PN-AAV-049

538 0000 00
6201

26157

REPORT

OF THE

CARIBBEAN EDUCATIONAL DEVELOPMENT
SCHOOL CONSTRUCTION SURVEY

002290

March, 1979

REPORT OF THE SCHOOL CONSTRUCTION SURVEY TEAM

NAME OF THE PROJECT:	Caribbean Educational Development: School Construction Survey
AID PROJECT NO:	538-000
SURVEYING PERIOD:	January 24 - March 31, 1979
SURVEY TEAM MEMBERSHIP:	1) Goulborn A Brathwaite, Retired Education Officer, Ministry of Education, Barbados.
	2) C Dean Spencer, Retired Buildings Officer, Ministry of Education, Barbados.
	3) Dr Richard F Tonigan, President, Richard F Tonigan & Associates Limited, Educational Consultants, Albuquerque, New Mexico, USA.
	4) James F W Watson, Retired, US AID Civil Engineer, White Stone, Va., USA.
PROJECT OFFICER FOR CARIBBEAN DEVELOPMENT BANK AND SURVEY COORDINATOR:	5) Clayton Didier, Civil Engineer.

March 27, 1979

FOREWORD

As one might anticipate, the eight countries surveyed were most gracious and hospitable to the surveyors and other project related personnel. Government officials and employees were most helpful in expeditiously conducting the required meetings, in producing data and in arranging for sufficient in-country travel for the School Construction Survey Team to accomplish its school and school site visitation schedule. Most of these people, hopefully all, are identified in Appendix "C" of this Report.

On the other hand, host country personnel were not condescending or over solicitous. They identified their needs, discussed them and debated with surveyors where they deemed it necessary. All seemed to be well intended and sincere. All wanted improved education facilities for the children of their respective countries.

The Survey Team acknowledges with appreciation the assistance it received from all eight of the countries and territories included in this school construction survey, the financial and technical support of the Regional Development Office/Caribbean of the United States Agency for International Development (AID), and the travel-technical-liaison assistance of the Caribbean Development Bank (CDB).

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
	A. Relationship to Overall Study	1
	B. Purpose of this Survey	1
	C. The Survey Team	2
	D. Visitation Schedule	2
	E. Survey Limitations	3
	F. Conversion of Church School Systems to Government-operated School Systems	4
	G. Survey Methodology/Scope of Work	6
II.	RESPONSIBILITIES OF SUPPORTIVE ORGANISATIONS	14
	A. Caribbean Development Bank (CDB)	14
	B. Agency for International Development (AID)	15
	C. Lesser Developed Countries (LDCs)	15
III.	PRESENTATION OF SCHOOL SURVEY DATA	16
	A. Antigua	17
	B. Belize	24
	C. Dominica	32
	D. Grenada	40
	E. Montserrat	48
	F. St Kitts/Nevis/Anguilla	54
	G. St Lucia	61
	H. St Vincent	69
IV.	CONSTRUCTION DESIGN & MANAGEMENT SUGGESTIONS	76
	A. Design Factors	76
	B. Management Factors	87
	C. Planning Data & Implementation	96

Page

V. MAINTENANCE 100

A. Existing Situation 100

B. Procedures for Maintenance 100

C. Suggested Improvement & Service 101

D. Recurrent Maintenance Costs 102

E. Inservice Training for Educational Administrators 104

VI. SELF-HELP 105

VII. SUMMARY & RECOMMENDATIONS 109

APPENDICES

A. Questionnaire

B. US AID/CXC/UWI Technical Review Meeting - Barbados - March 6 - 8, 1979

C. Officials Interviewed

D. Guidelines for School Building Design to reduce level of Maintenance

E. Caribbean Educational Development - School Construction Programme

I. INTRODUCTION

A. Relationship to Overall Study

The overall study, of which the School Construction Survey described in this report is one component, aims at assisting AID in developing a programme to improve the educational environment in selected islands of the Eastern Caribbean region.

The other component aims at assisting in the improvement of teaching methods, "Caribbeanization" of examinations, production of curricula materials and teacher training.

The School Construction Survey has been carried out for financing the extension, rehabilitation of existing schools and construction of new schools, and providing equipment and related facilities to overcome overcrowding. Where necessary, access, water installations, electrical service and sanitary facilities will also be improved.

B. Purpose of the Survey

The objective of the survey is to develop the technical specifications and costs of extensions, rehabilitation and construction of new schools (including equipment and related facilities) to be incorporated into the programme. This was carried out by a series of visits to all eight countries/territories, the holding of interviews, inspection of school buildings and sites for new schools and the collection of relevant data. The Survey Team was also required to evaluate its findings and to recommend projects for funding.

C. The Survey Team

The School Construction Survey Team membership is listed on the cover of this Report. Members of the Team were selected to staff the survey with four school construction related specialities:

1) A local CDB-employed Senior Educator (Goulborn A Brathwaite).

2) A local CDB-employed School Design and Maintenance Educationist (C Dean Spencer).

3) An AID-provided School Construction Engineer (James F W Watson).

4) An AID-provided Education Facilities Specialist (Dr Richard F Tonigan).

Two of the Survey Team members had extensive professional educational training and work experience in the Eastern Caribbean (Brathwaite and Spencer), and the other two (Watson and Tonigan) received their professional educations in the USA and have extensive work experience in both the USA and numerous developing countries. The Survey Coordinator (Clayton Didier of Dominica) received his professional education in the Caribbean and the United Kingdom and his work experience in the same two areas.

The Team completed this Survey feeling that this was a well staffed and coordinated effort; that support services were adequate and readily available; and that the Ministries of Education and Public Works (and other organisations) were most responsive and helpful.

D. Visitation Schedule

The following table is a summary of the travel and onsite surveying schedule followed by the School Construction Survey Team. As a general rule, the Team worked as a unit, but there were times when one member was assigned to drafting

final report materials while other members continued with surveying. The CDB Coordinator normally travelled to each new country/territory with the Team and spent the first day or two helping the Team get situated and into action; in between times, the Coordinator returned to Barbados to prepare for the next onsite visit and to accomplish some of his other CDB responsibilities.

TEAM SCHEDULE

Dates (Winter 1979)	Activity
January 22 - 26	Prepare for onsite surveying activity
January 27 - 31	Onsite surveying in Antigua
February 1 - 5	Onsite surveying in St Kitts (St Christopher)/ Nevis/Anguilla
February 6 - 7	Onsite surveying in Montserrat
February 8 - 11	Team located in Barbados
February 12 - 14	Onsite surveying in St Lucia
February 15 - 19	Onsite surveying in Dominica
February 20 - 21	Team located in Barbados
February 22 - 26	Onsite surveying in Grenada
February 27 - March 2	Onsite surveying in St Vincent
February 27 - March 2	Onsite surveying in Belize
March 3 - 16	Team writing and presenting final report in Barbados

E. Survey Limitations

Several guidelines which were followed by the Team in the performance of this School Construction Survey limited the scope of its activities. These included agreement on:-

1. Recommending grants only for primary level schools, except when there

is an extraordinary justification for doing otherwise. Any activity which was to depart from this rule would have to show an exceptionally favourable impact upon improving the primary level educational environment.

2. Recommending grants for only those schools which would be built, rehabilitated, or which entail additions to buildings on sites owned by the Government of the country/territory; i.e. grants have not been recommended for constructing or improving facilities situated on Church-owned lands.

3. Recommending grants only for those schools which are soon to become, or which are already, co-educational schools.

4. Limiting onsite examination of school facilities to those one to three schools considered by local Governments to fit into each of the following three construction classifications:-

a) New
b) Rehabilitation
c) Rehabilitation and extension.

F. Conversion of the Church School Systems to Government-operated School Systems

In all of the countries/territories surveyed, various Churches originally conducted what was recognized as the school system of the Eastern Caribbean. As time passed, however, Government organisations supplemented Church school funds with grants-in-aid; school facilities continued to be owned by the Churches and the schools were operated by the Churches.

In more recent decades, most of the Governments began to reduce their dependency on Church schools and to increase the number of Government-owned and operated public schools. Montserrat is the only country which has

completed this Church-owned to Government-owned transitional process. All of the other countries are in varying stages of transition. Each of the Ministers of Education and each of the Chief Education Officers interviewed by this School Construction Survey Team stated that their respective Governments were eager to move as rapidly as possible to the completion of this conversion of Church school systems and that their countries would proceed as rapidly as funds available would permit.

This conversion of Church to public schools considerably complicated this Survey, because Team members had to first examine Church schools which would no longer be used (to verify that conditions were as deplorable as Government officials stated) and then to examine alternative sites to help the officials identify the best possible location for the construction of a new school to replace the obsolete Church school under the proposed AID programme.

It is important to note that the seven LDCs are moving through this conversion process in a variety of ways - some countries are leasing Church-owned property and operating the schools: some Governments are repairing Church-owned property so that the schools can continue to function: some Governments are refusing to spend any money on Church-owned property. In many cases, Churches have for a long time refused to perform any maintenance or building improvement efforts, and hence many of these Church-owned schools are in badly deteriorated conditions, oftentimes in unsafe conditions, and certainly they present almost intolerable teaching and learning environments.

Reorganisation of the School Systems

At the same time that the eight territories are assuming greater responsibility for the operation of the school systems, most of the Governments, through their Ministries of Education, are engaged in the reorganisation of the school systems. This reorganisation was also a complicating factor during the School Facility Survey, e.g. some of the deteriorating schools that the Team examined were all-age primary schools, but after replacement the intention was that only some of these would continue as infant or lower-age primary schools.

The Team attempted to make recommendations in this Report which would be supportive of each country's efforts to reorganise its school system.

G. Survey Methodology/Scope of Work

Data Collection

Three members of the Team (Brathwaite, Spencer & Watson) and the Coordinator (Didier) initially met in Barbados during the period of January 22 - 26, 1979, and developed liaison with the Caribbean Development Bank, the regional office of the US Agency for International Development, represented by Donald Boyd, and the Canadian International Development Agency (CIDA)*.

A meeting was also held with senior education personnel of the Ministry of Education in Barbados, because it was believed that this country's recent work in the school construction area might provide some useful insights to this multi-country/territory Survey Team. During this period, the Team developed a School Construction Survey Questionnaire (see Appendix "A") and copies were forwarded to the eight Lesser Developed Countries (LDCs) being surveyed. This three-member Team and the Coordinator left Barbados for Antigua on January 28 to begin data and information collection activities and to stimulate adequate and prompt written responses to the School Construction Survey Questionnaire from Government personnel to CDB. The fourth member (Tonigan) arrived in Barbados on January 28, spent the following day meeting with AID representatives and construction personnel of the British Development Division in the Caribbean (BDD)**, and completed the Team by joining it in Antigua on January 30.

---

*Team members met with CIDA school planning and construction related personnel because the organisation has had considerable experience in financing, planning, designing and constructing schools in the Eastern Caribbean.

**A Team member met with BDD school facilities planning and construction related personnel since the organisation has had considerable experience in planning, designing and constructing schools in the Eastern Caribbean.

As the Team progressed through its visitation schedule, it increasingly found that the appropriate LDC Government personnel had completed major portions of the School Construction Survey Questionnaire, but that some questions always remained unanswered. Team members made sure that the meaning of each such question was clearly understood, and emphasised that each country's completed questionnaire needed to be mailed to CDB within a few days. In every country/ territory, the Team was assured that this would be accomplished.

As the Survey Team progressed through the eight specified LDCs, each member attempted to fulfil his designated role and to call other specialized problems to the attention of the appropriate Team member. Written records were made for later reference. As appropriate, the members of the Team met to discuss their observations, the material collected, unresolved problems, observational requirements and other Survey related items.

Concurrently with the Team's progress, the Coordinator reconfirmed future appointments, travel, lodging and such items. The Coordinator also periodically reviewed Team experiences and problems to verify that data and information collection methods were adequately replicated so that the LDCs were being equally and fairly assessed. As the Survey moved ahead, the Coordinator also provided the necessary typing and advisory services to permit the Team to complete a fairly accurate outline of its forthcoming Report and to actually begin the drafting of the first three sections of the Report. In addition, the Coordinator was invaluable in assisting with the development of a Report format for presentation of the data and information collected.
On the Team's final day in each LDC, a number of activities were typically performed:-

1. One or more Team members attempted to meet with key Government personnel to emphasise the urgent need to have completed questionnaires, facility sketches, and other materials forwarded to CDB promptly.

2. One Team member attempted to consolidate observation notes.

3. One member attempted to temporarily assign priority ratings to the proposed projects presented by the respective countries/territories.

4. One member appraised the need to include both general and country-specific data and other information in this final Report.

The Team concluded its final LDC onsite visits in St Vincent on March 1 and in Belize on March 3. The five-man group was divided into a two-man team and a three-man team during the week of February 26 so that St Vincent and Belize could be simultaneously surveyed and so that the onsite visitation schedule could be reduced by a week. This adjusted site visitation schedule took advantage of the Team's experience gained in the earlier visits and made it possible for Team members to be in Barbados the week of March 5. During that week, Education Officers of each of the LDCs would be attending the AID/CXC/UWI Technical Review Meeting (see Appendix "B"). These officers could supply the missing school facilities data to the School Construction Survey Team during this period.

The Team concluded its assignments by assembling, compiling and evaluating data which it had collected during the period of March 7 - 27 and writing the final Report.

Establishing Priorities

During the first LDC visits, it became obvious that the school construction needs of the eight countries were likely to be very substantial, and that the Team would not be able to visit all the schools needing major physical improvements. A priority classification procedure was therefore developed. Each Ministry of Education was asked to identify the 1 - 3 schools it would most like to have considered by the Team for a funding recommendation related to:-

Project Type No 1:	Construction of a new school
Project Type No 2:	Rehabilitation of an existing school
Project Type No 3:	A combination of rehabilitation and an extension(s) to a school.

In actuality, some 5 to 15 schools and potential sites were so identified by each LDC. The Team, and often the Coordinator, visited each of these and recorded detailed notes. Photographs were taken in many instances. The Team attempted to restrict its visits to primary schools (within the US definition), but this proved to be quite impossible at times, e.g. when a Minister of Education insisted that some other need was equally great and should be noted by the Team.

While visiting each LDC, the Team discussed needs, standards, practices, costs, priorities, and other pertinent survey related topics with the Ministers of Education, Education Officers, Educational Planners, and appropriate Public Works personnel. Head teachers and headmasters were also briefly interviewed and, at times, some teachers, students and parents. The pertinent data and information from the questionnaire responses, the onsite visitation notes, and the materials furnished directly by each of the countries formed the basis for preparing the technical data and information sheets included later in this Report. (All of the materials collected by the Survey Team were organised in a file system and given to AID.)

Utilizing all of the data and information it could gather, the Team then proceeded to develop its list of priorities for each country.

Cost Estimates

In attempting to determine the probable cost which would be associated with the planning, rehabilitation and construction of school facilities in the eight LDCs being surveyed, the School Construction Survey Team undertook the following:-

1. Discussed with BDD and CIDA their school facilities cost experience.

2. Asked Ministries of Public Works to share their recent school facilities cost experiences with the Team.

3. Asked Ministries of Education to submit cost estimates for the projects they wanted funded by AID under the proposed programme.

4. Discussed with the CDB Engineer some of the CDB's recent capital outlay cost experiences.

5. Met and discussed costs with practising engineers outside of Government in some of the territories.

6. Undertook a survey based upon a questionnaire which was passed to each territory's Government before the Team's arrival.

From each of these efforts, some additional knowledge was gained, but overall the Team found each different group reporting costs on a different basis, which made it difficult to make direct cost comparisons. However, from this bulk of information, it has been possible to arrive at a general project cost, based on unit costs which have enabled the Team to arrive at a reasonable programme estimate of costs. This cost factor approach coupled with budgets for each project submitted by the participating Governments makes up the method of determining project costs.

Perhaps it should be noted that as the finally approved projects are identified by AID, more precise costs can be calculated as the exact scope and nature of the facilities to be constructed are more thoroughly identified.

The process utilized to arrive at the unit costs which appear at the end of this section of the Report is itemized below:-

1. The basic cost of current school construction in the eight LDCs is close to EC$45 per square foot for new construction (approximately US$17). A figure of 10% of this cost should be added as a contingency item.

2. The above figure does not include all project costs. What is excluded varies from country to country, but involves such items as Central Government manpower expense (including some tradesmen labour) and supplies expense. As these are on-going Government costs, we have not included them in our estimate.

3. The current annual cost of construction inflation is averaging 12%.

4. Most of the construction work will be performed by contractors and the square footage costs passed to us by the Ministries have excluded some of the contractors' services and profit.

5. Some of the facilities may be designed by the staffs of Public Works Ministries and therefore design cost may be reduced. If private architects and engineers are to be commissioned by CDB, appropriate design costs will have to be added. A cost estimate of these management services is given at Section IV of this Report.

6. Other consultancy and administrative services will be included in CDB's contract with AID (see Section IV).

7. School furniture and equipment costs have been estimated at EC$100 or US$37 for two students for new schools and extensions.

In summary, these unit costs will be on a square footage basis as follows:-

		New Construction and Extensions	
		EC$	US$ Equivalent
1.	Current construction cost (partial)	45.00	17.00
2.	Inflation - first year	12%	
3.	Architectural and Engineering Fees	See Section IV	
4.	Other Consulting & Administrative Services	" " "	
5.	Furniture & equipment per two students	100.00	37.00

US$1.00 = EC$2.7

EC$1.00 = US$0.37

These figures (rounded off to the nearest dollar) have been used in the balance of this Report on the basis of:-

1. New construction and extensions for classrooms only.

2. Site preparation, sewerage, etc, are provided for by individual cost estimates for each school budget.

3. Budget figures for rehabilitation are based on cost estimates made by the Government, Education and Public Works Ministries.

Attention is called to the use of the following in the cost estimates made in this Report:-

a) A contingency of 10% of estimate
b) An annual inflation of 1[illegible]% of estimate.

Further attention is called to the fact that several countries requested that school facilities be fenced with chain link or similar type fencing. The cost estimates included in this Report do not include any funds for this purpose. Countries requested the fencing as a means of security from vandals and stray animals. Unfortunately, the Team saw too many school fences which had been damaged - and not repaired - and so they became useless within a few years of having been installed. A few exceptions to this were observed, and, in such cases, they were contributing to keeping the school in better condition.

Similarity of School Facility Conditions

In general, quite similar conditions were observed in school facilities in all eight of the LDCs. Most school facilities are in very bad condition; buildings are old; have been poorly maintained; are cleaned primarily by children and teachers; have no custodians or maids; are unpainted; are often undivided into classrooms (large open spaces are used by 5 - 12 classes, each with a teacher or teacher-in-training. These spaces are like open warehouse areas, having sometimes damaged floors, windows, walls and ceilings); are very minimally equipped with furniture; contain no instructional or learning equipment; are poorly lighted, without electrical outlets; and have many unsanitary and unsafe situations - toilets are in particularly unsatisfactory condition.

In general, school sites are poorly located - often on steep hillsides - and are crowded onto very small plots. Occasionally, schools were found on sites which were adequate in size and otherwise generally suitable.

In all of the island territories, the Ministries of Public Works were found to be responsible for the design, construction and maintenance of Government schools. With small provisions from Government to two of the Ministries, maintenance units have been established to handle minor repairs. Most Public Works representatives felt that they could perform satisfactorily if more money were provided: the Team was not so convinced. In addition, management planning often seemed obsolete or non-existent.

Ministries of Education wished to create small maintenance forces to do some of the work which is not now accomplished by the Public Works Ministries. The Ministries of Education hope to get increased budgets from the Central Government to enable them to employ staff to keep more up-to-date with the needed building and equipment repair work.

All eight LDCs revealed that they have not been able but would like to provide specialized types of classrooms (Science, Arts & Crafts, Agriculture, multi-purpose rooms, Home Economics, Industrial Arts, etc) for children in the all age (5 - 16+) primary schools.

Quite often, infants (ages 5 - 7) were found to be housed in infant blocks, separate buildings or portions of a commonly shared open-space building. Pre-school children (ages 4 - 5) were also sometimes housed in the same building or nearby in another building. Often, these appeared to be buildings that had formerly been used as residences.

One of the reasons why the schools are so poorly equipped throughout all of the LDCs is reportedly related to the almost total lack of trained school equipment repair technicians. Several educators stated that there had been some equipment but this had become unusable through lack of repair, and they were of the opinion that it was futile to get equipment since it could not be serviced by a qualified technician.

Some relief in this dismal school facilities situation is afforded by the group of schools which have recently been provided throughout the LDCs by the Canadian Government through CIDA and by the UK Government. These schools appear to be well sited, adequately designed, equipped and properly constructed. It would be wise for the Canadian experience to be examined in some depth. Such a study should provide some useful guidance to AID for overseeing its proposed school facilities programme.

II. RESPONSIBILITIES OF SUPPORTIVE ORGANISATIONS

A. Caribbean Development Bank (CDB)*

The CDB will coordinate and arrange the appropriate meetings to accomplish the site visits within the time period of the consultants' services. The CDB will also make available to the consultants all existing information relating to school needs of this region, such as:-

1) The UNDP report, Physical Planning Project, a comprehensive physical plan and tentative projection of education infrastructure needs for each LDC;

2) The ILO report on vocational education and occupational training in the Caribbean with a section on establishing standards for plant and equipment planning for training institutions;

3) The AID report, Education Survey of the Eastern Caribbean; and

4) Other reports and information (internal or otherwise) pertinent to this component of the programme.

Further, the CDB will provide assistance with services of selected staff to provide source data and information on local environment influences. Logistic support, office space, within island transportation, secretarial/typing and drafting services needed for the preparation of any sketches and drawings for the Report will also be provided by CDB.

---

*LIMITED SCOPE GRANT PROJECT AGREEMENT - between the United States Government, acting through the Agency for International Development (AID) and the Caribbean Development Bank (CDB), AID Project Number 538-000 for the period of January 24 through March 31, 1979.

B. Agency for International Development (AID)

AID's major responsibilities involved funding the Limited Scope Project Agreement with CDB via a contract requiring CDB to perform the work quoted in the above section; and, to provide for the Agreement specified School Construction Survey Team, both a School Construction Engineer and an Educational Facilities Specialist. In addition, AID was supportive in a number of other ways, such as providing reports of other studies, making appointments with BDD and CIDA, helping with travel and Barbados lodging arrangements, reviewing preliminary survey reactions, suggesting alternative data collection methods, and other project-related inputs.

C. Lesser Developed Countries (LDCs)

The eight countries/territories which were included in the School Construction Survey were requested, through their Ministries of Education and Public Works, to complete a questionnaire and to arrange for two to three-day series of onsite meetings and school visitations. The Ministries of each country/territory complied to the fullest extent anticipated; the Team knew that some of its enquiries might prove temporarily troublesome, and hence in-country time was allocated in each of the LDCs for resolving such problems.

Though the questionnaire took longer for the LDCs to complete than was initially planned, all of the eight countries/territories did submit their responses to the questionnaire in time for inclusion in this Report.

III. PRESENTATION OF SCHOOL SURVEY DATA

COUNTRY SPECIFICS: SURVEY DATA, RECOMMENDED FACILITY PROJECTS & ESTIMATED COSTS

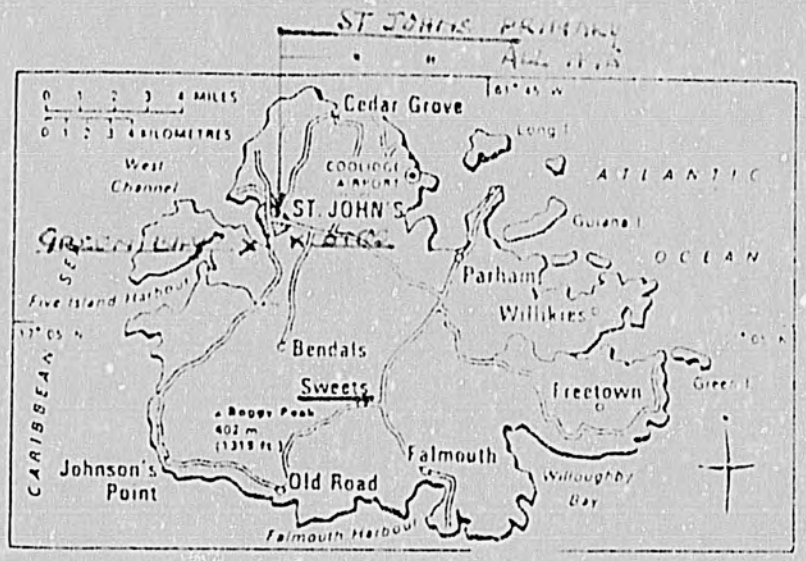
General

The pertinent school facilities data which were collected by the School Construction Survey Team for the eight LDCs surveyed in this study have been summarized and are presented in this section of the Report. The school facility projects which the Team recommends that AID should fund are identified on an individual country basis. The estimated cost of each project is also given in this section of the Report.

Preceding the data presentation for each country/territory is a map of the country, showing the location of each of the school facilities studied by the Team.

16a

ANTIGUA


0 1 2 3 4 MILES
0 1 2 3 4 KILOMETRES
West Channel
Cedar Grove
CODRINGTON AIRPORT
ST. JOHN'S
ATLANTIC
OCEAN
Parham
Willikies
Five Island Harbour
Bendals
Sweets
Freetown
Boggy Peak
402 m
(1319 ft)
Falmouth
Johnson's Point
Old Road
Willoughby Bay
Falmouth Harbour
CARIBBEAN

A. ANTIGUA

Specific Conditions

Several members of the Team felt that a number of the Antigua schools were in worse condition than the schools of any of the other seven LDCs visited. Poorly maintained, obsolete and over-utilized World War II wooden barracks were being used for "open plan" schools in some areas.

On the other hand, Antigua was one of the few countries in which the Ministry of Education employed a professional educational planning person (UNESCO-trained).

All schools visited have shown signs of prolonged neglect in the area of maintenance. A major rehabilitation programme would be required to restore the buildings. In the absence of available funds to meet this demand, the Survey Team based its selection on schools with heavy enrollment, on those in districts with increasing population, or where the existing amenities require immediate attention to relieve frustration among teachers and to provide an improved learning environment for pupils.

Priority Ratings/Cost Estimates

After examining all of the Antigua data, the School Construction Survey Team recommends that the five projects identified by Antigua as its top priority primary school needs be rated as indicated in the following table.

TABLE 101A

ANTIGUA

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrollment	Square Feet /Student	Square Feet /School	Estimated Unit Cost Per Sq Ft US$	Estimated Project Cost in US$'000			
						New Buildings	Rehabili-tation	Extension	Total
1.	St John's Primary	600	18	13,824	25	352	-	-	352
2.	St John's (Ages 5 - 16)	650	18	2,900		-	141	63	204
3.	Greenbay (Ages 5 - 16))	332	18	14,976		-	74	97	171
4.	Ottos Primary	610	18	10,980	13	-	119	76	195
5.	Sweetes (Ages 5 - 16)	340	18	6,120	13	-	94	59	153
TOTAL						352	428	295	1,075

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Antigua Date of Visit: 28/1/1979

Name & Type of School: St John's - Primary School Reference No: 101/1

Location: St John's

Description of Existing School: New school

Current Enrollment: No of Classes: 20 Overcrowded: Yes/ / No/ /

Enrollment from local area is: Increasing/ / Decreasing/ / Don't know/ /

Approximate age of facilities: Years

General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ /

Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /

Maintenance is performed by: Public Works/ / Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/ / Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/ / Urban/X/

Within walking distance/X/ Access road required/ /

Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /

Facilities required: No of Classrooms/20/ No of other rooms/4/

Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Antigua — Date of Visit: 30/1/1979

Name & Type of School: St John's - Ages 5 - 16 — School Reference No: 101/2

Location: St John's — (See Sketch No: 101/2)

Description of Existing School: Rehabilitation & extension

Current Enrollment: 650 No of Classes: 23 Overcrowded: Yes/X/ No/ /

Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know/ /

Approximate age of facilities: 75 Years

General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /

Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /

Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/ / Urban/X/

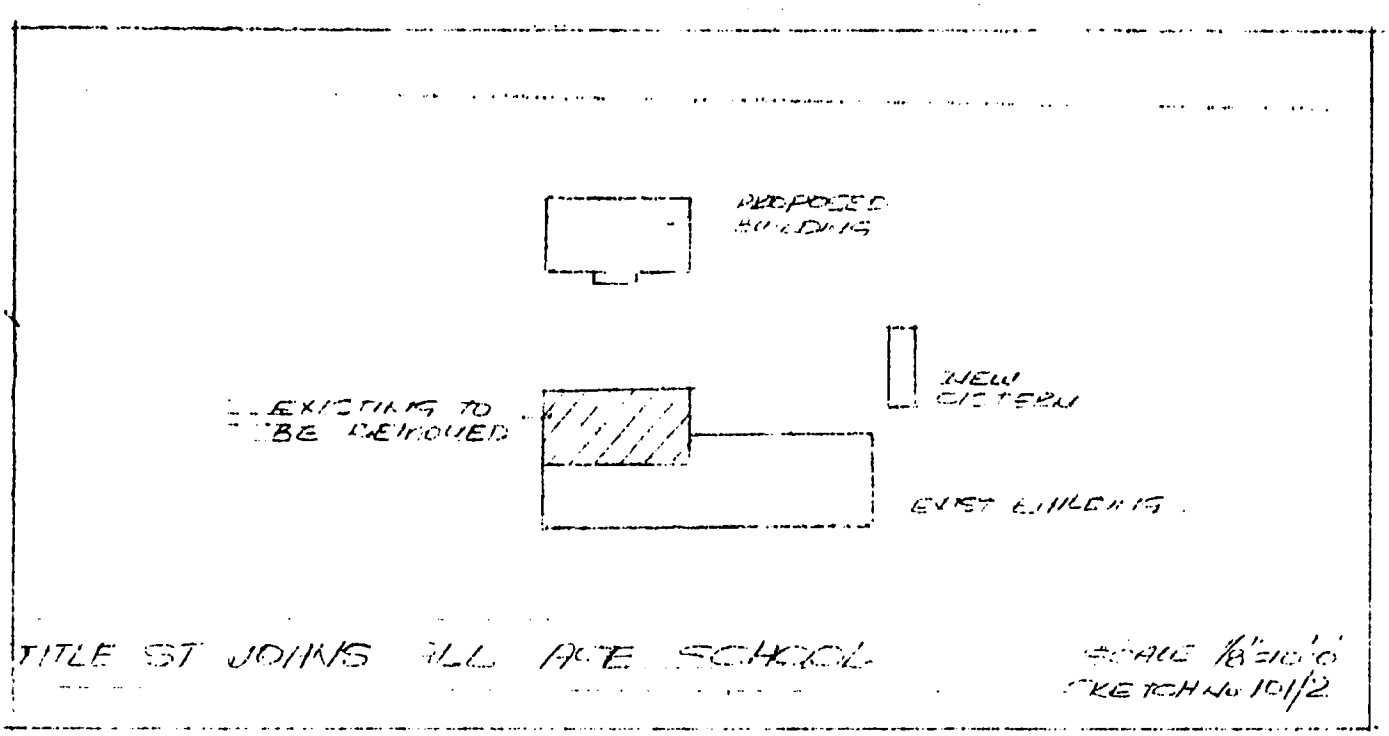
Within walking distance/X/ Access road required/X/

Availability of Water: Yes/ / No/ / Electricity: Yes/ / No/ /

Facilities required: No of Classrooms/3/ No of other rooms/2/

Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Antigua — Date of Visit: 29/1/1979

Name & Type of School: Greenbay - Ages 5 - 16 — School Reference No: 101/3

Location: St John's — (See Sketch No: 101/3)

Description of Existing School: Rehabilitation & Extension

Current Enrollment: 832 No of Classes: Overcrowded: Yes/ X/ No/ /

Enrollment from local area is: Increasing/ X/ Decreasing/ / Don't know/ /

Approximate age of facilities: 30 Years

General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ X/

Availability of Water: Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Maintenance is performed by: Public Works/ X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/ X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/ X/ No/ / Govt owned/ X/ Govt will buy/ / Rural/ / Sub-Urban/ X/

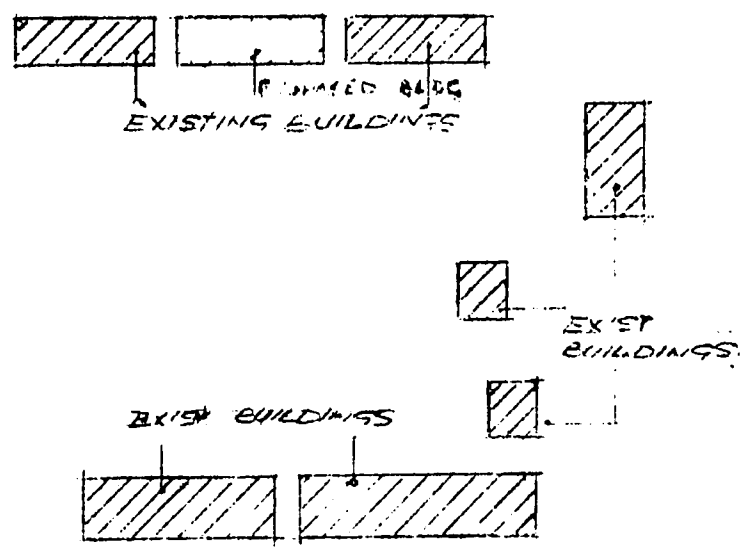
Within walking distance/ X/ Access road required/ /

Availability of Water: Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Facilities required: No of Classrooms/ 6/ No of other rooms/ 3/

Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ X/ High/ / Medium/ / Low/ /



TITLE GREENBAY SCHOOL. SCALE 1/8"=1'0"

REHABILITATION AND EXTENSION SKETCH 101/3

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Antigua Date of Visit: 30/1/1979

Name & Type of School: Ottos - Primary School Reference No: 101/4

Location: St John's

Description of Existing School: Rehabilitation & extension

Current Enrollment: 610 No of Classes: 21 Overcrowded: Yes/ X/ No/ /

Enrollment from local area is: Increasing/ X/ Decreasing/ / Don't know/ /

Approximate age of facilities: Years

General condition of facilities: Excellent/ / Good/ / Poor/ X/ Unsatisfactory/ /

Availability of Water; Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Maintenance is performed by: Public Works/ X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/ X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/ X/ No/ / Govt owned/ X/ Govt will buy/ / Rural/ / Urban/ X/

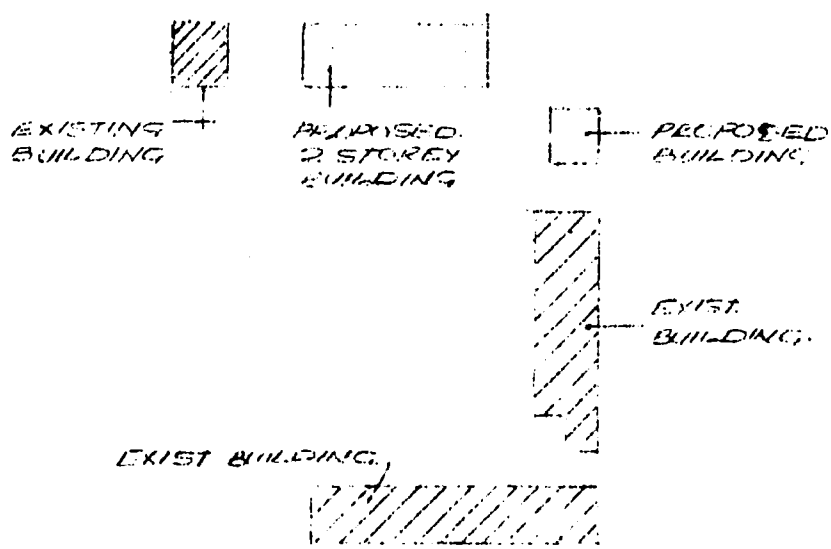
Within walking distance/ X/ Access road required/ /

Availability of Water: Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Facilities required: No of Classrooms/ 6/ No of other rooms/ 2/

Type of Construction: Reinforced concrete: wood: Metal roof

PRIORITY RATING: Very High/ / High/ X/ Medium/ / Low/ /



TITLE OTTOS SCHOOL REHABILITATION AND EXTENSION

SCALE 1/16" = 40'0"
SKETCH No 101/4

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Antigua
Date of Visit: 30/1/1979
Name & Type of School: Sweets - Primary
School Reference No: 101/5
Location:
(See Sketch No: 101/5)

Description of Existing School: Rehabilitation & extension

Current Enrollment: 340 No of Classes: 11 Overcrowded: Yes/X/ No/ /
Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know/ /
Approximate age of facilities: 30 Years
General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /
Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /

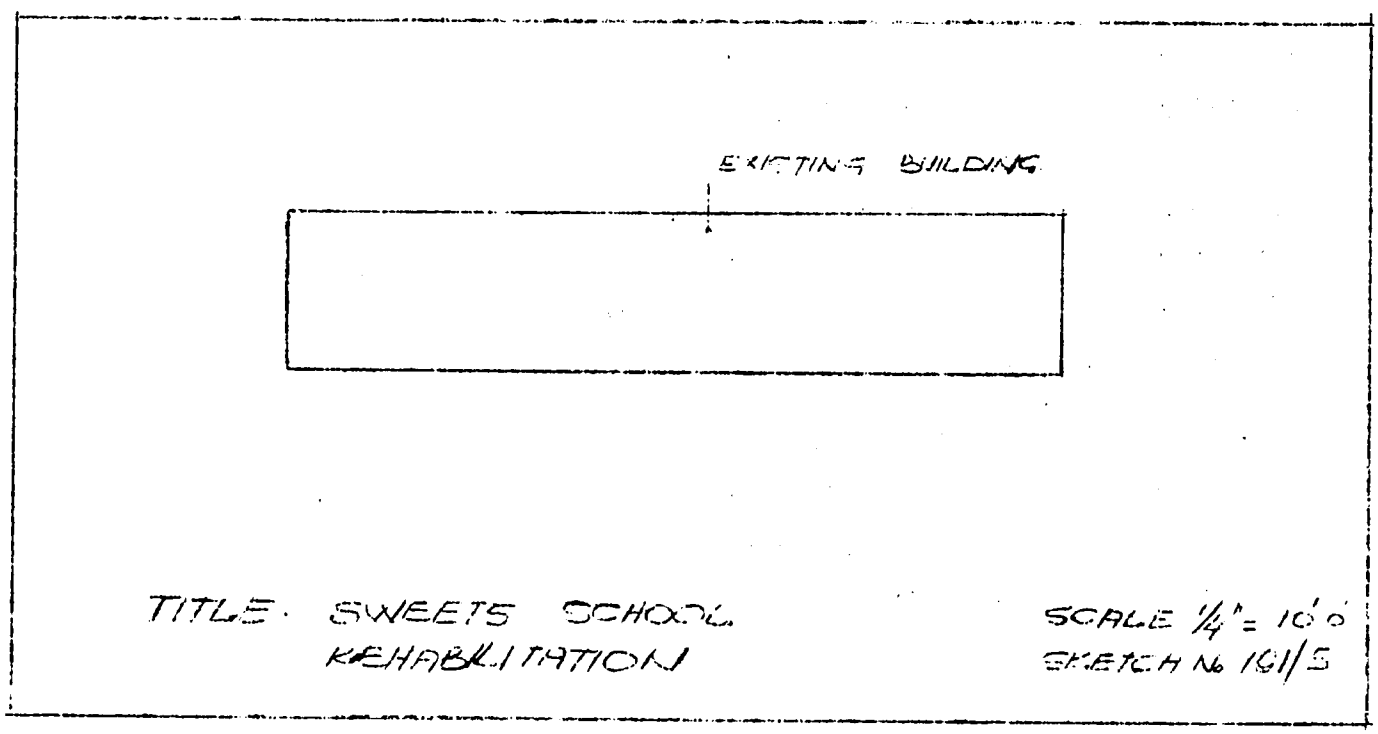
Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/X/ Urban/ /
Within walking distance/X/ Access road required/ /
Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /
Facilities required: No of Classrooms/2/ No of other rooms/4/
Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

New toilet: verandah required.



B. BELIZE

Specific Conditions

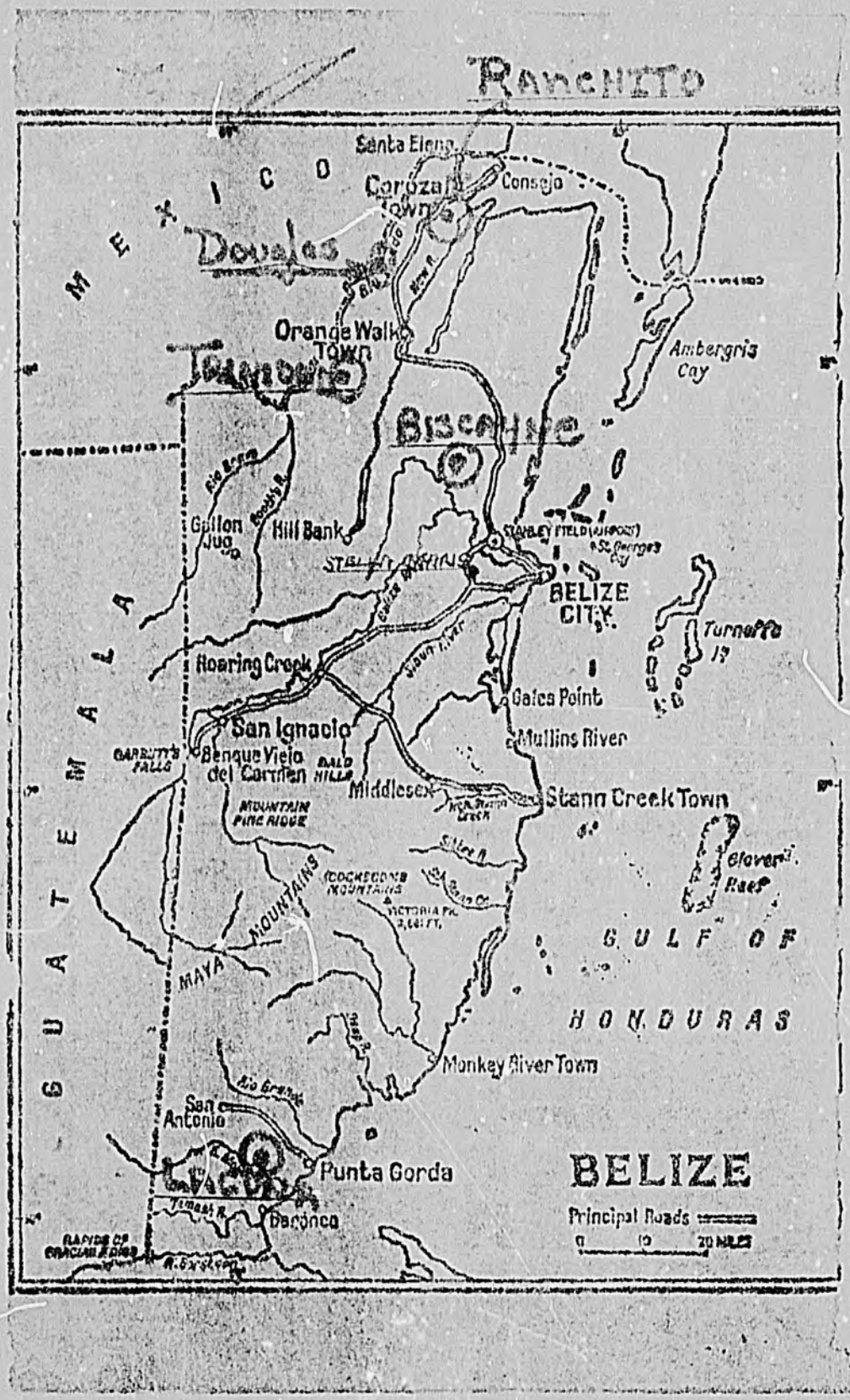
Belize is making commendable efforts to develop a sound national system of education and to maintain its schools. The territory is vast. The communities/villages are scattered, but a reasonably well-maintained school is found in each district. The principle of fully utilizing resources has been well established and many facilities serve the dual purpose of school and community centre. Some facilities cater to enrollments as low as 50 pupils.

The method of funding school building projects is unique, and is by far the best of all territories in the area, since self-help is an important motivating factor. State, Church and community collaborate in financing projects and there is abundant evidence of successful participation at local community levels.

The principle of erecting cottages for Head Teachers in remote areas has been established as a means of assisting in the recruitment of Head Teachers, who then have a motivating role in providing the school facilities. Adequate, but unpretentious residences are provided and the benefits of this scheme are reflected in the absence of vandalism, the unification of the villages for educational and community activities, and the husbanding of available talent and resources.

There is a lack of utility services, namely water and electricity, especially in outlying districts, but this is not a hindrance to progress. With external financial aid (in funding) and the provision of technical assistance, the desired improvement at the social and economic level is assured.

24a


RANCHITO
MEXICO
Santa Elena
Corozal Town
Consejo
Douglas
Orange Walk Town
Ambergris Cay
BISCAYNE
Gallon Jug
Hill Bank
STANLEY FIELD (AIRPORT)
St. George's Cay
BELIZE CITY
Turneffe Is.
Roaring Creek
Gaica Point
San Ignacio
Mullins River
Benque Viejo del Carmen
Middlesex
Stann Creek Town
MOUNTAIN PINE RIDGE
Elbow Reef
ROCKSTONE MOUNTAINS
GULF OF HONDURAS
GUATEMALA
MAYA MOUNTAINS
Monkey River Town
San Antonio
Punta Gorda
Barranco
BELIZE
Principal Roads
0 10 20 MILES

BELIZE

Priority Ratings/Cost Estimates

There are 200 primary schools in Belize, of which only 12 are Government-owned. The existing system of administration (Church/State) works well, but financial constraints limit the Churches in upgrading the physical standards of their schools to meet modern educational needs. Government's objective is to improve conditions by constructing new schools to replace fatigued Church-owned buildings. However, loss of revenue through heavy expenditure on rehabilitation following recent visitations of hurricanes has resulted in curtailment of the school building programme. The recommendations are based on the specific need for assistance in the school expansion programme.

In one specific case, Stella Maris, the recommendation for a new building to replace the present termite-infested structure is based on the Team's observation of the efforts being made by Government to cater to the needs of the physically handicapped and mentally retarded of primary school age. This is the only territory in which such a Government-sponsored institution was found. Excellent work is being done in this residential institution under extremely difficult conditions. The erection of a new building, under the proposed AID programme, would be fully justified.

After examining all of the Belize data, the School Construction Survey Team recommends that the four projects identified by Belize as its top priority primary school needs be rated as indicated in the following table.

TABLE 201B

BELIZE

PRIORITIES/COST ESTIMATES

Pricrity Number	School	Enrollment	Square Feet /Student	Square Feet /School	Estimated Unit Cost /Sq Foot *	Estimated Project Cost in US$'000 New Buildings	Rehabili-tation	Extension	Total
1.	Stella Maris	45	N/A	N/A		132			132
2.	Biscayne & Laguna	120	16	2,016		128			128
3.	Trinidad	180	16	3,024		175			175
4.	Douglas	240	16	5,091		191			191
5.	Ranchito	240	16	5,091		191			191
TOTAL				15,223		817			817

* Per sq ft costs have not been shown since project costs include unusual items, e.g. teacher's house, water wells, etc.

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Belize

Date of Visit: 2/3/1979

Name & Type of School: Stella Maris (Primary - Handicapped & mentally retarded)

School Reference No: 201/1

Location: Belize City

(See Sketch No: 201/1)

Description of Existing School: New school

Current enrollment: 45 No of Classes: Overcrowded: Yes/ X/ No/ /

Enrollment from local area is: Increasing/ X/ Decreasing/ / Don't know/ /

Approximate age of facilities: 7 Years

General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ X/

Availability of Water: Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Maintenance is performed by: Public Works/ X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/ X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/ X/ No/ / Govt owned/ X/ Govt will buy/ / Rural/ / Urban/ X/

Within walking distance/ X/ Access road required/ No/

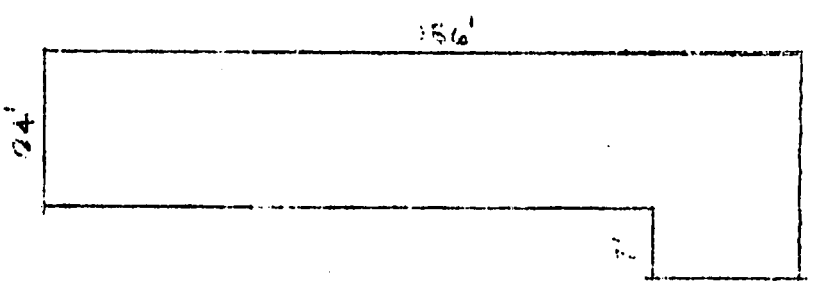
Availability of Water: Yes/ X/ No/ / Electricity: Yes/ X/ No/ /

Facilities required: No of Classrooms/ 9/ No of other rooms / /

Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ X/ High/ / Medium/ / Low/ /

This is a residential institution for physically handicapped and mentally retarded. 30-bed dormitory: kitchen: dining room: workshop: garage.



TITLE STELLA MARIS SCHOOL BELIZE CITY SCALE 1:40'

PROPOSED NEW SCHOOL SKETCH NO. 201/1

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Belize — Date of Visit: 2/3/1979

Name & Type of School: Laguna & Biscayne — School Reference No: 201/2

Location: Belize State — (See Sketch No: 201/2)

Description of Existing School: New

Current Enrollment: 81 No of Classes: 3 Overcrowded: Yes/X/ No/ /

Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know/ /

Approximate age of facilities: 5 Years

General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /

Availability of Water: Yes/ / No/X/ Electricity: Yes/ / No/X/

Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Aite Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/X/ Urban/ /

Within walking distance/X/ Access Road required/X/

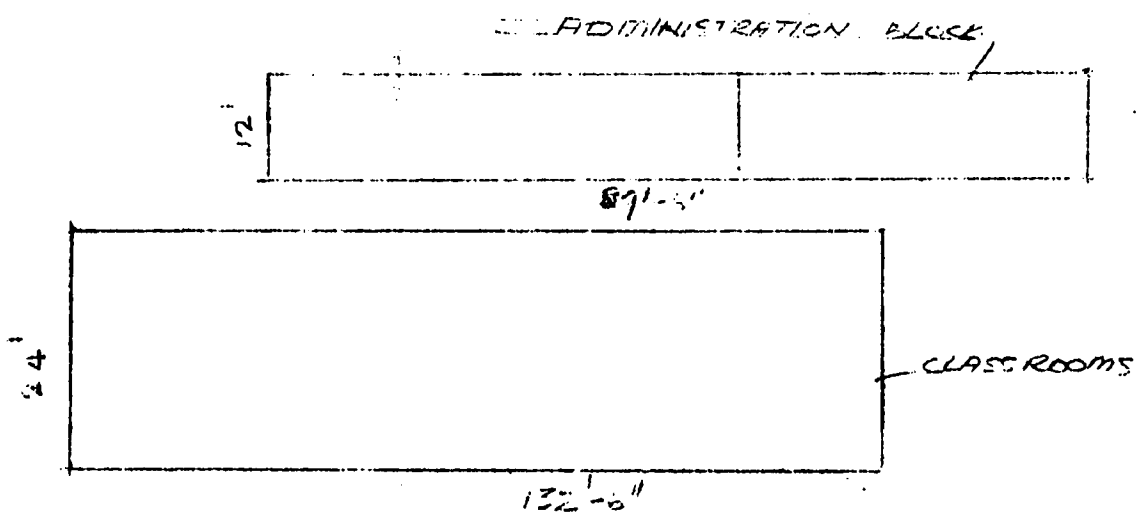
Availability of Water: Yes/ / No/X/ Electricity: Yes/ / No/X/

Facilities required: No of Classrooms/8/ No of other rooms/4/

Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/ / Medium/X/ Low/ /

Well is budgeted and Ministry will drill and install pump.



TITLE LAGUNA & BISCAYNE PROPOSED NEW SCHOOL

SCALE 1:50

SKETCH No 201/2

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Belize
Date of Visit: 1/3/1979
Name & Type of School: Trinidad - Primary
School Reference No: 201/3
Location: Corozal State
(See Sketch No: 201/3)

Description of Existing School: New school

Current Enrollment: 103 No of Classes: 5 Overcrowded: Yes/X/ No/ /
Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know/ /
Approximate age of facilities: 5 Years
General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /
Availability of Water: Yes/ / No/X/ Electricity: Yes/ / No/X/

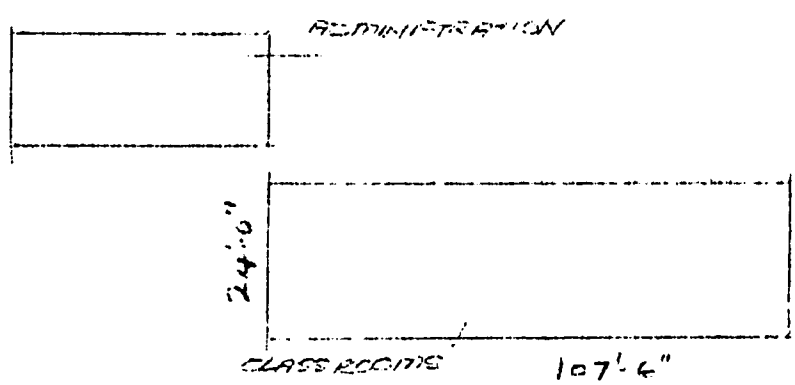
Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/X/ Urban/ /
Within walking distance/X/ Access road required/X/
Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /
Facilities required: No of Classrooms/6/ No of other rooms/2/
Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

Ministry has budgeted well and placement of handpump.



TITLE TRINIDAD
PROPOSED NEW SCHOOL

SCALE 1" = 40'
SKETCH NO 201/3

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Belize
Date of Visit: 1/3/1979
Name & Type of School: Douglas: Primary
School Reference No: 201/4
Location: Corozal State
(See Sketch No: 201/4)

Description of Existing School: New school

Current Enrollment: 120 No of Classes: 6 Overcrowded: Yes/X/ No/ /
Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know / /
Approximate age of facilities: 50 Years Church
General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /
Availability of Water: Yes/X/ No/ / Electricity: Yes/?/ No/ /

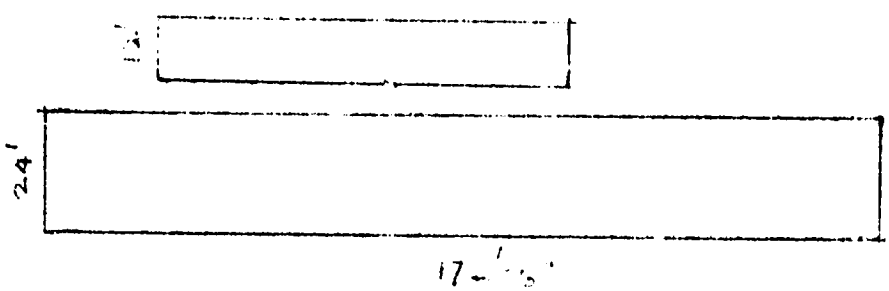
Maintenance is performed by: Public Works/ / Ministry of Education/ / Other/X/Chur
Maintenance Performance Rating: Low/ / Medium/X/ High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/ / Urban/ /
Within walking distance/X/ Access Road required/No/
Availability of Water: Yes/X/ No/ / Electricity: Yes/ / No/X/
Facilities required: No of Classrooms/8/ No of other rooms/2/
Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

Ministry will drill well at site and place handpump.



TITLE: DOUGLAS PROPOSED NEW SCHOOL

SCALE 1" = 40'
SKETCH No 201/4

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Belize
Name & Type of School: Ranchito
Location: Corozal State

Date of Visit: 1/3/1979
School Reference No: 201/5
(See Sketch No: 201/5)

Description of Existing School: New school

Current Enrollment: 160 No of Classes: 7 Overcrowded: Yes/X/ No/ /
Enrollment from local area is: Increasing/X/ Decreasing/ / Don't know/ /
Approximate age of facilities: 5 Years
General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /
Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /

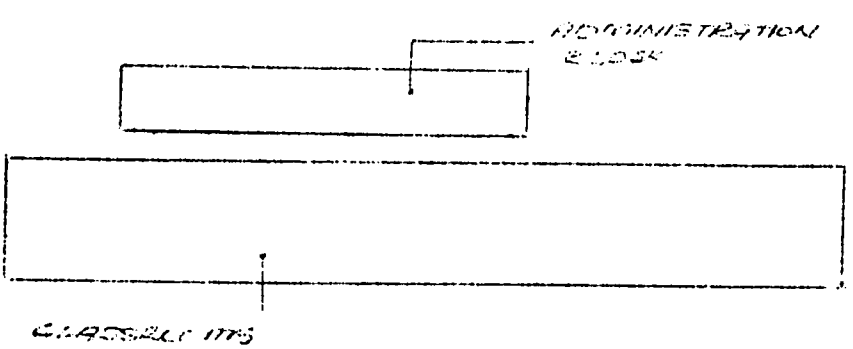
Maintenance is performed by: Public Works/ / Ministry of Education/ / Other/community
Maintenance Performance Rating: Low/ / Medium/X/ High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/X/ Urban/ /
Within walking distance/X/ Access road required/X/ Short distance from highway
Availability of Water: Yes/X/ No/ / Electricity: Yes/X/ No/ /
Facilities required: No of Classrooms/8/ No of other rooms/2/
Type of Construction: Reinforced concrete: wood: Metal roof

PRIORITY RATING: Very High/ / High/ / Medium/X/ Low/ /

The present school is housed in a community centre.

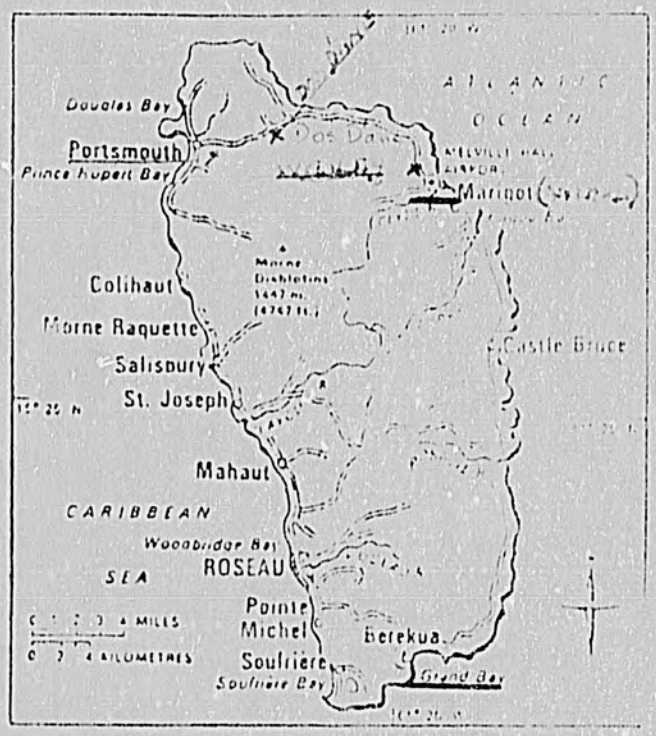


TITLE RANCHITO SCALE 1:40'

PROPOSED NEW SCHOOL... SKETCH No. 201/5

3/a

DOMINICA


Douglas Bay
Portsmouth
Prince Rupert Bay
Colihaut
Morne Raquette
Salisbury
St. Joseph
Mahaut
CARIBBEAN
SEA
Woodbridge Bay
ROSEAU
Pointe
Michel
Soufriere
Soufriere Bay
Berekua
Grand Bay
Marigot
Castle Bruce
MILES
KILOMETRES

C. DOMINICA

Specific Conditions

Dominica seemed to the Team to be the least developed of the eight LDCs. The school buildings were perhaps a little better than those found in Antigua, but quite often there was no water and sometimes no electricity at the schools. As a result of the lack of water, school toilet sanitation problems were very evident.

Dominica appeared to be the leader in utilizing self-help methods in providing school facility improvements. At a number of sites, people related how they carried sand, gravel and stones over one to two miles to the sites of prospective school buildings. Piles of rocks were observed at six of seven prospective school sites.

In two instances, Dominican villagers worked under the supervision of a Public Works Building Supervisor to erect prefabricated building panels, the end result being four wooden classroom buildings, each capable of holding two primary classes; these buildings still remain unpainted, but are equal in construction quality to other Public Works designed constructed school buildings located nearby.

The provision of new school facilities and the rehabilitation of existing buildings are pressing needs. Many of the schools visited by the Team are recommended for replacement or refurbishing because in their present condition they are unsatisfactory for educational purposes. In some instances, the degree of deterioration makes repairs impossible.

DOMINICA

In making its selection, the Team has taken into account the overall educational needs of the country, its inability to meet financial demands of those needs, and the necessity for an improved environment to facilitate effective instructional and learning processes. One school, Dos-D'ane, was burnt out some time ago and there is urgent need for replacement.

Priority Ratings/Cost Estimates

After examining all of the Dominica data, the School Construction Survey Team recommends that the six projects identified by Dominica as its top priority primary school needs be rated as indicated in the following table

TABLE 301C

DOMINICA

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrollment	Square Feet /Student	Square Feet /School	Estimated Unit Cost Per Sq Ft	Estimated Project Cost in US$'000			
						New Buildings	Rehabili-tation	Extension	Total
1.	Dos D'ane	300	18 new	5,600	22	124	-		124
2.	Wesley	589	18			-	28	124	152
3.	Weirs	350	18			-	58	-	58
4.	Grand Bay	315	18			-	79		79
5.	Portsmouth Primary	467	18			-	42	73	115
TOTAL						124	207	197	528

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Dominica
Date of Visit: 15/2/1975
Name & Type of School: Dos D'ane - Primary
School Reference No: 301/1
Location:
(See Sketch No: 301/1)

Description of Existing School: New school

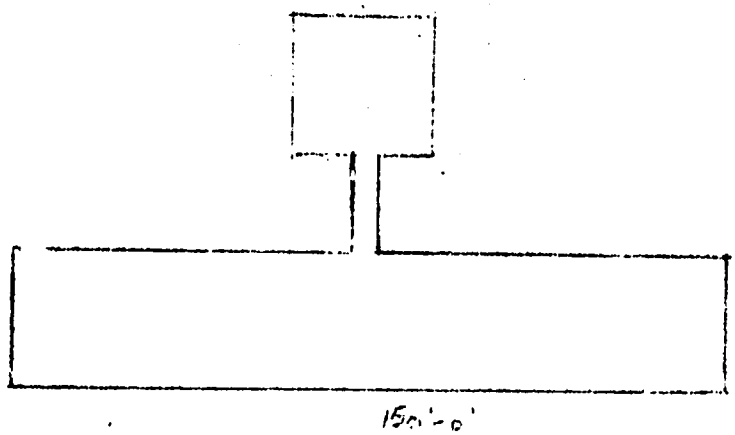
Current Enrollment: No of Classes: Overcrowded: Yes/ / No/ /
Enrollment from local area is: Increasing/ / Decreasing/ / Don't know/ /
Approximate age of facilities: Years
General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ /
Availability of Water: Yes/ / No/ / Electricity: Yes/ / No/ /

Maintenance is performed by: Public Works/ / Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/ / Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/ / Govt will buy/X/ Rural/X/ Urban/ /
Within walking distance /X/ Access road required/X/
Availability of Water: Yes/X/ No/ / Electricity: Yes/ / No/X/
Facilities required: No of Classrooms/6/ No of other rooms/3/
Type of Construction: Reinforced concrete: wood: metal roof

PRIORITY RATING: Very High/X/ High/ / Medium/ / Low/ /



TITLE DOS DANE
PROPOSED NEW SCHOOL.

SCALE 1"=40'
SKETCH No 301/1

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Dominica

Date of Visit: 15/2/1979

Name & Type of School: Wesley - Primary

School Reference No: 301/2

Location:

(See Sketch No: 301/2)

Description of Existing School: Rehabilitation & Extension

Current Enrollment: 589 No of Classes: 17 Overcrowded: Yes/X/ No/ /

Enrollment from local area is: Increasing/ / Decreasing/ / Don't know/X/

Approximate age of facilities: Years

General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /

Availability of Water: Yes*/X/ No/ / Electricity: Yes/ / No/ /

Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/X/ No/ / Govt owned/X/ Govt will buy/ / Rural/X/ Urban/ /

Within walking distance/X/ Access Road required/X/

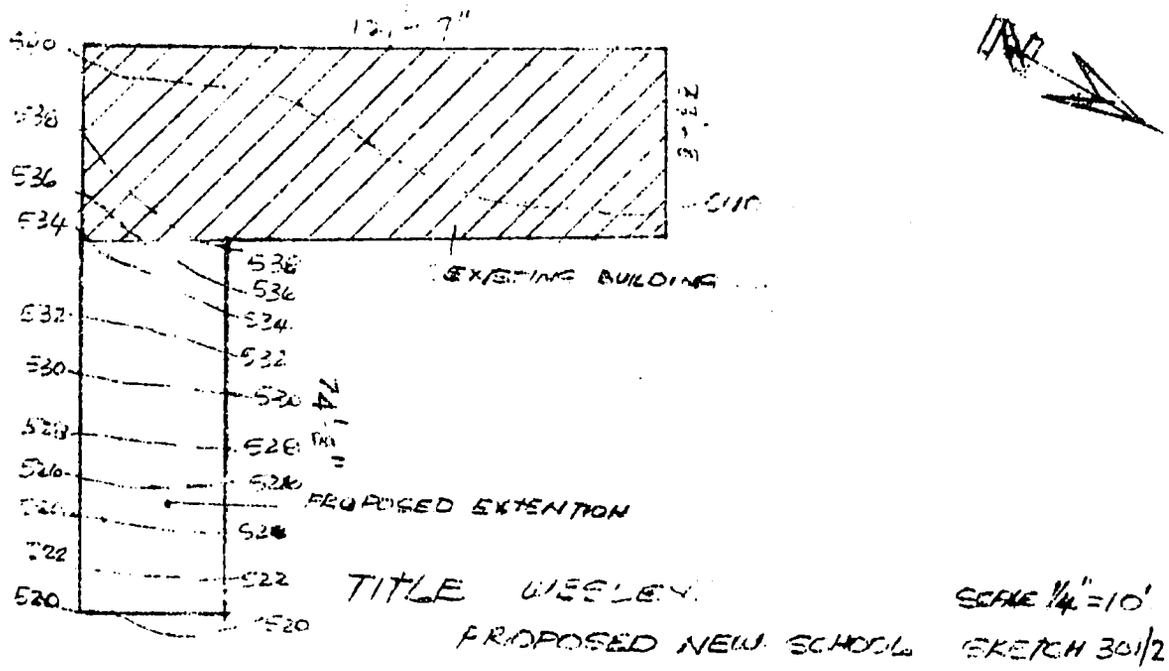
Availability of Water: Yes/ / No/ / Electricity: Yes/ / No/ /

Facilities required: No of Classrooms/6/ No of other rooms/3/

Type of Construction: Reinforced concrete: wood; Metal roof

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

* Water is available in the area but not at the school.



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Dominica
Date of Visit: 15/2/1979
Name & Type of School: Weirs - Primary
School Reference No: 301/3
Location: Marigot
(See Sketch No:)

Description of Existing School:

Current Enrollment: 707 No of Classes: 20 Overcrowded: Yes/X/ No/ /
Enrollment from local area is: Increasing/ / Decreasing/ / Don't know/ /
Approximate age of facilities: 9 Years
General condition of facilities: Excellent/ / Good/ / Poor/X/ Unsatisfactory/ /
Availability of Water: Yes/X/ No/ / Electricity: Yes/ / No/X/

Maintenance is performed by: Public Works/X/ Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/X/ Medium/ / High/ /

Details of Proposed School

Site Adequate: Yes/ / No/ / Govt owned/ / Govt will buy/ / Rural/ / Urban/ /
Within walking distance / / Access road required/ /
Availability of Water: Yes/ / No/ / Electricity: Yes/ / No/ /
Facilities required: No of Classrooms/ / No of other rooms/ /
Type of Construction:

PRIORITY RATING: Very High/ / High/X/ Medium/ / Low/ /

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY 32 (d)

Territory/Country: Dominica Date of Visit: 17/2/1979

Name & Type of School: Grand Bay: Primary School Reference No. 301/4

Location: Geneva Estate (See Sketch No:)

Description of Existing School

Current Enrolment: 1,000 + No. of Classes: Overcrowded: Yes /___/ No /x/

Enrolment from local area is: Increasing/___/ Decreasing/___/ Don't know/___/

Approximate age of facilities: 8 years

General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/x/ Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/___/ No/___/ Govt owned/___/ Govt will buy/___/ Rural/___/ Urban/___/

Within walking distance /___/ Access Road required /___/

Availability of Water: Yes /___/ No /___/ Electricity: Yes /___/ No /___/

Facilities required: No. of Classrooms /___/ No. of other rooms /___/

Type of Construction:

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY 32 (e)

Territory/Country: Dominica Date of Visit: 15/2/1979

Name & Type of School: Portsmouth: Primary School Reference No: 301/5

Location: (See Sketch No:)

Description of Existing School

Current Enrolment: 467 No. of Classes: 13 Overcrowded: Yes /x/ No /___/

Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't know /___/

Approximate age of facilities: 24 years

General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/x/ Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt-owned /x/ Govt will buy/___/ Rural/x/ Urban/___/

Within walking distance /x/ Access Road required /x/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Facilities required: No. of Classrooms /3/ No. of other rooms /3/

Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /___/ High /___/ Medium /x/ Low /___/

Shift system in operation

NO DATA AVAILABLE

39a

GRENADA

61° 40' W
MILES
KILOMETRES
Sauteurs
Grenada Bay
CARIBBEAN
Victoria
Charlotte Town
Grand Roy's
Grenville
Willis
ST. GEORGE'S
St. David's
CARIBBEAN
SEA
61° 40' W

D. GRENADA

Specific Conditions

Grenada shares some topographical features and related transportation problems with Dominica. The country is mountainous and has a minimal number of completed highways.

School sites were particularly small and very often located in extremely steep and difficult areas. The country has many schools needing repair and replacement.

This territory is orienting its educational policy to the junior secondary school concept, and emphasis is being placed on providing facilities at this level. There are, however, a number of primary schools that urgently need to be rehabilitated, extended and replaced. Some buildings surveyed by the Team have reached such a stage of deterioration that they should be demolished. It was noted also that, over the years, insufficient attention has been paid to termite control. One school, Grand Roy Government, is a sound stone structure, but the roofs of the main building and the Industrial Arts Shop are termite-infested. Similar conditions were seen at other schools.

In selecting schools for assistance under the proposed AID programme, the Team was guided by the conditions it observed, especially at Corinth, which is virtually uninhabitable; Florida, which is structurally unsafe; and St Mark's Anglican School which, among others, is in a very serious state of disrepair. The Team also observed an inadequate water supply in many schools, and the consequent malfunctioning of toilet facilities.

Priority Ratings/Cost Estimates

After examining all of the Grenada data, the School Construction Survey Team recommends that the four projects identified by Grenada as its top priority primary school needs be rated as indicated in the following table.

TABLE 401D

GRENADA

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrolment	Square Feet /Student	Square Feet /School	Estimated Unit Cost per sq. ft.	Estimated Project Cost in US$'000 New Buildings	Rehabilitation	Extension	Total
1	Florida	300	18	6,000	22	129	-	-	129
2	Corinth	400	18	10,200	22	228	-	-	228
3	Grand Roy	400	-	-	-	-	111	-	111
4	St. Mark's	200	-	6,200	35	218	-	-	218
5	South St. George	500	-	-	-	-	8	154	162
6	River Sallee	370	-	-	-	-	61	-	61
TOTAL						575	180	154	909

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Grenada
Date of Visit: 23/ 2/1979
Name & Type of School: Florida: Primary
School Reference No. 401/1
Location:
(See Sketch No: 401/1)

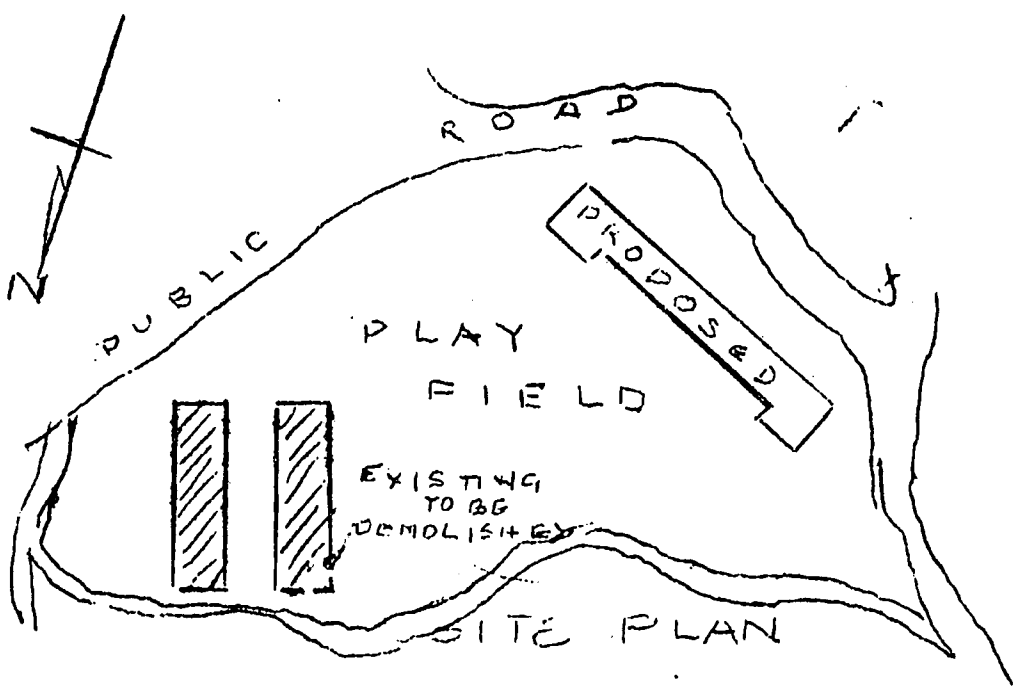
Description of Existing School

Current Enrolment: 200 No. of Classes: 7 Overcrowded: Yes /x/ No /__/
Enrolment from local area is: Increasing /x/ Decreasing /__/ Don't Know /__/
Approximate age of facilities: 9 years
General condition of facilities: Excellent/__/ Good/__/ Poor/__/ Unsatisfactory/x/
Availability of Water: Yes /x/ No /__/ Electricity: Yes /x/ No /__/
Maintenance is performed by: Public Works /x/ Ministry of Education /__/ Other /__/
Maintenance Performance Rating: Low /x/ Medium /__/ High /__/

Details of Proposed School

Site: Adequate: Yes/x/ No/__/ Govt Owned/x/ Govt will buy/__/ Rural/x/ Urban/__/
Within walking distance /x/ Access Road required /__/
Availability of Water: Yes /x/ No /__/ Electricity: Yes /x/ No /__/
Facilities required: No. of Classrooms /7/ No. of other rooms /3/
Type of Construction: Reinforced Concrete; wood; metal roof

PRIORITY RATING: Very High /__/ High /x/ Medium /__/ Low /__/



FLORIDA PRIMARY - PROPOSED NEW SCHOOL

SKETCH NO: 401/1
SCALE: 1:1250

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Grenada
Date of Visit: 23/2/1979
Name & Type of School: Corinth: Primary
School Reference No: 401/2
Location:
(See Sketch No: 401/2)

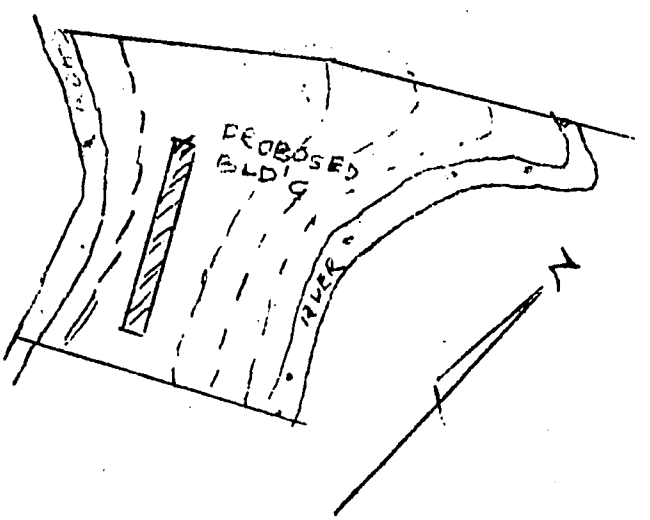
Description of Existing School

Current Enrolment: 265 No. of Classes: 8 Overcrowded: Yes /x/ No /___/
Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't Know /___/
Approximate age of facilities: 50 + Years (new school)
General condition of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/x/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Maintenance is performed by: Public Works /x/ Ministry of Education /___/ Other /___/
Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/Govt owned /x/ Govt will buy/___/ Rural/x/ Urban/___/
Within walking distrance /x/ Access Road required /No/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /13/ No. of other rooms /3/
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /x/ High /___/ Medium /___/ Low /___/



SITE PLAN

CORINTH PRIMARY - PROPOSED NEW SCHOOL

SKETCH NO: 401/2
SCALE: 1:2500

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Grenada
Date of Visit: 23/2/1979
Name & Type of School: Grand Roy
School Reference No: 401/3
Location:
(See Sketch No:)

Description of Existing School

Current enrolment: 400 No. of Classes: 14 Overcrowded: Yes/___/ No /x/
Enrolment from local area is: Increasing /___/ Decreasing /___/ Don't know /x/
Approximate age of facilities: 32 years
General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/x/ Ministry of Education/___/ Other/___/
Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/___/ No/___/ Govt owned/___/ Govt will buy/___/ Rural/___/ Urban/___/
Within walking distance /___/ Access Road required /___/
Availability of Water: Yes /___/ No /___/ Electricity: Yes /___/ No /___/
Facilities required: No. of Classrooms /___/ No. of other rooms /___/
Type of Construction:

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

Water supply is intermittent. Reflected in the condition of sanitary facilities.

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Grenada
Date of Visit: 23 / 2 /1979
Name & Type of School: St. Mark's Primary
School Reference No: 401/4
Location:
(See Sketch No.:)

Description of Existing School

Current Enrolment: 138 No. of Classes: 4 Overcrowded: Yes /x/ No /___/
Enrolment from local area is: Increasing /___/ Decreasing /___/ Don't Know /___/
Approximate age of facilities: 50+ years
General condiiton of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/x/
Availability of Water: Yes /___/ No /___/ Electricity: Yes /___/ No /___/

Maintenance is performed by: Public Works /___/ Ministry of Education /___/ Other /___/
Maintenance Performance Rating: Low /___/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes /x/ No /___/ Govt owned /x/ Govt will buy/___/ Rural/x/ Urban/___/
Within walking distance /x/ Access Road required /___/
Availability of Water: Yes /x/ No /___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /7/ No. of other rooms /3/
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY 36 (d)

Territory/Country: Grenada
Date of Visit: 23/ 2/1979
Name & Type of School: South St. George: Primary
School Reference No: 401/5
Location:
(See Sketch No: 401/5)

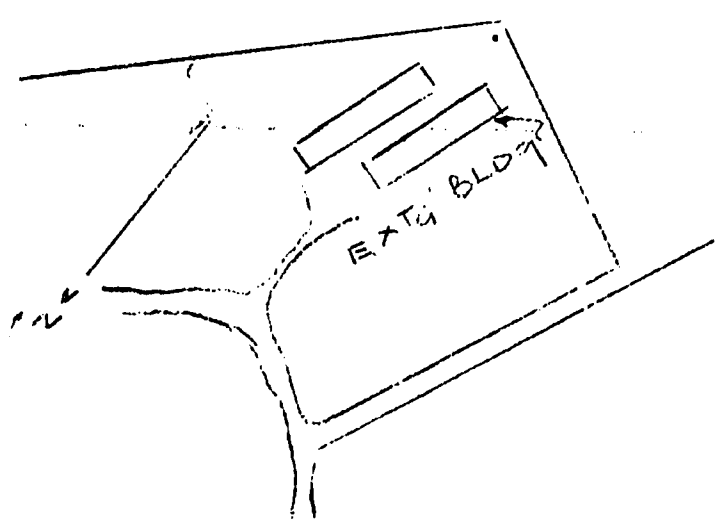
Description of Existing School

Current Enrolment: 320* No. of Classes: 5 Overcrowded: Yes/ x / No / /
Enrolment from local area is: Increasing/ x / Decreasing/ / Don't Know / /
Approximate age of facilities: 11 years
General condition of facilities: Excellent/ / Good/ / Poor/ x / Unsatisfactory/ /
Availability of Water: Yes / x / No / / Electricity: Yes / x / No / /
Maintenance is Performed by : Public Works/ x / Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low / x / Medium / / High / /

Details of Proposed School

Site: Adequate: yes/ x / No/ / Govt owned/ x / Govt will buy/ / Rural/ / Urban/ x /
Withinwalking distance / x / Access Road required / x /
Availability of Water: Yes / x / No / / Electricity: Yes / x / No / /
Facilities required: No. of Classrooms / 7 / No. of other rooms / 2 /
Type of Construction: Reinforced Concrete; wood; metal roof
PRIORITY RATING: Very High / / High / / Medium / x / Low / /

*The enrolment is to be increased to 500.



SITE PLAN

SOUTH ST GEORGE PRIMARY - PROPOSED NEW SCHOOL

SKETCH NO: 401/5
SCALE: 1:1250

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Grenada

Date of Visit: 24/2/1979

Name & Type of School: River Sallee; Primary

School Reference No: 401/6

Location:

(See Sketch No:)

Description of Existing School (REhab.)

Current Enrolment: 370 No. of Classes: Overcrowded: Yes/___/ No /___/

Enrolment from local area is: Increasing /___/ Decreasing /___/ Don't Know /___/

Approximate age of facilities: 31 years

General condition of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/ x /

Availability of Water: Yes / x / No /___/ Electricity: Yes / x / No /___/

Maintenance is performed by: Public Works/ x / Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low / x / Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/___/ No /___/ Govt owned/___/ Govt will buy/___/ Rural/___/ Urban/___/

Within walking distance/___/ Access Road Required /___/

Availability of Water: Yes/___/ No /___/ Electricity: Yes /___/ No /___/

Facilities required: No. of Classrooms /___/ No. of other rooms /.../

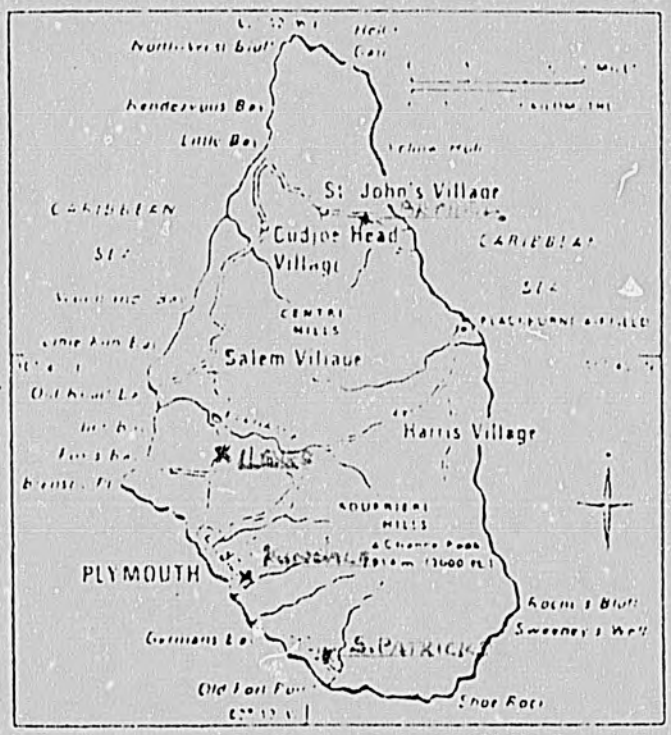
Type of Construction:

PRIORITY RATING: Very High /___/ High /___/ Medium / x / Low /___/

NO DATA AVAILABLE

47a

MONTSERRAT



E. MONTSERRAT

Specific Conditions

Montserrat is one of the smallest countries visited by the Team and has a low population. A coastal roadway around the island has not yet been completed, but a relatively good highway traverses the mountainous central portion of the island. School buses are used to transport children on this highway. The national economy seems to be as weak as any of those observed.

Some evidence of self-help was apparent in Montserrat; each of the schools reportedly has a PTA, and these PTAs have been assisting in securing funds to buy equipment such as pianos and refrigerators and, in some cases, PTAs have been redecorating buildings; the Ministry supplied the paint.

Level, adequate-sized sites are most difficult to find in this very mountainous country. School sites are therefore typically very small and are located on steep inclines.

A minimal lunch is being provided in the schools.

Montserrat is in the process of reorganising its educational system to accommodate the junior secondary school concept. The programme is about two-thirds complete, but some of the feeder schools need to be upgraded to provide the supporting educational programmes at the primary level as well as to relieve congestion. Construction of a new primary school at Bethel and rehabilitation and extensions to others, as recommended by the Team, are necessary to assist in meeting some of the requirements.

Housing development schemes are in progress at Lees and Kinsale, where school extension facilities have been recommended, and therefore school population growth may be expected.

A commendable standard of maintenance was observed throughout the country.

Priority Ratings/Cost Estimates

After examining all the Montserrat data, the School Construction Survey Team recommends that the four projects identified by Montserrat as its top priority primary school needs be rated as indicated in the following table.

TABLE 50IE

MONTSERRAT

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrolment	Square Feet /Student	Square Feet /School	Estimated Unit Cost per sq. ft.	Estimated Project Cost in US$'000			
						New Buildings	Rehabili-tation	Extension	Total
					US$				
1	Bethel	375	18	20,000	26*	536			536
2	St. Patrick's	73	18	1,314			48	47	95
3	Kinsale	204	18	3,672			67	44	111
4	Lees	136	18	2,443			145	43	188
TOTAL						536	260	134	930

* Cost includes unusual earth works, retaining walls and access roads.

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Montserrat — Date of Visit: 6-7/2/1979

Name & Type of School: Bethel: Primary — School Reference No: 501/1

Location: — (See Sketch No: 501/1)

Description of Existing School (Old School)

Current Enrolment: 192 No. of Classes: 7 Overcrowded: Yes /___/ No /x/

Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't Know /___/

Approximate age of facilities: Years

General condition of facilities: Excellent /___/ Good /___/ Poor /x/ Unsatisfactory /___/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/x/ Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low /___/ Medium /x/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt will buy/___/ Rural/x/ Urban/___/

Within walking distance /x/ Access Road required /___/

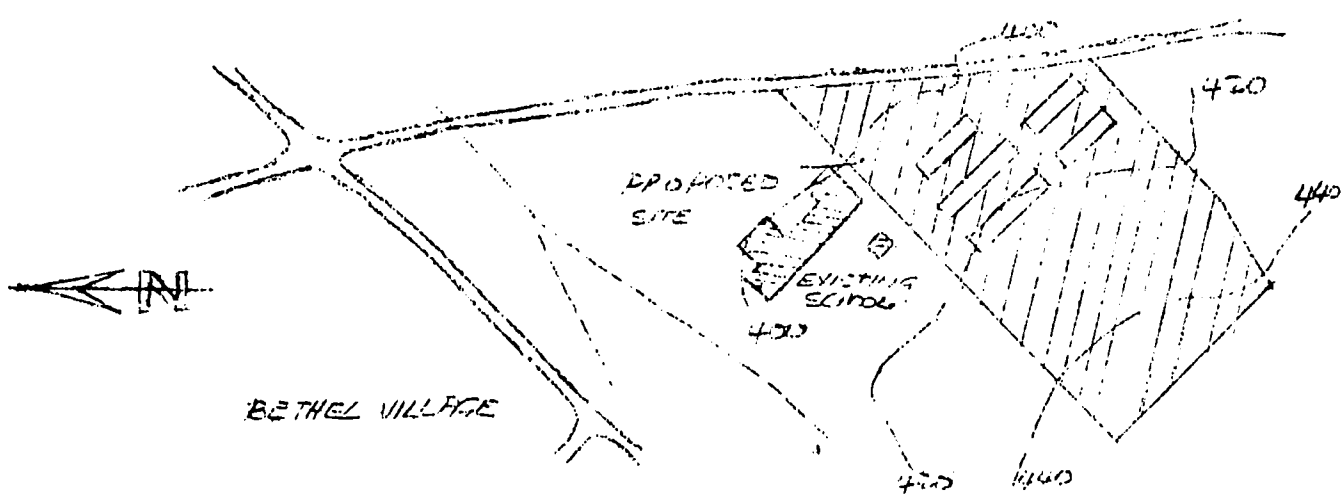
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Facilities required: No. of classrooms /8/ No. of other rooms /3/

Type of Construction: Reinforced Concrete; wood; metal roof.

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

The new school is needed to replace the existing school which is being converted into a Junior Secondary School.



TITLE BETHEL — SCALE 1/2500

PROPOSED NEW SCHOOL — SKETCH No 501/1

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Montserrat
Date of Visit: 7/ 2/1979
Name & Type of School: St. Patrick's: Primary
School Reference No: 501/2
Location:
(See Sketch No. 501/2)

Description of Existing School (Rehab. & Extension)

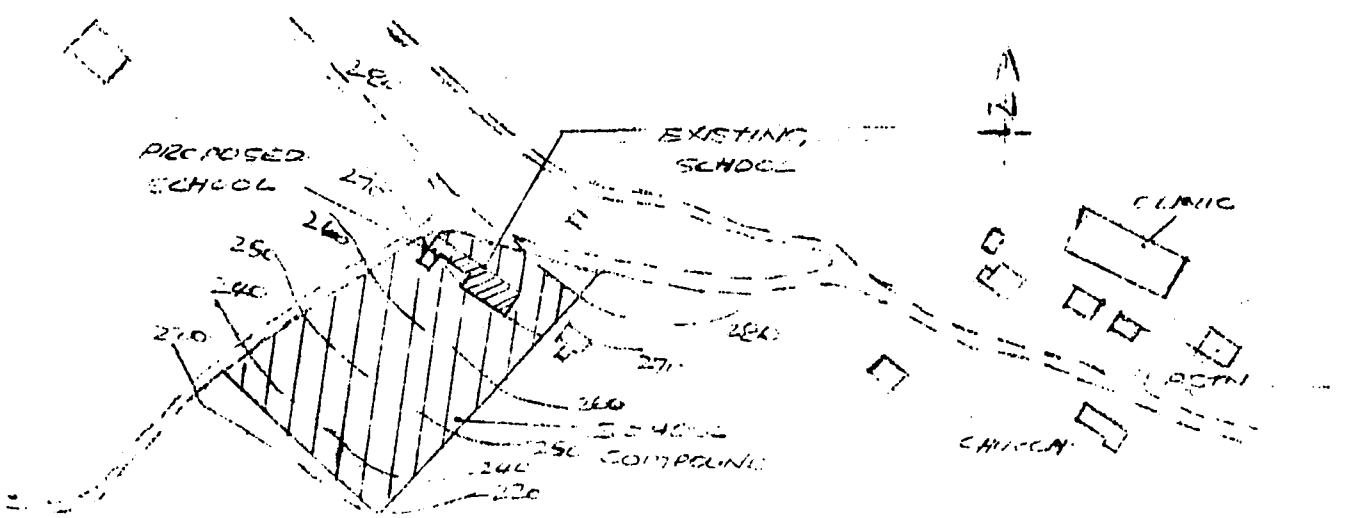
Current Enrolment: 73 No. of Classes: 4 Overcrowded: Yes /___/ No /x/
Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't Know /___/
Approximate age of facilities: Years
General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Maintenance is performed by: Public Works /x/ Ministry of Education /___/ Other /___/
Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No /___/ Govt owned /x/ Govt will buy /___/ Rural /x/ Urban /___/
Within walking distance /x/ Access Road required /___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /___/ No. of other rooms /3/
Type of Construction: Reinforced concrete; wood; metal roof - Rehab.

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

A verandah is to be added at playground side; 225 ft. retaining walls; 90 ft. apart



TITLE ST PATRICKS SCHOOL
REHABILITATION

SCALE 1/10,000
SKETCH No 501/2

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Montserrat — Date of Visit: 7/ 2 /1979

Name & Type of Schoc Kinsale: Primary — School Reference No: 501/3

Location: — (See Sketch No: 501/3)

Description of Existing School

Current Enrolment: 204 No. of Classes: 7 Overcrowded: Yes /x/ No /___/

Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't Know /___/

Approximate age of facilities: 22 years

General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/x/ Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low /x/ Medium /___/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt will buy/___/ Rural/x/ Urban/___/

Within walking distance /x/ Access Road required /___/

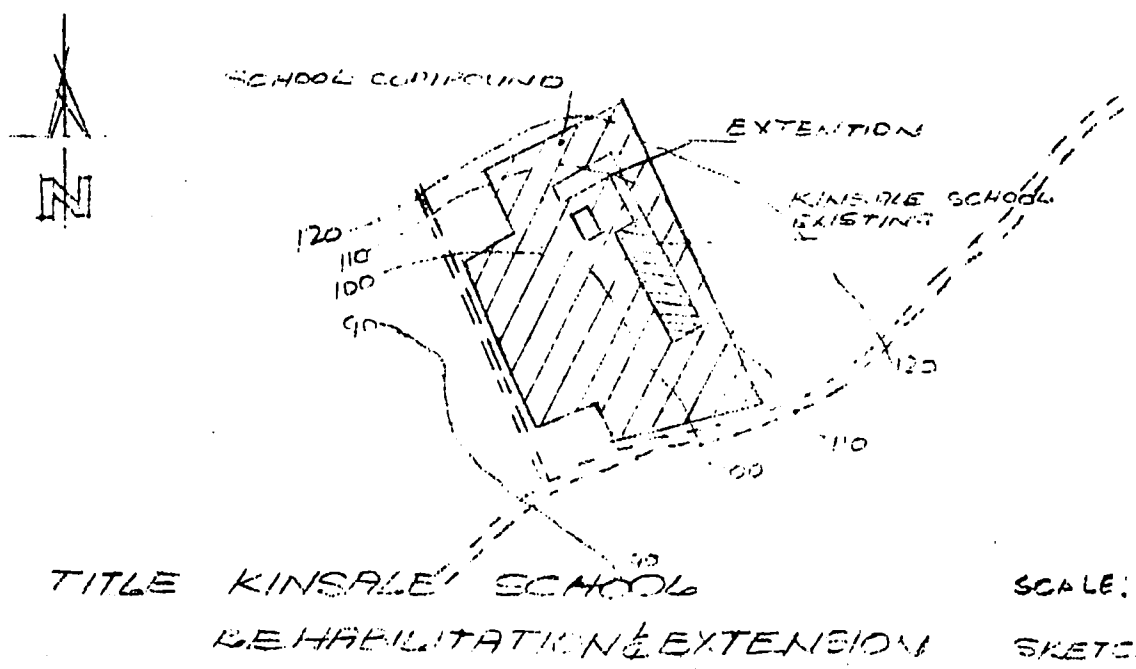
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Facilities required: No. of Classrooms /3/ No. of other rooms /___/

Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

Rehab. and extension



TITLE KINSALE SCHOOL REHABILITATION & EXTENSION

SCALE: 1:10,000

SKETCH No 501/3

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: Montserrat
Name & Type of School: Lees: Primary
Location:

Date of Visit: 7/2/1979
School Reference No: 501/4
(See Sketch No. 501/4)

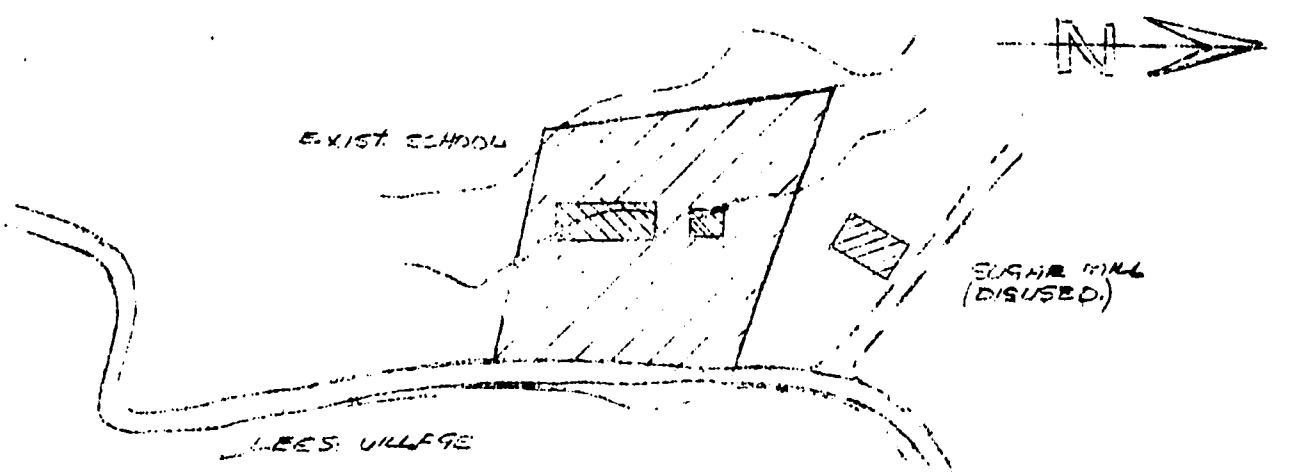
Description of Existing School

Current Enrolment: 134 No. of Classes: 6 Overcrowded: Yes /x/ No /__/
Enrolment from local area is: Increasing /x/ Decreasing /__/ Don't Know /__/
Approximate age of facilities: 12 years
General condition of facilities: Excellent/__/ Good/__/ Poor/x/ Unsatisfactory/__/
Availability of Water: Yes /x/ No /__/ Electricity: Yes /x/ No /__/
Maintenance is performed by: Public Works /x/ Ministry of Education /__/ Other /__/
Maintenance Performance Rating: Low /x/ Medium /__/ High /__/

Details of Proposed School

Site: Adequate: Yes/x/ No/__/ Govt owned/x/ Govt will buy/__/ Rural/x/ Urban/__/
Within walking distance /x/ Access Road required /__/
Availability of Water: Yes /x/ No /__/ Electricity: Yes /x/ No /__/
Facilities required: No. of Classrooms /2/ No. of other rooms /__/
Type of Construction: Reinforced Concrete; wood; metal roof - Rehab. and extension.

PRIORITY RATING: Very High /__/ High /x/ Medium /__/ Low /__/



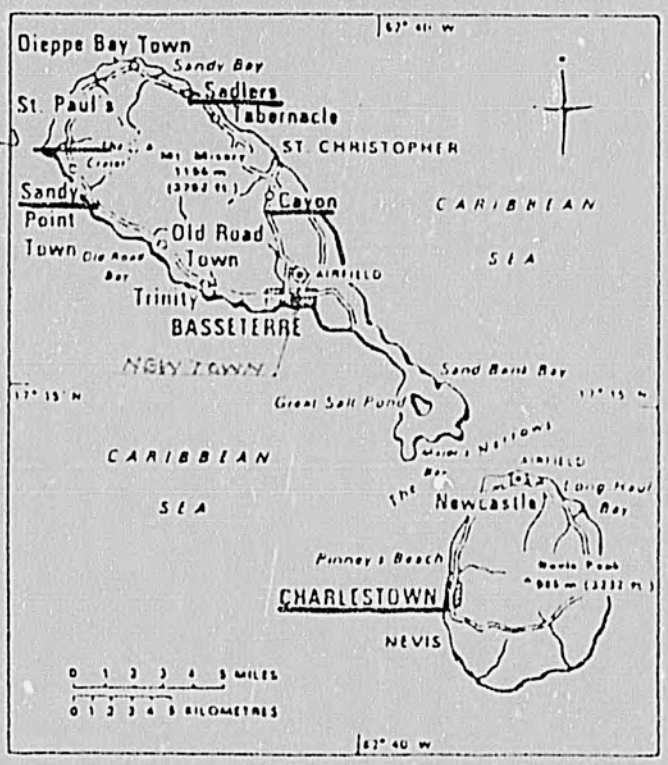
TITLE: LEES SCHOOL
REHABILITATION & EXTENSION.

SCALE: 1/10,000
SKETCH No. 501/4

53w

ST. CHRISTOPHER

NEVIS



F. ST KITTS/NEVIS/ANGUILLA

Specific Conditions

St Kitts/Nevis/Anguilla appeared to be further behind the other LDCs in converting its school system from Church-housed classes to Government-housed classes; that is to say, more students were observed attending classes in Church-owned buildings (leased or rented to the Government) than were observed in other countries. Some of these Church property conditions were virtually intolerable, large numbers of children being severely crowded into extremely obsolete, unhealthy, unsafe, unconstructive environments.

St Kitts also clearly illustrates the problems associated with a multi-island country. The lesser islands (Nevis, for example) complain constantly of less than their fair share in the country's Annual Budget for educational purposes (for example, school construction and maintenance).

The amount provided for the maintenance of schools is inadequate. Any one of the structures recommended for rehabilitation would require much more than the total Government provision over a two or three year period. The Survey Team feels, in the specific recommendations made for this territory, that arresting the deterioration would give the Government the opportunity to concentrate on the repair of smaller units and reduce the general state of dilapidation. It would also enable the Ministry of Education to plan a methodical system of maintenance for the future.

In the case of new schools, total needs have been identified, but the Team considers the situation at Charlestown, Nevis, as pressing and should, if possible, be considered as a special case.

Priority Ratings/Cost Estimates

After examining all of the St Kitts/Nevis/Anguilla data, the School Construction Survey Team recommends that the five projects identified by St Kitts/Nevis/Anguilla as its top priority primary school needs be rated as indicated in the following table.

TABLE 601F

ST. KITTS/NEVIS/ANGUILLA

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrolment	Square Feet /Student	Square Feet /School	Estimated Unit Cost per sq. ft.	Estimated Project Cost in US$'000			
						New Buildings	Rehabili-tation	Extension	Total
					US$				
1	Sadler's	422	18				50		50
2	Charlestown	420	18	9,400	23	266			266
3	Sandy Point	320	18	14,000	26	361			361
4	Cayon	500	18				60	152	212
5	Newtown	490	18				40	74	114
TOTAL						627	150	226	1,003

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Kitts/Nevis/Anguilla — Date of Visit: 2/2/1979

Name & Type of School: Sadler's Primary — School Reference No: 601/1

Location: — (See Sketch No:601/1)

Description of Existing School

Current Enrolment: 422 No of Classes: 17 Overcrowded: Yes/___/ No/___/

Enrolment from local area is: Increasing/___/ Decreasing/___/ Don't know/___/

Approximate age of facilities: 15 years

General condition of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/ x /

Availability of Water: Yes/ x / No/___/ Electricity: Yes/ x / No/___/

Maintenance is performed by: Public Works/ x / Ministry of Education/___/ Other/___/

Maintenance Performance Rating: Low/ x / Medium/___/ High/___/

Details of Proposed School

Site: Adequte: Yes/___/ No/___/ Govt owned/___/ Govt will buy/___/ Rural/___/ Urban/___/

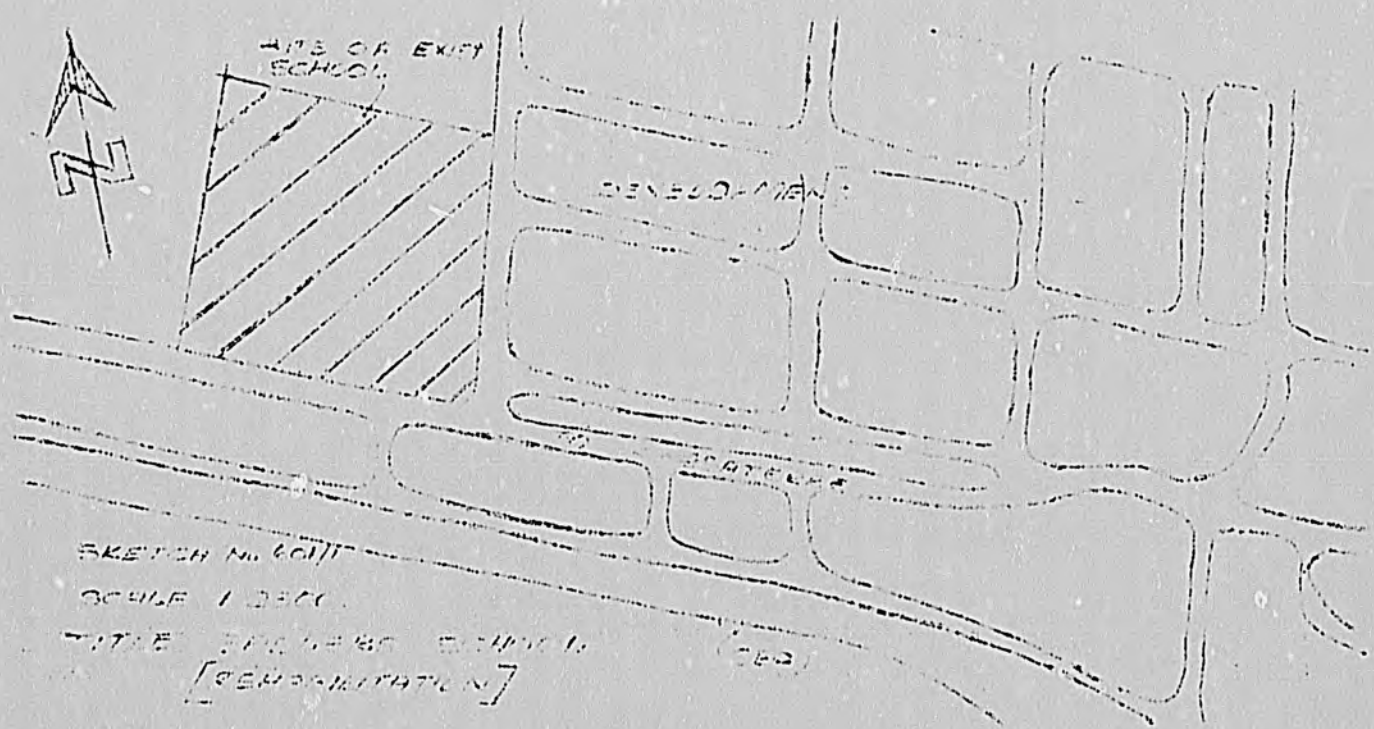
Within walking distance/___/ Access Road required/___/

Facilities required: No of Classrooms/___/ No of other rooms/___/

Type of Contruction:

Rehab.

PRIORITY RATING: Very High/___/ High/ x / Medium/___/ Low/___/



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Kitts/Nevis/Anguilla — Date of Visit: 3/2/1979

Name & Type of School: Charlestown - Primary (New) — School Reference No: 601/2

Location: — (See Sketch No: 601/2)

Description of Existing School

Current Enrolment: 184 No of Classes: 8 Overcrowded: Yes/ x / No/ /

Enrolment from local area is: Increasing/ / Decreasing/ / Don't know/ /

Approximate age of facilities: years

General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ x /

Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /

Maintenance is performed by: Public Works/ / Ministry of Education/ / Other/ x /

Maintenance Performance Rating: Low/ x / Medium/ / High/ /

Details of Proposed School

Site: Adequate: Yes/ x / No/ / Govt owned/ x / Govt will buy/ / Rural/ / Urban/ x /

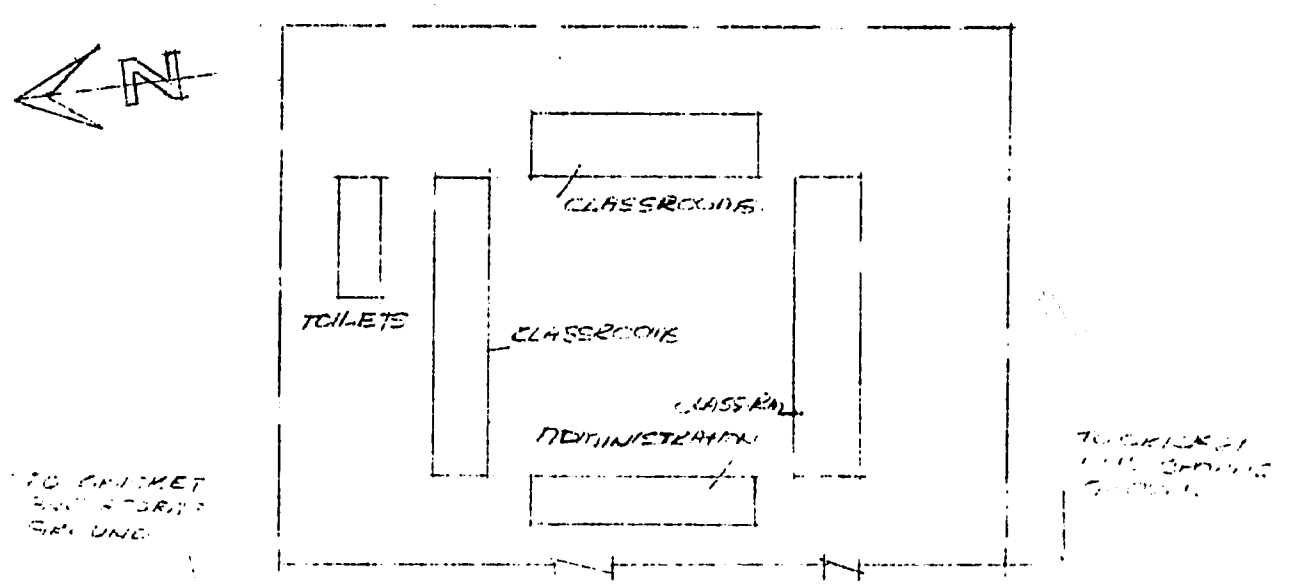
Within walking distance/ x / Access Road required/ /

Availability of Water: Yes / x / No / / Electricity: Yes / x / No / /

Facilities required: No. of Classrooms / 12 / No. of other rooms / 2 /

Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High/ x / High/ / Medium/ / Low/ /



TITLE PROPOSED CHARLESTOWN BOYS AND GIRLS SCHOOL SITE LAYOUT

SCALE 1/8" = 10'0

SKETCH No 601/2

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Kitts/Nevis/Anguilla
Date of Visit: 2/2/1979
Name & Type of School: Sandypoint Primary
School Reference No: 601/3
Location:
(See Sketch No: 601/3)

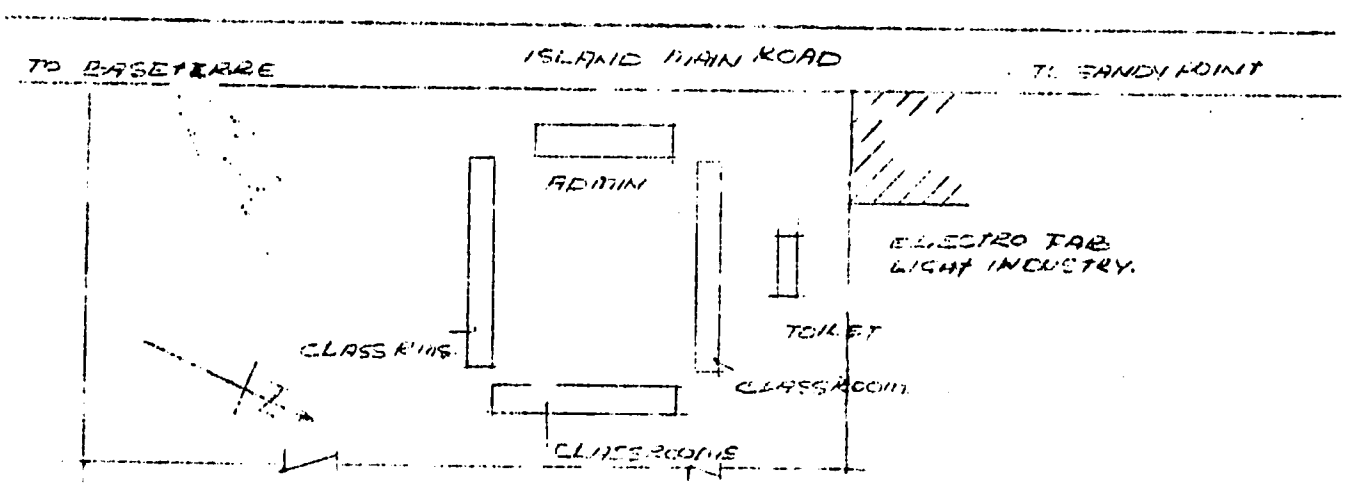
Description of Existing School

Current Enrolment: 354 No of Classes: 13 Overcrowded: Yes/ x / No/ /
Enrolment from local area is: Increasing/ x / Decreasing/ / Don't know/ /
Approximate age of facilities: 51 Years
General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ x /
Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /
Maintenance is performed by: Public Works/ x / Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/ x / Medium/ / High/ /

Details of Proposed School

Site: Adequate: Yes/ x / No/ / Govt owned/ x / Govt will buy/ / Rural/ x / Urban/ /
Within walking distance/ x / Access Road required/ x /
Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /
Facilities required: No of Classrooms/ 20 / No of other rooms/ 2 /
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High/ / High/ x / Medium/ / Low/ /



TITLE PROPOSED SANDY POINT JUNIOR SCHOOL SITE LAYOUT

SCALE 1/8" = 20'0"
SKETCH No 601/3

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Kitts/Nevis/Anguilla
Date of Visit: 2/2/1979
Name & Type of School: Canyon Primary
School Reference No: 601/4
Location:
(See Sketch No: 601/4)

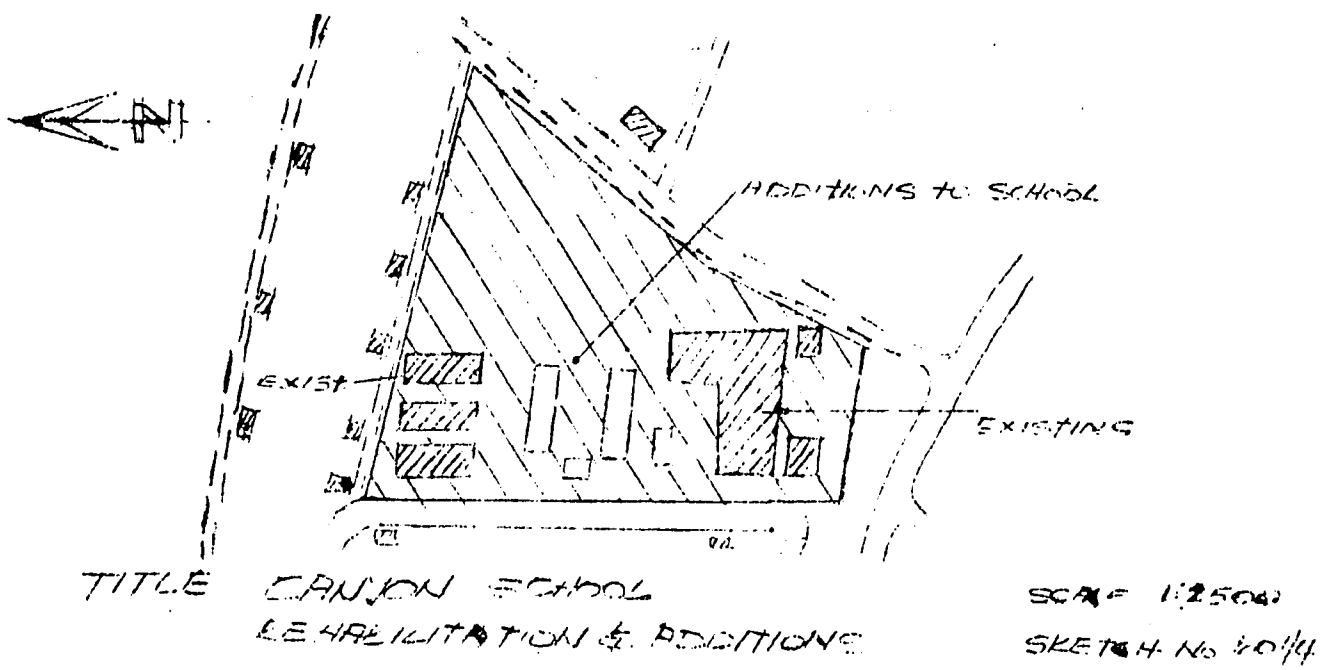
Description of Existing School

Current Enrolment: 500 No of Classes: Overcrowded: Yes/ x / No/ /
Enrolment from local area is: Increasing/ / Decreasing/ / Don't know/ /
Approximate age of facilities: 32 Years
General condition of facilities: Excellent/ / Good/ / Poor/ / Unsatisfactory/ x /
Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /
Maintenance is performed by: Public Works/ x / Ministry of Education/ / Other/ /
Maintenance Performance Rating: Low/ x / Medium/ / High/ /

Details of Proposed School

Site: Adequate: Yes/ x / No/ / Govt owned/ x / Govt will buy/ / Rural/ x / Urban/ /
Within walking distance/ x / Access Road required/ x /
Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /
Facilities required: No of Classrooms/ 5 / No of other rooms/ 3 /
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High/ / High/ x / Medium/ / Low/ /



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Kitts/Nevis/Anguilla
Date of Visit: 2/2/1979
Name & Type of School: Newtown: Primary
School Reference No: 601/5
Location:
(See Sketch No: 601/5)

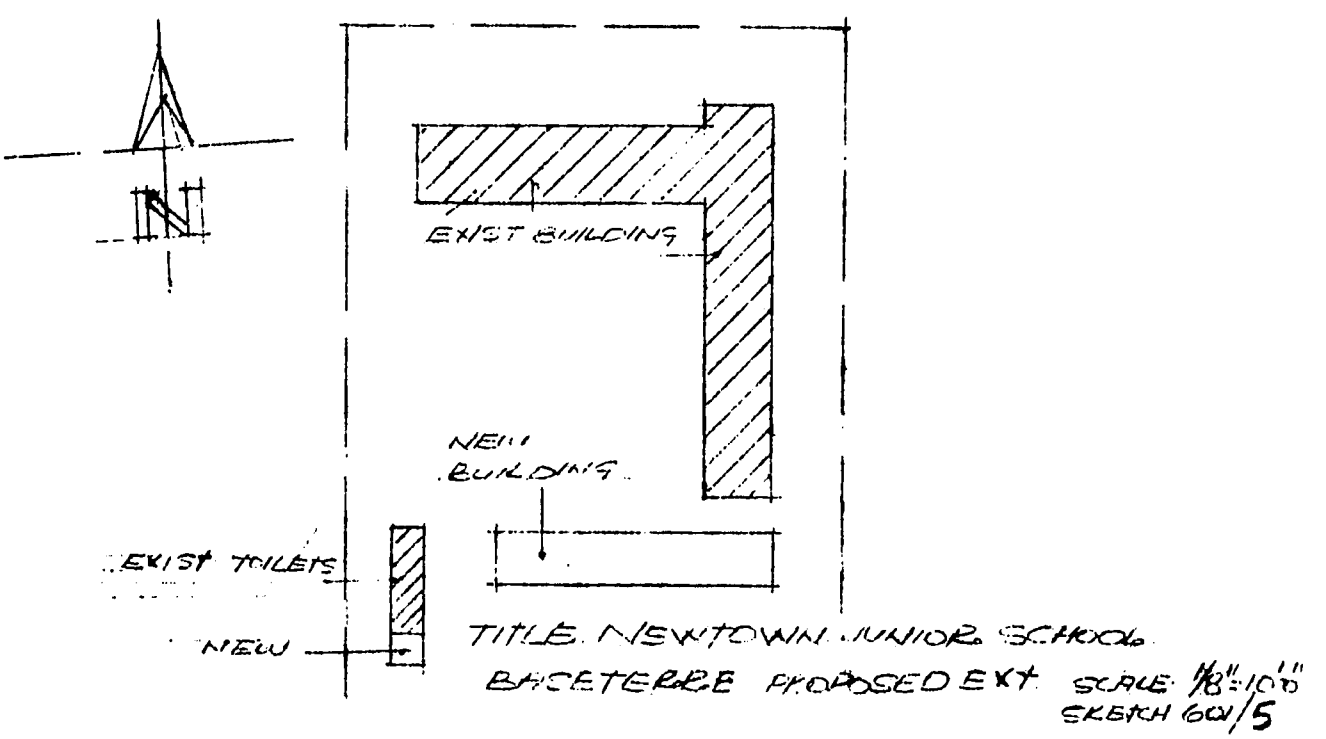
Description of Existing School

Current Enrolment: 498 No of Classes: 9 Overcrowded: Yes/ x / No/ ___ /
Enrolment from local area is: Increasing/ ___ / Decreasing/ ___ / Don't know/ ___ /
Approximate age of facilities: 14 Years
General condition of facilities: Excellent/ ___ / Good/ ___ / Poor/ x / Unsatisfactory/ ___ /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ x / No/ ___ /
Maintenance is performed by: Public Works/ x / Ministry of Education/ ___ / Other/ ___ /
Maintenance Performance Rating: Low/ x / Medium/ ___ / High/ ___ /

Details of Proposed School

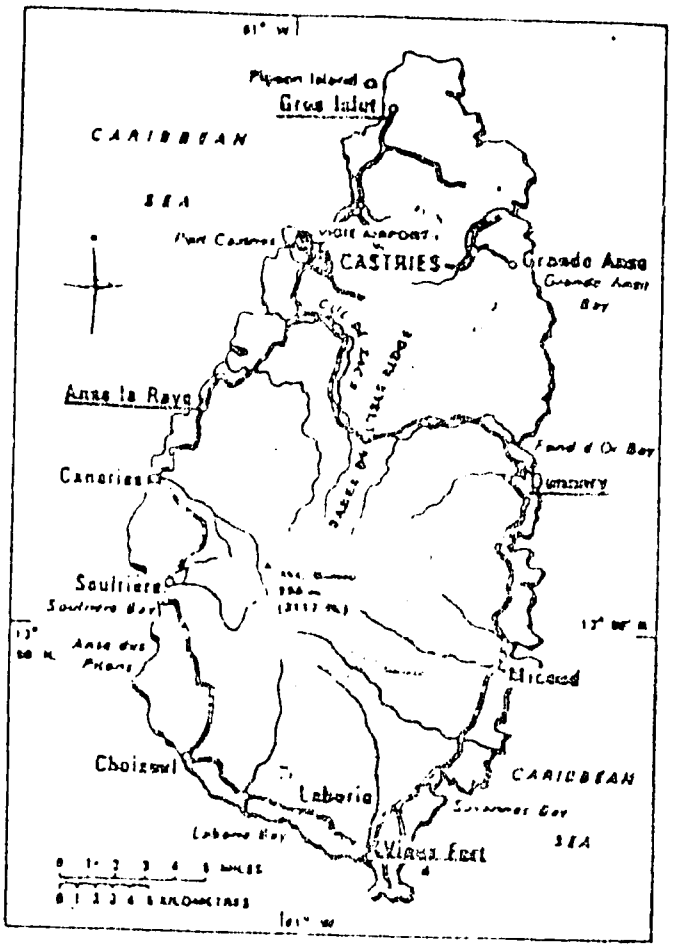
Site: Adequate: Yes/ x / No/ ___ / Govt owned/ x / Govt will buy/ ___ / Rural/ ___ / Sub-Urban/ x /
Within walking distance/ x / Access Road required/ x /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ x / No/ ___ /
Facilities required: No of Classrooms/ 1 / No of other rooms/ 3 /
Type of Construction: Reinforced concrete; wood; metal roof
Rehab. and extension

PRIORITY RATING: Very High/ ___ / High/ ___ / Medium/ x / Low/ ___ /



600

ST. LUCIA


Gros Islet
CARIBBEAN
SEA
CASTRIES
Grande Anse
Anse la Raye
Canaries
Soufriere
Choiseul
Laborie
Vieux Fort
Micoud
CARIBBEAN
SEA

G. ST LUCIA

Specific Conditions

Educationally, St Lucia seems to be a little more developed than most of the other seven LDCs visited. The Ministry of Education employs an educational planning professional person (UNESCO-trained), who seems to do a better-than-average job of maintaining educational facilities, statistics and studies. The schools appear to be a little better maintained than in the other countries, except Montserrat, but this should not be interpreted to mean that they are in any way adequately maintained. The country also relies on a small amount of self-help activities, especially in the school facility and community development centres. Very few vibrant PTAs apparently exist, but some school maintenance and school furniture design assistance is given by the country's Technical College. Again, these are minimal efforts, but at least they represent attempts in the right direction.

In St Lucia, there is a Director of Maintenance (attached to the Ministry of Education), who is housed at the Technical College. The Church authorities also make arrangements for minor repairs to their schools and receive technical and financial assistance from Government.

The self-help principle is in operation and is not restricted to the mere raising of funds for specific purposes. Two outstanding self-help school building projects at Belle Vue and Tiroche were inspected and, except for the toilet facilities and water storage, the buildings are a credit to those who were involved in their construction. The Team was impressed with the procedures outlined for the management of resources and the supervision of the self-help projects.

ST LUCIA

In making recommendations for assistance under the proposed AID programme, the Team is satisfied that the Roman Catholic building at Ans-la-Raye is unsuitable for educational purposes and should be replaced by a new building on the site that has been identified. The village of Augier caters to a large school population, but the amenities are inadequate and the property needs complete refurbishing. Gros Islet School has a serious drainage problem; the building needs redecoration and improvements to the eaves to keep the rain out. Dennery School has a similar drainage problem and needs rehabilitation and extension as well.

Priority Ratings/Cost Estimates

After examining all of the St Lucia data, the School Construction Survey Team recommends that the five projects identified by St Lucia as its top priority primary school needs be rated as indicated in the following table.

TABLE 701G

ST. LUCIA

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrolment	Square Feet /Student	Square Feet /School	Estimated Unit Cost per sq. ft.	Estimated Project Cost in US$'000 New Buildings	Rehabilitation	Extension	Total
1	Ans-la-Raye (Infants)	255	18	6,375	US$ 18	116			116
2	Augier	450	18				42	138	180
3	Dennery	300	18				43	142	185
4	Vieux Fort	300	18				46		46
5	Gros Islet	230	18				42		42
TOTAL						116	173	280	569

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Lucia
Date of Visit: 13/2/1979
Name & Type of School: Anse La-Raye Primary
School Reference No: 701/1
Location:
(See Sketch No: 701/1)

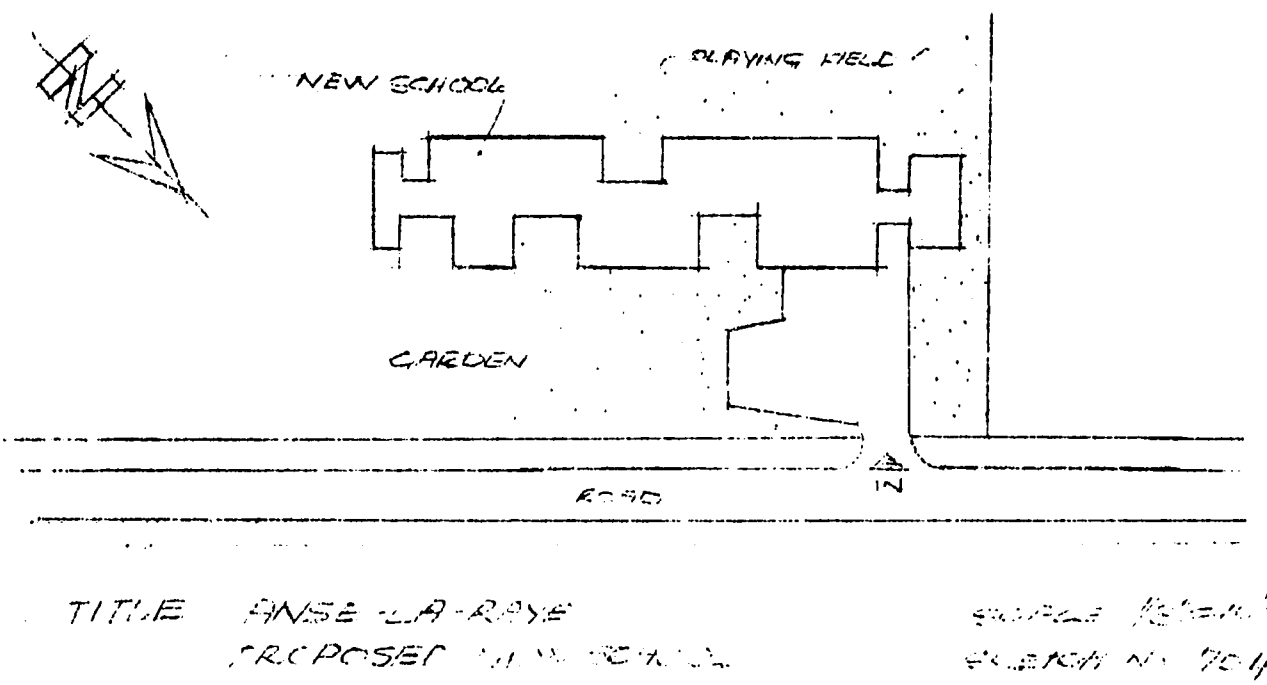
Description of Existing School

Current Enrolment: 255 No of Classes: 8 Overcrowded: Yes/ x / No/ ___ /
Enrolment from local area is: Increasing/ x / Decreasing/ ___ / Don't know/ ___ /
Approximate age of facilities: 70 Years
General condition of facilities: Excellent/ ___ / Good/ ___ / Poor/ ___ / Unsatisfactory/ x /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ x / No/ ___ /
Maintenance is performed by: Public Works/ x / Ministry of Education/ ___ / Other/ ___ /
Maintenance Performance Rating: Low/ x / Medium/ ___ / High/ ___ /

Details of Proposed School (New)

Site: Adequate: Yes/ x / No/ ___ / Govt owned/ x / Govt will buy/ ___ / Rural/ x / Urban/ ___
Within walking distance/ x / Access Road required/ ___ /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ ___ / No/ ___ /
Facilities required: No of Classrooms/ 8 / No of other rooms/ 2 /
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High/ x / High/ ___ / Medium/ ___ / Low/ ___ /



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Lucia
Date of Visit: 13/2/1979
Name & Type of School: Augier Primary
School Reference No: 701/2
Location:
(See Sketch No: 701/2)

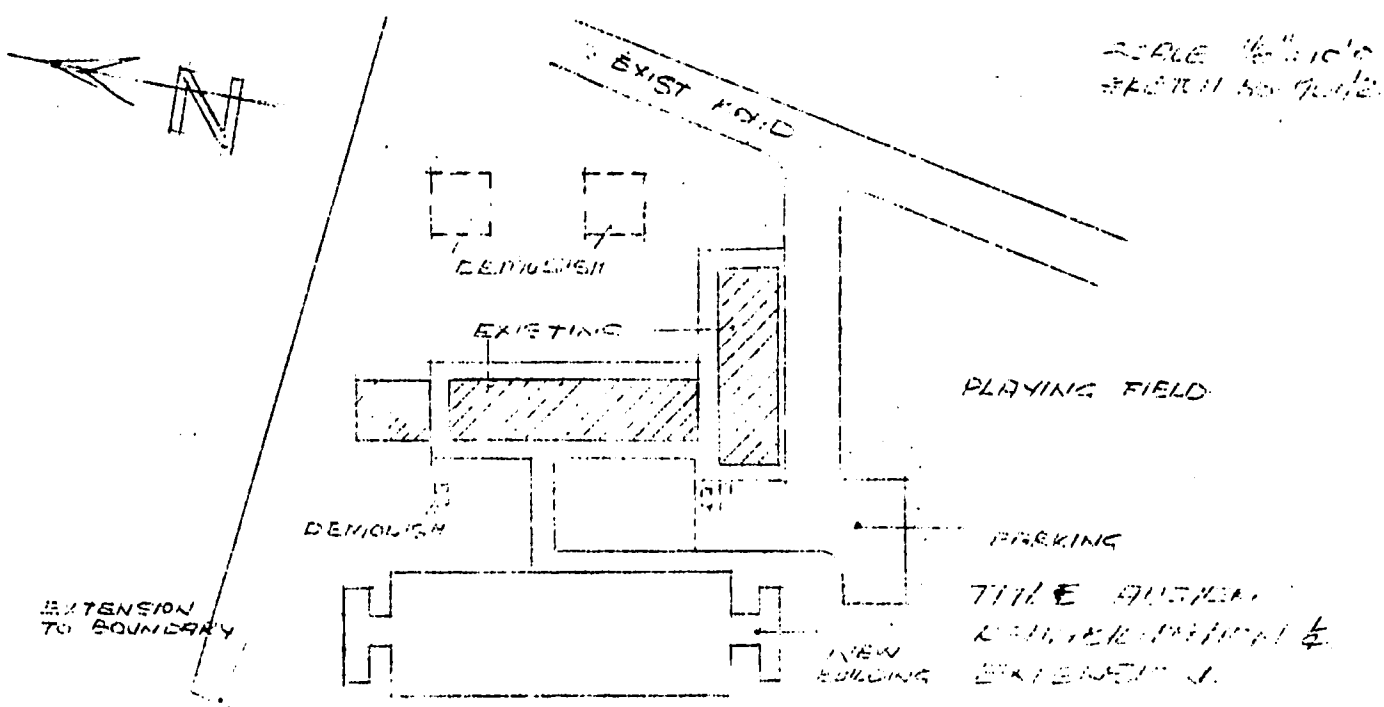
Description of Existing School

Current Enrolment: 450 No of Classes: 13 Overcrowded: Yes/ x / No/ ___ /
Enrolment from local area is: Increasing/ x / Decreasing/ ___ / Don't know/ ___ /
Approximate age of facilities: 20 + Years
General condition of facilities: Excellent/ ___ / Good/ ___ / Poor/ ___ / Unsatisfactory/ x /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ x / No/ ___ /
Maintenance is performed by: Public Works/ x / Ministry of Education/ ___ / Other/ ___ /
Maintenance Performance Rating: Low/ x / Medium/ ___ / High/ ___ /

Details of Proposed School

Site: Adequate: Yes/ x / No/ ___ / Govt owned/ x / Govt will buy/ ___ / Rural/ x / Urban/ ___
Within walking distance/ x / Access Road required/ x /
Availability of Water: Yes/ x / No/ ___ / Electricity: Yes/ x / No/ ___ /
Facilities required: No of Classrooms/ 6 / No of other rooms/ 3 /
Type of Construction: Reinforced Concrete; wood; metal roof - Rehab. & extension

PRIORITY RATING: Very High/ ___ / High/ x / Medium/ ___ / Low/ ___ /



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Lucia — Date of Visit: 13/2/1979

Name & Type of School: Dennery Primary — School Reference No: 701/3

Location: Dennery — (See Sketch No: 701/3)

Description of Existing School

Current Enrolment: 300 No of Classes: Overcrowded: Yes/ x / No/ /

Enrolment from local area is: Increasing/ x / Decreasing/ / Don't know/ /

Approximate age of facilities: Years

General condition of facilities: Excellent/ / Good/ / Poor/ x / Unsatisfactory/ /

Availability of Water: Yes/ x / No/ / Electricity: Yes / x / No / /

Maintenance is performed by: Public Works/ x / Ministry of Education/ / Other/ /

Maintenance Performance Rating: Low/ x / Medium/ / High/ /

Details of Proposed School

Site: Adequate: Yes/ x / No/ / Govt owned/ x / Govt will buy/ / Rural/ x / Urban/ /

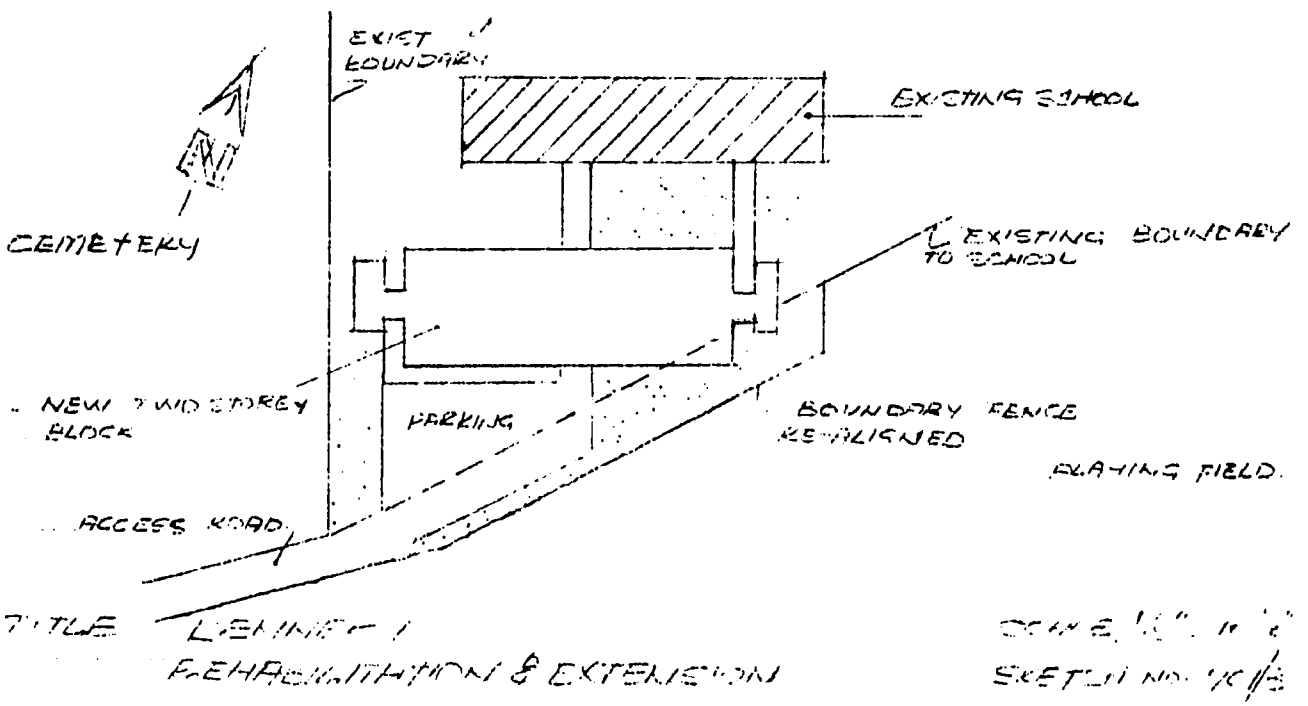
Within walking distance/ x / Access Road required/ /

Availability of Water: Yes/ x / No/ / Electricity: Yes/ x / No/ /

Facilities required: No of Classrooms/ 6 / No of other rooms/ 4 /

Type of Construction: Reinforced concrete; wood; metal roof - Rehab. & extension

PRIORITY RATING: Very High/ / High/ x / Medium/ / Low/ /



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Lucia
Date of Visit: 13/2/1979
Name & Type of School: Vieux Fort Primary
School Reference No: 701/4
Location:
(See Sketch No:)

Description of Existing School

Current Enrolment: No of Classes: Overcrowded: Yes/____/ No/____/
Enrolment from local area is: Increasing/_x_/ Decreasing/____/ Don't know/____/
Approximate age of facilities: Years
General condition of facilities: Excellent/____/ Good/____/ Poor/_x_/ Unsatisfactory/____/
Availability of Water: Yes/_x_/ No/____/ Electricity: Yes/_x_/ No/____/

Maintenance is performed by: Public Works/_x_/ Ministry of Education/____/ Other/____/
Maintenance Performance Rating: Low/_x_/ Medium/____/ High/____/

Details of Proposed School

Site: Adequate: Yes/____/ No/____/ Govt owned/____/ Govt will buy/____/ Rural/____/ Urban/____/
Within walking distance/____/ Access Road required/____/
Availability of Water: Yes/____/ No/____/ Electricity: Yes/____/ No/____/
Facilities required: No of Classrooms/____/ No of other rooms/____/
Type of Construction: Rehabilitation

PRIORITY RATING: Very High/____/ High/____/ Medium/_x_/ Low/____/

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Lucia
Date of Visit: 13/2/1979
Name & Type of School: Gros Islet
School Reference No: 701/5
Location:
(See Sketch No:)

Description of Existing School (Rehab)

Current Enrolment: 290 No. of Classes: 9 Overcrowded: Yes [x] No [ ]
Enrolment from local area is: Increasing [ ] Decreasing [ ] Don't know [ ]
Approximate age of facilities: 8 Years
General condition of facilities: Excellent [ ] Good [ ] Poor [x] Unsatisfactory [ ]
Availability of Water: Yes [x] No [ ] Electricity: Yes [x] No [ ]
Maintenance is performed by: Public Works [x] Ministry of Education [ ] Other [ ]
Maintenance Performance Rating: Low [x] Medium [ ] High [ ]

Details of Proposed School

Site: Adequate: Yes [ ] No [ ] Govt. owned [ ] Govt. will buy [ ] Rural [ ] Urban [ ]
Within walking distance [ ] Access Road required [ ]
Availability of Water: Yes [ ] No [ ] Electricity: Yes [ ] No [ ]
Facilities required: No. of Classrooms [ ] No. of other rooms [ ]
Type of Construction:

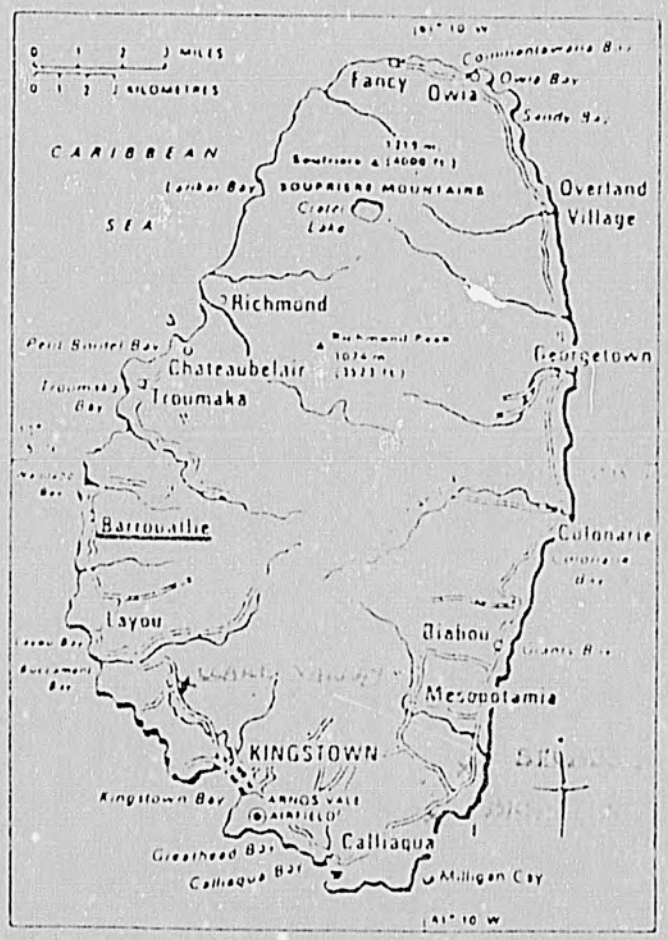
PRIORITY RATING: Very High [ ] High [ ] Medium [x] Low [ ]

Rehabilitation only

NO DATA AVAILABLE

68a

ST. VINCENT



H. ST VINCENT

Specific Conditions

Some of the schools are owned and also repaired by the Church, with the Government funding part of the money and giving technical assistance.

Instances of overcrowding and urgent need for maintenance were seen.

It is the policy of Government to provide all school plants when circumstances permit and it appears that the Church is eager to have the facilities vacated for Church purposes only.

Brighton, now currently housed in a Church and nearby wooden structure erected about eighty years ago, is recommended for replacement on a more adequate site. Stubbs is a fatigued and overcrowded building on a totally unsuitable site and is therefore recommended for replacement. Barrouallie and Clare Valley are situated in rapidly developing areas and are in need of urgent repairs and expansion.

Priority Ratings/Cost Estimates

After examining all of the St Vincent data, the School Construction Survey Team recommends that the four projects identified by St Vincent as its top priority primary school needs be rated as indicated on the following table.

TABLE 801H

ST. VINCENT

PRIORITIES/COST ESTIMATES

Priority Number	School	Enrolment	Square Feet /Student	Square Feet /School	Estimated Unit Cost per sq. ft.	Estimated Project Cost in US$'000			
						New Buildings	Rehabili-tation	Extension	Total
					US$				
1	Brighton Primary	420	18	10,500	21	217			217
2	Barrouallie	770	18	14,928			21	317	338
3	Stubbs	320	18	8,000	23	182			182
4	Clare Valley	320	18	5,400			25	182	207
TOTAL						399	46	499	944

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/School: St. Vincent
Name & Type of Schoo: Brighton: Primary
Location: Brighton

Date of Visit: 27/2/1979
School Reference No: 801/1
(See Sketch No:)

Description of Existing School Replacement and new school

Current Enrolment: 373* No. of Classes: 11 Overcrowded: Yes /x/ No /___/
Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't know /___/
Approximate age of facilities: 50 years
General condition of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/x/
Availability of Water: Yes/x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works/___/ Ministry of Education/___/ Other/___/
Maintenance Performance Rating: Low /___/ Medium /___/ High /___/

Details of Proposed School (New School)

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt willbuy/___/ Rural/x/ Urban/___/
Within walking distance /X/ Access Road requiped /___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /14/ No. of other rooms /3/
Type of Construction: Reinforced concrete; wood; metal roof.

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Vincent
Date of Visit: 28/2/1979
Name & Type of School: Barrouallie
School Reference No: 801/2
Location: Barrouallie
(See Sketch No: 801/2)

Description of Existing School (Rehab. & Extension)

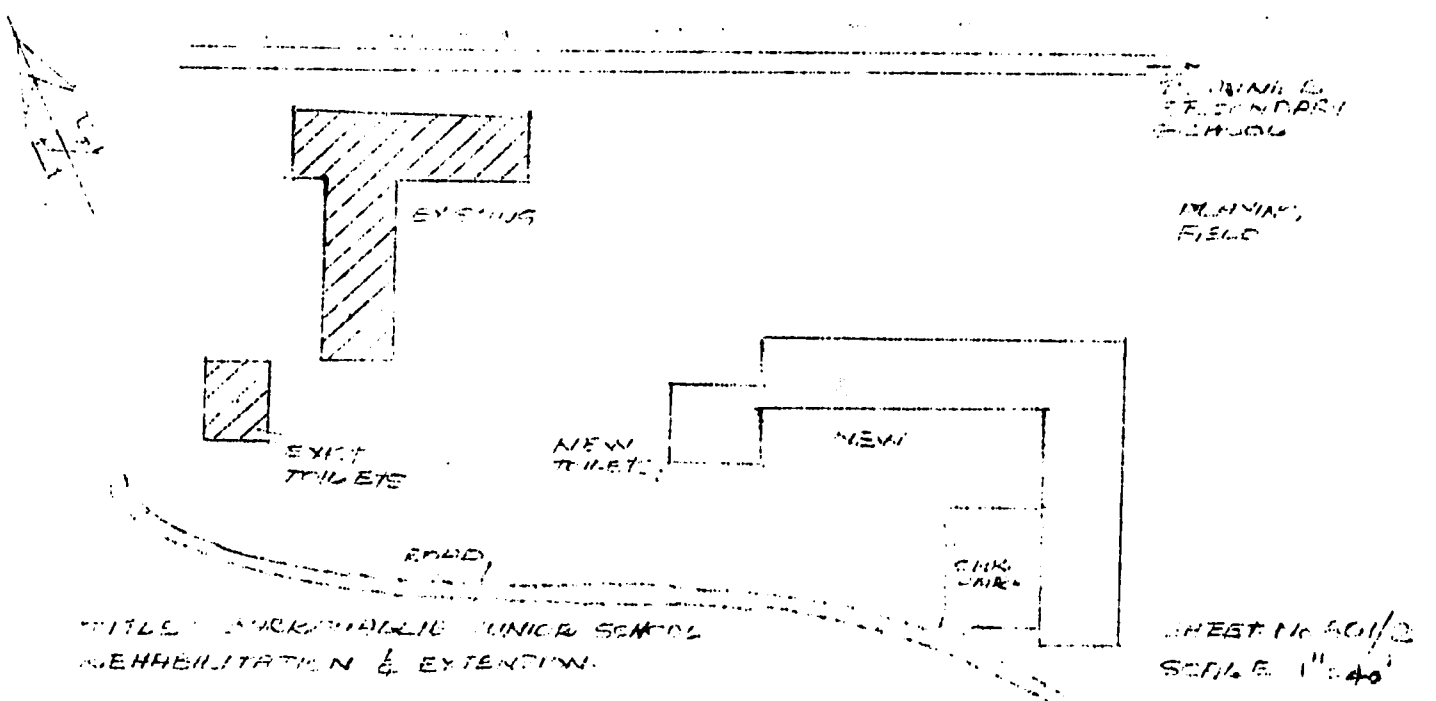
Current Enrolment: 564 No. of Classes: 20 Overcrowded: Yes /x/ No /___/
Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't know /___/
Approximate age of facilities: 28 years
General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works /x/ Ministry of Education /___/ Other /___/
Maintenance Performance Rating: Low /___/ Medium /x/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt will buy/___/ Rural/x/ Urban/___/
Within walking distance /x/ Access Road required /x/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /18/ No. of other rooms /2/
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very high /___/ High /x/ Medium /___/ Low /___/



CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Vincent — Date of Visit: 28/2/1979

Name & Type of School: Stubbs; Primary — School Reference No: 801/3

Location: — (See Sketch No:)

Description of Existing School Replacement - New

Current Enrolment: 261 No. of Classes: 7 Overcrowded: Yes /x/ No /___/

Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't Know /___/

Approximate age of facilities: 100 years

General Condition of facilities: Excellent/___/ Good/___/ Poor/___/ Unsatisfactory/x/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is Performed by: Public Works /x/ Ministry of Education /___/ Other /___/

Maintenance Performance Rating: Low /___/ Medium /x/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt will buy/___/ Rural/x/ Urban/___/

Within walking distance /x/ Access Road required /4/

Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Facilities required: No. of Classrooms /8/ No. of other rooms /4/

Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

NO DATA AVAILABLE

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION SURVEY

Territory/Country: St. Vincent
Date of Visit: 28/2/1979
Name & Type of School: Clare Valley: Primary
School Reference No: 801/4
Location: Clare Valley
(See Sketch No:)

Description of Existing School (Rehab. & Extension)

Current Enrolment: 275 No. of Classes: 10 Overcrowded: Yes /x/ No /___/
Enrolment from local area is: Increasing /x/ Decreasing /___/ Don't know /___/
Approximate age of facilities: 25 years
General condition of facilities: Excellent/___/ Good/___/ Poor/x/ Unsatisfactory/___/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/

Maintenance is performed by: Public Works /x/ Ministry of Education /___/ Other /___/
Maintenance Performance Rating: Low /___/ Medium /x/ High /___/

Details of Proposed School

Site: Adequate: Yes/x/ No/___/ Govt owned/x/ Govt will buy/___/ Rural/x/ Urban/___/
Within walking distance /x/ Access Road required /x/
Availability of Water: Yes /x/ No /___/ Electricity: Yes /x/ No /___/
Facilities required: No. of Classrooms /4/ No. of other rooms /4/
Type of Construction: Reinforced concrete; wood; metal roof

PRIORITY RATING: Very High /___/ High /x/ Medium /___/ Low /___/

NO DATA AVAILABLE

TABLE 901/1

EIGHT COUNTRIES: TOTAL PRIORITY LIST SUMMARY

(All amounts in US Dollars)

Country/ Territory	New	Rehabilitation	Rehab & Extension	Total
Antigua	352,000	428,000	295,000	1,075,000
Belize	817,000	-	-	817,000
Dominica	124,000	207,000	197,000	528,000
Grenada	575,000	180,000	154,000	909,000
Montserrat	536,000	260,000	134,000	930,000
St Kitts	627,000	150,000	226,000	1,003,000
St Lucia	116,000	173,000	280,000	569,000
St Vincent	399,000	46,000	499,000	944,000
TOTAL	3,546,000	1,444,000	1,785,000	6,775,000

IV. CONSTRUCTION DESIGN & MANAGEMENT SUGGESTIONS

A. DESIGN FACTORS

Construction Materials

The Team carefully observed the construction materials which were typically being used in school facilities throughout the eight LDCs. The following is a summary of these observations:-

Footings: These were typically constructed of concrete, stones or rocks. The concrete seemed to have held up very well, except in those instances where the earth surrounding the footing had been allowed to be eroded. Stones and rocks were used both as aggregate in concrete and as loose boulders to support floor framing members; the practice of using loose boulders or rocks in such a fashion should not be followed in the proposed AID construction programme.

Foundations (walls, columns & posts): Concrete, stone and wood posts were being used to support the buildings and footings. It is recommended that only concrete be used in the AID project. Loose stones and rocks are vulnerable to the movement of the earth, and wood is too often infested and destroyed by termites.

Floors: Most school floors were constructed of either wood or concrete. Occasionally, one was found covered with asbestos or vinyl tile. It is recommended that the AID financed school floors should ordinarily be of concrete finish, although it might be appropriate to use vinyl tile finishes to floors in certain areas, such as staff and Principal's offices. Wood floors should be avoided in most areas because of termites and because they do not wear well.

Structural Framing: Schools were found to have either steel, reinforced concrete, or wood structural frames. Very often, steel frames were located in areas in which there was exposure to sea salt spray and in such cases the steel members were badly rusted. Steel framing should only be considered in the dry portions of the islands. Reinforced concrete seemed to hold up very well throughout all of the islands. Wood framing is highly subject to severe damage by termites and should be avoided.

Exterior Walls: Exterior walls were made of concrete, stone, wood, concrete block and decorative block. All of these materials, except wood, seemed to wear well in the climate of these islands. Decorative block used on exteriors of buildings should be designed and finished to shed water to the exterior of the building.

Interior Walls: Interior walls were typically found to be made of wood (both fixed and moveable), concrete block and moveable chalk and bulletin boards. Solid interior partitions which extend from floor to ceiling are best made of some form of masonry. Wood partitions are subject to termites, vandalism and require more frequent maintenance. Moveable chalk and bulletin boards make very inferior partitions and do not help to reduce or control the excessive sound which is often generated in open plan school buildings.

Ceilings: Typically, ceilings were not used, i.e. the underside of roofs was left exposed. Occasionally, acoustical composition tile or sheets of composition boards were used to form finished ceilings. In one case, sound absorbing and relatively thin plastic fabric had been used in hallways to improve acoustics. This plastic had been torn down and severely damaged. Acoustical tile ceilings must be carefully specified since they tend to warp in the warm, moist climates. Many local people believe that finished ceilings help to reduce the heat which is transmitted by the sun through metal roofs.

Roofs: Most school roofs are made of galvanized corrugated iron. The thinner gauged roofs rapidly deteriorate and leak within a few years of being installed. The heavier gauged roofs will last one to three decades, depending upon how frequently they are painted and how well they are initially installed. Ribbed aluminium is also used quite successfully and is recommended as being a better roof in the more moist zones than corrugated iron. Corrugated asbestos sheets perform about as well as corrugated iron, but are more often damaged by children throwing stones on such roofs. It might be advisable to limit corrugated asbestos to the top of two or three storey buildings. Asphalt shingles and asphalt impregnated corrugated sheets seem to present the best overall roofing solution.

Doors: Both hollow-core and solid wood doors were found in many of the schools. The hollow-core doors were generally badly damaged and showed signs of much abuse. Solid wood doors last much longer and require less maintenance. Metal doors should be avoided because of the rusting conditions which prevail throughout the area. Some doors contained louvres made of glass, metal or wood. Glass should be avoided; wood should only be used in adequate strengths; aluminium louvres of adequate gauge should be specified in lieu of steel or lightweight aluminium.

Windows: These were found throughout the region to be made of aluminium, steel and wood frames. Aluminium makes the best window framing for this region, since steel rusts readily and wood is subject to termites. The best solution to providing windows appears to be the use of decorative blocks and adequate roof overhangs. In some areas, countries are finding that they can make do with just a window opening covered with heavy duty steel mesh coated with plastic and an adequate roof overhang.

Playground Equipment: Virtually no playground equipment was seen on any of the school playgrounds. It does not appear that AID should include any in its funding programme.

Interior Stages: Stages located on the inside and at one end of the building can be made of either concrete or wood. Team members saw both and they seemed to serve the required needs. Wood has the drawback of being subject to termites, and concrete makes it difficult to nail any kind of stage set material to the floor.

Interior Cabinets, Closets & Counters: These units are presently virtually non-existent in most schools, but where they do exist, they are typically made of wood and it would be best to continue to use wood. This should be cured, termite-treated and the fitments designed for reasonably heavy duty.

Chalk & Tack Boards: Low cost composition boards should suffice for both of these uses. It is best not to use metal trim or framing and to avoid enamel chalk board surfaces.

Light Fixtures: Fluorescent fixtures are used extensively at the rate of about two 4 ft tubes per each 150 sq ft of instructional space. Fixtures are industrial type, without louvres or covers. The quality of these fixtures should be upgraded and be more comparable to the lower cost fixtures used in schools and offices in the United States.

In summary, the Team recommends that the following materials seem to be most suitable for use in the schools of the Eastern Caribbean area:-

Footings	:	concrete
Foundations	:	concrete
Floors	:	concrete
Structural Framing	:	reinforced concrete (simple column and beam design)
Roof Framing	:	simple steel or wood trusses, or other wood framing
Roof Vents	:	ridge-type open screen cap vents; cyclone-type wind-driven turbines
Exterior Walls	:	Windward walls, except where there are gabled ends: hollow block construction, with cavities filled with concrete to underside floor; hollow block to approximately window sill level; decorative blocks (with approximately 50% light/air opening) from sill level to eaves Leeward walls: hollow block construction with cavities filled with concrete to underside floor; hollow block to approximately window sill level. Heavy duty enamelled aluminium louvres (adjustable) from sill to eaves; mullions maximum 24" apart, louvre operating lever to be simple push/pull type (not cranking device). Do not use glass louvres
Sanitary Blocks	:	Use high level windows with aluminium louvres, as above, or obscure plastic louvres in normal level windows

Roof Overhangs	:	Same as roofing materials; wind potential determines support requirements
Ceilings	:	These need not be installed where acoustical and ventilation problems can be otherwise resolved; when installed, use termite-proof materials with minimal metal in salt air locations
Roofs	:	Ribbed aluminium; asphalt shingles. Do not use corrugated galvanised iron
Doors	:	Solid wood, securely hung
Grills	:	Cyclone-type fencing, with plastic-covered wire
Fencing	:	As for Grills
Interior Stages	:	Wood
Interior Cabinets, Closets, Counters, Tops	:	Wood with laminate (e.g. formica) finish, where appropriate
Chalkboards	:	Composition board with wood framing
Bulletin Boards	:	As for Chalkboards
Light Fixtures	:	Exposed Fluorescent tubes

A few special concerns should be given to the use of these construction materials:

1) Wood used in school building construction should always be pressure-treated against termites.

2) For fencing, louvres, roofing, etc, use heavier - not lighter - gauge materials.

3) Sand, gravel and water, and labour are adequately available for making concrete on all of the islands; building stone is available, with labour on some of them (See Appendix "D").

Labour Availability: There exist throughout the territories/countries surveyed adequate supplies of skilled and unskilled labour to readily undertake a programme of construction such as is projected.

Electrical System

A simple electrical system should be installed in every school building. This system should be adequately designed to provide minimum lighting for night time use in all school areas; every instructional area should be equipped with a duplex electrical outlet every 300 to 500 sq ft of floor area.

Perhaps it should be noted that only about 50% of the older schools surveyed by the Team were equipped with electrical systems. All of the newer schools were so equipped.

It is important that every possible AID funded school be equipped with an electrica system. Use of school buildings at night and on rainy days is virtually impossible without electrical lighting systems.

Where electrical power is not readily available at school sites, it is strongly recommended that the programme should provide for bringing electricity to the site from the nearest mains, except in cases where the cost of this exercise would exceed about 5% of the construction costs of the facilities.

Sanitary Systems

All except one of the schools which were observed by the Team had sanitary (toilet) facilities. Most frequently, the sanitary facilities consisted of a building which stood separate from other school facilities, but in new buildings they were more often built as part of the main classroom buildings. In many cases the sanitary facilities had been poorly maintained and presented very unsanitary situations.

As a result of the many unsatisfactory situations encountered, the Team suggests the following be incorporated in the design of sanitary facilities funded by AID:

1) Toilet structures be provided for every school and be constructed at least 25 to 30 feet away from all other school structures. Where heavy rain conditions are experienced, covered walkways should connect the sanitary facilities to other school facilities.

2) Wash basins should be Stainless Steel (only a Cold Water faucet is needed, since Hot Water is not provided by any school). It is recommended that wash basins in all facilities be countered with trowelled concrete on a 3" rounded slab with Stainless Steel rings cased in the concrete and the Stainless Steel basin fitted to the pre-formed ring.

3) Boys' urinals should be step-up trough-type, built with impervious tile into the wall and floor materials.

4) All urinals and toilet bowls should be flushed from an overhead tank unit, using a flushing mechanism which is standard to the respective territory/country

5) All fittings should be plumbed with individual valves so that water can be turned off to the fitting.

Ventilation System

All of the schools surveyed by the Team had no mechanical ventilation equipment and, with good design, this practice should be continued. Mechanical ventilation is not necessary, as these territories/countries are islands in the path of the constant North-East Trade Winds. Except where site limitations prevent it, careful design should encourage natural ventilation, prevent the penetration of rainwater into instructional and other working areas and provide reasonable wind control in areas where severe wind storms can be anticipated.

Acoustical Considerations

Most of the schools surveyed by the Team were designed without any consideration being given to acoustics, possibly as a result of the period when they were built. Instructional areas were found to be very noisy. Architects and engineers involved in the design of new facilities funded by the proposed AID project should design the

facilities so that student voice sounds which travel further than 20 - 25 ft are largely absorbed or dissipated to the extent that this can be accomplished without spending any additional funds, i.e. it should be part of the basic building design. It should be noted that folding partition designs have proven very impractical in the weather conditions in these countries/territories. The same can be stated for most suspended ceiling designs. Metals appeared to have never been painted to prevent rusting. Iron rusts badly in this climate within 5 to 10 years after original installation in new structures, if not adequately maintained.

Hurricanes/Earthquakes

In the countries/territories surveyed, it is common practice for the school facilities to be used as places of refuge during hurricanes and after hurricanes and earthquakes. The new facilities to be provided as a result of this AID project should be designed to adequately withstand the forces imposed on these structures by hurricane-force winds and the effects of seismicity. Foundation and structural systems need to be adequately designed and constructed. Natural drainage provisions need to be adequate. Also, vehicular access should be provided and pedestrian access should cater for the very young or very old.

The concrete column and beam building designs recommended include standard earthquake code concepts and need not entail any additional structural design, but close attention should be given to detailing. All rafters or trusses must be individually fastened with some type of metal device other than nails (e.g. Teco Fasteners), and adequate holding down arrangements should be provided. Further, the nailing schedule for metal roofing should be adhered to rigidly and should entail additional fastening where recommended by the manufacturer.

Drainage Systems

The Team observed numerous drainage problems during its onsite visits to existing schools. These problems involved both sewerage and storm water drainage.

Termites

Termites were found to have damaged many of the school buildings examined by the Team. AID and CDB are encouraged not to use soft wood in structural framing members, and to use termite pressure treatment in all of the wood used in AID funded schools.

Rainwater Gutters & Drainage

Many of the school sites surveyed showed high incidence of erosion to the surroundings of the buildings, including undermining of foundations. Some of this was attributable to poor site preparation and earthworks, but much of it was due to the action of heavy run-off from roofs where rainwater goods were not provided. The Team recommends the use of rainwater goods to help control this problem. Polyvinylchloride (PVC) products of good quality should be used.

Environmental Considerations

It is the opinion of the Team that, in too many instances, inadequate thought was given to fitting the school buildings into the beautiful landscapes so common to these countries/territories. Fullgrown trees that could have been saved were bulldozed away, slopes were cut badly and left ungrassed, and generally poor standards of finish to the surroundings achieved. Often the poor sanitary facilities provided, as already described, helped to create dismal surroundings. The Team recommends that greater emphasis should be placed on conservation and the protection of the environment in the projected building programme.

Access Roads

Building sites are generally difficult in these predominantly mountainous countries/territories. Mainly for this reason, access to many of the schools surveyed was inadequate. Some of the proposed schools will house juniors and serve other community needs. As mentioned earlier, school buildings have a traditional role of serving as places of refuge during and after storms and other natural disasters; for these and other reasons, the Team recommends that adequate pedestrian and vehicular access should be provided to all school sites to be funded under the programme.

At most of the sites, sewage (if modern facilities existed) was drained from the septic tank into open ditches with no effort to spread the effluent through a septic drainage field. The Team recommends that sewage effluents be drained from school sites into septic fields. If soil conditions do not permit this, then cesspools of sufficient capacity should be included as a part of the septic system. At sites where there is an inadequate water supply, then modernly designed open-pit latrines are recommended. (Too many sites contained modern plumbing systems when water was available for only a few months of each year.)

Water Supply Systems

Water supply systems were often found at the schools visited or at nearby villages. Each school provided by the proposed AID project should have an adequate supply of water, i.e. water for drinking, cooking, cleaning, flushing sanitary facilities, etc. Water should not be provided to schools in those instances where the cost of so doing would exceed about 10% of the value of the rest of the school facilities located on the site. Not only mains water should be considered - rain water supply systems are equally appropriate at school sites in the countries/territories surveyed.

Security/Vandalism

Many of the educational personnel interviewed during the Team's visits complained that their schools were in such bad condition partly because of poor security provisions and excessive vandalism. It was generally very difficult for the Team to evaluate what proportion of the damage to facilities was indeed vandalism and what portion was related to the almost total absence of maintenance at most of the schools.

In any event, the Team does believe that security is a major problem. Invariably, each Ministry has suggested fencing the site to reduce the problem, but the Team is not convinced that fencing will solve very much of the problem. At a cost of US$6 per linear foot, the Team does not feel that fencing justifies the cost, nor can fencing stop the vandals from simply climbing the enclosures. In view of the seriousness of the problem, the Team places it at the top of a list of problems needing further consideration. It is recommended that AID considers collaborating with the various Governments in organising a programme directed specifically at this problem.

Standardized Materials

The use of carefully selected standardized materials is encouraged by the Team. Throughout the eight LDCs, Team members heard complaints about how difficult it was to acquire replacement parts for toilet fixtures, windows, louvres, etc, which had originally been produced in many different parts of the world and whose manufacturers or distributors were now extremely hard to locate.

Standardizing selected materials, e.g. light fixtures, hardware, operable louvres, etc, could be very helpful in reducing maintenance costs.

Furniture & Equipment

Most of the furniture, e.g. chairs and tables, needed in the schools can be constructed in each of the respective countries for US$30 per two-student unit. The student chairs are typically wooden benches with seats, backs and legs; they are made in various sizes and can be moved easily. They are easy to repair. Student desks are typically wooden two-student units with a smaller than usual wooden top and an open compartment under the top for storing books and supplies. The standard of construction ranged from fair to good, but it appeared that little or no attention was given to finish.

Equipment which is purchased for the schools through the AID programme should be of a very simple design and require the least possible maintenance. To the degree that is reasonable, equipment should be rust-proof, termite-proof, sturdy and durable.

Aesthetics

The only country which seemed to be concerned with decorating its school buildings was Grenada. A majority of the school buildings observed by the Team in Grenada had been painted in recent years and some were quite attractive in appearance.

Easily the most notable feature of this Survey has been the generally poor state of repair of school buildings and facilities, stemming from a dire lack of timely and effective maintenance.

The Team recommends that one of the practical ways to help alleviate this problem in the future is to incorporate specific "maintenance-free" building design concepts in the planning and design of the structures and facilities constructed under the proposed AID project.

These concepts have either suggested themselves to the Team through the deterioration and problems encountered, which problems have patently resulted from obvious design deficiencies; or they have been observed in recent school buildings constructed by other donor countries, such as Canada and the United Kingdom, who have generally demonstrated an awareness of maintenance problems.

The Team has therefore developed an outline specification (see Appendix "D") as guidance for those who will plan and design the school facilities. These are not full specifications, but rather guidelines covering specific areas which the Team considers should be stressed to building designers.

B. MANAGEMENT FACTORS

General

Members of the School Construction Survey Team visited schools with the key school facilities personnel in each of the eight countries/territories. Discussions were held concerning school facility and other types of public facilities planning, design construction and maintenance policies, staffs, budgets, procedures, costs, time schedules, furniture and equipment, etc; in addition, numerous new and old facilitie were discussed. Responses to the Team's School Construction Survey Questionnaire were also reviewed. Resource people in CDB, AID, BDD and CIDA were interviewed. The following management-related discussions, suggestions and recommendations evolved from this series of interviews.

Complexity of the Project

This AID project is a very complex undertaking. It involves, in effect, the making of grants to eight different countries and territories; assisting them with the planning of about thirty different school facility projects; developing, planning,

constructing, inspecting and financing projects for a developing area of the world in a sector (education) which has not previously been given high development attention.

Furthermore, the countries/territories are serviced by limited communications systems and many of the proposed sub-projects will occur in remote locations.

Also, none of the individual projects are massive in size or cost. The total AID input (this initial phase) will be apparently between 3 and 4 million dollars and individual project amounts will probably vary from less than $100,000 to not much more than several times that amount.

Contract Management

Because of the above and other reasons, it is believed that AID should contract with a responsible, experienced contractor, the CDB, to execute the planning and management of this construction project. It is believed that AID should invite CDB to propose an agreement for accomplishing this objective. After negotiations are completed by AID and CDB, the CDB can proceed to contract with each of the eight LDCs for the projects which have been identified and budgeted for by AID in its agreement with CDB. CDB's basic responsibility will be to manage the implementation of AID's school facilities project in the eight pre-selected LDCs.

Common Services

Mambers of the Survey Team believe that it would be cost effective for AID to also engage the CDB to provide a set of common services to the LDCs awarded an AID school facilities grant. The personnel arrangement with CDB could take one of several forms:

1) CDB could employ individual professionals (on both a full or part-time basis) to render the services;

2) CDB could sub-contract with consultants to provide the services; or

3) CDB could use a combination arrangement of employees and consultants.

The nature of this arrangement could best be decided after AID stated the common services it wishes to have CDB render, and after CDB had the opportunity to suggest how it could best fulfil these service requirements.

CDB has recently agreed to reorganise its staff and to create a new unit to render such common services as technical assistance (see CDB Staff Circular No 12/78 signed by C A Sorhaindo, CDB's Secretary, and CDB Paper BD 51/78).

The common services which might best be rendered by CDB seem to be:-

1) School Facilities Planning Assistance: The Ministries of Education and Public Works of the proposed grant received countries have identified only two persons (Cuthbert Prince in Antigua and Leonard Symonds in St Lucia) who were at least partially professionaly educated in educational planning; neither admitted to having had very much experience with implementary educational facilities plans.

Only one or two of the Ministries of Public Works (e.g. Dominica) seemed to have an architectural or related type employee with "somewhat" modern concepts of educational facility planning.

Frequently, related construction materials and techniques decisions were not based on policies related to lowering recurrent maintenance costs, prolonging the use of facilities, designing suitable acoustical environments and other pertinent educational factors.

Because of the above, and other similarly serious reasons, the Team recommends that the common services provided by a common service contractor include school facility planning assistance. This service might best be rendered by a part-time consultant who would conduct training sessions and conduct plan and specification reviews.

2) Construction Management Assistance: The quality and quantity of construction management practices observed in the eight LDCs varied from being poor and almost non-existent to average at the very best.

The Team believes that a common services contractor should be assigned technical assistance responsibility to help the LDCs' Ministries of Public Works upgrade their school construction management capabilities.

One area to which this technical assistance should be specifically directed is the proper inspection of school facilities, i.e. while they are being constructed, rehabilitated and equipped.

Overall, however, the majority of this construction management assistance component will be in the field of administration. CDB personnel will need to become familiar with AID construction management, requirements and practices, and then wed them to those of CDB. The degree to which CDB will use its own construction management systems as contrasted with those of AID is beyond the scope of the Team's responsibility. Obviously, however, areas of concern must include:

..... legal requirements

..... financial requirements

..... selection and use of consultants

..... bid, award and contract requirements

..... payment review and approval procedures, incountry reviews, approvals and other required inputs

..... reporting requirements

..... purchase procedures/practices

..... construction inspections

..... prequalifications and solutions of general contractors and major sub-contractor

..... use of standardized materials and equipment.

3) Maintenance Planning & Management Assistance: None of the eight countries surveyed by the Team has a reasonable or adequate school maintenance programme. Maintenance programmes were either non-existent or very inadequate. School property was often found to be unusable, in an unsafe condition, unsanitary or in an otherwise unacceptable condition.

The Team recommends that the common services contractor be required to operate a programme directed at improving and expanding the planning and management of school maintenance (the care and repair) of school buildings in the eight LDCs' Ministries of Education and Public Works.

One portion of this programme should be aimed at school administrators in the Ministries of Education and the schools (see the Maintenance section of this Report). Another portion should involve administration and maintenance workers of the Ministries of Education, Public Works and Health. CDB should be able to render this training with CDB staff or short-term consultants.

Cost of Management Services

Elsewhere in this Report, the Team has referred to the complexity of the proposed programme, the logistics of the geographic dispersion of the eight territories and other management factors required to achieve effective project implementation.

The Team considers that a reasonable estimate of cost for the provision of the management services required for successful programme implementation is as follows:

1.	Develop "Edspecs"	US$25,000
2.	Cost of resource personnel for central planning and design, contract documentation, supervision, inspection, certification and reporting, Sub-contract services/ surveying, etc - 2½ man-years @ $3,750 per man-month	123,750
3.	Staff recruitment and travel and related expenditure 2 No. at $5,000	10,000
4.	Territory supervision, inspection, certification, reporting - 3 man-years at $2,000 per man-month	72,000
5.	Central travel, subsistence, etc 1 man X 8 No. quarterly ound trips at $5,000 per trip	40,000
6.	CDB indirect costs - one and a quarter percent of outstanding loan portfolio say $3.48 M. over ½ year	21,750
	TOTAL	US$292,500

Construction Methods

Although only a few schools were undergoing construction or rehabilitation at the time that the Team was making the survey, the construction of other facilities such as roads, institutions and houses was quite often observed. Consistently, the same construction methods were used throughout the entire area. These appeared adequate for the construction of the proposed school programme.

Standard Plans

During the past several generations, much effort has been expended on developing standard building plans (architectural and engineering). Every known school system, State, Government or other agency which ever introduced standard plan practices, stopped using the practices within five to ten years of starting them. Planning and construction costs have always ended up running higher - and not lower. Legislated obsolescence starts with the second year's usage of the stock plans and gets worse every year thereafter. Getting money to update the plans becomes impossible. Finding specified equipment soon becomes impossible, and finding identical site conditions - certainly in the Eastern Caribbean - is absolutely impossible. The Team's advice to AID and CDB is clear - do not use stock plans.

Project Advisory Group

The Survey Team suggests that AID consider establishing an advisory - or steering - group to provide project management and coordination guidance to AID or to the CDB during the early part if not the lifetime of this project. Members of this group could include:-

1 - 2 representatives of the British Development Division (BDD)
1 - 2 representatives of the Canadian International Development Agency (CIDA)
1 representative of the Caribbean Development Bank (CDB)
2 representatives of the LDCs' Ministries of Education
2 representatives of the LDCs' Ministries of Public Works
1 - 3 representatives of the private sector (architects, engineers, construction area manufacturers and contractors)
1 - 2 representatives of the educational planning field
1 - 2 representatives of AID

Members of the school facilities advisory group should be selected because of their past experience, or current responsibilities, in the school facilities and Caribbean construction areas.

The group could be called together on two to four occasions a year to review the status, plans and problems of the ongoing programme and make recommendations for improvement (and expansion?) of AIDs' school facilities programme in the LDCs of the Eastern Caribbean.

AID should be expected to cover all costs associated with calling and conducting the groups' meetings, with participant travel, per diem and other miscellaneous costs. The current employer of each representative should be required to pay all salary costs. AID should provide secretarial and other routine clerical services.

The advisory group could prove to be very beneficial to AID and CDB. The group could be solicited for ideas, policies and procedures related to the management of the project.

The annual costs associated with the operation of such a group has been approximated as follows:-

COST TO AID/CDB

		US$
1.	Salaries	-0-
2.	Travel (averaging 14 persons at 3 nights per year @ $100/person/trip)	4,200
3.	Per diem (averaging 14 persons for 3 two-day meetings per year @ $75/day)	3,150
4.	Miscellaneous expenses of participants at three meetings per year - 14 x 6 x 10	840
5.	Secretarial and clerical services at $500 per meeting for three meetings per year	1,500
6.	Communications	1,500
7.	Other	1,000
		$12,190

Educational Facilities Planning

Impact Areas

As the School Construction Survey Team surveyed each of the countries/territories, at least one member of the Team tried to locate educational, architectural and engineering personnel who had been professionally trained in educational facility planning and who specialized in the same work. No such specialist was found, although several persons were identified who had experience with designing one or more school facilities.

As a rule, schools seemed to have been designed with attention given only to construction matters, and not to educational matters.

The proposed AID-funded schools should be designed educationally on a much more thoughtful basis than any of the infant or primary schools observed during the Team's onsite surveying efforts.

Educational facilities planning needs to focus on at least the following educationally related items:-

1) the inclusion and distribution of electricity and water;
2) the inclusion and placement of sanitary facilities;
3) the allocation, location, site and shape of instructional spaces;
4) the sizing and placement of chalk and bulletin boards;
5) the inclusion of teaching/learning furniture and equipment;
6) the use of selected walls for projectioning, playing learning games, and physical education skill development;
7) classroom standards for lighting and acoustics;
8) the use of colour in the school for instructional purposes; and
9) bringing natural materials from the schools' outside environment into the schools' learning programme.

Educational Specifications

The educational facilities specialist member of this Team did not discover a single Ministry of Education or Ministry of Public Works which was using educational specifications. In most situations, it appeared that the Ministry of Education merely informed the Ministry of Public Works as to how much money might be available and how many rooms were needed. Little seems to have been done to set forth the educational environment requirements of each school. Only the architectural and engineering - and mostly the latter - features have been presented in written format.

Since AID and the World Bank have both required the extensive development and use of educational specifications in many developing countries, e.g. Colombia and Brazil, AID may also want to require them in this project.

If educational specifications are not required, it is almost certain that all future schools will be built by all of the Ministries of Education to look and function just about like all of the existing - including the recently-built - schools.

It should not be necessary to develop a highly individualized "edspec" for every building: rather, to hold cost to a minimum, it would be best to develop a standardized "edspec" for each different type of room, regular and special, and allow for flexibility for individual incountry options.

The preliminary development of these "edspecs" could be done in the US, with consultative assistance (or in Barbados); the main portion of their development should be completed in Barbados or in each of the eight countries - again with consultative assistance.

The use of "edspecs" will greatly increase the involvement of local educators - Ministry and school - in the planning of the school facilities. They, in turn, will stimulate and encourage curricular improvement and expansion. The two functions go best hand-in-hand and not down separate paths.

The cost of developing these edspecs could very greatly depend on the approach utilized, but with careful planning, flexible but standardized edspecs could be developed for all or most of the schools with considerable local participation for about $25,000 - depending on the consultant utilized and the local involvement required. The educational facilities which would come out of this process would be far more satisfactory and up-to-date than those which would be the result of continued use of the present planning system. In addition, some locally trained people would be an added, but important, output.

Edspecs are needed in this project for school areas which include:-

1. Library
2. Administration
3. Staff
4. Regular classrooms
5. Home Economics
6. Sciences
7. Industrial Arts
8. Arts & Crafts
9. Multi-purpose room

Different specifications need to be developed for infant, primary, junior secondary and grammar level schools - as each of these is included in an AID-funded programme.

C. PLANNING DATA & IMPLEMENTATION

The Team feels that it is imperative to repeat this statement. "This project is a very complex undertaking, but with a proper plan of implementation, many of the problems can be solved before they become problems".

The primary purpose of the Survey was to gather data which would be retrievable and which would form the basis for the development of the programme. The data take the following form:-

a) Survey: Before each country visit, a Survey Form was mailed to each of the participating Governments. This survey requested some fifty pieces of information; information dealing with prices of materials and their availability, land and labour costs, and other facts all dealing with school construction, its construction management and costs. Coupled with this data bank were requests for school plans, sample specifications, bidding documents and other material necessary for determining the base for a valid school construction programme. This material represents a vast reservoir of information that in itself was used in developing this Report and also in determining the budgets, construction elements and implementation procedures in the future development of the project.

b) Cost Estimates: Based on the foregoing information, including meetings with local contractors and engineers (apart from Public Works representatives), are the budgets outlined in the country by country "Recommendations, Facility and Estimated Costs" sections. These cost estimates are, further, a result of individual budgets projected for each school by the participating Governments. The budgets do not only represent square footage estimates, but include site analyses, site preparation, electrical and sewage facilities, etc, projected for each school.

Similarities in traditional school facilities design in the territories have resulted in generally like costs. For this reason the Team has not included all the data in this Report, but has forwarded this material to AID for reference.

The "Estimated Costs" sections develop the budget for each segment of the country programme involving:-

i) new construction
ii) rehabilitation
iii) rehabilitation and addition

c) Contingency: Budgets prepared by the different Governments varied in the inclusion of a contingency. The Team has established a 10% contingency for each school component:-

i) new construction
ii) rehabilitation
iii) rehabilitation and addition

d) Inflation Factor: Each component of the budget has a 12% inflation factor.

e) Recurring Costs: No provision has been made in the school budgets for recurring costs such as electrical energy, consumables, etc. 'Mobilization costs' are included as part of construction costs. Those costs after occupancy are maintenance costs and are not included in any construction cost figures, but should become part of the Government's maintenance programme.

f) Standardization of Plans for Procurement Savings: A number of schools were undergoing construction in some of the participating countries during our visits and there is evidence that the islands have unknowingly adopted rather standard construction procedures and methods, namely reinforced beams and columns, with masonry filler walls involving wooden trussed roofs that offer an extended overhang on the windward side and a covered passageway on the leeward side of the schools. The Team recommends that CDB, under the auspices of its new common services approach, initiate a common structural design for all inter-island schools. The design should incorporate all the advantages of the modular concept, taking into account the possibilities of standards in lumber grades and lengths, roofing materials, reinforcing steel, etc.

The Team feels that it is imperative to the success of the programme that the design should be the produce of advice from a selected group nominated from the school planners and engineers and the respective Education and Public Works Ministries. In view of the short time frame of the consultants, this development, and even sketches, was impossible, but they do recommend CDB using the above approach.

g) Construction Materials & Procurement: Directly related to the inter-island design concept is the procurement of construction materials. In view of AID procurement policies, it is recommended that CDB compile a material and equipment list, which would establish availability, cost and import problems of material mobilization, brought on by a programme involving the magnitude of purchasing within the islands for a programme of this size.

The Survey established general prices for materials encountered on each Island, which, on the whole, are quite standard. It must be pointed out that, except for sand, gravel and rock, all material must be imported. Small amounts of lumber are produced on some islands, but unless it is pressure treated for termite infestation, it is uneconomical to use.

The Team recommends the following information be developed:-

i) Source of construction materials imported into the islands;

ii) Delivery schedules of materials, taking into account the increased volume;

iii) New products, e.g. Aluminium roofing, are not compatible from company to company (Corrugations). Supply should be established as a compatible produc and supplier should carry item as stock for replacement and repair;

iv) Cement source, supply and origin.

These are just some of the many purchasing procedures that should be clarified as implementation takes place.

In summary, the Team feels that, given proper attention to the data available in this Report and on file, implementation can be accomplished with the least amount of problems.

Construction Time Schedules

On the basis of:-

a) Its assessment of the construction capacity of the various Public Works Departments in the territories/countries surveyed;

b) The magnitude of the proposed planning, design and school building programme;

c) The Grant recommendations made in this Report;

d) The management factors determined and set out in this Report:

the Team has developed an outline time schedule (see Appendix "E") for the programme tasks envisaged. This, the Team believes, will assist AID in giving effect to its proposed programme.

Construction Financing

The Team believes, having reviewed construction management practices in the eight countries/territories that the ready availability of interim construction finance and adequate cash flows are indispensable to successful construction activity in this region. The complexity of the proposed project has been clearly recognised and stated elsewhere in this Report. The Team believes that the 'small contractor' in these parts will be well suited to participation in construction of the facilities dispersed as most of them are in rural locations.

Evaluation of Programme Implementation

The Team recommends that AID should provide for, in conjunction with the CDB, evaluation of the proposed project implementation. One such evaluation should be carried out towards the middle of the implementation period and another at the end of the period. Such evaluation would include, but not be limited to, a review of programme accounting procedures, procurement, standards of workmanship and adherence to specifications on the physical educational plan being provided, and the performanc of consultants, contractors, Public Works Departments (when applicable) and the CDB.

V. MAINTENANCE

General

To prolong the useful life of school plants in a region containing developing countries (where shortages of funds are continually experienced), maintenance work should be accomplished as soon as the need becomes apparent. 'Minor' repairs which are not promptly handled soon become 'major' repairs, involving greater expenditures which reduce the funds available for extensions and new construction.

A. Existing Situation

The physical conditions of a large percentage of the schools inspected revealed that little attention or concern had been given to maintenance over long periods, dating in some cases from the time that the schools were built. In addition to normal wear and tear, there was evidence of massive vandalism, which was said to be perpetrated by both pupils and adults. Unpainted schools with leaking roofs, battered windows and doors, sagging and open floors, broken cladding and defaced walls presented a depressing and hazardous atmosphere for learning in many of the schools the Team visited.

At certain schools, watchmen had been employed but, in some instances, without the desired results. In one area, deemed by an officer as tough, a watchman had been beaten while in the execution of his duty.

B. Procedures for Maintenance

Maintenance to schools is initiated by the Head Teachers who report to their respective Ministries of Education when there is need for school repairs. Two of the territories, St Lucia and Dominica, have recently organised, with some measure of success, maintenance units within their Ministries of Education, but in the other islands the teachers' requests have to be forwarded to the Public Works Departments, whose responsibility is to provide maintenance to school plants from budgetary allocations covering all Government buildings. Judging from the colossa

maintenance needs seen throughout the islands and from reports made by educational personnel, it was obvious that the allocations were hopelessly inadequate. it was also reported that the Public Works Departments did not always respond to calls for repairs as promptly as the situations warranted, and it was the consensus that the interest of the schools would be better served if grants were increased and allocated directly to the Ministries of Education.

In Belize, there is full community involvement and repairs are carried out without delays. Reports are made by Head Teachers to the Village Council of the neighbourhood, which arranges for the supply of materials and labour. In many instances, the villagers provide free labour and, on occasion, materials as well.

C. Suggested Improvement & Service

The Team recommends that:-

1) All of the LDC Governments should provide funds to their respective Ministries of Education for the accomplishment of minor school maintenance work.

2) Each Ministry of Education employ a qualified Building Officer to direct a small and mobile maintenance staff - in conjunction with a local Technical College, when possible.

3) Each such Building Officer be responsible for:-

a) periodically inspecting all school facilities and effecting minor repairs;

b) routinely completing Head Teachers' maintenance requests;

c) reporting on both minor and major maintenance problems to the Ministries of Education and Public Works;

d) inspecting work completed by staff and contractors; certifying payments, when appropriate;

e) developing and implementing formal programmes and procedures for timely and effective maintenance to all aspects of physical school plant;

f) reviewing plans, drawings and specifications for proposed rehabilitation, new construction and extensions;

g) ascertaining that minimum maintenance concepts are incorporated in all school designs;

h) liaising with Public Works Departments.

4) Public Works be responsible for major renovation, payment for which should be made from a maintenance budget allocated to the Ministry of Education.

5) Organised groups of Scouts, Old Scholars' Associations, Parent-Teachers' Associations and Evening Classes should be invited and encouraged to use the facilities during out-of-school hours. Such utilization will develop community respect for the school facilities and assist in reducing vandalism. These groups should be motivated to mobilize the community to find ways and means of better caring for school facilities.

6) Outdoor games, physical education and playing fields and courts be:-

a) large enough to accommodate the intended activity;
b) located at safe distances from buildings.

D. Recurrent Maintenance Costs

Design architects and engineers for the facilities to be built in this AID project should be instructed to design facilities which will need the least possible recurring maintenance work. The country/territory can only afford to do a very small amount of maintenance work annually.

In an effort to see that the LDCs do develop maintenance programmes, it would be advisable to require that a percentage of the annual operating educational budget be allocated to performing minor maintenance work at the AID-funded schools. This could be established on a four-year sliding scale, starting with one fourth of one percent of the grant made to each territory and gradually increasing to 1%.

Prior to the beginning of the financial year, all school buildings should be inspected and assessed for the cost of necessary repairs, including painting roofs and woodwork. A list of schools should be prepared showing the nature of and the cost of repairs at individual schools and total costs. In the event that the estimated amount required is beyond the finances of the country, the maximum amount of money should be earmarked and used for the most pressing backlog needs, leaving enough funds to pay for incidental but urgent minor repairs to the end of the financial year.

It is the considered opinion of the Team that the inadequacy of maintenance in the territories is occasioned principally by current economic conditions. It is therefore recommended that assistance be given by an advance of annual grants (say for 3 years) on a diminishing basis to enable the various Ministries to establish and maintain systematic and effective units under a Building Maintenance Officer with the necessary experience and competence. His salary should be paid by the Government concerned. This officer should liaise with the Education Officers who visit the schools and be directly responsible to the Permanent Secretary, the Administrative Head of the Ministry of Education.

The cost of this technical assistance to the Governments is estimated as a percentage of the total cost of the priorities listed in the Report.

First year	- 2% of $6.8 million	$136,000
Second year	- 1% of $6.8 million	68,000
Third year	- ½% of $6.8 million	34,000
	TOTAL	$238,000

The amount of this assistance over three years per territory would therefore be under US$30,000.

OR - a reduced sum be made available for materials only, with the recipient Government providing labour from its own revenue and through the utilization of well organised self-help units which would operate under the guidance of paid foremen assisted, when necessary, by teachers from Technical Institutes or Industrial Arts Departments in the school system.

OR - a grant made on a matching basis through which AID, on a 50/50 agreement, would advance funds for an agreed number of years.

Agreement should be reached with the recipients that all funds, however disbursed, should be subjected to recognised accounting practices and used entirely and solely for the purposes of maintenance.

It is felt that any assistance given should be for a period of about four years. This time would enable the recipient countries to tide over their present financial difficulties and prepare them for assuming full responsibility when the aid ceases.

E. Inservice Training for Educational Administrators

The School Construction Survey Team urges AID and CDB to develop, in cooperation with an appropriate university or other contractor, a series of inservice workshops for training LDC school administrators in concepts directly applicable to school facility maintenance.

This training would take two forms. The first should be the preparation and distribution of an Operations & Maintenance Handbook and other visual aids to be used commonly by all LDCs. This manual should be suitable for several years of usage. (It is possible that an existing maintenance manual - CONESCAL - Mexico City-produced - could be adopted for use in the Eastern Caribbean area. This possibility should be investigated by AID before contracting to have one produced "from scratch".) The second should be a four-day workshop (for two years) for Education Officers and heads of primary and secondary schools from each of the eight countries. These workshops could be conducted either centrally or regionally and utilize Caribbean instructurs to the maximum degree. A US consultant could be utilized in conjunction with planning and conducting the workshops.

The cost of this inservice programme would approximate:-

		US$
a)	for a new Maintenance & Operations Manual	$20,000
b)	for each year's workshop - (40 participants for 4 days in Barbados: 40 x 4 x $75 per diem; plus 40 x $100 for travel; plus 40 x $40 for miscellaneous; plus $5,000 for a US Consultant @ 2 one-week trips in Barbados; plus administration, communications, supplies, secretarial, etc. @ $10,000) ..	29,000
	TOTAL	$49,000

VI. SELF-HELP

As the School Construction Survey Team visited each of the LDCs, it tried to identify self-help contributions made to the construction of schools and improvement in the school environment. Although a few of the island Governments seemed to be utilizing some self-help inputs, the Team did find in Belize an extensive productive programme in which self-help efforts had been used to erect prefabricated buildings, construct schools, paint classrooms and gather sand and foundation material (stone) to be incorporated in footings, foundations and walls.

As against these efforts, instances were found in the territories where neither the citizens nor the staff members of schools displayed such interest. One outstanding case was Grand Bay Comprehensive School (Grades 1 - 12), built by the Canadian Government in 1971 for 1200 pupils. This school was in need of massive maintenance work and most of the furniture had been destroyed. At another school, Delices, the pupils were writing on the tops of benches (from a kneeling position) because there were no desks available, even though the school had an Industrial Arts workshop.

Dominica is rated by its Minister of Education as a leader in self-help and community development. In 1971, "Operation Bootstrap" was initiated by Government, in cooperation with PTAs and other agencies, to provide much-needed furniture for the schools. A regular subsidy from the British Development Office in Barbados, supplemented by Government funds and channelled through local Government, met the cost of materials. Free labour was supplied by members of the community, while villagers provided food for the workers.

In some areas, building stones (for foundations) were collected by the villagers and transported to the building site by a Government vehicle from the nearby Health Centre. The Minister reported that 31 gallons of paint had been sent to Boetica Primary School, where the residents had volunteered to paint the structure. On a visit to this school, a new lean-to extension in timber, approximately 12' x 36', was seen. It was erected under the self-help scheme with materials supplied by the Government.

In St Lucia, the Permanent Secretary and his technical staff assured the Team that self-help was in operation throughout the country. Two projects, Belle Vue Primary and Tiroche Primary, were visited. The Government had provided materials in unit panels and residents in the catchment areas of the two schools had supplied the labour to assemble and erect them, with technical assistance and supervision provided by the Government. The two unpainted structures, approximately 20' x 40' each, were inspected and found to be of sound construction and pleasing design, blending satisfactorily with the architectural features of the original school structure. A beginning of such magnitude augurs well for the future involvement of other section of the community in similar activities.

In Belize, the Team encountered the most extensive self-help programme in the region; a programme that could be used as a model for the other LDCs. Through the Ministries of Education, Labour, Public Health and Agriculture, a self-help programme, "New Life in Belize", involved the society at all levels. The Ministry of Education, working with officials and village community organisations, has initiated extensive community centres and school construction programmes. Some schools visited were started in community centres financed and built by the communities and staffed by the Government Others had moved from community centres to schools financed jointly by various forms of self-help. The building of one school was funded entirely by the villagers, except for the salary of the master mason.

In order to encourage teachers to take appointments in certain districts, Government accepts the responsibility of building Head Teachers' houses. In many cases, the erection of the residence precedes that of the school, and the Head Teachers are therefore in a position to assist in organising self-help schemes while the school operates in makeshift accommodation.

In view of the limited self-help approach in some of the islands and following investigations into the causes for such limitations, the Team has discerned the following:-

1) Self-help, in most instances, must be introduced by Government at some place within the society and, whenever possible, in cooperation with the Church and other organisations;

2) Successful community programmes do not materialize as a matter of course: they become actualities as a result of leadership;

3) Education is the basis for successful community action and the Central Governmen should accept responsibility for introducing self-help by providing leadership throug education for community service.

The outstanding self-help programmes that were seen in Belize are based on the concepts of leadership, education and community action. The Belizean Government has been able to reduce its capital outlay for Government-owned schools by at least 30% to 50% because of the inputs from community efforts. This has resulted in making funds available for other Government projects.

Based on the Belize experience, the Team recommends the following:-

1) A study, financed by this AID project, should be made of the Belize programme with emphasis on its methods and implementation procedures.

2) Arising out of this study, a seminar financed by AID should be conducted in Barbados for participants drawn from Ministries of Education or their representatives This seminar should devise a syllabus for teacher-training in community development and self-help programmes.

3) The action recommended in 1 and 2 (above) should precede the initiation of the construction phase, so that personnel trained at the seminar may be used for assistin at construction sites and in mobilizing support in areas where rehabilitation or construction is being carried out.

The Team recommends, further, that some form of self-help becomes part of each construction, rehabilitation or repair project; that Education Authorities in LDCs should encourage the formation of PTAs, Old Scholars' Associations, and Youth Clubs as part of this thrust towards awakening community interests, and that, as a means of encouraging teacher participation, experience and success in community organisation should be taken into account when making appointments on promotion to districts that need leadership in planning self-help schemes.

It is anticipated that, with intelligent leadership, the friends of the schools and parents will broaden their concept of assistance to include the purchasing of materia and equipment for maintenance and supplying labour and food for voluntary workers.

Self-Help for Teacher-Training Courses

Community involvement in the construction and maintenance of school plant was so impressive and successful in Belize that the Team recommends that a study of the system and procedures be made for the purpose of formulating a course for teachers-in-training in the other LDC territories visited.

Recommendations

An educationist with a knowledge of the design and maintenance of schools in the region and a suitable staff member of the University of the West Indies should be engaged to visit Belize and study the self-help schemes and practices there with the object of drawing up an appropriate syllabus for presentation to the Ministries of Education in the islands for inclusion in their respective Teacher-Training programmes.

Estimate of Expenses

2 Educationists - 2 weeks	US$6,000
1 Secretary - 2 weeks	1,000
Travel & per diem allowance (6 nights) - 2 persons	6,400
Miscellaneous	800
Communication	500
Contingencies	1,000
TOTAL	US$15,700

VII. SUMMARY & RECOMMENDATIONS

In the course of the survey, the Team visited a total of eighty-eight (88) schools and twenty (20) sites for proposed new schools and held discussions with Ministers of Government, Senior Government Officials, parents and teachers. From the conditions observed, it is clear that a substantial and imaginative building programme is essential to rehabilitate existing schools, provide new sites and equip them for the expansion of the educational needs that are necessary to support the developing economies of the countries.

We feel that the Governments should be encouraged to provide long-term professional training arrangements for full-time leaders in self-help and community activities. These leaders should be recruited preferably from three main categories, namely teachers, social workers and mature persons with an interest in leadership.

Our general recommendations are as follows:-

1) Governments through their Ministries of Education should embark upon a ten-year development programme divided into two stages of five years each for construction and rehabilitation of schools. The development of a school building maintenance system should be a central requirement of such a programme. This system should be organised and should include a unit within the Ministries of Education with support from the Public Works Ministries, where necessary. The setting up of an Advisory Committee of representative persons who have special qualities and experience and are charged to guide the Minister on educational matters would be a decided advantage, as it would involve the community in the educational process at the highest level.

2) An annual estimate of cost of maintenance based on a formula related to the current value of buildings should be prepared by the Ministries of Education in collaboration with the Public Works Departments, and an adequate financial provision should be included in the Annual Budget for expenditure on school maintenance, and controlled by the Ministries of Education.

3) Standardized designs should be adopted and as far as possible local materials should be used in the repair and construction of school buildings, and care should be taken not to use materials that are unsuited to local climatic conditions. Planners of school facilities should aim at adequately designed buildings which have incorporated into them distinctive "maintenance-free" ideas and which are environmentally suitable.

4) In the provision of primary school facilities close attention should be given to durability of materials and sound workmanship in order to reduce the need for frequent replacements, the costs of which are a drain on the resources/economies of the developing countries.

5) Partitions and other fixtures for separating classrooms and minimizing interference between classes in open plan school rooms should be adequately designed and installed, be frequently inspected and serviced to ensure proper functioning as well as to reduce cost of maintenance or premature replacement.

6) Economic activities of the district should, wherever possible, be reflected in the craft instruction of the school and a workroom, or rooms, should be provided in every primary school for that purpose.

7) Ministries, schools, Parent-Teachers' Associations, local councils, voluntary organisations and youth groups should be encouraged to wage a planned and unrelenting campaign against vandalism and the misuse of public property. That use should be made of the media and other forms of advertising for mounting a concerted and sustained programme to educate the citizens of the importance and functions of the school in the community.

8) Community activities based on the principle of self-help should be encouraged and the formation of national or local self-help agencies should be considered for groups of schools in each district.

9) As far as possible, management groups composed of representative persons in the community should be appointed to control the use of school facilities for purposes other than educational, and invested with the authority to withhold the use of a school. Such vigilance would ensure that school facilities are not misused and their basic educational function thereby impaired.

10) Technical assistance be given to the eight territory Governments in the form of annual grants on a 50/50 basis for a period of three years to enable Ministries of Education to establish and maintain systematic and effective maintenance units under a Building Maintenance Officer with the necessary experience and competence.

11) Timber used in school building construction should be pressure treated against termites, and the use of local building material encouraged.

12) An adequate electrical supply should be provided in every school building, except where the cost of such supply is more than about 5% of total building costs.

13) Adequate toilet facilities should be provided for every school. Where the school water supply is not dependable, toilet facilities should be constructed at least 25 to 30 feet away from the main structure, and covered walkways should connect them to the other school facilities. The specific detailed design recommendations for wash basins and urinals described in the Report should be followed. Sewage should be drained from school sites into septic fields. If soil conditions do not permit this, then cesspools of sufficient capacity should be included as part of the septic system, and at sites where water supply is inadequate then modernly designed open-pit toilets should be used.

14) The present ventilation practice where schools are gravity-ventilated should be continued.

15) The new facilities funded by AID should be designed to absorb or dissipate student voice sounds which travel further than 20 to 25 feet. Efforts should be made to accomplish this without spending any additional funds.

16) The structures provided by AID should be designed to adequately withstand the forces imposed by hurricane-force winds and the effects of seismicity.

17) Each school provided under the AID project should be supplied with adequate water for drinking, cooking, cleaning and flushing sanitary facilities.

18) Some form of self-help should be encouraged in the implementation of the proposed projects and that voluntary and other local organisations should be involved as part of the thrust towards awakening community interests in the provision of educational facilities.

19) An educationist with a knowledge of design and maintenance and a suitable staff member of the University of the West Indies be engaged to visit Belize to study self-help schemes and practices there, with a view to training personnel from the other LDCs in this.

We believe that these measures, carefully planned and implemented and assisted initially with the right measure of external financial and technical assistance on concessionary terms, can help the Governments and peoples of these territories to help themselves in this vital and fundamental area of the development process.

G A Brathwaite

C D Spencer

J F W Watson

R F Tonigan

C Didier - Coordinator

QUESTIONNAIRE

TERRITORY.....

1. Give enrolment in (a) Primary Schools.....

(b) Junior Secondary Schools.....

(c) Secondary/High Schools.....

(d) Vocational/Technical Schools.....

Give total number of pupils enrolled in school districts/parishes.....

Give the number of children, if any, who have applied for admission but have not been admitted.....

No. of schools in each parish/district by parish/district.....

(a) Primary.....

(b) Junior Secondary.....

(c) Secondary/High.....

(d) Vocational/Technical.....

2. What is the National Budget for Education 1978-79? (EC$)

What was the National Budget for Education 1977-78?(EC$)

What is the per capita cost at Primary level.....(EC$)

Junior level.....(EC$)

Secondary.....(EC$)

Vocational/Technical.....(EC$)

3. What is the National Budget for Schools by years from 1975 to 1979?

Years	Primary	Junior Secondary	Secondary/High
1975-76			
1976-77			
1977-78			
1978-79			

Was the budget supplemented and by how much?

What was the shortfall? (Vocational/technical)

4. What was the National Budget for refurbishing in each of the following years? (not maintenance).

Years	EC$
1975-76	
1976-77	
1977-78	
1978-79	

5. What was the building cost in EC$ per sq. ft. of the last school built by your Ministry and containing 4 classrooms or more?

What was the cost of Equipment and Furniture?
(Please submit bidding documents or ministry's estimate of cost and actual cost statements).

6. Give the cost in EC$ of the following materials, also give origin.

Building stone per cu. yd. delivered

Pitch pine per board ft.

Building sand per cu. yd. delivered

roofing - Gal. iron per ft. run

concrete blocks 8" x 8" x 16'; 8' x 16" x 16"; 8" x 4" x 16'.

cement per bag

steel rods for reinforcement - specify 3/8"; 1/2" per lb.

sanitary ware per suite

doors and windows - specify

labour cost in EC$ per hour for artisans

labour cost in EC$ per hour for unskilled personnel

trucking, per hour or journey

contractors' standard profit and overheads (percentage of total cost for contracts over EC$5,000)

Give average cost in EC$ per acre of land (non-government owned) for such sites?

	Yes	No
Are construction workers in adequate supply in the territory?	____	____
Are Building materials in adequate supply in the territory?	____	____
Is lorry transportation in adequate supply in the territory?	____	____
	____	____

School Maintenance

7. Do you have a Supervisor of maintenance for school buildings?

8. What was the maintenance Budget for 1978 - EC$

   What was the maintenance Budget for 1977 - EC$

   What was the maintenance Budget for 1976 - EC$

   What was the maintenance Budget for 1975 - EC$

General Education

9. Has your Ministry developed a space requirement standard for each student to determine class room size?

   Yes ☐ No ☐

   If yes, what is this standard?

10. How is the use of the school facilities meeting the needs of the community after school hours?

    Give the nature of the activities?

11. Do you have plans available or being developed for using modular construction in your buildings?

    Yes ☐ No ☐

12. Would the villagers be willing to cooperate by participating in self-help schemes through which, the cost of construction etc. may be reduced by provision of gifts, donations or labour?

GENERAL INFORMATION

By whom is the cost of electricity and water paid?

Is a special tax levied by the Parish or District to meet the cost of school operation and maintenance of existing schools? Please elaborate:

List schools requiring maintenance:

School	Code No.	Location	Nature of Repairs and Costs								
			Plumbing EC$	Painting EC$	Electricity EC$	Windows EC$	Roofs EC$	Furniture EC$	Access EC$	Other EC$	Total EC$

New Schools Planned

(a) Territory.....

(b) Location..... Acreage required.....

(c) Name.....

(d) Proposed enrolment.....

(e) Size in sq. ft.....

(f) No. of class rooms.....

(g) No. of special rooms - specify

(h) Sanitary conveniences - No. of Toilet Bowls.....
- No. of W. Hand Basins.....
- No. of urinals.....
(length of strips)

(i) Type of construction

(j) What utility services are to be provided?

(k) Is access road required?

(l) Plans and specifications to be submitted

Signed.....

Office.....

.....

US AID/CXC/UWI TECHNICAL REVIEW MEETING
BARBADOS, 6 - 8 MARCH 1979

During the course of the survey, the Team had an opportunity to discuss the principal objectives and issues of the proposed project with senior education officials from the eight territories as a group. This occurred in Barbados from March 6 - 8, 1979, at the US AID/CXC/UWI Technical Review Meeting of the Caribbean Educational Development Project.

On the more technical level, discussion centred around, and agreement was reached on, the following:-

- the importance of careful site selection and adequate site preparation for school facilities.
- provisions for proper ventilation, lighting, acoustics and, to the extent possible, maintenance-free design features.
- the need for safe and adequate access, water, electrical power and sanitary facilities.
- the desirability of specialized spaces within the school building, i.e. for Science, Crafts, Library, Lunch Room, etc, where it fits into the instructional programme as currently operated or planned.
- the need to design facilities to suit the climatic conditions in the territories.

Of the many issues discussed during the three-day workshop, the matters of building specifications/standardization, vandalism /security and maintenance clearly were seen as the ones most important to project success.

Specifications/Standardization: There was considerable interest in the development of reasonable educational specifications, standards or "targets" which could be used regionwide as a minimum guide for school physical plants and towards which Governments could strive and which would permit a more standard, cost-effective approach.

Vandalism/Security

While it was agreed that vandalism of school facilities was difficult to prevent and was a significant problem to many of the territories, it was also agreed that no school design could ever make a building totally secure from this problem. However, Belize was pointed to as an excellent and positive example in this respect where vandalism was not a serious problem, largely due, it was believed, to the extensive community involvement through self-help which supported school building and repair. It was agreed that the Belize experience should be studied further and, where possible, suggested to other territories. AID expressed its strong interest in community self-help and stated its intention to financially support this practice wherever it could be utilized under the project.

Maintenance

Ongoing and improved maintenance of all school buildings in the territories was seen as the single greatest problem affecting the physical environment in which primary education takes place. It was stated and understood that Governments would be expected to make a significant commitment ot improving the school maintenance system under the proposed AID project. The actions which were recommended by those participating in the meeting as being the most effective, either alone or in combination, were to:-

a) shift responsibility for minor repairs from the Ministry of Public Works to the Ministry of Education, with a vote to support it;

b) create a Buildings Officer position, with appropriate resources in the Ministry of Education, to manage school maintenance;

c) organise community self-help groups to assist the Ministry of Education with maintenance; and

d) arrange a programme whereby qualified technical school students could perform needed repairs as a part of their school programme.

All of the foregoing points were, of course, raised in earlier discussions within each territory, and the conclusions drawn were reinforced at the Review Meeting and are reflected in the Team's final Report.

OFFICIALS INTERVIEWED

ANTIGUA

Hon E E Williams	Minister of Communications & Works
Hon R Harris	Minister of Education & Culture
A King	Permanent Secretary, Ministry of Education & Culture
W Harris	Chief Education Officer, " " " " "
C Prince	Educational Planning Officer, " " " "
Ms S Tong	Ministry of Education
A Alexander	" " "
S Morgan	" " "
M DeFreitas	" " "
H DeFreitas	" " "
C Edwards	" " "
J Knowles	" " "
StG Mitchel	" " "
M Edwards	" " "
B Thompson	Ministry of Communications & Works
C Henry	" " " " "
B Tomlinson	" " " " "
J W Griffith	Chartered Civil Engineer

BARBADOS

R Boyce	Ministry of Education
Ms G Branker	" " "
V Archer	" " "
J Toller	Canadian International Development Agency
P Hilton	British Development Division in the Caribbean

BELIZE

E Breceno	Minister of Education
I Sanchez	Chief Education Officer
P Carrillo	Engineer, Public Works
J Nembhard	Principal Education Officer
E Fuller	Anglican Education Representative
F. Costillo	Permanent Secretary, Ministry of Education
Ms V Pelayo	Roman Catholic Education Representative
J Hertular	Housing Engineer
Rev H Gill	Methodist Representative

DOMINICA

Hon H L Christian	Minister of Education
B Robinson	Permanent Secretary, Ministry of Education
A Benjamin	Education Officer, " " "
D LaBassiere	Ministry of Public Works
D Shillingford	" " " "

GRENADA

Dr W R L Friday	Hon Minister of Education
Sen H Bullen	Ministry of Education
Ms G Payne	Cabinet Secretary
R O Palmer	Chief Education Officer,
Dr F Caesar	Ministry of Education
O Phillips	Engineer, Public Works Department
Rev R Jordanson	School Manager, St Andrews' Methodist School

ST VINCENT

StC Dacon	Hon Minister of Education
F Tony	Chief Education Officer, Ministry of Education
W Bacchus	Ministry of Education
K Bates	Deputy Chief Engineer, Ministry of Works

GUIDELINES FOR SCHOOL BUILDING DESIGN TO REDUCE LEVEL OF MAINTENANCE

1. Site Clearance & Preparation

a) Retain all trees, where possible.

b) Provide cut-off drains at top of embankments and direct run-off safely away from buildings and surroundings. Cur embankments to stable slopes and provide

c) Where retaining walls are required, adequate drainage is to be provided at back of wall to reduce earth pressures. Use weepholes where necessary. Where retaining wall faces are to form classroom walls, adequate tanking (waterproofing) is to be provided to the earth face to eliminate damp conditions in the buildings.

d) As most sites for school buildings are likely to be on steep slopes, consideration should be given, where possible, to stepped construction perpendicular to the contours as an alternative to the preferred massive cuts along the contours so often observed.

e) All cut or fill areas should be grassed immediately after earthworks have been completed.

f) Where pedestrian traffic causes damage to grass cover, those areas should be reinstated as a formal maintenance procedure during long school holidays.

g) Use retaining walls to toe of embankment fill areas to assist in stabilizing slopes and control erosion of grades. Lack of these have led to foundations being exposed and undermined in certain areas.

2. Foundations

a) These should be adequately but economically designed for the soil conditions existing at individual sites. Special care should be taken in foundation design to provide for lateral forces from seismic disturbance and the effects of hurricane-force winds on the buildings. All territories included in the Survey are in the regular path of hurricanes and experience seismic disturbances.

b) The elevation of ground floors of buildings should not be less than twelve inches (0.3m) above finished grade levels.

c) All foundations are to be treated against termites. Proprietary methods are available throughout the territories.

d) Damp-proof courses are to be used beneath all ground floors and in walls.

3. Superstructure

a) Wherever possible, the use of structural steel should be avoided as a building material. Where, for special reasons, the use of steel is the most advantageous material for a specific site, special care should be taken in the design and detailing of elements so that easy and effective maintenance is ensured. Easy accessibility to all members and the detailing of connections should be given the highest attention. An extra coat of paint should be applied at connections.

b) Use of paints resistant to marine conditions should be specified for steelwork or other members used at sites situated in coastal areas.

c) The use of concrete and masonry should be encouraged. Concrete members subject to pedestrian traffic, e.g. free-standing columns in corridors, should specify good quality concrete (4,500 psi) and should have chamferred corners.

d) Use timber for roof framing.

e) Use hard woods, wherever possible.

f) All soft woods should be treated against infestation by termites, preferably pressurized. When brush-on treatment is unavoidable, ensure that treatment is thorough and that members are treated before incorporation into the building.

g) Care should be taken not to use timber that is insufficiently dried.

h) Use stippled finishes to masonry/concrete walls to reduce possibility of walls being defaced by graffiti.

i) Provide adequate ventilation to timber-framed roofs to avoid dry rot.

j) The use of decorative blocks for ventilation should be encouraged, rather than the use of steel wire, mesh or fabric for this purpose.

APPENDIX "E"

CARIBBEAN EDUCATIONAL DEVELOPMENT - SCHOOL CONSTRUCTION PROGRAMME

ACTIVITY \ TIME	1979										1980												1981	
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Survey Team Reports	XXX																							
AID Project Proposal		XXXXX																						
AID/CDB Agreement			XXX																					
Employ Consultants				XXXXX																				
Project Planning & Design, Contract Documents					XXXX	XXXX	XXXX	XXXX																
Preparation of Cost Estimates							XXXXX																	
Employ Contractor/ PWDs							XXXXX																	
Consultants Reports to CDB/AID									XXX															
CONSTRUCTION										XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	
AID Evaluation No 1															XXXX									
AID Evaluation No 2																							XXXX	
CONSULTANTS FINAL REPORT																								XXXXX