00	estimate	
80	clock, wall hung, electric, 220 Volts	4	49.20	196.80	A-F9	catalog #57663-012
81	bulletin boards, 36" x 60"	4	25.00	100.00	estimate	

Mt. Gay Treatment and Rehabilitation Center

Non-fixed Equipment and Supplies

Cost Source Code

A - Page # - American Hospital Supply 1982
 B - Page # - abco, Hospital Equip. & Supplies 1983

Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Staff Lounge (1)</u>						
82	sofa, with arms, upholstered	1	800.00	800.00	B305	price not listed
83	chairs, with arms, upholstered	2	500.00	1,000.00	B305	price not listed
84	table, round, 48" diameter	1	150.00	150.00	estimate	
85	chairs, dining type, stacking type	4	100.00	400.00	estimate	
86	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
87	bulletin board, 36" x 48"	1	25.00	25.00	estimate	
<u>Activity Therapy Staff Workroom (Office) (1)</u>						
88	desk, office, 36" x 60"	2	350.00	700.00	B306	price not listed
89	chairs, desk type	2	150.00	300.00	B306	price not listed
90	chairs, side type	2	125.00	250.00	estimate	
91	bookcases, 4 shelves	2	400.00	800.00	estimate	
92	file cabinets, 4 drawer	2	150.00	300.00	estimate	
93	bulletin board, 36" x 48"	1	25.00	25.00	estimate	
<u>Athletic Equipment</u>						
94	volley ball, net and posts set	1	50.00	50.00	estimate	
95	basketballs	4	25.00	100.00	"	
96	basketball goal hoops, backboards & posts	each/2	100.00	200.00	"	
97	soccer balls	2	25.00	50.00	"	
98	cricket set	1	100.00	100.00	"	
99	punching bag with frame	1	100.00	100.00	"	
100	exercise mats 48" x 84" x 2"	5	172.50	862.50	A-G24	catalog #72035-025
101	stereo recorder, music	1	500.00	500.00	estimate	
<u>Occupational Therapy Room, Arts & Crafts</u>						
102	tables, 36" x 72"	2	300.00	600.00	estimate	
103	stools	8	50.00	400.00	"	
104	art supplies, miscellaneous			200.00	"	
<u>Woodworking</u>						
105	benches, woodworking w vise, 30" x 48"	2	250.00	500.00	estimate	
106	stools	8	50.00	400.00	"	
107	hand-type tools, saws, hammers, etc.			200.00	"	

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Mt. Gay Treatment and Rehabilitation Center

Non-fixed Equipment and Supplies

Cost Source Code

A - Page # - American Hospital Supply 1982

B - Page # - abco, Hospital Equip. & Supplies, 1983

Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Weaving, basket-making</u>						
108	tables, 36" x 72"	2	300.00	600.00	estimate	
109	stools	6	50.00	300.00	"	
110	weaving machine, tools and supplies			500.00	"	
<u>Waiting Area</u>						
111	chairs, upholstered	10	94.50	945.00	B291	stock #4L015112
<u>Receptionist</u>						
112	desk, office, 30" x 60"	1	350.00	350.00	B306	price not listed
113	chair, receptionist, arms, upholstered, swivel, adjustable casters	1	200.00	200.00	B306	price not listed
114	chairs, upholstered	2	94.50	189.00	B291	stock #4L015112
115	curtains, pair, 36" wide x 80" long	2	20.00	40.00	estimate	
116	curtain rods, 48" long	2	10.00	20.00	"	
117	clock, wall type, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
118	bulletin board, 36" x 48"	1	25.00	25.00	estimate	
<u>Entrance Porch</u>						
119	bench with back, 60" long	2	200.00	400.00	estimate	
<u>Administrator's Office</u>						
120	desk, office, 36" x 60"	1	350.00	350.00	B306	price not listed
121	lamp, desk	1	50.00	50.00	estimate	
122	chair, desk, arms, uphol, swivel w castors	1	200.00	200.00	B306	price not listed
123	chair, upholstered	1	94.50	94.50	B291	stock #4L015112
124	cabinet, file, 4 drawer, legal size w lock	1	150.00	150.00	estimate	
125	cabinet, 36" wide x 72" high w 5 shelves	1	400.00	400.00	"	
126	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
127	bookcase, 36" wide x 48" high w 3 shelves	1	400.00	400.00	estimate	
128	curtains, pair, 36" wide x 60" long	1	20.00	20.00	"	
129	curtain rod, 48"	1	10.00	10.00	"	
<u>Matron's Office</u>						
130	desk, 30" x 60"	1	350.00	350.00	B306	price not listed
131	lamp, desk, electric, 220 Volts	1	50.00	50.00	estimate	
132	chair, arms, uphol, swivel w castors	1	200.00	200.00	B306	price not listed
133	chair, upholstered	1	94.50	94.50	B291	stock #4L015112

Mt. Gay Treatment and Rehabilitation Center

Non-fixed Equipment and Supplies

Cost Source Code

A - Page # - American Hospital Supply 1982
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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
134	cabinet, file, legal size, 4 drawer w lock	2	150.00	300.00	estimate	
135	bookcase, 36" x 48" high, 3 shelves	1	400.00	400.00	"	
136	bulletin board, 36" x 48"	1	25.00	25.00	"	
137	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
138	curtains, pair, 36" wide x 60" long	1	20.00	20.00	estimate	
139	curtain rod, 48"	1	10.00	10.00	"	
<u>Psychiatrist's Office</u>						
140	desk, office, 36" x 60"	1	350.00	350.00	B306	price not listed
141	lamp, desk, electric, 220 Volts	1	50.00	50.00	estimate	
142	chair, arms, uphol, swivel & adjust., w casters	1	200.00	200.00	B306	price not listed
143	chairs, upholstered	1	94.50	94.50	B291	stock #4L015112
144	endtable	1	100.00	100.00	estimate	
145	lamp, table, electric, 220 Volts	1	50.00	50.00	"	
146	bookcase, 36" x 48", 3 shelves	1	400.00	400.00	"	
147	curtains, pair, 30" wide x 60" long	1	20.00	20.00	"	
148	curtain rod, 48"	1	10.00	10.00	"	
<u>Nurse Tutor's Office</u>						
149	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
150	lamp, desk, electric, 220 Volts	1	50.00	50.00	estimate	
151	chair, arms, uphol, swivel & adjust., w casters	1	200.00	200.00	B306	price not listed
152	chair, upholstered	2	94.50	189.00	B291	stock #4L015112
153	cabinet, file, 4 drawer, legal size w lock	1	150.00	150.00	estimate	
154	bulletin board, 30" x 48"	1	25.00	25.00	"	
155	clock, wall hung, electric 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
156	curtain, pair, 36" wide x 60" long	1	30.00	30.00	estimate	
157	curtain rod, 48"	1	10.00	10.00	"	
158	slide projector, 35 mm, Carrousel, Eastman	1	350.00	350.00	estimate	with trays. 220 Volts
159	carrousel slide trays for 100-35 mm slides	10	1.00	10.00	"	
160	projector, movie or video?			1,000.00		
161	projector, overhead	1	200.00	200.00	estimate	
162	screens, projection, movable, 60" sq, roll-up (built-in bookcase by Contractor)	1	100.00	100.00	"	

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Social Worker's Office</u>						
163	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
164	lamp, desk, electric, 220 Volts	1	50.00	50.00	estimate	
165	chair, arms, uphol, swivel, adjust/casters	1	200.00	200.00	B306	price not listed
166	chairs, upholstered	2	94.50	189.00	B291	stock #4L015112
167	cabinet, file, 4 drawer, legal size w lock	1	150.00	150.00	estimate	
168	bookcase, 36" long x 48" high, 3 shelves	1	400.00	400.00	"	
169	bulletin board, 30" x 36"	1	25.00	25.00	"	
170	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
171	curtains, pair, 36" wide x 60" long	1	30.00	30.00	estimate	
172	curtain rod, 48"	1	10.00	10.00	"	
<u>Staff Meeting Room</u>						
173	tables, 36" x 72"	2	400.00	800.00	estimate	
174	chairs, upholstered	20	94.50	1,890.00	B291	stock #4L015112
175	curtains, pair, 36" wide x 60" long	3	30.00	90.00	estimate	
176	curtain rod, 48"	3	10.00	30.00	"	
177	shades, window, size ?	3	20.00	60.00	estimate	
178	clock, wall hung, electric, 220 Volts (chalk writing board [blackboard] to be built in)	1	49.20	49.20	A-F9	catalog #57663-012
<u>Examination - Treatment Room</u>						
179	examination table, 24" x 72"	1	245.00	245.00	B354	stock #168000
180	stool, revolving	1	170.00	170.00	B349	stock #214825
181	cabinet, treatment	1	457.00	457.00	B350	stock #217341
182	scale, dual reading	1	254.00	254.00	B356	stock #23392
183	chairs, straight back	2	94.50	189.00	B291	stock #4L015112
184	lamp, examining	1	75.00	75.00	B321	stock #250435
185	desk, 30" x 48"	1	300.00	300.00	estimate	
186	lamp, desk, electric, 220 Volts	1	50.00	50.00	"	
187	bookcase, 36" wide x 48" high, 3 shelves	1	400.00	400.00	"	
188	sphygmomanometer (blood pressure)	1	49.00	49.00	B180	stock #040930
189	stethoscope, dual head	6	13.95	83.70	B189	stock #058305
190	ophthalmoscope	1	105.75	105.75	B160	stock #8114003
191	otoscope	1	93.00	93.00	B163	stock #8211203
192	hammer, percussion	1	3.35	3.35	B193	stock #329746

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193	fork, tuning, set	1	83.85	83.85	R211	
194	curtains, pair, 36" wide x 60" long	1	30.00	30.00	estimate	stock #5MX19-1202
195	curtain rod, 48"	1	10.00	10.00	"	
196	shade, window	1	30.00	30.00	"	
<u>Kitchen</u>						
197	bulletin board, 30" x 36"	1	25.00	25.00	estimate	
198	desk, 30" x 48"	1	300.00	300.00	"	
199	chair, straight back	1	94.50	94.50	B291	stock #4L015112
200	pans, utensils, misc. kettles, frypans, etc.			2,000.00	estimate	
201	mixer, dough (Hobart, commercial), 220 Volts	1	1,500.00	1,500.00	"	
202	tables, stainless steel, 48" x 96"	2	1,000.00	2,000.00	"	
203	stool	1	50.00	50.00	"	
204	overhead pan rack, to hold 20 pans	1	100.00	100.00	"	
205	fire extinguishers	2	25.00	25.00	"	
206	dishwashing brushes, etc.			100.00	"	
<u>Garbage Yard</u>						
207	garbage cans	6	50.00	300.00	estimate	
208	water hose, 50 feet	1	5.00	5.00	"	
<u>Janitor's Closet</u>						
209	mop bucket with wringer	1	35.00	35.00	"	
210	brooms, push	2	15.00	30.00	"	
211	mops, large	2	5.00	10.00	"	
<u>Storage</u>						
212	hand truck, heavy duty, 2-wheel	1	75.00	75.00	"	
<u>Warehouse</u>						
213	ladder, extension, 30 ft.	1	75.00	75.00	"	
214	ladder, step, 6 ft.	1	25.00	25.00	"	
215	repair tool box	1		20.00	"	
216	tools, mechanical, wood, paint, etc.			1,000.00	"	
<u>Maintenance Office</u>						
217	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
218	chair, swivel, with casters, wood	1	100.00	100.00	estimate	

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
219	chair, straight back, wood	1	50.00	50.00	estimate	
220	cabinet, filing, 4 drawer, legal size w lock	1	150.00	150.00	"	
221	bulletin board, 30" x 36"	1	25.00	25.00	"	
222	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
223	bookcase, 36" wide x 48" high, 3 shelves	1	400.00	400.00	estimate	
224	fire extinguisher	1	25.00	25.00	"	
<u>Kitchen</u>						
225	food carts	4				
226	refrigerator, 20 cu. ft., no freezer, 220 Volts	1	800.00	800.00	estimate	
227	water glasses, 10 oz.	300	.40	120.00	"	
228	dishes; plates, cups, saucers, etc.	200	20.00*	4,000.00	"	*complete place settings, unit cost est. at 20.00/setting
229	silver ware (place setting)	150	10.00	1,500.00	"	150 place settings/\$10.00 per setting
<u>Patients' Kitchen (training)</u>						
230	range, electric, 4 burner with oven, 220 Volt	2	400.00	800.00	"	
<u>Dining Room</u>						
231	ice-making machine, 220 Volts	1	500.00	500.00	"	
232	coffee urn, large restaurant type	1	200.00	200.00	"	
<u>Nurses' Stations</u>						
233	coffee pot, 12 cup	6	20.00	120.00	"	
234	cabinet, storage, metal w shelves, 2 door with lock, 36" x 64"	4	100.00	400.00	"	
<u>Emergency Room</u>						
235	crash carts	2	475.00	950.00	B343	stock #511602
236	oxygen resuscitators	2	297.65	595.30	B414	stock #513312
<u>Gardening Tools</u>						
237	shovels	6	5.00	30.00	estimate	
238	hoes, rakes (6 of each)	12	5.00	60.00	"	
239	hand trowels	6	3.00	18.00	"	

Note: Items 225 through 239 are an addendum to pages 1 through 9.

\$156,759.93 - Total Cost for Mt. Gay Treatment & Rehab Centr

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Patient Wards (2)</u>						
240	bed, dormitory type, single	18	200.00	3,600.00	estimate	
241	mattress, hospital type for dormitory bed	18	53.50	963.00	"	
242	wardrobe, 36" w x 48" h x 12" deep, 3 shelves	18	200.00	3,600.00	"	
243	chairs, straight back	16	94.50	1,701.00	B291	wardrobes to have coat-hanging space
244	curtains, pair, 36" wide x 48" long	18	20.00	360.00	estimate	stock #4L015112
245	curtain rods, 48", to support less than 50 lbs.	18	10.00	180.00	"	
<u>Bedrooms, Seclusion Rooms (4)</u>						
246	beds, hospital type, manually operated	2	328.50	657.00	B291	stock #48832112
247	rails, bed, for above #246 beds	2	123.00	246.00	A-F3	catalog #56313
248	mattress, hospital type	4	53.50	214.00	B291	stock #4B222
249	mattress cover, waterproof	12	12/120.00	120.00	B267	stock #254042
250	restraint set	2	20.00	40.00	estimate	
<u>Nurse's Station (1)</u>						
251	table, 30" x 60", for staff charting	1	200.00	200.00	estimate	
252	chair, straight back	2	94.50	189.00	B291	stock #4L015112
253	bookcase, 36" long x 48" high, 3 shelves	1	400.00	400.00	estimate	
254	filing cabinet, 4 drawer, legal size/lock	1	150.00	150.00	"	
255	patient chart rack, 20 charts	1	250.95	250.95	A-F10	catalog #58180-010
256	medication cart	1	825.00	825.00	B-317	stock #5MC-40B2
257	refrigerator, 220 Volts	1	303.85	303.85	A-F14	catalog #58818WAL
258	bulletin board, 36" x 48"	1	25.00	25.00	estimate	
259	cabinet, storage, 2 dr w lock, 36" x 84"	1	100.00	100.00	"	metal with shelves
260	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
<u>Patients' Bath (1)</u>						
261	chair, straight back	1	94.50	94.50	B268	stock #961925
<u>Patient Lounge</u>						
262	sofa, with arms, upholstered	2	800.00	1,600.00	B305	no price listed
263	chair, straight back	16	94.50	1,512.00	B268	stock #961925
264	table, dining type, 36" x 72"	1	600.00	600.00	estimate	
265	bookcase, 36" wide x 48" high	1	400.00	400.00	"	
266	curtain, pair, 36" wide x 48" long	3	20.00	60.00	"	
267	curtain rod, 48", to support under 50 lbs.	3	10.00	30.00	"	

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268	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012
269	calendar, wall hung, flip type	1	5.00	5.00	estimate	
270	bulletin board, 36" x 48"	1	25.00	25.00	"	
271	chairs, rocking	2	195.50	391.00	A-F7	catalog #57368
<u>Nurses' Office</u>						
272	desk, 36" x 60"	1	350.00	350.00	estimate	
273	chair, arms, uphol, swivel adjust w casters	1	200.00	200.00	"	
274	chair, straight back	1	94.50	94.50	B291	stock #41015112
275	bookcase, 36" wide x 48" high	1	400.00	400.00	estimate	
276	filing cabinet, 4 drawer w lock, legal size	1	150.00	150.00	"	
277	bulletin board, 30" x 36"	1	25.00	25.00	"	
<u>Counseling Room</u>						
278	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
279	chair, arms, uphol, swivel adjust w casters	1	200.00	200.00	B306	price not listed (chair also should tilt)
280	chairs, upholstered	2	94.50	189.00	B291	stock #41015112
281	curtains, pair, 36" x 48"	1	20.00	20.00	estimate	
282	curtain rod, 48"	1	10.00	10.00	"	
<u>Pharmacy Office</u>						
283	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
284	lamp, desk, electric, 220 Volts	1	50.00	50.00	estimate	
285	chair, arms, uphol, swivel adjust w casters	1	200.00	200.00	B306	price not listed (chair also should tilt)
286	bookcase, 36" wide x 48" high, 3 shelves	1	400.00	400.00	estimate	
<u>Pharmacy Proper</u>						
287	step ladder, 3 feet	1	10.00	10.00	estimate	
288	drug baskets w handle, 14" x 24" x 6" high	2	30.00	60.00	"	
289	drug box, emergency drugs	2	69.30	138.60	A-A237	catalog #27500-020
290	stool with back, adjustable	2	109.50	219.00	A-F65	catalog #63368-XX
291	typewriter, electric, with memory	1	1,500.00	1,500.00	estimate	
292	plastic bags for drugs, 2" x 2"	5,000	for 25.00	25.00	"	
293	bottles, 4 oz., 8 oz., 16 oz	3,000	15.00	450.00	"	1,000 each size = 3,000 total
294	capsule vials, 1/2 oz, 1 oz, 2 oz, 4 oz	4,000	.15	600.00	"	1,000 of each size = 4,000 total
295	ointment jars, 2 oz, 4 oz, 1,000 each	2,000	.15	300.00	"	

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Examination-Treatment Room</u>						
296	examining table, 24" x 72"	1	245.00	245.00	B354	stock #168000
297	stool, revolving	1	170.00	170.00	B349	stock #214825
298	cabinet, treatment	1	457.00	457.00	B350	stock #217314
299	scales, dual reading	1	254.00	254.00	B356	stock #23392
300	chairs, straight back	2	94.50	189.00	B291	stock #4L015112
301	lamp, examination	1	75.00	75.00	B321	stock #250435
302	lamp, desk, 220 Volts	1	50.00	50.00	estimate	
303	desk, 30" x 48"	1	300.00	300.00	"	
304	bookcase, 36" wide x 48" high	1	400.00	400.00	"	
305	sphygmomanometer	1	49.00	49.00	B180	stock #040930
306	stethoscope	1	13.95	13.95	B189	stock #058305
307	ophthalmoscope	1	105.75	105.75	B160	stock #8114003
308	otoscope	1	93.00	93.00	B163	stock #8211203
309	percussion hammer	1	3.35	3.35	B193	stock #329746
310	tuning fork, set	1	83.85	83.85	B211	stock #HX19-1202
311	sterilizer, table top, steam, 220 Volts, model 800V	1	1,700.00	1,700.00	B424	stock #7XN0800V0-AAE2
313	oxygen, medicinal, portable	1	398.30	398.30	B414	stock #2A477G126-083
314	suction machine, portable	1	770.00	770.00	B398	stock #705-20002
315	crash cart	1	475.00	475.00	B343	stock #511602
316	intravenous fluid stand	1	67.35	67.35	B375	stock #043403
317	wheelchair	1	250.00	250.00	B338	stock #621220
318	curtain, pair, 36" wide x 48" long	1	20.00	20.00	estimate	
319	curtain rod, 48"	1	10.00	10.00	"	
320	window shade	1	30.00	30.00	"	
<u>Janitor's Closet</u>						
321	buckets, mop, with wringer	2	35.00	70.00	"	
322	mop, large, heavy duty	2	5.00	10.00	"	
323	brooms, push	2	10.00	20.00	"	

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Central Medical Records Room</u>						
324	shelving, steel, open, 14" deep x 84" high	420 (linear feet)		2,000.00	estimate	
325	table, 36" x 60"	1	200.00	200.00	"	
326	chairs, straight back	2	94.50	189.00	B291	stock #4L015112
<u>Medical Records Librarian Office</u>						
327	desk, 36" x 60"	1	350.00	350.00	B306	price not listed
328	chair, arms, uphol, swivel, adjust w casters	1	200.00	200.00	B306	price not listed
329	chair, straight back	1	94.50	94.50	B291	stock #4L015112
330	bookcase, 36" wide x 48" high, 3 shelves	1	400.00	400.00	estimate	
331	file cabinet, 4 drawer, legal size w lock	2	150.00	300.00	"	
332	bulletin board, 30" x 36"	1	25.00	25.00	"	
333	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-E9	catalog #57663-012
334	curtains, pair, 36" x 60" long	1	30.00	30.00	estimate	
335	curtain rod, 48"	1	10.00	10.00	"	
<u>Dirty Utility Room</u>						
336	linen hampers	3	98.00	294.00	B276	stock #555802
337	trash cans	2	25.00	50.00	estimate	
<u>Medical Records Typist</u>						
338	desk, typewriting, 36" x 60"	1	350.00	350.00	estimate	
339	chair, secretarial type	1	100.00	100.00	"	
340	typewriter, electric, 15" carriage, 220 Volts	1	1,000.00	1,000.00	"	typewriter to be self-correcting
341	chair, straight back	1	94.50	94.50	B291	stock #4L015112
342	table, 36" x 60"	1	200.00	200.00	"	
<u>Patients' Activity Area - Laundry</u>						
343	washing machine, heavy duty, elec, 220 Volts	1	500.00	500.00	estimate	
344	ironing board	1	25.00	25.00	"	
345	iron, hand, electric, 220 Volts	1	35.00	35.00	"	
346	chairs, straight back	2	94.50	189.00	B291	stock #4L015112
347	cabinet, 36" wide, 50" high, 11" deep	1	150.00	150.00	estimate	with 5 shelves
<u>Patients' Kitchen</u>						
348	stove, countertop only, elec. 220 Volts	1	200.00	200.00	estimate	without oven
349	utensils, assorted			500.00	"	

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<u>Multipurpose Room</u>						
350	tables, dining type, 36" x 48"	5	400.00	2,000.00	estimate	
351	chairs, straight back	20	94.50	1,890.00	B291	stock #4L015112
352	tables, 36" x 60"	2	200.00	400.00	estimate	
353	stools	8	50.00	400.00	"	
<u>Storage Room</u>						
354	woodworking tool kit	2	50.00	300.00	estimate	
355	weaving tool, sets	2	150.00	300.00	"	
356	art supplies, miscellaneous			50.00	"	
357	table, table tennis	1	150.00	150.00	"	
358	paddles, nets, balls for table tennis sets	2	50.00	100.00	"	
359	basketballs	2	25.00	50.00	"	
360	basketball backboard w hoops and net	1	100.00	100.00	"	
361	punching bags	2	50.00	100.00	"	
<u>Drug Abuse Unit/Detox Unit</u>						
362	beds, dormitory type	4	200.00	800.00	estimate	
363	mattress, for dormitory beds	2	53.50	107.00	"	
364	beds, hospital, manual operated	2	328.50	657.00	B291	stock #4B832112
365	mattresses, hospital bed	2	53.50	107.00	B291	stock #4B222
366	rails, for hospital beds	2	123.00	246.00	A-F3	catalog #56313
367	wardrobe, 36" x 48" x 12" deep w shelves	6	250.00	1,500.00	estimate	wardrobes must have space for clothes hangers
368	chairs, straight back	5	94.50	567.00	B291	stock #4L015112
369	mattress covers, waterproof	12	12/120.00	120.00	B267	stock #254042
<u>Patients' Lounge</u>						
370	sofa, arms, upholstered	1	800.00	800.00	B305	price not listed
371	chairs, straight back	9	94.50	850.50	B291	stock #4L015112
372	table, dining, 36" x 72"	1	600.00	600.00	estimate	
<u>Counseling Room</u>						
373	sofa, arms, upholstered	1	800.00	800.00	estimate	
374	chairs, straight back	2	94.50	189.00	B291	stock #4L015112
375	table, end	1	100.00	100.00	estimate	
376	desk, 30" x 60"	1	350.00	350.00	B306	price not listed
377	chair, arms, uphol, swivel, adjust w casters	1	200.00	200.00	B306	price not listed

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Line No.	Location and Item	Quantity	Unit Cost	Total Cost	Cost Source Code	Comments
<u>Nurses' Station</u>						
378	table, 36" x 60", for staff charting	1	200.00	200.00	estimate	
379	chair, straight back	2	94.50	189.00	B291	stock #41015112
380	bookcase, 36" long x 48" high, 3 shelves	1	400.00	400.00	estimate	
381	filing cabinet, 4 drawer, legal size w lock	1	150.00	150.00	-	
382	patient chart rack, 20 charts	1	250.95	250.95	A-F10	catalog #58180-010
383	medication cart	1	825.00	825.00	B317	stock #51C-40B2
384	cabinet, storage, metal, shelves, 2 door with lock, 36" x 84"	1	100.00	100.00	estimate	
385	bulletin board, 36" x 48"	1	25.00	25.00	-	
386	clock, wall hung, electric, 220 Volts	1	49.20	49.20	A-F9	catalog #57663-012

US\$55,099.20 - Total Cost for St. George's Acute Care Unit

US\$156,759.93 Total Cost for Mt. Gay Treatment & Rehabilitation Center

9,611.00 Estimate for plumbing fixtures

GRAND TOTAL US\$221,470.13

Note: There is no Item #312.

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TECHNICAL ANALYSIS/PHARMACEUTICALS USED

The attached chart lists pharmaceuticals, by therapeutic category, currently used in mental health. Also included are: (a) proposed additions to the drug formulary; (b) drugs recommended by a WHO Expert Committee; and, (c) additional drug items recommended for USAID projects. The clinical setting where the drugs will be used is noted. The major category of psychotropic drug use for mental patients is the antipsychotic drugs, used mainly to control and prevent recurrent psychoses. Other drug categories include: antidepressants, antitoxicity, and lithium. Due to the high incidence of seizure disorders in mental patients, anticonvulsants are included. Drugs restricted by the Federal Drug Control Act are noted.

I. Antipsychotic/Neuroleptics

There are three phenothiazine-type antipsychotics extensively used in Grenada, these include:

1. chlorpromazine 25 mg, 100 mg
2. fluphenazine decanoate 25 mg/cc
3. trifluoperazine 5 mg

These drugs are currently being used inappropriately, in that all three types are being used concurrently in approximately 85 percent of the outpatient prescriptions reviewed. Janice Stevens, M.D., noted in her report (November 1983) that fluphenazine decanoate was being prescribed irrationally in the hospital setting. Patients receiving antipsychotics are receiving antiparkinson/anticholinergic drugs concurrently without documentation of need. The only injectable drug available for acute use is chlorpromazine.

The type of drugs prescribed, the inappropriate use of combinations of antipsychotics and the subtherapeutic dosages administered reflect a lack of current knowledge of the proper prescribing of these drugs.

It is recommended that guidelines for prescribing antipsychotic drugs be developed. One additional antipsychotic (Haloperidol) should be added to the present drug list as well as several additional strengths of some currently available drugs. Using 1-50 mg chlorpromazine is less expensive than using 2-25 mg ones. One rapidly acting high potency injectable should be available (i.e., haloperidol). When these drugs are added, physicians, nurses and others would benefit from inservice education in the proper use of these agents.

The long-acting antipsychotic, fluphenazine decanoate, is the most expensive psychotropic used. This drug is of extreme value in an outpatient setting where patients are often noncompliant with their drug therapy. Indications for the long-lasting decanoates are limited in a hospital setting where drug administration is monitored; it is of little value in an acute care setting. A drug protocol should be developed to promote the rational use of this expensive agent.

Side effect from antipsychotic drugs, e.g., akathisia, tardive dyskinesia, are widespread, often dangerous, and contribute to patient non-compliance. Guidelines for monitoring side effects have not been developed;

-2-

side effects experienced by patients are not currently recorded in the chart. It is recommended that monitoring parameters be developed for the antipsychotics and documentation of such appear in the medical record. Information regarding side effects would be included in any patient education program.

Patient noncompliance with antipsychotics is widespread. Several methods are known to increase patient compliance. These include improving the prescribing habits of physicians. It is recommended that guidelines be developed to improve the prescribing of antipsychotics and to subsequently increase patient compliance. For example: (1) use an effective dose of one antipsychotic instead of a subtherapeutic dose of three, and (2) the half-life of the antipsychotic is over 24 hours, therefore they can be given once daily instead of 3-4 times daily.

II. Antidepressants

There are two tricyclic antidepressants in current use in Grenada. They include: (1) amitriptyline 25 mg; and (2) imipramine 25 mg.

A brief review of the prescribing of these drugs, including drug dosages, indicates that subtherapeutic amounts are being prescribed. Dr. Steven's report noted the lack of proper diagnosis of depression. It is recommended that physicians receive additional training in the proper diagnosis and treatment of depression.

III. Antianxiety Drugs

There are three antianxiety drugs available in Grenada:

1. chlordiazepoxide 10 mg
2. diazepam 5 mg, and the injectable
3. lorazepam 1 mg, 2 mg

These drugs have similar effects and therapeutic properties. It is recommended that lorazepam be deleted from the proposed formulary. Diazepam injection is the drug-of-choice for status epilepticus. In psychiatry, the injection has extremely limited use: the IM administration of this agent is actually slower in therapeutic onset of action than the oral form. It is recommended that diazepam be available only for emergency use.

IV. Sedative-Hypnotic Drugs

Several barbiturates are available for use in Grenada as sedative-hypnotics. Since the antipsychotics, the antidepressants, and the antianxiety agents have sedative properties, it is recommended that sedative-hypnotics not be prescribed concurrently, because it is costly and unnecessary. Therefore, it is recommended that no sedative-hypnotic be included in the proposed formulary; the WHO list of essential drugs does not include sedative-hypnotic drugs.

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V. Antiparkinson/Anticholinergic Drugs

The prescribing of antiparkinson drugs concurrently with the antipsychotics is extensive. The acute need for these drugs is recognized, however, it is recommended that patients be evaluated at least every three months, for the continued need for these drugs. Using these agents inappropriately leads to increased drug costs, patient noncompliance, and additional side effects. Since benztropine and benzhexol (trihexylphenidyl) are therapeutically equivalent, it is recommended that the least expensive drug be used, i.e., benzhexol, and that oral benztropine be deleted from the proposed formulary.

VI. Other Psychotropic Drugs - Lithium

Lithium is not in current use in this country. The major reason is that the equipment necessary to monitor Li blood levels is not available. Lithium does, however, appear on the proposed protocol.

Since lithium's discovery in 1948 as an antimanic drug, its use and therapeutic benefit has been extensive. Lithium is noted to be extremely toxic when taken inappropriately.

It is recommended that the use of this drug be restricted, and used only under the guidance of the psychiatric consultants. Proper inservice education to the staff should be conducted.

VII. Anticonvulsants (nonpsychotropic drugs)

There are two anticonvulsant drugs available in Grenada:

1. phenytoin 100 mg
2. phenobarbital 30 mg, 60 mg

The following recommendations are offered. Extensive problems have been noted regarding the bioequivalency of phenytoin. As a result, seizure control is lost and/or severe toxicity has occurred. Most hospitals and clinics use a consistent and reliable brand of phenytoin. It is recommended that one supplier of phenytoin be used. Also, due to phenytoin's narrow therapeutic index, frequent monitoring for side effects should be performed.

PSYCHOTROPIC DRUGS/PHARMACEUTICALS

Generic Name	Strength	Status ^{a/}	Projected ^{b/} Area of Use
I. ANTIPSYCHOTICS/NEUROLEPTICS			
chlorpromazine	tablet, 25 mg	1,2,4	A,B,C,D
"	tablet, 50 mg	4	A,B,C,D
"	tablet, 100 mg	3,4	A,B,C,D
"	injection, 25 mg/cc in 2 ml ampuls	1,2,3,4	A,B,C
fluphenazine decanoate	injection, 25 mg/cc (decanoate) in 5 cc ampuls	1,2,3,4	C,D
haloperidol	tablet, 2 mg	1,3,4	A,B,C,D
"	tablet, 5 mg	1,2,4	A,B,C,D
"	tablet, 10 mg		A,B,C,D
"	injection, 5 mg/cc ampuls	3,4	A,B,C
trifluoperazine	tablet, 5 mg	1,2,4	A,C,D
"	tablet, 10 mg	4	A,C,D
thioridazine	tablet, 25 mg	1	omit
II. ANTIDEPRESSANTS			
amitriptyline	tablet, 25 mg	1,2,3,4	A,C,D
"	tablet, 50 mg	4	A,C,D
imipramine	tablet, 10 mg	2	omit
"	tablet, 25 mg	1,2,4	A,C,D
"	tablet, 50 mg	4	A,C,D
III. ANTIANXIETY			
*chlordiazepoxide	capsule, 10 mg	1,2,4	A,B,C,D
"			
*diazepam	tablet, 2 mg	2	omit
*diazepam	tablet, 5 mg	1,2,3,4	A,B,C,D
*diazepam	injection, 5 mg/cc ampuls-(emergency use only)	1,2,4	A,B,C
*lorazepam	tablet, 1 mg	1	omit
"	tablet, 2 mg	1,2	omit

*Under Federal Drug Control Act, Schedule IV.

a/ = code

1. Currently used in the Grenadian Mental Health System.
2. Has been proposed by the Grenadian medical profession for inclusion in the Grenadian formulary.
3. Recommended for use by a WHO Expert Committee, Technical Report Series 688, "The Use of Essential Drugs", 1983.
4. Recommended for use in USAID Mental Health Project.

b/ = code

- A. Acute 20-bed Psychiatric Unit.
- B. 6-bed Substance Abuse Unit
- C. 80-bed Treatment and Rehabilitation Facility
- D. Community Mental Health Svcs.

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IV. SEDATIVE-HYPNOTICS

Several are on the proposed formulary, none are recommended by WHO; none are recommended for use in this project.

Generic Name	Strength	Status ^{a/}	Projected ^{b/} Area of Use
V. ANTIPARKINSON/ANTICHOLINERGIC DRUGS			
benzhexol (trihexylphenidyl)	tablet, 5 mg	1,2,4	A,B,C,D
benztropine	tablet, 2 mg	1,2	omit
benztropine	injection, 1 mg/cc 2 cc amps	1,2,4	A,B,C

VI. OTHER PSYCHOTROPIC DRUGS

lithium carbonate	capsule, 100 mg	1,2,3,4	A,B,C,D
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Restricted to use only under the guidance of the psychiatric consultants.

VII. ANTICONVULSANT DRUGS (NON PSYCHOTROPIC AGENTS)

phenytoin, Na	capsules, 100 mg	1,2,3,4	A,B,C,D
*phenobarbital	tablet, 30 mg	1,2,4	A,B,C,D
* "	tablet, 60 mg	1,2,3,4	A,B,C,D

*Under Federal Drug Control Act, U.S., Schedule IV.

a/ = code

1. Currently used in the Grenadian Mental Health System.
2. Has been proposed by the Grenadian medical profession for inclusion in the Grenadian formulary.
3. Recommended for use by a WHO Expert Committee, Technical Report Series 683, "The Use of Essential Drugs", 1983.
4. Recommended for use in USAID Mental Health Project.

b/ = code

- A. Acute 20-bed Psychiatric Unit.
- B. 6-bed Substance Abuse Unit.
- C. 80-bed Treatment and Rehabilitation Facility.
- D. Community Mental Health Services.

PSYCHOTROPIC DRUGS - PHARMACEUTICALS

Name of drug item	Drug Strength	Dosage Form	Quantity USAID '84 Purchased	Annual Estimated Quantity '85	Annual Recommended Purchase Units	Unit Issue	83a VA-Cost per unit Issue	83b VA-Cost per unit Issue	83c Red Book cost per unit issue	12-month/annual total project cost - \$.	Comments
I. Antipsychotics											
H chlorpromazine	25mg	tablets	none	100,000	50	1,000	12.85 (Parke-Davis)			642.50	
H chlorpromazine	50mg	tablets	none	unknown	30	1,000	16.11 (Parke-Davis)			483.30	
H chlorpromazine	100mg	tablets	none	275,000	200	1,000	25.30 (Parke-Davis)			5,060.00	
L chlorpromazine	25mg/cc in 2cc Ampuls	injection	none	300	none	1,005	88.40	-	-	none	have a 1-2 year supply in stock.
H fluphenazine	25mg/cc	injection	200	1,200	600	5cc/vial	-	25.00 (Squibb)	27.30	16,350.00	
M decanoate	25mg/cc	injection	none	unknown	200	1cc single dose syringe			5.90 (Squibb)	1,180.00	
L haloperidol	2mg	tablets	7,500	30,000	5	1,000	-	100.00 (McNeil)	191.25	500.00	
M haloperidol	5mg	tablets	none	unknown	7	1,000	-	140.00	257.75	920.00	
L haloperidol	10mg	tablets	none	unknown	3	1,000	-	200.00	345.00	600.00	
L haloperidol	5mg/cc 1cc Ampuls	injection	none	unknown	5	10s			14.25	71.25	
H trifluoperazine	5mg	tablets	none	200,000	100	1,000	-	30.00 (Geneva Genetics)	123.00 (Geneva Genetics)	3,000.00	
H trifluoperazine	10mg	tablets	none	unknown	500	100		13.00	21.55	6,500.00	

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Name of Drug Item	Drug Strength	Dosage Form	Quantity USAID '84 Purchased	Annual Estimated Quantity '85	Annual Recommended Purchase Units	Unit Issues	83a Unit Cost per unit issue	83b Unit Cost per unit issue	83c Per Book cost per unit issue	12-month Annual Total project cost US.\$	Comments
2.											
<u>II. Antidepressants</u>											
M amitriptyline	25mg	tablets	none	50,000	3	1,000	12.59 (Parke-Davis)	-	53.72 (Parke-Davis)	37.77	
L amitriptyline	50mg	tablets	none	10,000	2	1,000	20.99	22.50 (Geneva Genetics)	103.78 (Parke-Davis)	41.93	
II imipramine	25mg	tablets	6,250	25,000	none	1,000	14.34 (Beigy)	-	-	none	Annual need was over-estimated, have a 3 yr. supply
L imipramine	50mg	tablets	none	unknown	2	1,000	20.53 (Beigy)	22.50 (Phillips Rowan)	31.45 (Geneva Genetics)	41.16	
<u>III. Antianxiety</u>											
* chloriazepoxide	10mg	capsules	none	50,000	5	500	6.25 (Parke-Davis)			31.25	Distribution restricted 20 bed-Acute Unit-Substance Abuse unit
* lorazepam	1mg	tablets	2,200	10,000	none	-	-	-	-	none	
* lorazepam	2mg	tablets	2,500	10,000	none	-	-	-	-	none	Therapeutically equivalent to chloriazepoxide, more expensive
<u>IV. Sedative-Hypnotics</u>											

*Under Federal Drug Control Act in U.S. - Classified as Schedule IV

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Name of drug item	Drug Strength	Dosage Form	Quantity USAID '84 Purchased	Estimated Quantity '85	Recommended Purchase Units	Unit Issue	Cost per unit issue	Vit-Cost per unit issue	Fed Book cost per unit issue	Project cost US.\$	
V. Antiparkinson/ Anticholinergic (H) trihexyphenidyl (TIP)	5mg	tablets	none	200,000	150	1,000	1.90 (Solar)	-	7.15 (Solar)	1,035.00	
O benzotropine	2mg	tablets	4,250	25,000	none	1,000	none	60.00	59.26	none	Is therapeutic-ly equivalent to TIP, but more expensive.
VI. Other Psychotropics (H) lithium carbonate	300 mg	capsules	none	unknown	2	1,000	17.75 (Rowell)	22.5 (Phillips Roxane)	28.95 (Roxane Labs)	35.50	To be used only under the guidance of the psychiatric consultant.
VII. Anticonvulsants (non- psychotropics (H) phenytoin, Na	100mg	capsules	none	200,000	30	1,000		20.00 (Parke-Davis)	17.75 (Lederle)	532.50	Always purchase same brand, because of differences in bioequivalency
(H) phenobarbital	30mg (gr)	tablets	1,000	300,000	10	1,000	1.52 (Parke-D)	-	2.85 (Parke-Davis)	15.20	
phenobarbital	60mg (1 gr)	tablets	none	unknown	5	1,000	4.07	-	4.54 (Parke-Davis)	20.35	
									Total	42,137.76	

*Under Federal Drug Control Act in U.S. - Schedule IV.

CODE:

H - highest priority purchase

M - middle priority purchase

L - lowest priority purchase: may not need to purchase in 1985.

O = Do not purchase.

a = Federal Supply Schedule, Veterans Administration Office of Procurement and Supply, July 25, 1983.

b = State of Virginia, Department of Mental Health and Mental Retardation, Contract Prices for Psychotropic Drugs, February 19, 1983.

c = 1983 Red Book Psychotropics, Annual Pharmacists' Reference - List of Whole prices to Pharmacies (Prices quoted are lowest listed for volume purchases).

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EMERGENCY CRASH CHART

Need: two emergency boxes
 1 - 80 bed Treatment and Rehabilitation Facility
 1 - 20 bed Acute Psychiatric Unit

<u>Injectable Drugs</u>	<u>Quantity/each Box</u>	<u>Total</u>
Aminophylline Inj. USP	2 amps	4 amps
Aramine 1% 10 ml	1 amp	2 amps
Atropine 0.4 mg	2 vials	4 vials
Calcium Chloride 10%	2 vials	4 vials
Dextrose 50% 50 ml	1 vial	2 vials
Digoxin 0.5 mg	2 amps	4 amps
Diphenhydramine 50 mg/ml	2 amps	4 amps
Ephedrine 50 mg	2 amps	4 amps
Epinephrine 10 ml	3 syr.	6 syr.
Hydrocortisone Sod. Phos. 100 mg/ml	1 vial	2 vials
Isoproterenol 0.2 mg.	2 amps	4 amps
Lasix 20 mg	2 amps	4 amps
Levophed 4 ml	2 amps	4 amps
Lidocaine for Cardiac Use	2 amps	4 amps
Phenytoin 100 mg/2 ml	2 amps	4 amps
Physostigmine 1 mg/ml	2 amps	4 amps
Propranolol 1 mg	2 amps	4 amps
Sodium Bicarbonate 44.6 ml/l	3 syr.	6 syr.
Vasoxyl 1 ml	2 amps	4 amps
Dextrose 5% in Water 1000 ml	1 bag	2 bags
Lactated Ringers 1000/ml	1 bag	2 bags
Normal Saline 1000 ml	1 bag	2 bags

Pharmacy will be responsible for maintaining the contents of the boxes.

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TAGS:

SUBJECT: PROPOSED MENTAL HEALTH SERVICES PROJECT

- SER/COM/CPS HAS REVIEWED LIST OF PHARMACEUTICALS PROPOSED FOR PURCHASE UNDER SUBJECT PROJECT.
 - FOR BUDGET PLANNING PURPOSES THE ESTIMATED COST FOR YEAR 1 IS DOLS 36,000 PLUS 33 PERCENT (AIR FREIGHT AND INSURANCE) FOR A TOTAL OF DOLS 48,000. YEAR 2 TOTAL COST, INCLUDING TEN PERCENT INFLATION, IS ESTIMATED AT DOLS 52,800. DAY
- BT
 #925 1

In Master

SCOPE OF WORK

Psychiatric Therapeutic Activities Specialist

- I. Specialty: Psychiatric Therapeutic Activities
- II. Level of Effort: 5 person months
- III. General Objective: To provide short-term technical assistance to the psychiatric inpatient staff and midway in the training program of the direct care staff of the psychiatric hospital, regarding the design and implementation of a therapeutic activities program for psychiatric departments
- IV. Specific Tasks:
 1. Develop therapeutic activities assessment forms, for example:
 - past and present interests, e.g., vocational, education, etc.
 - individual preferences of activities;
 - interest, e.g., crafts, music, arts, dance;
 - activities of daily living, e.g., feeding, dressing, and personal grooming;
 - enjoyment of reading;
 - interest in sports;
 - Special aptitudes, e.g., mechanical ability, gardening, cooking, woodworking, etc.
 2. Survey direct care staff regarding their interest in acquiring special skills for implementing the therapeutic activities plan of patients;
 3. With assistance of the Chief Matron, Psychiatric Social Worker and Occupational Therapist, perform basic skills and interest assessments on a sample of long-term patients (those hospitalized over six months).
 4. Pretest therapeutic activities assessment forms on the patient sample and revise as necessary and establish a therapeutic activities plan.
 5. Conduct hospital-wide training seminars on the formulation of a therapeutic activities plan;
 6. Develop a therapeutic activities program for the Psychiatric Service, including the therapeutic activities scheduling: develop and initiate the program with the assistance of the Nurse Matron, Psychiatric Social Worker and Psychiatrist, for patients sampled.
- V. Qualifications:
 1. Certification in occupational therapy and/or recreational therapy and/or activities therapy;
 2. Five years experience in therapeutic activities, program development, and management in a mental hospital;

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VI. Work Plan:

TASK: To develop a basic therapeutic assessment form for utilization by the activities therapist director, treatment team staff, and direct care staff.

Schedule: -- To determine content areas for the therapeutic activities assessments, in collaboration with the occupational therapist, the psychiatric/clinical treatment team, attendants, and the Chief Matron;

- To develop a basic therapeutic assessment form;
- To pre-test the form on a select sample of long-term patients and;
- To evaluate the findings and revise as necessary.

TASK: To establish a therapeutic activities plan for the patients sampled.

Schedule: - After completion of the assessment form, develop and individualize a therapeutic activities plan;

- Participate with the clinical treatment team in the formalization of the treatment plan;
- Document in the patient's medical record progress toward achievement of the formulated goals.

SCOPE OF WORK

Pharmacy Consultant

- I. Specialty: Pharmacy
- II. Level of Effort: 10 person weeks
- III. General Objective: To assist the Chief Pharmacist and other pharmacy personnel in establishing a safe, efficient and accountable drug procurement and drug distribution system to mental health patients.
- IV. Specific Tasks:
 1. To assist in developing an efficient and quality drug procurement system for mental health.
 2. To assist in developing a system for the storage and delivery of all psychotropic drugs distributed to mental patients. The 80-bed intermediate chronic unit will be used to store psychotropic drugs; these drugs will be distributed as needed then to the district pharmacies and the 26-bed St. George's unit.
 3. To assist in developing a modern, accountable distribution system for psychotropic drugs in the community mental health program. The district pharmacist will be responsible for dispensing these drugs.
 4. To assist in establishing a safe, modern and accountable drug distribution system in the inpatient setting (26 beds at St. George's and 80 bed intermediate and long term care facility).
 5. To educate nurses and other mental health staff in appropriate use of the new drug distribution system.
 6. To collaborate with other pharmacy-related donors, including Project HOPE.
- V. Qualifications:

Degree: an MS in hospital pharmacy (preferred) or a Doctor of Pharmacy degree from a school accredited by the American Association of Colleges of Pharmacy (ACCP).

Experience: At least five years of experience in a hospital pharmacy, a knowledge of pharmacy management, experience in establishing a unit dose distribution system in a hospital, experience in working with nursing staff.

Preferred: -previous experience in working with developing countries.

VI. Work Plan:

Phase I: Assist the Chief Pharmacist, the medical supply officer, and the Richmond Hill Institute's Pharmacist in developing an efficient and quality drug procurement and distribution system for psychotropic drugs. The pharmacist at Richmond Hill will be responsible for the storage and distribution of all psychotropic drugs purchased by USAID. This responsibility will begin in January 1985. (2 weeks)

Phase II:

1. Assist the Chief Pharmacist and the district pharmacists in developing a modern, safe and accountable drug distribution system for psychotropic drugs to psychiatric outpatients. The responsibility for dispensing psychotropic drugs to community mental patients will be the district pharmacist's, beginning October 1985.
2. Evaluate the drug procurement and distribution system developed in Phase I, make changes as needed and review and recommend the purchase of psychotropic drugs to 1986. (2 weeks)

Phase III:

1. Approximately two weeks before the new hospital is scheduled to open, assist the pharmacist in establishing a safe, modern, and accountable drug distribution system for the inpatient 80-bed facility; a similar drug distribution system is also to be developed at the 26-bed acute treatment unit at General Hospital. Nurses and other mental health staff should be trained in the appropriate use of this system;
2. Evaluate the distribution of psychotropic drugs used in the outpatient setting developed during Phase II, upgrade and implement changes as needed. Review the procurement and distribution of psychotropic drugs developed during Phase I, upgrade as needed. (6 weeks).

SCOPE OF WORK

Psychiatric Nursing Educator

- I. Specialty: Psychiatric Nursing
- II. Level of Effort: 12 person months
- III. General Objective: Provide short term technical assistance to the psychiatric inpatient nursing staff; provide intermittent evaluation; design and conduct a training program for three levels of attendant staff and a six-month training program for certified nurses. The purpose is to upgrade mental health nursing skills and improve the quality of inpatient psychiatric care and treatment.

IV. Specific Tasks:

Phase I:

1. With assistance of the Chief Nursing Officer, the Council on Nursing, and the Director of the Grenada School of Nursing, design a curriculum for training of mental health nurses (approximately five).
 - a. Perform a needs assessment
 - b. Develop a curriculum
 - c. Test the curriculum
 - d. Conduct formal training of mental health nurses, use faculty of the University of the West Indies as guest lecturers.
2. Provide a clinical, on-site training program with direct clinical supervision, concurrently with a formalized didactic training program.
3. Evaluate the impact of the training program.
4. In collaboration with the Ministry of Health and Nursing Council, will seek specialized certification for mental health nurses.

Phase II:

1. With assistance of Chief Nursing Officer, Chief Nurse Matron, and Clinical Treatment Team of the Psychiatric service, design a training program for nursing attendants (approximately 58).
 - a. Perform a needs assessment
 - b. Develop a curriculum
 - c. Conduct a formal training program, including clinical treatment.
2. Provide clinical supervision and on-site training, concurrently with formalized didactic training.
3. Evaluate the training program.

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Phase III:

1. With assistance of Chief Nursing Officer, Chief Nurse Matron, and Mental Health Nurses develop:
 - a. Psychiatric nursing policy and procedures,
 - b. job descriptions and performance evaluations for the nursing staff.

Phase IV:

1. Evaluate the impact of the training programs upon the quality of psychiatric nursing provided.
2. Write a report on the activities performed, including recommendations for further implementation.

V. Qualifications:

1. Certification as Mental Health Nurse or Masters degree in psychiatric mental health nursing;
2. Five years experience as mental health nurse tutor or psychiatric nurse instructor.
3. Clinical experience on a psychiatric inpatient service, maximum of five years;
4. Two years experience in needs assessment, task analysis, curriculum design and development and training evaluation;
5. Preferred, but not essential, knowledge and understanding of Caribbean culture and mores;
6. Previous international assignments preferred.

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SCOPE OF WORK
Social Worker

- I. Specialty: Social Work
- II. Level of Effort: one year
- III. General Objective: To assist the MOH in strengthening its ability to effectively deal with the mental health problems associated with the deinstitutionalized mental patients.
- IV. Specific Tasks:
 1. Through didactic lectures, classroom discussions, actual supervised assignments, and case presentations, to train a group of selected individuals to function in specific community settings as mental health workers, to provide support to discharged mentally ill patients and their families. The goal is to maintain patients in their communities and to reduce recidivism.
 2. To develop a curriculum design, plan and implement a period of training for community mental health workers and community health aides that will develop health personnel with the capability of functioning in the aforementioned assigned tasks.
 3. To establish clearly for the trainees their lines of responsibility and the methods and importance of open communication in order to maximize their efforts.
 4. To construct the procedures necessary for ongoing supervision of the trainees' work upon completion of training.
 5. To serve as team leader for AID-financed technical assistance.
 6. To prepare Grenadian staff to perform evaluation for the second group of Community Health Aides to be trained under the Project.
- V. Qualifications:
 1. Masters Degree in social work.
 2. Five years or more of social work experience, no less than two of which has been in community settings, and two years of international experience.
 3. Experience in evaluation of training programs.
 4. Experience in teaching, supervision, and must possess some administrative skills.
 5. Two years experience in needs assessment, task analysis, curriculum design and development and training evaluation.

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SCOPE OF WORK

Psychiatric Supervisor

- I. Specialty: Psychiatry
- II. Level of Effort: 2.2 Person Months (2 days/month or 48 days for life of project)
- III. General Objective: Through the provision of ongoing training, strengthen the mental health component of the Office of the MOH by improving the quality of the evaluative and therapeutic efforts of key mental health personnel. Close collaboration with the PHC team is essential.
- IV. Specific Tasks:
 1. Conduct a series of teaching and supervision seminars during twice monthly visits for: psychiatrists, mental health nurses, nurse attendants, and community mental health workers.
 2. Conduct teaching conferences consisting of case presentations, individual and group supervision, and didactic lectures as necessary.
 3. Conduct quarterly evaluations of the trainees in conjunction with responsible administrative and clinical personnel officials.
 4. Review and identify problems with the prescribing practices of physicians.
 5. Develop guidelines and drug protocols to promote the rational prescribing of psychotropic medication.
 6. Develop monitoring parameters to identify and treat adverse drug reactions.
 7. Develop mechanisms to improve patient compliance, especially in the community mental health program.
- V. Qualifications:
 1. Possession of a medical degree from an approved school of medicine.
 2. Completion of a full psychiatric training program.
 3. Experience in community psychiatry and a working knowledge in dynamic psychiatry.
 4. Teaching and supervisory experience.

SCOPE OF WORK

Psychiatrist

- I. Specialty: Psychiatry
- II. Level of Effort: 42 person days (estimated)
- III. General Objective: To provide several discrete training modules that aid in improving the quality of mental health care in the Grenada Mental Health System.
- IV. Specific Tasks:
 1. To review, make suggestions and recommendations for curriculum content for the Community Health Aides' (CHAs) and Community Mental Health Workers' (CMHWs) courses and to serve in an advisory capacity to the Social Worker.
 2. Establish the criteria for the selection of the Community Mental Health Workers.
 3. In cooperation with the other psychiatric consultant, screen the Richmond Hill patient population by reviewing charts; through interviews, record observations and impressions; and state the diagnosis. Will also indicate on the chart and to the Matron those patients who can be discharged.
 3. To conduct two 2-week seminars on substance abuse (alcohol and drugs) for personnel of the Mental Health System.
 4. In cooperation with the psychiatric consultant, provide technical assistance and support for the psychiatrist and the Senior Medical Officer.
 5. In cooperation with the USAID Team Leader, develop a schedule for inclusion of seminars by psychiatrist(s) in the training program.
- V. Qualifications:
 1. Possession of a medical degree from an approved school of medicine.
 2. Completion of a full psychiatric training program.
 3. Experience in community psychiatry.
 4. Knowledgeable in dynamic and biologic psychiatry.
 5. No less than five years teaching and supervisory experience.
 6. Administrative experience of no less than five years.

SCOPE OF WORKMedical Records Administrator

- I. Specialty: Medical Records Administration
- II. Level of Effort: 5 person months
- III. General Objective: Provide technical assistance to psychiatric/mental health clinical staff three months prior to the opening of the new hospital and one and a half months after the opening. The consultant will design and initiate a patient clinical record system, in consultation with the Ministry of Health, for use by staff working in inpatient psychiatric facilities and in community mental health service.
- IV. Specific Tasks:
 1. Through site visits and review of available community and inpatient psychiatric clinical/patient data, develop essential components for a single/uniform patient medical record. The consultant will take into consideration Project Hope's recommendations regarding medical records. (Also see report entitled "The Health Data Base," Grenada, 1984, pp. 13-16).
 2. With key members of the inpatient psychiatric and community health/mental health staff, develop the basic contents of the patient clinical record; address the following:
 - a. Patient identification data;
 - b. Psychiatric and intercurrent diagnoses and DSM-III coding;
 - c. Psychiatric evaluation and mental status examination;
 - d. Physical and neurological examination;
 - e. Psychosocial and family history;
 - f. Laboratory, and diagnostic reports (including special reports e.g. Diabetic Reports);
 - g. Treatment plan;
 - h. Progress notes;
 - i. Nursing care forms (e.g. TPR/BP, Administration of medications, Nursing Care Plan);
 - j. Therapeutic reports;
 - k. Discharge summary and final diagnosis;
 - l. Referral Record Forms.
 3. With the Ministry of Health staff, and in conjunction with the psychiatrist(s), develop a uniform data collection reporting system, including:
 - a. Incidence and prevalence of mental diseases for the psychiatric services;
 - b. Data on patients served within the Mental Health and Health Service Delivery system (including characteristics of the population served).
 - c. Demographic and epidemiological data on the population at risk; and
 - d. Data on patient movement/flow.

4. With the clinical staff, develop a training curriculum for key professional staff on the proper documentation of patient care and treatment;
5. With other clinical staff and subject matter experts, supervise and assist in the direct implementation of the training modules;
6. Pretest the patient clinical forms and revise as needed;
7. With curriculum designers, develop a training evaluation plan, and
8. With assistance from Ministry of Health, submit the patient clinical record forms for printing.

V. Qualifications:

1. Certification in Medical Records Administration;
2. Experience as a medical records administrator in a mental hospital setting for five years;
3. Related experience in a uniform data collection system;
4. Preferred, but not essential, a background in patient management information systems;
5. Previous international assignments in medical records administration is preferred.

VI. Work Plan:

TASK: To assess the present patient medical record system for inpatient and outpatient psychiatric services.

- Schedule:
- Perform a needs assessment and review the present psychiatric inpatient and outpatient documentation of service delivery;
 - Develop a single patient medical record, with attention to documentation of critical clinical data for psychiatric outpatients and inpatients;
 - Pretest the clinical record forms, evaluate the findings, and revise as needed.

TASK: To develop a uniform/psychiatric data collection system that will have broad utilization within the psychiatric service as well as the Ministry of Health System.

- Schedule:
- Perform a needs assessment and review present inpatient and outpatient uniform data collection regarding incidence, prevalence, and morbidity of psychiatric patients;

- Develop a uniform data collection system for psychiatric service, including reporting forms and analysis of data collection, in collaboration with the Ministry of Health psychiatrist(s) and the medical records officer;
- Pretest the data collection forms, evaluate the findings, and revise as needed.

TASK: To develop a training program for the medical records officer, clinical psychiatric staff, and the clinical staff of the Ministry of Health.

- Schedule:**
- Determine the trainee selection criteria;
 - Develop and test the curriculum;
 - Conduct the training seminars for:
 - a. Clinical staff of the Ministry of Health;
 - b. Psychiatric service clinical staff;
 - c. Participates in the training of Community Health/Mental Health Staff, Mental Health Nurses, and Attendants;
 - d. Clinical on-site training of the Medical Records Officer.
 - Evaluate the training effort.

TASK: To establish a uniform clinical record and data collection system for psychiatric patients.

- Schedule:**
- Work with the medical records officer in the finalization of forms;
 - Collaborate with the Ministry of Health to assure agreement on the design and methodology;
 - Collaborate with the community-based and psychiatric services to assure agreement on the design and methodology;
 - Secure printing of all forms through the Ministry of Health.

TRAINING PROGRAM

1. Mental Health Nurses (2-5 persons)

- Recipients:
- a. Certified nurses who have expressed an interest in receiving specialized training in mental health nursing;
 - b. May or may not be employees in the mental health system;
 - c. Evidence of interest and plans to work in the psychiatric service;
 - d. Demonstrated competence in basic nursing; and
 - e. Willingness to participate in a 6-month mental health nursing program.

Course Description:

- a. A 6-month training program, including didactic lectures and on-site clinical supervision;
- b. course objectives will focus upon training in psychiatric nursing assessment, intervention, and evaluation;
- c. guest lecturers will participate in the lectures and case discussions;
- e. limited field trips to select training sites within the Caribbean, and, if possible, to the U.S. will be provided.
- f. Three to five certified nurses will be selected; three to five guest faculty will be selected.
- g. Practical application of all required skills with set level of performance attained.

2. Attendants (58 persons)

- Recipients:
- a. Compulsory training for all Grade B(Senior), Grade A (mid-level) and Junior (entry level) attendants;
 - b. In accordance with the Chief Matron, develop a timetable for scheduling the training components.

Course Description:

- a. Didactic lectures, films and textbooks on basic nursing care of the mentally ill patient will be provided.
- b. Assigned course reading in preparation for lectures will be made.

- c. Additional course content includes: the causes of mental illness, care and treatment of the mentally ill person, understanding of behaviorism, therapeutic intervention, and interpersonal skills development for work with individuals and groups of patients.
- d. Documentation in the patient's clinical record.
- e. Practical application of all required skills with set level of performance attained.

Proposed Training Plan for levels of Attendants:

- a. Attendant B Group (8 persons) - 2 weeks
- b. Attendant A Group (10 persons) - 3 weeks
- c. Junior Attendant Group (40 persons): Class I - 20 persons for 4 weeks
Class II - 20 persons for 4 weeks
- d. Total number of trainees will be 58 attendants.
- e. The faculty will consist of:
 - 1) Psychiatric Nurse Instructor
 - 2) Clinical Treatment Staff
 - 3) Mental Health Nurses
 - 4) Psychiatrist

The Consultant will work with the Chief Nurse in Ministry of Health, Nursing Advisory Council, Grenada School of Nursing, Grenada Nurses' Association, and the Nursing Matron in the implementation of the training program. The Consultant will also work with the Nursing Council in the classification of nursing personnel by training and work performance.

3. Medical Records Officer (1 Person)

A Medical Records Officer will work with the consultant to provide technical assistance. The Officer will develop skills in the course of working with the consultant.

4. Community Mental Health Workers (7 persons)

The persons to receive the training will be individuals who have an expressed interest in working with people. They may already be employees in the mental health system or they may be selected as new employees.

The community based worker responsible for mental health may be male or female and must be 21 or more years of age. The worker must have not less than school leaver level certificate. There must be evidence of, if employed in the mental health system, having been helpful with patients and having demonstrated a caring attitude. There must also be evidence of having worked well with other disciplines and co-workers. For the new employees, letters of reference attesting to the presence of these attributes must be presented.

The prospective worker must be a good listener, have a high tolerance in frustration-producing situations and have a history of not acting impulsively.

The trainees will receive didactic lectures on patient and family interaction and behavior, community reactions, problems of the poverty-level family, patient, family and community education in mental health principles, and behavioral characteristics of specific illnesses. Special instructions on how to make home visits will be provided. They will be involved in classroom discussions on dealing with patient-family problems and community problems and family crises.

Trainees will be given assignments to selected discharged patients followed by case presentation and discussion of that trainee's effort. Information will be given on determining community resources and how to make use of them. Training will last 24 weeks.

5. Community Health Aides (up to 44 persons)

The persons receiving the training are 38 Community Health Aides (CHAs) who presently work out of 22 health stations in the seven parishes of Grenada. These aides have been trained generically to recognize and administer to a wide variety of health needs. Educating patients about good health habits is a part of their function, as is referral to the District clinics and health stations for ailments beyond their ability to treat. They have had considerable experience and are known in the communities in which they serve. The mental health training to be offered them will add another dimension to their capabilities and allow them to increase their range of services. This will not only be of benefit to the communities, but when emotional problems are recognized and dealt with along with physical difficulties, this reduces the need to over-use medical facilities.

Training will be conducted via a technical assistance program designed and managed by an experienced social worker. Training will be provided in two 8-week blocks of time with 19 CHAs in each training block. The CHAs will be taught to recognize signs and symptoms of the commonly occurring forms of mental disorder, signs of chemical substance abuse, and to recognize evidence of family upheaval and its consequences. Further, they will be taught to recognize their limitations to effectively communicate with the District Nurse and refer those problems in which extensive help is needed.

6. Activities Therapy Specialist (1 person)

(Refer to the Scope of Work for the Technical Assistance)

7. Hospital Administrator (1 person)

Training will be in the principles of hospital administration, resource management (financial, human, commodities), principles of supervision. The training program will be of nine months duration and will take place in the United States.

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JOB DESCRIPTION

Mental Health Nurse

Overall Responsibility: for nursing care assessment, planning, intervention, and evaluation of patients admitted to the Acute Psychiatric Care Unit, and works collaboratively with the clinical team members.

Specific Tasks and Duties:

1. Provide therapeutic milieu, concerned largely with socio-psychologic aspects of patients' environment.
2. Assess, detect, and care for the somatic aspects of patients' mental health problems, including responses to drugs and other treatment.
3. Perform a psychiatric assessment and mental health status examination, and a psycho-social assessment on all newly admitted patients as part of the intake screening and evaluation.
4. Develop Nursing Care Plans, in collaboration with the attendants for all psychiatric patients, and revise the plans based upon patient needs.
5. Administer medications and evaluate the patients' clinical reactions.
6. Work with patients in individual and/or groups in terms of therapeutic interventions.
7. Provide leadership, supervision, and clinic assistance to attendants.
8. Participate in the treatment plan, formulation, implementation, and discharge planning.
9. Actively participate in discharge planning and follow-up/referral of mental patients.

Qualifications and Experience Required:

1. Certification in mental health nursing.
2. Demonstrated competence in mental health nursing skills.
3. Five years experience in Mental Health Nursing as a clinician.

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JOB DESCRIPTION

Community Mental Health Worker

Overall Responsibility: The Community Based Health Worker (CMHW) entails the following responsibilities:

1. Must be knowledgeable of the difficulties of all persons in his/her district who have been discharged from the inpatient services of the Treatment Rehabilitation Center and the Acute Psychiatric Care Unit.
2. Must have familiarity with both the family and the community in which the patient resides.
3. Will participate in the discharge planning of patients re-entering the District after hospitalization, during which time he/she will meet with the patient.
4. Will visit the patient in the home at least once per week for the first two weeks following discharge.
5. Will attend the health center or visiting station in which the patient reports for follow-up and will provide the Psychiatrist, and the Mental Health team (and the Primary Health Nurse or her designee) of the patient's progress in his home setting.
6. Will be administratively responsible to the Primary Health Nurse through the District Nurse, and will be clinically responsible for health problems to District Medical Officer through District Nurse and/or Public Health Nurse and/or Family Nurse Practitioner.

JOB DESCRIPTION

Activities Therapist Director

Overall Responsibility: for the provision and/or will assure the provision of activity services to meet the psychiatric, physical, social, cultural, recreational, and vocational health maintenance and rehabilitation needs of patients on the psychiatric services.

Specific Tasks and Duties:

1. In collaboration with the direct care staff, provide a wide range of therapeutic activities, e.g., occupational therapy, sewing, art, music, dance, recreational therapy and vocational rehabilitation.
2. Maximize the skills of direct care staff (and volunteers) in the provision of therapeutic activities.
3. Schedule suitable therapeutic activities on an individual and/or group basis, based upon individual patient assessments.
4. Provide written goals, objectives, and policies for therapeutic activities.
5. Assure appropriate therapeutic activities are available for patients during the day, in the evening, and on weekends.
6. Participate in the treatment planning conferences.
7. Document in the progress notes of patient, response to the activity services.
8. Assist in the training programs for clinical staff and direct care staff.
9. Secure and maintain adequate and appropriate supplies and equipment for therapeutic activities.

Qualifications and Experience Required:

1. Registered occupational therapist.
2. Demonstrated competence in therapeutic activities programs.
3. Five years clinical experience in providing and designing a therapeutic recreational program for an inpatient psychiatric service.

JOB DESCRIPTION

Medical Records Officer

Overall Responsibility: 1) for the patient medical record system for all in-patient psychiatric service components, as well as the coordination of the medical records system for psychiatric outpatients; 2) for maintaining a uniform data collection system for psychiatric inpatients and outpatients.

Specific Tasks and Duties:

1. Establish and maintain a patient medical record system for all psychiatric components.
2. Oversee the completion, filing, and retrieval of the patients' medical records.
3. With assistance from the clinical treatment teams, establish written policies and procedures for a comprehensive psychiatric patient medical record system.
4. Maintain a system of identification and filing to insure prompt location of patients' medical records.
5. Assure that relevant clinical information, patients' stay, and/or follow-up is centralized in each psychiatric patient's record.
6. Index patient records after discharge, according to outpatient clinic status, disease state, and area of residence.
7. With assistance from the clinical team staff, assure that:
 - a. diagnoses is in DSM III terminology;
 - b. diagnostic workups are recorded;
 - c. treatment plans are complete and present;
 - d. course of illness is described and progress of patients is documented;
 - e. clinical assessments are documented, and
 - f. discharge planning/follow-up and after care plans are documented.
8. Responsible for implementation of the uniform data collection system.

Qualifications and Experience Required:

1. Qualified Medical Record Administrator
2. Demonstrated competence in organizing and maintaining a patient medical record system for a psychiatric service.
3. Five years experience in psychiatric hospital setting as a medical records clerk.
4. Preferred, but not essential, competence in establishing a uniform data collection system for psychiatric services.

PROJECT OUTPUT DESCRIPTION1. TREATMENT FACILITIESa) Acute Psychiatric Services Unit

The proposed Acute Psychiatric Services Unit consists of 26 beds at the St. George's General Hospital. The unit will replace the present seven-bed unit located at General Hospital and will serve as a point of entry for all admissions to the inpatient psychiatric services of Grenada's mental health system. Other functions of the unit are as follows:

- To conduct a complete bio-psycho-social assessment of entering patients.
- To establish and implement a plan of treatment with the objective of rapid return of the patient to his/her respective community.
- To involve community and family resources: these include, for the former, health center and clinics; and, for the latter, families concerned with patients.
- To serve as a specialized facility for detoxifying those patients whose primary or presenting difficulty stems from the abuse of chemical substances, e.g., drugs, alcohol, and return of the patient as quickly as possible to a substance-free state.

Utilizing the facilities of the General Hospital as well as the Psychiatric staff, the unit will provide the following services: medical and psychiatric histories, mental status examination, physical (including neurological) examinations, basic laboratory work (CBC, urinalysis, serological test), X-rays (for new patients), PAP smears, consultation from other medical specialties when needed, treatment plans, medication, medical treatment for substance abuse, patient group meetings, meetings with families, and discharge and/or transfer planning.

All routine admission procedures are to be completed within 24 hours of entry. These include: chief complaint and reason for entry, psychiatric and medical history, mental status examination, physical and neurological examination. Procedures will be to perform all but the physical and neurological examinations. If the history and mental status examination is conducted by the nurse, the patient will be seen as soon as possible by the psychiatrist (who will also review the data collected by the nurse) to establish a diagnosis and outline the initial treatment needed. (In cases of emergency, the nurse will immediately notify the psychiatrist.) Routine laboratory examinations are to be ordered and the results countersigned by the physician. Consultations, when needed, are to be requested

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by the physician. The nurse will also obtain a family history whenever this is possible.

Regular staffings of the patients will take place with the following personnel in attendance: psychiatrist, who will lead the meeting; mental health nurse; nursing students, aides and/or attendants who are assigned to specific patient groups. The nurse will also hold short meetings with the attendants and aides on each shift for review of problems and to gain impressions from the aides and attendants and discuss management from a nursing point of view. The psychiatrist on the service shall meet regularly (no less than three times weekly) to review and discuss patient management.

The psychiatrist will also countersign the nurse's histories and mental status examinations. Together they will develop a treatment plan for each patient. The nurse will also maintain contact with the patients' families. When discharge is considered, this should be discussed at the inpatient staffing meeting in order to obtain information from all personnel who have been in contact with the patient. The community mental health worker located in the parish in which the patient is to return will also be included and/or informed of imminent patient discharge.

A discharge summary will be prepared containing a precise reason for entry, psychiatric listing, abnormal findings in the mental status, hospital course, medication, and other pertinent findings. In addition, the reasons for discharge or transfer and recommendations are also included in writing at the time of discharge. If discharged, a copy of the summary is sent to the center or clinic which the patient will attend. If transferred to the Rehabilitation and Treatment Center, then copies of the discharge summary, history, mental status and physical-neurological examination are forwarded.

b) Treatment and Rehabilitation Center

The proposed 80-bed Treatment and Rehabilitation Center will provide a safe, healthful and stimulating environment that will enhance improvement of the patient's mental condition. Other functions of the Center are as follows:

- To provide active treatment programs, e.g., activities, crafts, group and behavioral therapy for intermediate and long stay patients.
- To prepare the patient for return to the community, e.g., occupational therapy, socialization groups, weekend home visits, etc.
- To establish strong linkages with families of hospitalized patients to provide information regarding mental illness and to adequately prepare the families to accept and assist in managing the patient after discharge.

Among the services to be provided are: update and revision of the patient's treatment plan, including problem assessment; patient care management, including medication, evaluation, and monitoring of drug therapy; administration of special therapeutic procedures, e.g., behavioral modification; provision of occupational, recreational, and diversional activities and socialization groups; work with families to accept the patient and to deal with family anxieties, frustrations, etc.; delivery of quality pharmaceutical services in a safe and efficient manner; patient education and supportive counseling; preparation of the patient for return to the community.

Patients will be received from the Acute Psychiatric Unit with copies of all necessary patient data. Within two weeks of the transfer, a new treatment plan should be designed for each patient. No less than a weekly assessment of the patient's progress is to be recorded as progress notes by the psychiatrist and/or the mental health nurse countersigned by the psychiatrist. These notes should include information that relates directly to those factors identified by the problem areas of the treatment plan. After one month, progress notes may be recorded every two weeks.

Progress notes should include: behavioral changes; any change in quality and/or quantity of interpersonal relationships; reduction (or increase) in abnormal condition (hallucinations, delusions, etc.); and if thinking has or has not become more realistic. Regular staffing of patients, at least twice weekly are to be conducted by the senior nurse in charge of each of the living units. Staffing meetings will also include nurses, attendants, and any other personnel directly involved in the care of the patients. The psychiatrists will attend meetings on a rotational basis. These short meetings allow input of observations and improvements of each of the participants and instructions will be provided to personnel for patient management. Presentation of difficult or complicated patients will be presented to the psychiatric consultant.

Occupational therapists will record in the progress notes, every two weeks, the progress of patients in those activities specifically designed to deal with the identified problems of the patients. Attendants will help to direct patient activities under the direction of the activities therapist. The Director of Pharmacy Services will develop a quality program of drug delivery that ensures adequate drug control and appropriate distribution of drugs to patients.

A determination of readiness for discharge will be provided in staffing meetings with the psychiatrist in attendance. Preparing the patient for discharge will be handled by the psychiatric nurse assistant under the guidance of the psychiatrist. When families are involved, preparation of their receiving the patient will be under the direction of the social

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worker. It is expected that family contact will have been established early in the course of hospitalization of the patient, thus making the transition from inpatient to community as smooth as possible for the patient. A discharge summary will be written by the psychiatrist or the psychiatric nurse assistant (countersigned by the psychiatrist) and a copy provided to the clinic or center in the community where the patient resides. The community mental health worker should personally be a part of the discharge planning and will visit the patient within the first week of discharge.

2. Community Mental Health Services

The primary population to be served are persons who have previously been hospitalized for mental illness. Initial emphasis will be placed on those 59 persons who will be released from the Richmond Hill Mental Hospital as part of the inpatient census reduction effort. The primary goal is to maintain patients at a functioning level in the community and to prevent unnecessary rehospitalization due to inadequate follow-up. However, the use of Project resources to strengthen community health services will also permit prevention activities and initial assessment of new patients and work with their families. Other functions of the community mental health service delivery system are:

- To provide a quality program of mental health care to the community.
- To prevent inappropriate and unnecessary hospital admissions.
- To identify patients at risk for hospital admission, especially those who are noncompliant with their clinic visits and/or their medications.
- To identify persons and/or families in the community who have a history of emotional disorders requiring primary health or mental health counseling and intervention.

The services to be provided are as follows: behavioral assessment; monitoring of medication usage; observation for adverse effects of medication; home visits to provide family support, education, and information for dealing with deviant behavior, intervention in crisis situations, etc.

Formal follow-up services will be provided at three-week intervals at each of the health centers or clinics by a visiting psychiatrist. Patients will be regularly scheduled for these clinics. In addition to prescribing and carefully assessing medication needs, some evaluation of the patient's adjustment in the community will be determined by the psychiatrist. Additional information may be provided by the Community Mental Health Worker (CMHW), who attends the clinics or centers in his/her parish. Information related to all of the above activities are to be

recorded for that visit on the patient's chart.

Seven CMHW's will be recruited and trained using Project resources. This role may differ appreciably from that of the other personnel at the centers. Since the CMHW, in time, will be familiar with most, if not all, of the patients in attendance, his/her role will be to appraise the psychiatrist of impressions gained from home visits and frequent contact with the patients and their families. Patients who do not appear for their appointments will be visited by the CMHW.

The pharmacist will fill all medication orders, dispense drugs, and maintain a patient drug profile. The pharmacist will also educate patients and their families in regard to the proper use of medication. Intramuscular injections or medication will be administered by the pharmacist, the District Nurse (DN), or the Public Health Nurse (PHN), whichever is available.

For those patients who visit the Health Center or clinic at times other than their appointed one, they will be seen and evaluated by the Public Health Nurse (PHN) or the District Nurse (DN). They will assess the patient's situation, deal with it at the time of the visit, or call the CMHW or the psychiatrist. This is a judgemental determination based on the nurse's perception of the patient's state.

The CMHW, with appropriate support from the psychiatrist or psychiatrically trained PHN (if she/he is in the same district) will intervene in the home setting during times of family crisis that involve the patient. The results of his/her efforts are to be reported to the psychiatrist and as soon as possible recorded on the patient's chart, including the nature of the incident, how it was dealt with, and the outcome.

The CMHW is expected to participate in the discharge planning for patients leaving both services who will locate in his/her district. The worker will also visit the patient weekly for the first two weeks of discharge (because this is the most difficult adjustment period for patients). Regular visits to the patients' homes to check on their adjustment, and family and community relations will also be maintained.

IMPLEMENTATION PLAN

Project Agreement Signed	15 Nov 84
CP's Met	15 Dec 84
A&E Contract Signed	30 Dec 84
USAID Submits List of Equipment	15 Apr 85
USAID Executes PIO/C for Procurement of Equipment and Supplies	15 Jul 85
USAID Signs Construction Contract	5 Jul 85
Construction Completed	1 Mar 86

The major implementation events and dates for Technical Assistance and Training activities are:

<u>Technical Assistance</u>	<u>Beginning</u>	<u>Duration</u>
Psychiatrist	Dec 84	42 days
Psychiatric Supervisor	Mar 85	48 days
Psychiatric Nursing Educator	Jan 85	12 mths
Social Worker	Jan 85	12 mths
Psychiatric Therapeutic Activities Specialist	Aug 86	5 mths
Medical Records Administrator	Jul 86	5 mths
Pharmacy	Mar 85	10 weeks
 <u>Training</u>		
Mental Health Nurses	Jan 85	6 mths
Nursing Attendants	Aug 85	3.5 mths
Medical Records Officer	Sep 86	4 mths
Community Mental Health Workers	Jun 85	6 mths
Community Health Aides	Mar 85	16 weeks
Activities Therapy Specialist	Sep 86	5 mths
Hospital Administrator	Nov 85	9 mths

TECHNICAL PLANSummary Budget
(000 US Dollars)

	<u>Phase I</u>		<u>Phase II</u>		<u>Total</u>	
	<u>AID</u>	<u>GOG</u>	<u>AID</u>	<u>GOG</u>	<u>AID</u>	<u>GOG</u>
Design, Const., Supervision	265	53	3,100	-	3,365	53
Technical Assistance	440	-	-	-	440	-
Training	31	-	-	-	31	-
Commodities	64	-	-	-	64	-
Evaluation	-	-	-	-	-	-
Operation and Maintenance	-	<u>366</u>	-	<u>365</u>	-	<u>731</u>
TOTAL	800	419	3,100	365	3,900	784
	===	===	=====	===	=====	===

Table 1

COST ESTIMATE AND FINANCIAL PLAN
(US Dollars)

	<u>AID GRANT</u>		<u>TOTAL</u>	
	<u>Phase I</u>	<u>Phase II</u>	<u>AID</u>	<u>GOG</u>
1. <u>Design/Construction/Supervision</u>				
1.1 Land and Utilities Hook-up	-	-	-	52,500
1.2 80 Bed Facility/Mt. Gay	200,000	2,515,000	2,715,000	-
1.3 26 Bed Facility/St. Georges	65,000	585,000	650,000	-
SUB-TOTAL	265,000	3,100,000	3,365,000	52,500
2. <u>Technical Assistance</u>				
2.1 Long Term (24 p/m)	364,350	-	364,350	-
2.2 Short Term (15.5 p/m)	70,900	-	70,900	-
2.3 Caribbean Resource Pool	5,000	-	5,000	-
SUB-TOTAL	440,250	-	440,250	-
3. <u>Training</u>				
3.1 Hospital Management	20,320	-	20,320	-
3.2 Hospital and Field Staff	4,630	-	4,630	-
3.3 Audio Visual Aids	1,000	-	1,000	-
3.4 Other Training	5,000	-	5,000	-
SUB-TOTAL	30,950	-	30,950	-
4. <u>Commodities</u>				
4.1 Health Equipment	5,800	-	5,800	-
4.2 Vehicles	10,000	-	10,000	-
4.3 Pharmaceuticals	48,000	-	48,000	-
SUB-TOTAL	63,800	-	63,800	-
5. <u>Operations & Maintenance (2 yrs)</u>				
5.1 Personnel	-	-	-	513,250
5.2 Administrative Support (including Utilities)	-	-	-	195,600
5.3 Grounds Care & Building Maintenance	-	-	-	9,000
5.4 Vehicle Maintenance & Operations	-	-	-	14,060
SUB-TOTAL	-	-	-	731,910
GRAND TOTAL	800,000	3,100,000	3,900,000	784,410

CONSTRUCTION COST ESTIMATES

**PROPOSAL FOR THE MT. GAY
AND RATHDUNE FACILITIES**

PREPARED FOR USAID

**BY MORRISON-KNUDSEN
INTERNATIONAL CO., INC.**

REVISION 2

CONTRACTORS AND ENGINEERS

MORRISON-KNUDSEN INTERNATIONAL COMPANY, INC
POINT SALINE AIRPORT
ST GEORGE'S, GRENADA.

24 June 1985

U. S. AID
Point Saline Airport
ST GEORGE'S
Grenada

ATTENTION: STAN HEIGHMAN

SUBJECT: HOSPITAL CONSTRUCTION PROPOSAL

Gentlemen:

As a result of the negotiating on 19 June and 24 June 1985, Morrison-Knudsen International Company Inc., has revised the proposal of 20 June 1985 to complete construction of the Mental Hospital Complex at the Mt. Gay site and the Rathdune House.

Changes discussed at our meeting have been included in our "Best and Final Offer", and are attached as notes to this letter.

Very truly yours
MORRISON-KNUDSEN INTERNATIONAL COMPANY, INC.



D. E. BUCKERT
Project Director

DEB/VMP/FAA/pc

REGULATION REQUIREMENTS

The following are the requirements of the Morrison-Rudsen International Company and the cost estimate has been revised to prepare this estimate and the cost estimate.

- * Cost of work done involvement by Airport Personnel has been included in the cost estimate.
- * The cost of the Morrison-Rudsen International Company key personnel have been reduced to the amount of staff in phases of the project.
- * Equipment operations costs have been re evaluated to reflect operating hours as we now understand them. Equipment operating months do not reflect the time that each individual piece of equipment will be available for use on the site.
- * The performance bond has been deleted.
- * Required profit was reduced due to the reduction in expenses by early release of the key personnel.
- * Review of remaining estimated costs has made some minor miscellaneous adjustments.
- * A quality control inspector will be provided.
- * A reduction in the scope of work on the access road has been reflected in estimated costs.

PROPOSAL

I INTRODUCTION:

This revised proposal is prepared and submitted based on preliminary conceptual drawings from Lee Wan and Associates Inc., as to the scope of work required to complete the construction of the facility, and discussions held with Mr. Heishman on 19 June, and 24 June 1985.

II SCOPE OF WORK:

Work included under the contract will include:

- o Demolition of an existing structure (Rathdune House) on the grounds of St. George's Hospital
- o Construction of a two story Mental Health Facility at the St. George's Hospital.
- o Connection of the new facility to existing water, and electrical services in the area.
- o Construction of septic tanks, sand filters and chlorinators.
- o Construction of an access road and parking lot with walkways to the site of a new Mental Hospital

- o Construction of five buildings on the Mt. Gay Hospital Site.

- o Erection of 20,000 gallons of water storage at Mt. Gay.

Morrison-Knudsen International Company, Inc. will not be responsible for designing or for specifications, however an on-site quality control inspector will be provided to test materials and insure the integrity of construction.

Equipment and Materials including office space available on the Point Saline Airport Project will be utilized for the duration of the Hospital Project.

III. CONTRACT:

Morrison-Knudsen International Company, Inc. proposes that the contract be performed under a Cost Reimbursable plus Fixed Fee format.

That is, Morrison-Knudsen International Company, Inc. will complete the construction of the project utilizing local labor and government owned plant, equipment, and material. Materials and construction supplies not available from the Airport project will be produced or purchased in Grenada when possible or purchased from U.S. sources.

Budgeting of all expenditures will be accomplished by a Delivery Order describing the work and estimating the cost. Delivery Orders are prepared for approval by the Contracting Officer. Authorization to make expenditure against a specific budget item will be accomplished by execution of a Job Order by the USAID Liaison Official. Three Delivery Orders required to budget the work as defined at this time are included as an attachment to this proposal. Amendments to these Delivery Orders will be prepared for approval as additional information is available. Job Orders authorizing the early expenditures will be available for signature by the Liaison Official at contract signing.

In addition to the Reimbursible Costs incurred on the project Morrison-Knudsen International Company, Inc. will be awarded a Fixed Fee as compensation for Home Office Overhead, the difference between USAID and Morrison-Knudsen International Company, Inc. payroll policy, and profit.

It is understood that work on the project will begin prior to completion of the Point Salines Airport Project and that Airport personnel, equipment, and plant will be utilized on the Mental Hospital on an "as available basis" until completion of the Airport Project at cost.

IV SCHEDULE:

Morrison-Knudsen International Company, Inc. plans to begin construction as soon as drawings are received to capitalize on equipment and staff available on the present airport project.

Attached is a schedule of Expatriate Staff which will be required for completion of the Hospital Project beyond those costs already budgeted for the Airport. In order for this schedule to be accomplished in the time frame shown Morrison-Knudsen International Company, Inc. must receive the following:

July 1, 1985 - Site Civil Drawings

- Underground Utilities Drawings
- Access Road Drawings

Aug 1, 1985 - Building Structural

- Building Utilities
- Building Imbeds

Sept 1, 1985 - Architectural Details

As an incentive to personnel now on the Airport Project to continue work on the Mental Hospital those individuals who have served on both contracts will be supplied with round trip air tickets to their point of repatriation during the two week Christmas shutdown. Cost of this transportation is included in the Delivery Order for site management personnel.

MENTAL HOSPITAL EXPAT PERSONNEL LIST

NAME	DESCRIPTION	JULY 85	AUGUST	SEPT	OCT	NOV	DEC 85	JAN 86	FEB	MARCH	APRIL	MAY	JUNE 86
BICKERT	PROJECT DIRECTOR	XXXXXXXXXX-10-XXXXXX											
ATCHISON	ACCOUNTANT	XXXXXX-75-XXXX											
B. HR	W'HOUSE/PURCHASE	XXXXXX-50-XXXX											
F. ALLITNER	PROJECT ENGINEER	XXXXXXXXXX-50-XXXX											
E. AM	FIELD ENGINEER	XXXXXX-75-XXXX											
ARTIS	PROJECT CONTROL	XXXXXX-50-XXXX											
STALEY	P.M./SCH. ENGINEER	XXXXXXXXXX-10-XXXX											
ENS	CONST. MANAGER	XXXXXXXXXX-10-XXXX											
SANTELLI	BUILDING SUPT.												
E-14	ELECTRICAL SUPT.	XXXXXX-50-XXXX											
KS	CIVIL SUPT.	XXXXXX-25-XXXX											
SHOLD	CARPENTRY SUPT.												
E-14	PLUMBING SUPT.												
ARNATHY	EQUIPMENT SUPT.	XXXXXX-5-XXXX											
AKER	CONCRETE SUPT.												

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COST:

Morrison-Knudsen International Company, Inc., proposes to complete the Mt. Gay Mental Hospital Complex and the Rathdune House for a fixed fee of \$342,500 U.S. dollars plus reimbursement of Delivery Order costs incurred.

The fixed fee is payment for Home Office overhead, profit, and reimbursement of cost incurred where Morrison-Knudsen International Company, Inc. policy differs from USAID reimbursement allowances.



D. E. Buckert
PROJECT DIRECTOR

COST SUMMARY

FIXED COST		\$342,500
DELIVERY ORDERS:		
D.O. 1	SUPPORT AND SUPERVISION	\$818,470
D.O. 2	MATERIALS AND TRANSPORTATION	\$943,914
D.O. 3	ERECTION AND EQUIPMENT	\$987,590
D.O. 4	ACCESS ROAD	\$130,000
TOTAL DELIVERY ORDER COSTS		----- \$2,879,974
TOTAL ANTICIPATED COSTS		\$3,222,474 =====

DESCRIPTION	MENTAL HOSPITAL FIXED COST RATE	TOTAL
EXEC TRAVEL		5000
BOISE ACCOUNTING	@ 625/Mo x 8	5000
PERSONNEL	@ 900/Mo x 4	3600
PURCHASING	@ 1000/Mo x 8	8000
PROJECT SUPPORT	@ 500/Mo x 8	4000
COMPUTER	@ 625/Mo x 8	5000
MISC SUPP	@ 250/Mo x 8	2000
PROMOTIONAL		2000
INTEREST CURRENCY LOSS ETC		1000
SUBTOTAL		35600
ADD:		
INSURANCE	.0081 x 4M	32400
PAYROLL DIFF		42000
FEE @ 50% SALARIES (465000)		232500
SUBTOTAL		306900
TOTAL FIXED		342500

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
DELIVERY ORDER

Contract No. LAC = 0006 - C-4045 - 00	2. Delivery Order No. 1
NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED, AND EXECUTIVE ORDER 11223	
3. CONTRACTOR (Name and Address): Morrison-Knudsen International Co. Inc. Two - Morrison-Knudsen Plaza P.O. Box 7808 Basco, Idaho 83729	4. CONTRACTING OFFICE (Name and Address): Office of Contract Management Regional Operations Division- LAC Agency for International Development Washington D.C. 20523
5. PROJECT MANAGER AND PROJECT OFFICE (Name and Address): Mr. John Lamb - Grenada	6. SUBMIT VOUCHERS TO (Office Name and Address): Controller USAID - Grenada
7. EFFECTIVE DATE: 1 July 1985	8. ESTIMATED COMPLETION DATE: 31 March 1986
ACCOUNTING AND APPROPRIATION DATA (Insert appropriate numbers):	
Amount Obligated: \$818,470	PIO/T No.: 543-0006-1-40062
Appropriation No.: 72-11x037	Budget Plan Code: LESX-84-25543-KG-1
9. The United States of America, represented by the Contracting Officer signs this Order, and the Contractor agreed that: (a) this Order is issued pursuant to the Contract or Agreement specified in Block 2 above and (b) the entire Contract between the parties hereto consist of this Order and the Contract Agreement specified in Block 2 above.	
10a. NAME OF CONTRACTOR: (Signature of authorized individual):	10b. UNITED STATES OF AMERICA AGENCY FOR INTERNATIONAL DEVELOPMENT BY (Signature of Contracting Officer):
11. TYPED OR PRINTED NAME: Duane Buckert	11. TYPED OR PRINTED NAME: S.D. Heisham
12. TITLE: Project Director	12. TITLE: Contracting Officer
13. DATE:	13. DATE:

DELIVERY ORDER NO. 1:1. OBJECTIVE:

To Provide Support and Supervision to complete the Mount Gay and Rathdune Mental Hospitals.

2. STATEMENT OF WORK:

<u>Task No.</u>	<u>Description</u>
1	Provide Expatriate Supervision
2	Provide Travel and Transportation for Supervisory personnel
3	Provide onsite accommodation for Supervisory personnel
4	Provide local administrative and engineering personnel
5	Provide Administrative, Engineering, Purchasing, and miscellaneous expenses.

3. TERM OF PERFORMANCE:BEGINEND

1 July 1985

31 March 1986

4. LAISON OFFICIAL - Project Manager5. COST CEILING: -\$818,4706. BUDGET:

<u>ACTIVITY</u>	<u>PRESENT</u>
Labor	517,545
Travel & Transport	50,850
Supplies	250,075
Total	818,470

DELIVERY ORDER 1 SUMMARY

TASK NUMBER	LABOR	TRANS	SUPPLIES	TOTAL
1 SUPERVISION	422795			422795
2 MOB & STORAGE		50850	118700	169550
3 LOCAL SUPPORT LABOR	94750			94750
4 ADMINISTRATIVE EXPENCE			131375	131375
TOTAL	517545	50850	250075	818470

MENTAL HOSPITAL EXPAT PERSONNEL LIST

NAME	DESCRIPTION	NO MTHS	BASE	STA ALL	TOTAL
BUCKERT	PROJECT DIRECTOR	2	5662	580	14981
ATCHISON	ACCOUNTANT	7	3150	532	31297
ROHR	W'HOUSE/PURCHASE	3	2890	514	15318
FOXLEITNER	PROJECT ENGINEER	2	5280	683	23852
BEAM	FIELD ENGINEER	3	3775	691	11165
ARTIS	PROJECT CONTROL	6	3200	536	28020
STALEY	P.M./SCH. ENGINEER	4	3200	536	16065
OWENS	CONST.MANAGER	4	5565	650	27346
SANTELLI	BUILDING SUPT.	5	4460	706	25830
GR14	ELECTRICAL SUPT.	6	4200	704	34328
WEEKS	CIVIL SUPT.	1	3650	683	7583
ARNOLD	CARPENTRY SUPT.	6	3965	701	27996
GR 14	PLUMBING SUPT.	4	3500	555	16220
ABERNATHY	EQUIPMENT SUPT.	5	4750	709	28387
BARKER	CONCRETE SUPT.	6	2600	506	19836

64	60047	9286	328224
----	-------	------	--------

GROSS SALARIES & ALLOWANCES
 10% SAL INCREASE JAN 86

328224
 9899

RECRUITMENT INCENTIVE:
 RECRUITMENT INCENTIVE:

ELECT. SUPT 34328
 PLUMB. SUPT. 16220

GROSS: 50548 @ 10% 5055

BURDEN @ 23.2% BURDEN @ .232

79617

TOTAL

422795

TRAVEL, TRANSPORT, STORAGE

DESCRIPTION

MOB TWO SINGLE STATUS EXPATS	
AIRFARE	5000
PERSONAL EFFECTS	1000
STORAGE 8 MOS @150	1200
HOME LEAVE INCENTIVE FOR AIRPORT PERSONNEL 14 INDIVIDUALS @2000	28000
EMERGENCY LEAVE 5 TRIPS @2000	10000
STORAGE MARRIED 8 MOS @200/MO	1600
STORAGE SINGLE 27 MOS @150/MO	4050

TOTAL	50850
=====	
HOUSING MARRIED 28 MOS @1150/MO	78200
HOUSING & MEALS SINGLE 34 MOS @2250/MO	76500
EDUCATION	10000

TOTAL	118700
=====	

MENTAL HOSPITAL
SUPPORT ACTIVITIES

DESCRIPTION		NO MTHS	RATE	TOTAL
ADMINISTRATIVE				
PAYROLL	1	5	450	2250
ACCOUNTING	1	5	650	3250
SECRETARY/RECEPTIONIST	2	5	500	5000
PURCHASING	1	5	650	3250
WAREHOUSE	2	5	450	4500
DRIVER	1	5	500	2500
NURSE	1	5	800	4000
SECURITY & PORT	25	5	400	50000
ENGINEERING				
COST TECHNICIAN	1	5	1500	7500
TECHNICIAN	1	5	800	4000
DRAFTSMAN	1	5	700	3500
SURVEY	2	5	500	5000
	39	60	7900	94750

GENERAL EXPENSE

DESCRIPTION	NO. OF MONTHS	RATE	TOTAL

MISCELLANEOUS EXPENSE:			
MANHAUL	5	2000	10000
OFFICE SPLS	5	500	2500
OFF UTILITIES	4	2000	8000
ENGR SUPPLIES AND EXPENSE	5	200	1000
PHOTO AND REPRODUCTION	5	500	2500
W'HOUSE & FUR EXPENSE	5	100	500
LABOR REL-SUPPLIES & EXPENSE	5	50	250
SAFETY/FIRST AID SUPPL/EXPEN	5	500	2500
SECURITY EXPENSES	5	200	1000
TEL. TELEX	5	5000	25000
RADIO COMMUNICATIONS	5	2500	12500
BLDG MAINTENANCE	5	100	500
LEGAL EXPENSES	4		5000
FIRE PROTECTION	5		2000
SANITARY FACILITIES	5	100	500
DRINKING WATER & ICE	5	100	500
JOB SIGNS	5		500
MISC GENERAL EXPENSES	5	1000	5000
AID (D.B.A. INSURANCE)	5		11625
MIAMI EXPEDITING OFFICE	5	5000	25000
PURCHASING SUPPORT - BOISE	5	5000	15000
-----			131375
-----			-----

UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL DEVELOPMENT
 DELIVERY ORDER

D.19

Contract No. LAC - 0006 - C-4045 -00

2. Delivery Order No. 2

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT
 OF 1961, AS AMENDED, AND EXECUTIVE ORDER 11223

CONTRACTOR (Name and Address):

Morrison-Knudsen International Co. Inc.
 Two - Morrison-Knudsen Plaza
 P.O. Box 7808
 Basic, Idaho 83729

CONTRACTING OFFICE (Name and Address):

Office of Contract Management
 Regional Operations Division- LAC
 Agency for International Development
 Washington D.C. 20523

PROJECT MANAGER AND PROJECT OFFICE
 (Name and Address):

Mr. John Lamb - Grenada

SUBMIT VOUCHERS TO (Office Name and Address):

Controller USAID - Grenada

EFFECTIVE-DATE:

1 July 1985

ESTIMATED COMPLETION-DATE:

31 March 1986

ACCOUNTING AND APPROPRIATION DATA (Insert appropriate numbers):

Amount Obligated: \$947,914

FIO/T No.: 543-0006-1-40062

Appropriation No.: 72-11x037

Budget Plan Code: LESX-84-25543-KG-1

The United States of America, represented by the Contracting Officer signed this Order, and the Contractor agreed that: (a) this Order is issued pursuant to the Contract or Agreement specified in Block 2 above and (b) the entire Contract between the parties hereto consist of this Order and the Contract Agreement specified in Block 2 above.

NAME OF CONTRACTOR:

11b. UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL
 DEVELOPMENT

(Signature of authorized individual):

BY (Signature of Contracting Officer)

TYPED OR PRINTED NAME:

Duane Buckert

TYPED OR PRINTED NAME:

S.D. Heisham

TITLE:

Project Director

TITLE:

Contracting Officer

DATE:

205

DELIVERY ORDER NO. 2:

1. OBJECTIVE: :

Supply material for the Mt. Gay and Rathdune Mental Hospitals.

2. STATEMENT OF WORK:

<u>Task No.</u>	<u>Description</u>
1	Purchase Material
2	Transport material to the site.

3. TERM OF PERFORMANCE:

BEGIN
1 July 1985

END
31 March 1986

4. LAIISON OFFICIAL - Project Manager

5. COST CEILING: - \$943,914

6. BUDGET:

<u>ACTIVITY</u>	<u>PRESENT</u>
Material	760,331
Transport	<u>183,583</u>
Total	<u>943,914</u>

MENTAL HOSPITAL COST SUMMARY

DELIVERY ORDER 2

DESCRIPTION	LABOR	MATERIAL	TOTAL
STRUCTURAL	171101	200197	371298
ELECTRICAL	38970	54935	93905
MECHANICAL	109949	104649	214598
CIVIL	113355	273103	386458
ARCHITECTURAL	368849	411447	780296
<hr/>			
SUBTOTAL	802224	1044331	1846555
FRT & HANDLING @25% WITH COST		261083	261083
<hr/>			
DIRECT COSTS	802224	1305414	2107638
 ADJUSTMENTS:			
BLOCK & CEMENT		-56250	-56250
STEEL		-56250	-56250
<hr/>			
SUBTOTAL		-112500	-112500
FREIGHT: @ 25% MATERIAL USE OF BARGE			-37500
			-40000
ACCESS ROAD:			
REDUCTION IN SCOPE	-41000	-84000	-125000
TRANSFER TO D.O. 4	-42500	-87500	-130000
<hr/>			
SUBTOTAL ADJUSTMENTS:			-445000
 REVISED BUDGET:			
	GROSS	ADJUST	REVISION
LABOR	802224	-83500	718724
MATERIALS	1044331	-284000	760331
FREIGHT	261083	-77500	183583
<hr/>			
TOTAL:	2107638	-445000	1662638
<hr/>			
DELIVERY ORDER 2:			
	MATERIAL:		760331
	FREIGHT		183583
	<hr/>		
	TOTAL		943914
<hr/>			
DELIVERY ORDER 3:			
	LABOR		718724
<hr/>			
TOTAL D.O. 2 & 3			1662638

UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL DEVELOPMENT
 DELIVERY ORDER

D. 22

Contract No. LAC - 0006 - C-4045 -00

2. Delivery Order No. 3

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT
 OF 1961, AS AMENDED, AND EXECUTIVE ORDER 11223

CONTRACTOR (Name and Address):

Morrison-Knudsen International Co. Inc.
 Two - Morrison-Knudsen Plaza
 P.O. Box 7808
 Basic, Idaho 83729

4. CONTRACTING OFFICE (Name and Address):

Office of Contract Management
 Regional Operations Division- LAC
 Agency for International Development
 Washington D.C. 20523

PROJECT MANAGER AND PROJECT OFFICE
 (Name and Address)

Mr. John Lamb - Grenada

6. SUBMIT VOUCHERS TO (Office Name and Address):

Controller USAID - Grenada

EFFECTIVE-DATE:

1 July 85

8. ESTIMATED COMPLETION-DATE:

31 March 1986

ACCOUNTING AND APPROPRIATION DATA (Insert appropriate numbers):

Amount Obligated: \$987,590

PIO/T No. 543-0006-1-40062

Appropriation No.: 72-11x037

Budget Plan Code: LESX-84-25543-KG-1

The United States of America, represented by the Contracting Officer signs this Order, and the Contractor agreed that: (a) this Order is issued pursuant to the Contract or Agreement specified in Block 2 above and (b) the entire Contract between the parties hereto consist of this Order and the Contract Agreement specified in Block 2 above.

1a. NAME OF CONTRACTOR.

11b. UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL
 DEVELOPMENT

BY (Signature of authorized individual):

BY (Signature of Contracting Officer)

TYPED OR PRINTED NAME:

Duane Buckert

TYPED OR PRINTED NAME:

S.D. Heisham

TITLE:

Project Director

TITLE:

Contracting Officer

DATE:

DATE:

208

DELIVERY ORDER NO. 3:

1. OBJECTIVE:

To provide labor and equipment to build the Mt. Gay and Rathdune Mental Hospitals.

2. STATEMENT OF WORK:

<u>Task No.</u>	<u>Description</u>
1	Provide local labor,
2	Construction Support labor, and
3	Equipment Operation.

3. TERM OF PERFORMANCE:

BEGIN

1 July 1985

END

31 March 1986

4. LAISON OFFICIAL - Project Manager

5. COST CEILING: -\$987,590

6. BUDGET:

<u>ACTIVITY</u>	<u>PRESENT</u>
Labor	674,849
Material	<u>312,741</u>
Total	<u>1,135,950</u>

DELIVERY ORDER 3			
DESCRIPTION	LABOR	MATERIAL	TOTAL

DIRECT LABOR			
GROSS:	718724		
ADJUST:	75000	643724	643724
SERVICE & SUPPORT LABOR			
15 MEN FOR SMO = 75MM			
75MM @\$415/MM	31125		31125
EQUIPMENT OPERATIONS		312741	312741
		-----	-----
TOTAL	674849	312741	987590
	=====	=====	=====

MENTAL HOSPITAL COST SUMMARY

D. 25

DELIVERY ORDER 2

DESCRIPTION	LABOR	MATERIAL	TOTAL
STRUCTURAL	171101	200197	371298
ELECTRICAL	38970	54935	93905
MECHANICAL	109949	104649	214598
CIVIL	113355	273103	386458
ARCHITECTURAL	368849	411447	780296
<hr/>			
SUBTOTAL	802224	1044331	1846555
FRT & HANDLING @25% WITH COST		261083	261083
<hr/>			
DIRECT COSTS	802224	1305414	2107638
 ADJUSTMENTS:			
BLOCK & CEMENT		-56250	-56250
STEEL		-56250	-56250
<hr/>			
SUBTOTAL		-112500	-112500
FREIGHT: @ 25% MATERIAL USE OF BARGE			-37500
			-40000
ACCESS ROAD:			
REDUCTION IN SCOPE	-41000	-84000	-125000
TRANSFER TO D.O. 4	-42500	-87500	-130000
<hr/>			
SUBTOTAL ADJUSTMENTS:			-445000
 REVISED BUDGET:			
	GROSS	ADJUST	REVISION
LABOR	802224	-83500	718724
MATERIALS	1044331	-284000	760331
FREIGHT	261083	-77500	183583
<hr/>			
TOTAL:	2107638	-445000	1662638
<hr/>			
DELIVERY ORDER 2:			
	MATERIAL:		760331 ✓
	FREIGHT		183583 ✓
	<hr/>		
	TOTAL		943914 ✓
 DELIVERY ORDER 3:			
	LABOR		718724
<hr/>			
TOTAL D.O. 2 & 3			1662638

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MENTAL HOSPITAL EQUIPMENT LIST

NO.	DESCRIPTION	NO. OF MONTHS OPERATED	COST PER FUEL	HOUR PARTS	TOTAL NO HOURS PER HOUR PER DAY	DAILY COST	MONTHLY COST	OPERATING COST	MONTHLY OWN'SHIP	TOTAL OWN'SHIP

MAJOR EQUIPMENT										
2	KOMATSU DOZERS	2	9.06	16.44	25.50	8	204.00	4488.00	17952.00	0.00
2	950 CAT. LOADERS	4	4.62	7.80	12.42	8	99.36	2185.92	17487.36	0.00
1	CASE BACKHOE	5	5.35	13.88	19.23	8	153.84	3384.48	16922.40	0.00
1	14-G CAT BLADE	4	6.15	10.62	16.77	8	134.16	2951.52	11806.08	0.00
4	G.M.C. DUMP TRUCKS	2	11.80	7.08	18.88	8	151.04	3322.88	26583.04	0.00
1	G.M.C. FLAT BED	5	4.67	3.25	7.92	8	63.36	1393.92	6969.60	0.00
1	G.M.C. MECHANIC TRUCK	5	4.57	3.25	7.82	8	62.56	1376.32	6881.60	0.00
1	G.M.C. WATER TRUCK	5	4.57	3.25	7.82	8	62.56	1376.32	6881.60	0.00
1	G.M.C. GREASE/LUBE TRUCK	5	4.72	3.40	8.12	8	64.96	1429.12	7145.60	0.00
1	20TON KATO TRUCK CRANE	5	12.83	9.43	22.26	8	178.08	3917.76	19588.80	0.00
1	TRACTOR TRUCK	5	3.25	5.63	8.88	8	71.04	1562.88	7814.40	0.00
1	HIGH BED TRAILER	5	N/A	4.01	4.01	8	32.08	705.76	3528.80	0.00
1	LOW BED TRAILER	5	N/A	4.01	4.01	8	32.08	705.76	3528.80	0.00
1	DIST. TRUCK OR TRAILER	1	11.80	7.08	18.88	8	151.04	3322.88	3322.88	0.00
1	BARBER GREEN PAVER	1	4.76	26.93	31.69	8	253.52	5577.44	5577.44	0.00
1	RUBBER TYRED ROLLER	1	1.55	4.34	5.89	8	47.12	1036.64	1036.64	0.00
2	INGENSOLL RAND VIB. ROLLER	1	1.55	4.34	5.89	8	47.12	1036.64	2073.28	0.00
1	750 INGENSOLL RAND COMPRESSOR	5	7.51	4.16	11.67	8	93.36	2053.92	10269.60	0.00
2	SULLAIR 350 COMPRESSORS	8	4.35	2.30	6.65	8	53.20	1170.40	18726.40	0.00
1	INGENSOLL RAND AIR TRACK DRILL	1	N/A	15.65	15.65	8	125.20	2754.40	2754.40	0.00
1	CAT GENERATOR SET	8	20.13	10.71	30.84	8	246.72	5427.84	43422.72	0.00
2	LIGHT PLANTS	5	0.31	0.89	1.20	8	9.60	211.20	2112.00	0.00
3	PORTABLE WELDING MACHINES	5	1.45	0.70	2.15	8	17.20	378.40	5676.00	0.00
2	MAZDA SEDANS	5	3.66	1.59	5.25	8	42.00	924.00	9240.00	0.00
12	CHEVROLET PICKUPS	5	3.66	1.59	5.25	8	42.00	924.00	55440.00	0.00

47			132.32	172.33	304.65		2437.20	53618.40	312741.44	0.00

D. 27

UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL DEVELOPMENT
 DELIVERY ORDER

Contract No. LAC - 0000 - C-4045 -00

2. Delivery Order No. 4

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT
 OF 1961, AS AMENDED, AND EXECUTIVE ORDER 11223

CONTRACTOR (Name and Address):

Morrison-Knudsen International Co. Inc.
 Two - Morrison-Knudsen Plaza
 P.O. Box 7808
 Boise, Idaho 83729

4. CONTRACTING OFFICE (Name and Address):

Office of Contract Management
 Regional Operations Division- LAC
 Agency for International Development
 Washington D.C. 20523

PROJECT MANAGER AND PROJECT OFFICE
 (Name and Address):

Mr. John Lamb - Grenada

6. SUBMIT VOUCHERS TO (Office Name and Address):

Controller USAID - Grenada

EFFECTIVE-DATE:

1 July 1985

8. ESTIMATED COMPLETION-DATE

31 March 1986

ACCOUNTING AND APPROPRIATION DATA (Insert appropriate number):

Amount Obligated: \$130,000

PIO/T No.: 543-0006-1-40062

Appropriation No.: 72-11x037

Budget Plan Code: LESX-84-25543-KG-1

The United States of America, represented by the Contracting Officer sign this Order and the Contractor agreed that: (a) this Order is issued pursuant to the Contract or Agreement specified in Block 2 above and (b) the entire Contract between the parties hereto consist of this Order and the Contract Agreement specified in Block 2 above.

1a. NAME OF CONTRACTOR

11b. UNITED STATES OF AMERICA
 AGENCY FOR INTERNATIONAL
 DEVELOPMENT

(Signature of authorized individual):

BY (Signature of Contracting Off.

SIGNED OR PRINTED NAME:

Duane Buckert

TYPED OR PRINTED NAME:

S.D. Heisham

TITLE:

Project Director

TITLE:

Contracting Officer

DATE:

DATE:

213

DELIVERY ORDER NO. 4:

1. OBJECTIVE:

To provide labor and equipment to build the access road near the Mt. Gay Mental Hospital.

2. STATEMENT OF WORK:

Construct an access road to the new Mt. Gay facility.

3. TERM OF PERFORMANCE:

BEGIN

END

1 July 1985

31 March 1986

4. LAISON OFFICIAL - Project Manager

5. COST CEILING: - \$130,000

6. BUDGET:

ACTIVITY

PRESENT

Labor

42,500

Material

87,500

Total

130,000

MENTAL HOSPITAL COST SUMMARY

CIVIL	113355	273103	386458
ARCHITECTURAL	368849	411447	780296

SUBTOTAL	802224	1044331	1846555
FRT & HANDLING			
@25% WITH COST		261083	261083

DIRECT COSTS	802224	1305414	2107638
ADJUSTMENTS:			
BLOCK & CEMENT		-56250	-56250
STEEL		-56250	-56250

SUBTOTAL		-112500	-112500
FREIGHT: @ 25% MATERIAL			-37500
USE OF BARGE			-40000
ACCESS ROAD:			
REDUCTION IN SCOPE	-41000	-84000	-125000
TRANSFER TO D.O. 4	-42500	-87500	-130000

SUBTOTAL ADJUSTMENTS:			-445000

REVISED BUDGET:	GROSS	ADJUST	REVISION
LABOR	802224	-83500	718724
MATERIALS	1044331	-284000	760331
FREIGHT	261083	-77500	183583

TOTAL:	2107638	-445000	1662638
	=====		

DELIVERY ORDER 2:

MATERIAL:	760331
FREIGHT	183583

TOTAL	943914

DELIVERY ORDER 3:

LABOR	718724

TOTAL D.O. 2 & 3

1662638

Table 4TECHNICAL ASSISTANCE

(Long Term)

<u>Psychiatric Nursing Educator</u> (12 person months)	<u>US\$</u>
Salary and Overhead	110,354
FICA (Govt. share)	3,876
Post Differential	5,518
COLA	1,890
Transportation to Post	3,200
Per Diem - Wash. D.C., enroute	414
Shipment of PE - Air	1,225
Shipment of HHE - Sea	5,000
Shipment of Car	1,500
Storage of HHE	3,000
Temporary Lodging Allowance	9,000
Leased Housing	18,000
Utilities	3,150
Educational Allowance	13,550
Consumerables	2,000
Misc. Costs (medical exam., tel. calls, etc.)	500
Total	<u>182,177</u>
(Estimate based on family of (4) members. Man and wife and (2) children. The child goes to school at Post, the other goes away to school from Post.)	
<u>Psychiatric Social Worker</u> (12 person months)	<u>182,177</u>
(Same breakdown as above.)	
Long Term Technical Assistance Total	<u>\$364,354</u>

Table 4 (Cont'd)

TECHNICAL ASSISTANCE

(Short Term)

<u>Psychiatrist</u> (42 person days)	<u>US\$</u>
Dr. Michael Beaubrun	
Honorarium (\$150 x 42 days)	6,300
Per Diem (\$130 x 70 days)	9,100
Travel (Trinidad/Grenada) 8 trips @ EC\$230=EC\$1840	685
Health Insurance, other direct costs	300
Contingency	<u>300</u>
Total	16,685
<u>Psychiatric Supervisor</u> (48 person days)	
Dr. George Mahy	
Honorarium (\$150 x 48 days)	7,200
Per Diem (\$130 x 96 days)	12,480
Travel (Barbados/Grenada) 2 days/months, 24 trips @ EC\$260=EC\$6,240	2,320
Health Insurance, other direct costs	300
Contingency	<u>300</u>
Total	22,600
<u>Psychiatric Therapeutic Activities Specialist</u>	15,000
<u>Medical Records Administrator</u>	16,615
<u>Pharmacy Consultant</u> (10 person weeks)	
3 trips (2 weeks, 2 weeks, 6 weeks)	
Salary and Overhead (50 days)	25,000
Per Diem (\$130 x 76 days)	9,880
International Airfare (3 trips)	3,000
Direct Costs	375
Contingency	<u>400</u>
Total	38,655
Total Short Term Technical Assistance	70,900 =====
Caribbean Resource Pool	5,000 =====

Table 4 (Cont'd)

TRAINING

		<u>US\$</u>
Mental Health Nurses (5)		
Books @ \$50/nurse	250	
Didactic Material	250	
		500
Attendants (58)		
Training Material @ \$50/person		2,900
Medical Records Officer (1)		
Forms, records, ledgers, etc.		4,000
Community Mental Health Workers (7)		
Didactic Material & books @ \$50/person		350
Community Health Aides (44)		
Training Material @ \$20/aide		880
Activity Therapeutic Specialist (1)		
Books & didactic material		<u>100</u>
Sub-Total		8,730
Audio-visual supplies (films, video tapes, slides)		<u>2,500</u>
Total		11,230
Other Training in U.S. or Caribbean Region		19,720
All Training Costs		30,950 =====

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance Funds, B.2. applies to projects funded with Development Assistance loans, and B.3. applies to projects funded from ESP.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees 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 amount)?

A Congressional Notification has been forwarded to Congress for the funding of Phase I and Phase II

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,00, will there be

Yes

(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

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 legislative action required.
4. FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)
- N/A
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 and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?
- Yes

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. No.
7. FAA Sec. 601(a). 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; and (c) encourage development and use of cooperatives, and 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. N/A
8. FAA Sec. 601(b). Information and conclusions 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). Except where justified, US source goods and services will be used in the Project.

9. FAA Sec. 612(b), 636(h);
FY 1982 Appropriation
Act Sec. 507. 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
in lieu of dollars.
- The Host Country is contri-
buting staff, recurrent costs,
land, and other resources in
support of this Project.
10. FAA Sec. 612(d). Does
the U.S. own excess
foreign currency of the
country and, if so, what
arrangements have been
made for its release?
- No.
11. FAA Sec. 601(e). Will
the project utilize
competitive selection
procedures for the
awarding of contracts,
except where applicable
procurement rules allow
otherwise?
- Yes.
12. FY 1982 Appropriation Act
Sec. 521. If assistance
is for the production of
any commodity for export,
is the commodity likely
to be in surplus on world
markets at the time the
resulting productive
capacity becomes
operative, and is such
assistance likely to
cause substantial injury
to U.S. producers of the
same, similar or
competing commodity?
- N/A
13. FAA 118(c) and (d).
Does the project comply
with the environmental
procedures set forth in
AID Regulation 16? Does
- Yes.

the project or program take into consideration the problem of the destruction of tropical forests?

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

N/A

B.. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

N/A

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (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; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? N/A

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a 'relatively least developed' country)? N/A

e. 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, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.

N/A

f. FAA Sec. 122(b). 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?

N/A

g. FAA Sec. 281(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

N/A

institutional development;
and supports civil
education and training in
skills required for
effective participation in
governmental processes
essential to self-government.

2. Development Assistance Project
Criteria (Loans Only)

- a. FAA Sec. 122(b). N/A
Information and conclusion
on capacity of the country
to repay the loan, at a
reasonable rate of interest.
- b. FAA Sec. 620(d). If N/A
assistance is for any
productive enterprise which
will compete with U.S.
enterprises, 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?
- c. ISDCA of 1981, Sec. 724 N/A
(c) and (d). If for
Nicaragua, does the loan
agreement require that the
funds be used to the
maximum extent possible for
the private sector? Does
the project provide for
monitoring under FAA Sec.
624(g)?

3. Economic Support Fund
Project Criteria

- a. FAA Sec. 531(a). Will Yes.
this assistance promote
economic or political

stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities? No.
- c. FAA Sec. 534. Will ESP funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? No.
- d. 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? N/A