CHAPTER 3

IMPLEMENTATION PLAN

CHAPTER 3 IMPLEMENTATION PLAN

3-1 IMPLEMENTATION PLAN

3-1-1 Implementation Concept

This project shall be implemented in compliance with the Japan Grant Aid program requirements. The prime consultant for detailed design and construction management, and the main contractor/supplier for the project shall be limited to Japanese nationals. The Fisheries Management Unit (FMU) of the Ministry of Agriculture, Fisheries, Cooperatives, Lands and Housing, the executing agency of Saint Christopher and Nevis will contract with those firms. Prior to award, the contracts shall be verified by the Ministry of Foreign Affairs of the Government of Japan, and the project shall be implemented after verification of the Japanese Government.

Part of the construction works should be subcontracted to local construction companies or foreign-affiliated companies that have their business base in other Caribbean countries. Further, it is desirable that construction machinery and materials such as machines used for building/road construction, stone and raw material of concrete be sourced in Saint Christopher and Nevis as much as possible. Regarding equipment and materials for civil works and building facilities construction, which are not available locally, procurement cost should be estimated based on procurement from neighboring Caribbean countries, USA and Japan.

Project implementation will be divided into two phases. During the first phase, reclamation of a temporary yard, extension of the east breakwater, construction of a landing space for loading gear, the slipway, boat ramp and east revetment will be carried out. In the second phase the remainder of the works including the west revetment, breakwater reinforcement, preparation of sandy beach, construction of the fisheries center building, paved areas, installation of machinery and equipment and fishermen's lockers will be executed.

3-1-2 Implementation Conditions

(1) Considerations Regarding Fishing Activities and the Existing Port

To minimize the influence of the construction works on fishing activities, commercial activities of the neighboring port (Port of Basseterre) and navigation of pleasure boats,

sufficient attention should be given to both land and sea areas during the construction works. In the land area, it is necessary to segregate vehicles using the existing port facilities and beach from construction traffic. Therefore, direct access from existing roads to the project site should be secured for construction vehicles. In the sea, navigation routes for ships and boats should be clearly separated from the construction working area. Fishing boats that currently use the beach near the project site would use the east beach and shore as an alternative site. Accordingly, parking space, temporary lockers and other facilities should be provided.

(2) Measures against Hurricanes

Considering the fact that there is high risk of a hurricanes from July to October in the region of the project site as mentioned above, construction of new breakwater and landing space will be started during or after November in order to avoid the hurricane season. From the viewpoint of case of implementation, land based construction works should be adopted. In addition, every effort should be made to take all possible measures against hurricanes: i.e. collecting weather information in the hurricane season, establishing protective measures, preparing an evacuation plan, considering cement storage, mix proportion of concrete materials, and concrete placing during rain etc.

(3) Attention to the Environment

As the project site is situated in an area of fishing activities, sufficient attention should be given in order to avoid adverse impact due to the construction works on the environment including sea water quality deterioration, and construction waste management.

3-1-3 Scope of Works

Scope of works for this project is outlined in Table 3-1-3.1.

Table 3-1-3.1 Scope of Works

Item of Responsibility	Responsibility of Japanese side	Responsibility of Saint Christopher and Nevis's side
Provision of the project site for construction including temporary yard		○
Securing roads for construction vehicle access to the project construction site and temporary yard, permission of access		○
Advance notice to prohibit fishing boats and other ships from entering the project sea area and to restrict access to the site		○
Provision of mooring space and landing space for fishing boats and other ships, coordination with relevant organizations and agencies		○
Repair of existing fishermen's lockers		○
Replacement work of existing drainage		○
Site clearance		○
Civil construction works	○	
Site reclamation and land formation	○	
Dredging works	○	
Building/facilities construction work	○	
Ancillary facilities construction work	○	
Procurement and supply of machines/equipment	○	

3-1-4 Consultant Supervision

According to Japan's Grant Aid procedures, a Japanese consulting engineering company will be contracted to carry out detailed design and construction supervision with Saint Kitts Fisheries Management Unit (FMU), the implementing agency of Saint Christopher and Nevis, and will execute the said services under the authorization of the Japanese Ministry of Foreign Affairs. In outline the consultant services are as follows:

(1) Detailed Design

Based on the results of basic design study and the exchange of notes (E/N), the consultant company will execute detailed design, prepare tender documents related to the construction work and procurement of equipment (drawings, technical specifications, etc.) and estimate detailed project costs.

(2) Tender Related Works

The consultant company will discuss with the implementing agency of Saint Christopher and Nevis the selection of bidders and the tender method, and will conduct the tender for and on behalf of the implementing agency. Services related to the tender include the following.

- Public notification of the tender
- Preliminary examination of applicants' qualifications
- Organizing a meeting to explain the tender documents
- Observation of tender procedures
- Examination of the tender results

(3) Construction Supervision

The consultant will supervise the construction works to ensure that they are in accordance with the drawings and specifications. The consultant is responsible for ensuring as far as is reasonable that program targets are met. The biggest risk to the program is the hurricane risk. The consultant will ensure that measures to mitigate against the risk are put in place.

During the construction works, an engineer will represent the consultant on site. The engineer will carry out process/quality control and will contact and report to the relevant organizations as appropriate.

Further, engineering specialists will be dispatched to the site when necessary during the building construction, ancillary facilities construction and equipment installation works. As for equipment to be provided, performance testing and inspection in the manufacturer's workshop will be witnessed in order to assure quality of the products.

3-1-5 Procurement Plan

(1) Construction Materials

As a principle construction materials that can be procured in Saint Christopher and Nevis should be sourced locally. Stone, sand, aggregate for concrete and other raw materials are available in Saint Christopher and Nevis. Other materials will be procured from third countries (neighboring Caribbean countries) and Japan.

Materials sourced locally	:	stone, sand, aggregate, cement, reinforcing bar, timber, steel fittings, wooden fittings, paint, interior finish materials, fuel, lubricants, lighting equipment, glass, concrete block, tile
Materials sourced from Japan	:	materials for landing facilities (fenders, mooring rings, bumper posts, corner metal plates), temporary materials, generator, waterproof material for roof, refrigerator, ice making plant, geotextile
Materials sourced from Saint Christopher and Nevis or Japan	:	plumbing, electric wiring materials

(2) Construction Equipment/Machinery

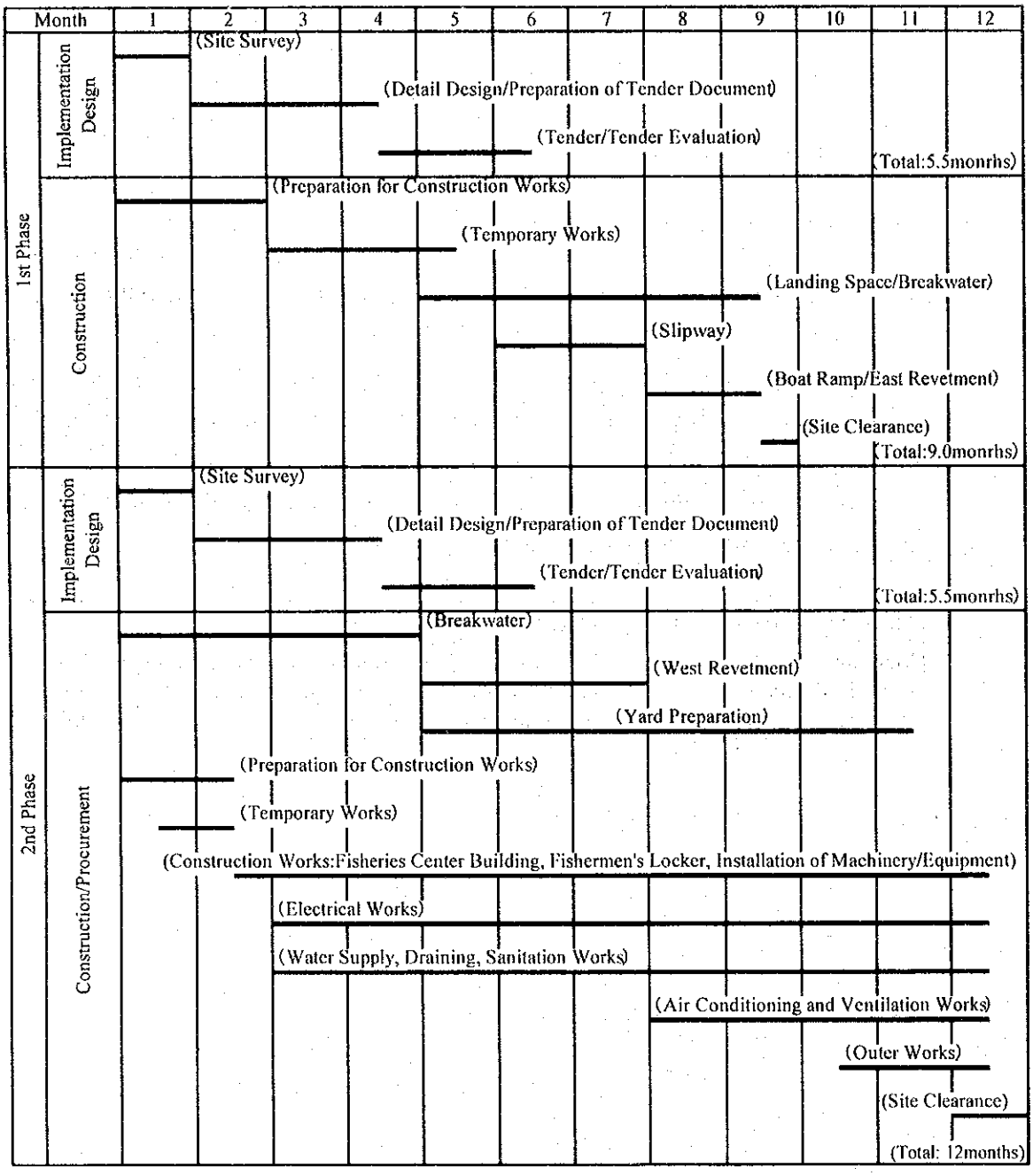
With the exception of concrete mixer trucks for transport of ready mixed concrete and concrete pump trucks, there would be no locally sourced construction equipment/machinery that could be used for long periods through the construction works. Machinery other than the above vehicles, should therefore be procured from the neighboring Caribbean countries (mainly from Barbados and Trinidad). When local construction plant is available for short periods, it may be rented from local companies according to project program.

Machines sourced locally	:	concrete mixer truck, pump truck
Machines sourced from third countries (Barbados, Trinidad)	:	bulldozer, back hoe, dump truck, wheeled tractor shovel, truck crane, motor grader, pneumatic tire roller, floating crane, barge, tugboat, diver boat, crawler crane, anchor handling boat

3-1-6 Implementation Schedule

The project implementation schedule for the Japanese parties is shown in Table 3.1.6-1.

Table 3-1-6.1 Implementation Schedule



3-1-7 Undertaking of the Government of Saint Christopher and Nevis

Listed below are items that should be executed by the Government of Saint Christopher and Nevis in the case that this Project is implemented under the Japanese Grant Aid System.

(1) Providing the land necessary for the construction works of this project,

(2) Obtaining permissions and approvals necessary for implementing the works,

(3) Establishing and paying costs pertaining to a Banking Arrangement (B/A) with a Japanese bank,

(4) Ensuring the prompt unloading and customs clearance at the port of disembarkation in Saint Christopher and Nevis and internal transportation and tax-exemption of the equipment and materials imported under Grant Aid,

(5) Exemption of Japanese nationals from customs duties/tariffs, internal taxes (including VAT) and other fiscal levies which may be imposed in Saint Christopher and Nevis with respect to the supply of materials/equipment and services under the verified contracts,

(6) Obtaining permission for entry and stay of Japanese nationals into Saint Christopher and Nevis with respect to the supply of services under the verified contracts,

(7) Ensuring that the facilities and equipment to be provided under the Japan's Grant Aid are to be maintained and used properly and effectively,

(8) Bearing all expenses other than those covered by the Japan's Grant Aid necessary for accomplishment of the project, and

(9) Issuing the Authorization to Pay in accordance with the verified contracts.

3-2 OPERATION AND MAINTENANCE PLAN

Civil/building facilities constructed on this project and the equipment supplied will be maintained by the Fisheries Management Unit (FMU). Since the civil works (breakwater) are robust due to the hurricane risk, it is expected that repair costs will be slight. Operation and maintenance of the new facilities constructed through this project will be executed by FMU on the basis of the existing system. Estimated annual operation and maintenance costs for these facilities and equipment are shown in Table 3-2.1.

Table 3-2.1 Financial Plan of Operation and Maintenance

(Unit: US$)

Income		Expenditure (operation & maintenance costs)	
Item	Amount	Item	Amount
Fish and shellfish handling charge	82,620	Personnel expenses for fisheries center	34,560
Fishing gear selling income	17,875	Electricity	20,207
Ice handling charge	58,320	Water	598
Fishermen's locker charge	1,344	Maintenance of the facilities and buildings	8,462
Slipway/trailer truck charge	4,320	Maintenance of the machinery and equipment	11,808
		Depreciation	24,660
		Maintenance dredging	10,000
Total income	164,479	Total expenditure	110,295
		The balance:	US$ +54,184

Based on the above table, it is judged that costs for operation and maintenance of Basseterre Fisheries Complex could be covered by the income of the Complex. Breakdown and explanation for each estimated item are as follows:

1) Fish and shellfish handling charge

Catch 108,000 kg x average fish selling price US$ 5.1/kg = US$ 550,800
Handling charge = US$ 550,800 x 15 % = US$ 82,620

2) Fishing gear selling income

45 boats x US$ 1,500/boat x 25 % = US$ 17,875

3) Ice handling charge

720 kg/day x 300 days x US$ 0.27/kg = US$ 58,320

4) Fishermen's locker charge

Fishermen 28 x locker charge US$ 4/person/month x 12 months = US$ 1,344

5) Slipway/trailer truck charge

Fishing boats (person) 45 x 4 times/month x charge US$ 2/person/month x 12 months = US$ 4,320

6) Personnel expenses for the fisheries center (including social insurance)

6 persons x US$ 480/month x 12 months = US$ 34,560

7) Electricity

35 kwh/day x 15h x 300 days x EC$ 0.34/t ÷ 2.65 EC$/US$ = US$ 20,207

8) Water

10 t/day x 300 days x EC$ 0.528/t ÷ 2.65 EC$/US$ = US$ 598

9) Maintenance of the facilities and buildings

• Pavement	: 4,800 m^2 x US$ 59 x 1 %	= US$ 2,832
• Passages, stairs	: 4,800 m^2 x US$ 59 x 1 %	= US$ 2,832
• Fisheries center building	: 250 m^2 x US$ 1,364 x 1 %	= US$ 3,410
• New fishermen's lockers	: 200 m^2 x US$ 560 x 1 %	= US$ 1,120
• Existing fishermen's lockers	: 200 m^2 x US$ 280 x 1 %	= US$ 560
Total		US$ 8,462

10) Maintenance of the machinery and equipment

• Machinery (ice making plant, cold storage, generator, cooling condenser)	: US$ 210,000 x 0.5 %	= US$ 10,500
• Equipment	: US$ 43,000 x 3.0 %	= US$ 1,308
Total		US$ 11,808

11) Depreciation

US$ 370,000/year x life 15 years = US$ 24,660

12) Maintenance dredging

1,000m^3 x US$ 10/m^3 = US$ 10,000

CHAPTER 4

EVALUATION OF THE PROJECT AND RECOMMENDATIONS

CHAPTER 4 EVALUATION OF THE PROJECT AND RECOMMENDATIONS

4-1 PROJECT EFFECTS

4-1-1 Project Effects

The following are considered to be the direct and indirect effects of implementing the Basseterre Fisheries Complex Project.

(1) Direct Effects

(a) The present situation is that on a daily basis fishermen must manually haul their boats up the beach beyond the reach of damaging waves. The effects of this project will be to create a calm basin behind the protection of the breakwater, including landing beach, loading wharf suitable for handling larger sized fishing equipment, and a boat ramp.

(b) Sheltering of fishing boats during the hurricane season and improvement of boat maintenance facilities

Currently fishing boats are hauled up to the side of the coastal road or to a safe place nearby fishermen's houses by trailer, but in some cases the boats are damaged due to the lack of safe places. The project will provide a slipway and a boat ramp to secure easy sheltering, behind the protection of the breakwater. On an everyday basis, these facilities can be used for boat repair and maintenance.

(c) Improvement of fish distribution and of the living standard of fishermen by improving and stabilizing the fish supply

The present fish distribution system suffers from serious limitations regarding assurance of quality and stabilization of supply through the seasons. Provision of a fisheries center improves the current distribution system through stabilizing supply, and by improving freshness and quality of the product. Furthermore, management of the center by the fishermen as a cooperative is expected to lead to improvements to their productivity and living standards.

(2) Indirect Effects

The Department of Cooperatives of the Ministry of Agriculture, Fisheries, Cooperatives, Lands and Housing has a plan to merge all local cooperatives of Saint

Kitts into a single cooperative society. Implementation of the project is expected to assist in this process of rationalization and build mutual relationships between all of the fishermen's cooperative societies in Saint Kitts.

4-1-2 VERIFICATION OF PROPRIETY OF THE PROJECT

This project has been evaluated as being appropriate for support by Japanese Grant Aid for the following reasons.

(1) The project will contribute to improving artisanal fishing activities, safe sheltering, and effective maintenance of fishing boats;

(2) It is expected to improve the fish distribution system by providing a stable and effective fresh fish supply to consumers. Through participation of fishermen in the management of the fisheries center, fishermen will have the inventive to improve productivity, with a consequent improvement in living standards;

(3) The project will be a core project of the medium-term plan targeting the sustainable development of the national fishery sector;

(4) It is confirmed that the Government of Saint Christopher and Nevis will budget for all the expenses necessary other than those covered by the Japan's Grant Aid.

4-2 RECOMMENDATIONS

In order to maximize efficient and continued use of the facilities after completion of the project, it is recommended to pay particular attention to the following:

(1) Immediately following completion of the project, the facilities/equipment shall be managed, operated and maintained by the FMU. Thereafter when the Newtown Fishermen's Cooperative Society (NFCS) is reorganized and functioning, the management shall be transferred to the NFCS in order that the fishermen be involved in managing and operating the center;

(2) As it is anticipated that maintenance dredging will be necessary in the port due to regular hurricanes, it is recommended that the support mechanisms with the Ministry of Public Works and Harbor Department be put in place.

(3) The need for technical training regarding maintenance of the refrigeration equipment such as an ice making plant, freezers and cold storage is emphasized;

(4) It is recommended that a technician responsible for equipment in the fisheries center be appointed before the implementation of the project so that they can familiarize themselves with the equipment through the delivery, installation and testing phases. This will assist their training in the operation, maintenance and repair of the equipment.

APPENDIXES

APPENDIXES

I. Member List of the Survey Team
II. Survey Schedule
III. List of Party Concerned in the Recipient Country
IV. Minutes of Discussion
V. Collected Information
VI. Location of Survey Area
VII. Topographic/Hydrographic Survey Drawing
VIII. Soil Data
IX. Sea Bed Analysis Data
X. Tide/Current Survey Data

I. Member List of the Survey Team

I-1 Draft Basic Design Explanation

(1) Team Leader	Hiroshi KITANI Development Specialist, Institute for International Cooperation, Japan International Agency
(2) Technical Adviser	Tutomu MATSUNAGA Deputy Director, Fishing Grounds and Facilities Division, Resources Development Department, Fisheries Agency
(3) Project Coordinator	Naomiti MUROOKA Fourth Project Management Division, Grant Aid Management Department, JICA
(4) Project Manager/ Fishery Facility Planning	Nobuo KAWAMURA Pacific Consultants International
(5) Fishery Equipment Planning	Minoru ISHIHARA Pacific Consultants International
(6) Civil Structure Planning/ Natural Condition Survey	Hirofumi OOKI Pacific Consultants International
(7) Construction Planning/ Cost Estimation	Kazuo UEZUMI Pacific Consultants International

I-2 Draft Basic Design Explanation

(1) Team Leader	Noritaka ASAKAWA Assistant Director, Fishing Port Planning Division Fishing Port Department, Fishing
(2) Project Coordinator	Yoshihiro SATO Training Division Kanagawa International Fisheries Training Center, Japan International Cooperation Agency
(3) Project Manager/ Fishery Facility Planning	Nobuo KAWAMURA Pacific Consultants International
(4) Fishery Equipment Planning	Minoru ISHIHARA Pacific Consultants International

II. Survey Schedule

II-1 Basic Design Study

No. of Date	Date (DD/MM/YY)		Schedule				Stay
			Officials (3person)	Consultants A (2person)	Consultants B (2person)		
1	14MAY00	SUN	Narita→NewYork→Miami				Miami
2	15MAY00	MON	Miami→Port of Spain Courtesy Call on Embassy of Japan in Republic of Trinidad and Tobago				Port of Spain
3	16MAY00	TUE	Port of Spain→San Juan→St. Kitts Team Meeting				Basseterre
4	17MAY00	WED	Courtesy Call on Government of St.Kitts Discussion with Fisheries Division				B
5	18MAY00	THU	Discussion with Fisheries Division Site Survey				B
6	19MAY00	FRI	Discussion with Fisheries Division Signing of Minutes of Discussions				B
7	20MAY00	SAT	Ovservation at Port of Charlestown				B
8	21MAY00	SUN	Meeting		Narita → Miami		B/Miami
9	22MAY00	MON	Discussion with Fisheries Division		Miami → San Juan → St. Kitts		B
10	23MAY00	TUE	Ovservation at Port of Charlestown		Site Survey		B
11	24MAY00	WED	St. Kitts→San Juan →Port of Spain	Study			B
12	25MAY00	THU	Report of Embassy of Japan	↓			POS/B
13	26MAY00	FRI	Port of Spain→ San Juan→New York	↓			NY/B
14	27MAY00	SAT	New York	↓			O.F./B
15	28MAY00	SUN	Narita	↓			B
29	10JUN00	SAT		Report of Embassy of Japan (in POS)	↓	→Narita	POS/B
29	11JUN00	SUN		Miami→	↓		NY/B
30	12JUN00	MON		→Narita	↓		O.F./B
41	23JUN00	FRI			Miami→		O.F.
42	24JUN00	SAT			→Narita		

Consultants A : PM/Fishery Facility Planner, Fishery Equipment Planner
Consultants B : Civil Structure Planner, Construction Planner
O.F. : ON FLIGHT

No. of Date	Date (DD/MM/YY)		Schedule		Stay
			officials	Consultants	
1	19AUG00	SAT	Narita→NewYork		NY
2	20AUG00	SUN	New York→Port of Spain		POS
3	21AUG00	MON	Courtesy Call on Embassy ofJapan in Republic of Trinidad and Tobago Port of Spain→Bridge Town→St. Kitts		St. Kitts
4	22AUG00	TUE	Courtesy Call on Government of St.Kitts Discussion with Fisheries Division		S
5	23AUG00	WED	Discussion with Fisheries Division		S
6	24AUG00	THU	Discussion with Fisheries Division		S
7	25AUG00	FRI	Discussion with Fisheries Division Signing of Minutes of Discussions		S
8	26AUG00	SAT	St. Kitts→Antigua	St. Kitts→New York	/NY
9	27AUG00	SUN		New York→	/O.F.
10	28AUG00	MON		→Narita	

O.F. : ON FLIGHT

III. List of Party Concerned in the Recipient Country

(1) Ministry of Foreign Affairs (MOFA)

Carlisle Richardson	Assistance Secretary

(2) Ministry of Finance

Wendell Lawrence	Financial Secretary

(3) Ministry of Agriculture, Lands, Housing and Co-operatives (MOA), Saint Christopher

Hon. Cedric R. Liburd	Minister
Raphael Archibald	Permanent Secretary
Joseph Simmonds	Senior Fisheries Officer, Fisheries Management Unit (FMU)
Ralph Wilkins	Fisheries Officer, FMU
Frank Farrel	Enforcement Officer, FMU
Samuel Heyliger	Assistant Fisheries Officer, FMU
Clyde Thompson	Co-operatives Officer, Department of Co-operatives

(4) Ministry of Agriculture, Lands, Housing & Co-operatives (MOA), Nevis

J. Livingston Herbert	Junior Minister
Elvin Bailey	Permanent Secretary
R. Arthur Anslyn	Marine Advisor
Stephern Jones	Assistant Secretary

(5) Nevis Fishermen's Co-operatives

Pearlievan Wilkin	Administration Director
Conrad Perry	Manager

(6) Department of Public Works

Marchins Best	Director
Alston A. Peter	Quarry Manager

(7) St. Christopher Air & Sea Ports Authority

Thomas A. Williams	General Manager
Maxwell Wilson	Personnel Manager
Nigel Herbert	Maritime Pilot/ Berthing Officer/ Marine Division

(8) Statistics & Planning Unit

Sylvine Henry

(9) Ministry of Health & Environment

Hon. G. A. Dwyer Astaphan	Minister
June Hughes	Chief Conservation Officer, Department of Environment
Oliver Lawrence	Chief Environmental Health Officer, Health Centre

(10) Department of Labour

Clifford M. F. Thomas	Labour Commissioner

(11) Fire and Rescue Services, Aerodrome & Municipal

George N. Fough	Fire Chief

(12) Department of Inland Revenue

Beverley Williams	Comptroller
Wingrove Mcmabou	Senior Tax Inspector/Supervisor Revenue Control
Gary Edwords	Senior Tax Inspector/Supervisor Audit

(13) Customs Department

Charleton Edward	Senior Customs Officer

(14) Department of Electricity

Wilson Blondel	Chief Engineer, Manager

(15) Meteorological Office

Robert Warner	Acting Manager, Robert L. Bradshaw International Airport

(16) Department of Water

Athill Rawlince	Manager/Water Engineer

(17) St. Kitts Nevis Defence Force Coast Guard

Patrick Wallace	Commanding Officer

(18) Embassy of Japan in Republic of Trinidad and Tobago

Yoshio Yamagishi	Ambassador of Japan
Kazuyuki Yazawa	Second Secretary

(19) Others

Theophilus Edward	Plant Manager, St. Kitts Masonry Products Ltd.

Carlos Kelly	Operation Manager, St. Kitts Masonry Products Ltd.
Jacqueline Armony	Executive Director, St. Kitts Heritage Society
Eustace Hendrickson	Manager Corporate Sales, Cable & Wires St. Kitts and Nevis Ltd.
Jason Kelsick	General Manager, St. Kitts Urban Development Corporation Ltd., Port Zante
John O. Matalon	General Manager, Island Dredging Ltd.
Rameshwar Mahabir	Managing Director, Trinidad Constructors Ltd., Trinidad and Tobago
Charmaine Vidale	Administrative Assistant -Export, Caribbean Steel Mills Ltd., Trinidad and Tobago
Joseph D. Esdaille	Sales Manager, St. Kitts Sales Office, Shell Antilles & Guianas Ltd.

IV. Minutes of Discussion

MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY
ON
THE PROJECT
FOR
CONSTRUCTION OF THE BASSETERRE FISHERIES COMPLEX IN SAINT CHRISTOPHER AND NEVIS

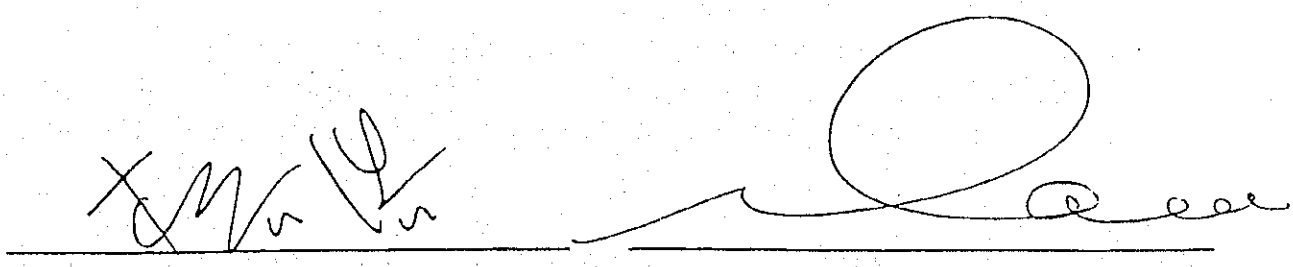
In response to a request from the Government of Saint Christopher and Nevis / the Ministry of Agriculture, Lands and Housing (hereinafter referred to as "the Government of Saint Christopher and Nevis"), the Government of Japan decided to conduct a Basic Design Study on the project for Construction of the Basseterre Fisheries Complex (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Saint Christopher and Nevis the basic design study team (hereinafter referred to as "the Team"), which is headed by Mr. Hiroshi KITANI, Institute for International Cooperation, JICA, and is scheduled to stay in the country from 17 May to 23 May, 2000.

The Team held discussions with the officials concerned of the Government of Saint Christopher and Nevis and conducted a field survey at the study area.

In the course of discussions and field survey, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Basseterre, 19 May, 2000



Mr. Hiroshi KITANI	Mr. Raphael A. Archibald
Leader	Permanent Secretary
Basic Design Study Team	Ministry of Agriculture,
JICA	Lands and Housing

ATTACHMENT

1. Objective

The objective of the Project through a construction of the Basseterre Fisheries Complex is to improve the present fisheries circumstances in Saint Christopher and Nevis.

2. Project Site

The site of the Project is located in Basseterre as shown in ANNEX-1.

3. Responsible and Implementing Agency

3-1. The Responsible Agency is the Ministry of Agriculture, Lands and Housing.

3-2. The Implementing Agency is the Fisheries Management Unit of the Ministry of Agriculture, Lands and Housing (FMU).

4. Items requested by the Government of Saint Christopher and Nevis

After discussions with the Team, the Saint Christopher and Nevis side requested the items described in Annex-2 . JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid System

5-1. The Saint Christopher and Nevis side has understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-3.

5-2. The Saint Christopher and Nevis side will take the necessary measures, as described in Annex-4, for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultants will proceed to further works in Saint Christopher and Nevis until 22 June, 2000.

6-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around August, 2000.

6-3. In case of that the contents of the report is accepted in principle by the Government of Saint Christopher and Nevis, JICA will complete the final report and send it to the Government of Saint Christopher and Nevis by November, 2000.

7. Other relevant issues

7-1. It is agreed that FMU will repair the present facility (fishermen's lockers) by the beginning of the project.

7-2. FMU will be responsible for coordination with other relevant agencies.

7-3. Sufficient temporary yard and jetty for the construction of the Basseterre Fisheries Complex shall be secured by Saint Christopher and Nevis side.

7-4. FMU shall implement periodic dredging to maintain planned depth of water in case the area behind breakwater becomes filled with sands after a hurricane. If the budget for dredging of FMU is insufficient for implementing, The Government of Saint Christopher and Nevis will allocate necessary fund for dredging. Frequency

RAA

and amount of maintenance dredging will be suggested in the final report based on the further study.

7-5. The land for the project shown in ANNEX-1 doesn't require legal procedures for acquiring the right of land-use since the land belongs to the Government of Saint Christopher and Nevis.

7-6. The Saint Christopher and Nevis side has promised to undertake the following measures as a condition for Japan's Grant Aid to be implemented.

1) Provide the appropriate number of staff and the necessary budget allocation.

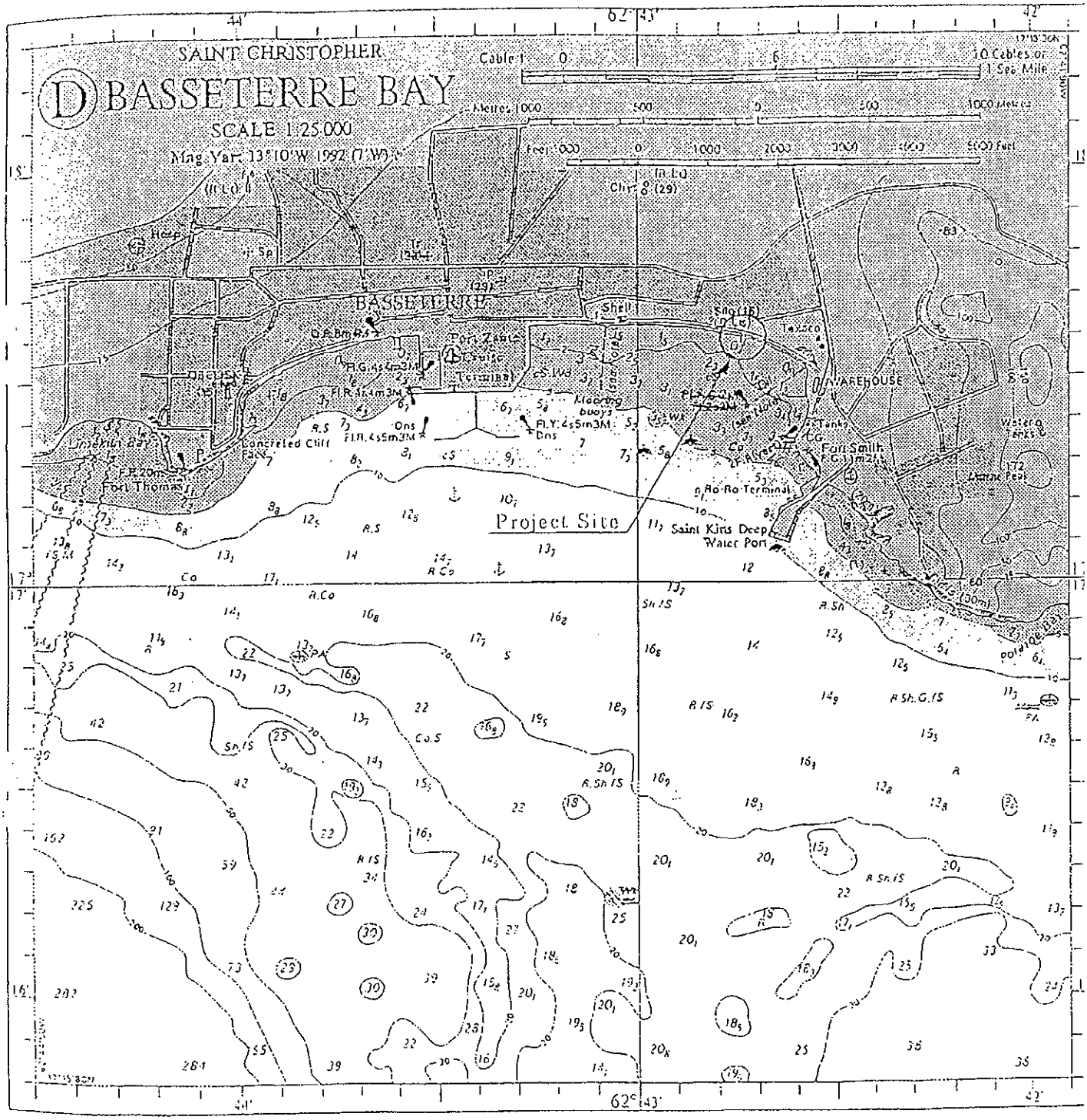
2) Make adequate preparation for the eventual smooth handling over of the management of the Complex to fishermen's Cooperative.

3) Take initiative for good aid coordination between Japan and other donors in providing relevant information in order to avoid any duplication of the Project.

7-7. As to the facilities and it's allocation, both parties confirmed the consideration for a hurricane.

RMA

Annex-1



Location of Project Site (Basseterre)

A. MARINE CIVIL WORK
(1) Slipway / Boat ramp / Landing space (for one boat) / Electric winch
(2) Coastal protection

B. BUILDING WORK
(1) Fisheries center building
a) Fish handling area
b) Fish processing area
c) Fish shop
e) Administration office (Including toilet)
f) Meeting room (Multipurpose room)
g) Fishing gear shop
(2) Fishermen's lockers / Toilet & shower

C. FACILITIES
(1) Ice making & storage plant
(2) Back-up generator
(3) Septic tank
(4) Water reservoir tank

D. AUXILIARY WORK
(1) Lighting fixture
(2) Parking lot

E. EQUIPMENT
(1) Fish handling & processing equipment
a) Small freezer
b) Showcase freezer
c) Scales
d) Fish container
e) Insulated fish box
f) Hand cart
g) Processing table
h) Fish cutting machine (band saw)
i) Vacuum packing machine
j) Knife, glove, boots, cutting board, etc.

F. ADDITIONAL FACILITIES AND EQUIPMENT
(1) Air condition in the fisheries center building
(2) Two sets of computers (Including printers)
(3) Chilling storage (Walk-in type)
(4) Freezing storage (Walk-in type)

Japan's Grant Aid Program

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.
Application (Request made by a recipient country)
Study (Preparatory Study / Basic Design Study conducted by JICA)
Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
Determination of Implementation (Exchange of Notes between the both Governments)
Implementation (Implementation of the Project)

(2) Firstly, an application or a request for a project made by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to see whether or not it is suitable for Japan's Grand Aid. If the request is deemed suitable, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm. If the background and objective of the requested project are not clear, a Preparatory Study is conducted prior to a Basic Design Study.

Thirdly, the Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study Report prepared by JICA and the results are then submitted to the Cabinet for approval.

Fourthly, the Project approved by the Cabinet becomes official when pledged by the Exchange of Notes signed by the both Governments.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

2. Contents of the Study

(1) Contents of the Study
The purpose of the Study (Preparatory Study/Basic Design Study) conducted on a project requested by JICA is to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

a) to confirm background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
b) to evaluate appropriateness of the Project for the Grant Aid Scheme from a

RMA 1160

technical, social and economical point of view,

c) to confirm items agreed on by the both parties concerning a basic concept of the project,

d) to prepare a basic design of the project,

e) to estimate cost involved in the project.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request.

Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

(2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) consulting firm(s) registered. JICA selects (a) firm(s) through proposals submitted by firms which are interested. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference made by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency.

(3) Status of a Preparatory Study in the Grant Aid Program

A Preparatory Study is conducted during the second step of a project formulation & preparation as mentioned above.

A result of the study will be utilized in Japan to decide if the Project is to be suitable for a Basic Design Study

Based on the result of the Basic Design Study, the Government would proceed to the stage of decision making process(appraisal and approval) .

It is important to notice that at the stage of Preparatory Study, no commitment is made by the Japanese side concerning the realization of the Project in the scheme of Grant Aid Program.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services for economic and social development of the country under the following principles in accordance with relevant laws and regulations of Japan. The Grant Aid is not in a form of donation or such.

(2) Exchange of Notes (E/N)

The Japan's Grant Aid is extended in accordance with the Exchange of Notes by both Governments, in which the objectives of the Project, period of execution

conditions and amount of the Grant etc. are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.
When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country origin.
However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

(5) Necessity of the "Verification"
The Government of the recipient country or its designated authority will conclude into contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings required to the Government of the recipient country
In the implementation of the Grant Aid, the recipient country is required to undertake necessary measures such as the following:

a) to secure land necessary for the sites of the project and to clear and level the land prior to commencement of the construction work,

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

c) to secure buildings prior to the installation work in case the Project is providing equipment,

d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,

RTA

f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) Proper Use

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for their operation and maintenance as well as to bear all expenses other than those to be borne by the Grant Aid.

(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the contracts verified.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay issued by the Government of the recipient country or its designated authority.

RM

Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To construct the parking lot	●	
5	To construct roads		
	1) Within the site	●	
	2) Outside the site		●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		●
	b.The drop wiring and internal wiring within the site	●	
	c.The main circuit breaker and transformer	●	
	2)Water Supply		
	a.The city water distribution main to the site		●
	b.The supply system within the site (receiving and/or elevated tanks)	●	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		●
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	●	
	4)Gas Supply		
	a.The city gas main to the site		●
	b.The gas supply system within the site	●	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame / panel (MDF) of the building		●
	b.The MDF and the extension after the frame / panel	●	
	6)Furniture and Equipment		
	a.General furniture		●
	b.Project equipment	●	
8	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)

RAA

10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
11	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●

RAA

MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY
ON
THE PROJECT
FOR
CONSTRUCTION OF THE BASSETERRE FISHERIES COMPLEX IN SAINT CHRISTOPHER AND NEVIS (CONSULTATION ON THE DRAFT REPORT)

In August 2000, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Basic Design Study Teams on the Project for Construction of the Basseterre Fisheries Complex in Saint Christopher and Nevis (hereinafter referred to as "the Project"), and through discussions, site surveys, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and to consult the Saint Christopher and Nevis side on the components of the draft report, JICA sent to Saint Christopher and Nevis the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Noritaka ASAKAWA, Assistant Director, Fishing Port Planning Division Fishing Port Department, Fisheries Agency, from August 23 to August 26, 2000.

As a result of discussions, both sides have confirmed the main items described on the attached sheets.

Basseterre, August 25, 2000

Mr. Noritaka ASAKAWA
Leader
Draft Report Explanation Team
JICA

Mr. Raphael A. Archibald
Permanent Secretary
Ministry of Agriculture, Fisheries,
Co-operatives, Lands & Housing

ATTACHMENT

1. Components of the draft report

The Government of Saint Christopher and Nevis agreed and accepted the components of the draft report explained by the Team.

2. Japan's Grant Aid System

The Saint Christopher and Nevis side understands the Japan's Grant Aid Scheme as explained by the Team and will take the necessary measures described in Annex I on condition that the Grant Aid by the Government of Japan is extended to the Project.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Saint Christopher and Nevis around December 2000.

4. Other Relevant Issues

4-1. The Saint Christopher and Nevis side will be responsible for cleaning the Project site in order for smooth implementation of the Project and repairing existing fishermen's lockers by the beginning of the Project.

4-2. The Saint Christopher and Nevis side will take necessary measures to arrange appropriate number of staff and the necessary budget allocation for the operation and maintenance of the Fisheries Complex.

4-3. The Saint Christopher and Nevis side will be responsible for explaining the outline and schedule of the Project to fishermen and persons related to the Project and obtaining their understanding and cooperation.

4-4. The land and sea area at the Project site don't require legal procedures for the right of land and sea use since the land and sea area belong to the Government of Saint Christopher and Nevis.

4-5. The Saint Christopher and Nevis side will be responsible for erecting permanent fences surrounding the Project.

4-6. The Saint Christopher and Nevis side will be responsible for relocation of the existing drainage.

4-7. The Saint Christopher and Nevis side made a requirement of the computers for the following necessities;

1) Data input and analysis of purchases, sales and all relevant supply and materials
2) Keeping, tracking and analyzing business operation of the Fishery Complex.
3) To standardize data information system that is compatible with that of the Fisheries Management Unit.

Then, the Team promised to convey the requirement to the Government of Japan.

Japan's Grant Aid Program

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.
Application (Request made by a recipient country)
Study (Preparatory Study / Basic Design Study conducted by JICA)
Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
Determination of Implementation (Exchange of Notes between the both Governments)
Implementation (Implementation of the Project)

(2) Firstly, an application or a request for a project made by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to see whether or not it is suitable for Japan's Grand Aid. If the request is deemed suitable, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm. If the background and objective of the requested project are not clear, a Preparatory Study is conducted prior to a Basic Design Study.

Thirdly, the Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study Report prepared by JICA and the results are then submitted to the Cabinet for approval.

Fourthly, the Project approved by the Cabinet becomes official when pledged by the Exchange of Notes signed by the both Governments.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

2. Contents of the Study

(1) Contents of the Study
The purpose of the Study (Preparatory Study/Basic Design Study) conducted on a project requested by JICA is to provide a basic document necessary for appraisal of the project by the Japanese Government. The contents of the Study are as follows:

a) to confirm background, objectives, benefits of the project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
b) to evaluate appropriateness of the Project for the Grant Aid Scheme from a technical, social and economical point of view,
c) to confirm items agreed on by the both parties concerning a basic concept of the project,
d) to prepare a basic design of the project,
e) to estimate cost involved in the project.

Final project components are subject to approval by the Government of Japan and therefore may differ from an original request.

Implementing the project, the Government of Japan requests the recipient country to take necessary measures involved which are itemized on Exchange of Notes.

(2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) consulting firm(s) registered. JICA selects (a) firm(s) through proposals submitted by firms which are interested. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference made by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country after Exchange of Notes, in order to maintain technical consistency.

(3) Status of a Preparatory Study in the Grant Aid Program

A Preparatory Study is conducted during the second step of a project formulation & preparation as mentioned above.

A result of the study will be utilized in Japan to decide if the Project is to be suitable for a Basic Design Study

Based on the result of the Basic Design Study, the Government would proceed to the stage of decision making process(appraisal and approval) .

It is important to notice that at the stage of Preparatory Study, no commitment is made by the Japanese side concerning the realization of the Project in the scheme of Grant Aid Program.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services for economic and social development of the country under the following principles in accordance with relevant laws and regulations of Japan. The Grant Aid is not

in a form of donation or such.

(2) Exchange of Notes (E/N)
The Japan's Grant Aid is extended in accordance with the Exchange of Notes by both Governments, in which the objectives of the Project, period of execution, conditions and amount of the Grant etc. are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as Exchange of Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and a final payment to them must be completed.

(4) Under the Grant, in principle, products and services of origins of Japan or the recipient country are to be purchased.
When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country origin.
However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

(5) Necessity of the "Verification"
The Government of the recipient country or its designated authority will conclude into contracts in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. The "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings required to the Government of the recipient country
In the implementation of the Grant Aid, the recipient country is required to undertake necessary measures such as the following:

a) to secure land necessary for the sites of the project and to clear and level the land prior to commencement of the construction work,

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

c) to secure buildings prior to the installation work in case the Project is providing equipment,

d) to ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the

products purchased under the Grant Aid,

e) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,

f) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(7) Proper Use
The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for their operation and maintenance as well as to bear all expenses other than those to be borne by the Grant Aid.

(8) Re-export
The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank") . The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the contracts verified.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay issued by the Government of the recipient country or its designated authority.

Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To construct the parking lot	●	
5	To construct roads		
	1) Within the site	●	
	2) Outside the site		●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		●
	b.The drop wiring and internal wiring within the site	●	
	c.The main circuit breaker and transformer	●	
	2)Water Supply		
	a.The city water distribution main to the site		●
	b.The supply system within the site (receiving and/or elevated tanks)	●	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		●
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	●	
	4)Gas Supply		
	a.The city gas main to the site		●
	b.The gas supply system within the site	●	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame / panel (MDF) of the building		●
	b.The MDF and the extension after the frame / panel	●	
	6)Furniture and Equipment		
	a.General furniture		●
	b.Project equipment	●	
8	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)

RAA 23/8/2011

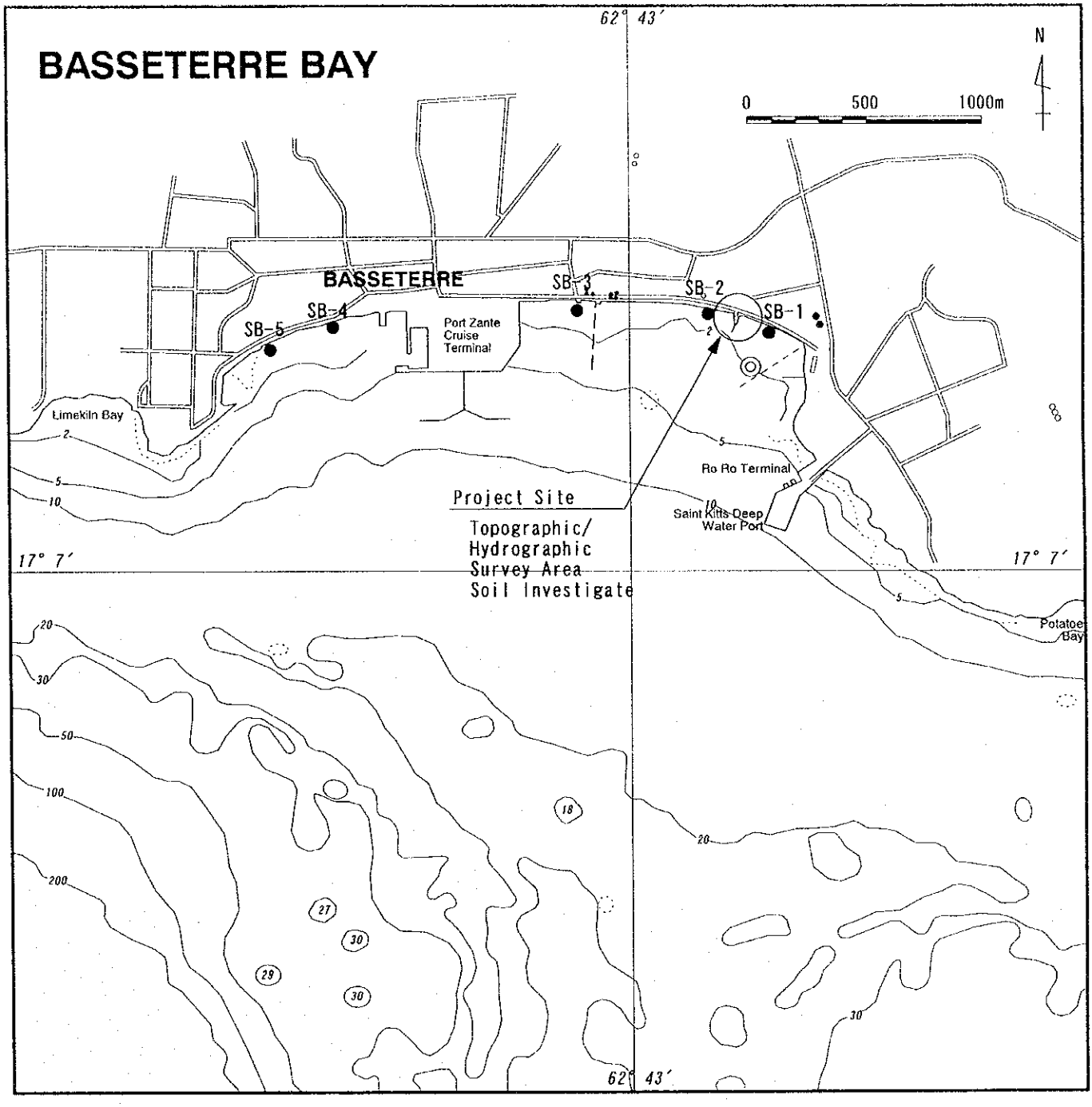
10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		⑩
11	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		⑪
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		⑫
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		⑬

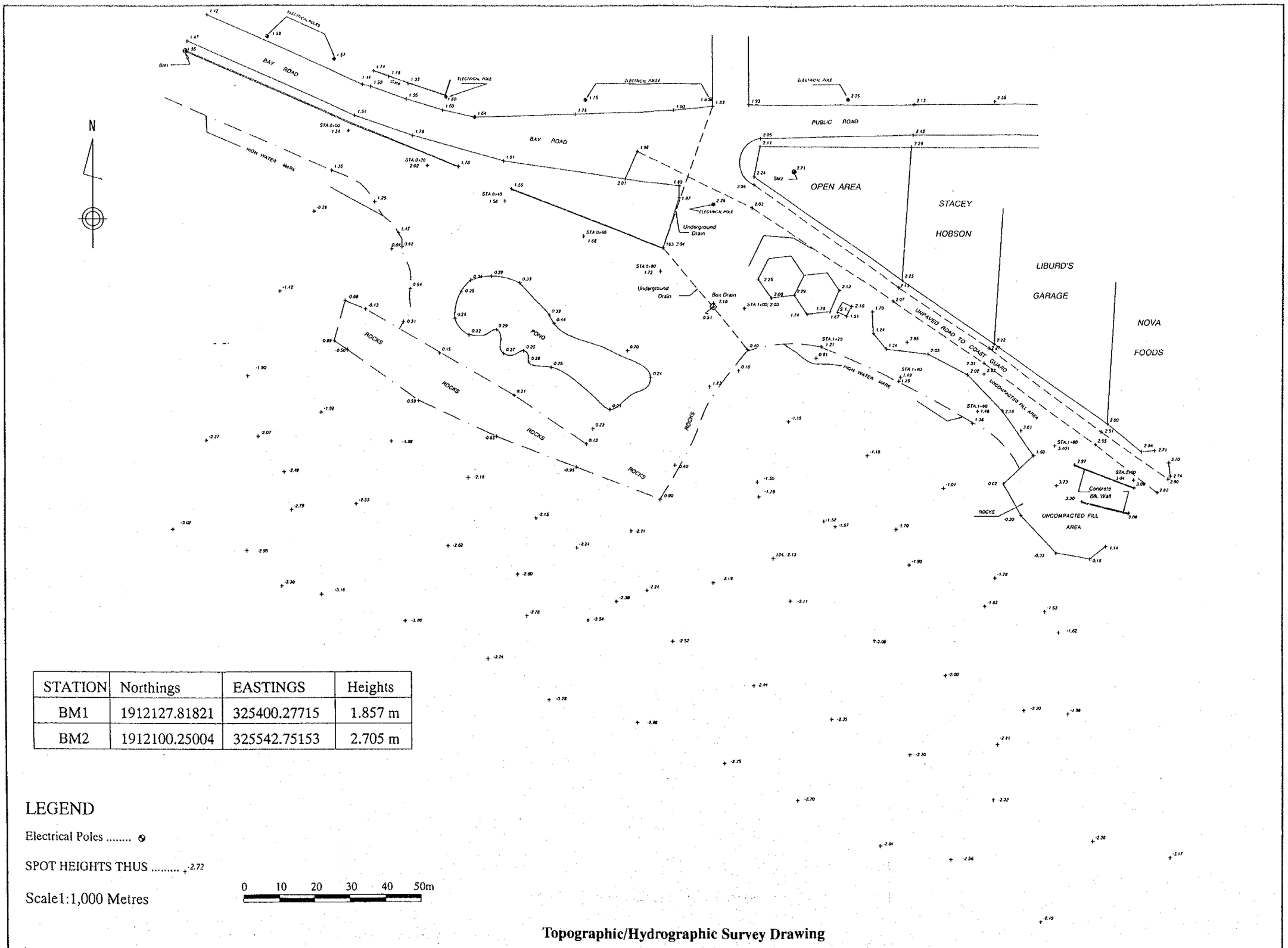
V. Collected Information

No.	Name of material	Organization	Date	Form
1	National Project			
1.1	St. Kitts and Nevis Medium-Term Strategy Paper 2000-2002	Government of St. Kitts and Nevis		Print
1.2	Estimates for the Year 2000 St. Christopher and Nevis	Government of St. Kitts and Nevis	Dec-99	Original
1.3	2000 Budget Address - Towards Development with Equity	Government of St. Kitts and Nevis	Dec-99	Original
2	Marine Product			
2.1	Amount of Fishery Profit of the Year	Statistic Department	1994, 1996, 1997, 1999	Print
2.2	Nevis Fishermen's Marketing and Supply Co-operative Society Limited Report and Accounts for the Year Ended December 31st, 1997.	Nevis Fishermen's Marketing and Supply Co-operative Society Limited	Dec-97	Original
2.3	Nevis Fishermen's Marketing and Supply Co-operative Society Limited Report and Accounts for the Year Ended December 31st, 1998.	Nevis Fishermen's Marketing and Supply Co-operative Society Limited	Dec-98	Original
3	Water Treatment			
3.1	Cromaglass - Water Treatment System	Cromaglass Corporation		Original
3.2	Causes and Presentation of Failure of Septic-Tank Percolation Systems Technical Studies Report			Print
3.3	Drawings	Public Works Department		Print
4	Natural Condition			
4.1	Video of Hurricane Lenny	Urban Development Co-operation	Nov-99	Copy
5	Metrological Condition			
5.1	Meteorological Data	Meteorological Office	1999	Print
6	Environmental Condition			
6.1	The National Conservation and Environment Protection	Ministry of Health and Environment	Apr-87	Print
6.2	The Coast Management Act - Regulations Referring to Beaches, Sandmining, Seagrass Beds, Reefs	Ministry of Health and Environment		Print
6.3	Marine Pollution Prevention Regulations	Ministry of Health and Environment	1999	Print
7	Environmental / Natural Condition			
7.1	Country Environmental Profile	Caribbean Conservation Association, St. Michael, Barbados	1991	Print
7.2	Beach Erosion in St. St. Kitts	COSALC Coordinating Center	1996	
8	Port&Harbour			
8.1	Information of Port of Basseterre of the St. Christopher Air & Sea Ports Authority	St. Christopher Air & Sea Ports Authori	Jun-00	Original
8.2	Port Zane	St. Kitts Urban Development Corporation Ltd.		Original
9	Taxation System			
9.1	The Licenses on Businesses and Occupations Act	Inland Revenue Department	Jun-72	Print
10	Construction			
10.1	Island Dredging Ltd.	Island Dredging Ltd.		Original
10.2	Trinidad Contractors Ltd.	Trinidad Contractors Ltd.		Original
10.3	Recommendation for the Fireproofing Facilities	Fire and Rescue Services	Jun-00	Original

No.	Name of material	Organization	Date	Form
11	Supply			
11.1	Firm Guide, Cost Estimation	St. Kitts Masonry Products Ltd.		Print
11.2	Caribbean Steel Mills Ltd.	Caribbean Steel Mills Ltd.		Original
12	Unit Price			
12.1	Water Rates	Water Service Department		Print
12.2	Power Rates	Electric Department		Print
12.3	Post Charges	DHL, FedEx, EMS, Post Office		Original
12.4	Annual Report, Labour Department	Labour Department		Original
13	General			
13.1	Information of National Holiday,2000	Ministry of National Security and Information		Print
13.2	Guide Map of Port of Spain	Embassy of Tmidad and Toago in Japan	Apr-00	Print

VI. Location of Survey Area





STATION	Northings	EASTINGS	Heights
BM1	1912127.81821	325400.27715	1.857 m
BM2	1912100.25004	325542.75153	2.705 m

LEGEND

Electrical Poles ..... ⊗

SPOT HEIGHTS THUS ..... +2.72

Scale1:1,000 Metres

0 10 20 30 40 50m

Topographic/Hydrographic Survey Drawing

TRINTOPLAN CONSULTANTS LTD.

SHEET 1 OF 1

PROJECT: GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

PROJECT No. 5831

RECORD OF BOREHOLE 1

ENCLOSURE 5

LOCATION N:1912097.4782 m E:325500.2493 m

BORING DATE 00-06-16 TO 00-06-16

DATUM MEAN SEA LEVEL

SAMPLER HAMMER WEIGHT / PENETRATION TEST HAMMER WEIGHT } 63.5 kg, DROP 762 mm

BORING EQUIPMENT / METHOD ACKER SKID MOUNTED / WASH BORING

DIAMETER OF DRILL BIT 0.1 m

DRILLING MUD N/A

ELEV. (m) / DEPTH (m)	SAMPLE NUMBER	SAMPLE TYPE	STRAT. PLOT	WELL INSTALLATION	SOIL PROFILE DESCRIPTION	BULK UNIT WEIGHT γ_{sat} KN/m³	PENETRATION RESISTANCE BLOWS/0.3 m N-VALUE (N) CONE PENETRATION; UNDRAINED SHEAR STRENGTH KN/m²	WATER CONTENT, PERCENT W_P W W_L	REMARKS AND GRAIN SIZE DISTRIBUTION GR SA SI CL
1.680					Ground Surface				
0	1				SAND TRACE GRAVEL, SILT AND CLAY COMPACT DARK GREY AND BROWN		(42)		3 92 (5)
0.68									
1	2				SAND SOME CEMENTED PARTICLES TRACE GRAVEL, SILT AND CLAY VERY DENSE DARK BROWN		(84)		21 68 (12) S.G. = 2.91 G.W.T. ON 2000-08-16
0.32									
2	3				SAND SOME GRAVEL TRACE FRAGMENTS OF SEA SHELLS, SILT AND CLAY		(67)		15 80 (5) S.G. = 2.87
1.32									
3	4				VERY DENSE		(81)		25 70 (5)
2.32									
4	5				DARK GREY DENSE OLIVE BROWN		(93)		22 74 (4) 20 71 (10) S.G. = 2.19
3.32									
5	6				SAND LITTLE TO SOME GRAVEL TRACE FRAGMENTS OF SEA SHELLS, SILT AND CLAY		(45)		14 76 (10)
4.32									
6	7				VERY DENSE		(78)		10 78 (12) S.G. = 2.81
5.32									
7	8						(68)		26 68 (7)
6.32									
8	9				DARK BROWN AND GREY		(79)		19 74 (7)
					END OF BOREHOLE @ 8.5m				
7.32									

GROUNDWATER TABLE ELEV. / DEPTH 0.2 m / 1.5 m

SPLIT SPOON; ROCK CORE; DISTURBED BULK; SHELBY TUBE; BLOCK SAMPLE; SAMPLE LOST

W_L - LIQUID LIMIT; W_P - PLASTIC LIMIT; W - MOISTURE CONTENT; ✳ - ORGANIC CONTENT

NATURAL VANE; REMOULDED VANE; UNCONFINED; TRIAXIAL QUICK; TORVANE; PILCON VANE

CLAY; SILT; SAND; GRAVEL; METAMORPHIC; TOP SOIL; ORGANIC

B.H. No. 1 ENCLOSURE 5

TRINTOPLAN CONSULTANTS LTD.

SHEET 1 OF 1

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

PROJECT No. 5831

RECORD OF BOREHOLE 2

ENCLOSURE 6

LOCATION N:1912074.3107 m E:325482.4164 m

BORING DATE 00-06-17 TO 00-06-17

DATUM MEAN SEA LEVEL

SAMPLER HAMMER WEIGHT / PENETRATION TEST HAMMER WEIGHT } 63.5 kg, DROP 762 mm

BORING EQUIPMENT / METHOD ACKER SKID MOUNTED / WASH BORING

DIAMETER OF DRILL BIT 0.1 m

DRILLING MUD N/A

ELEV. (m) / DEPTH (m)	SAMPLE NUMBER	SAMPLE TYPE	SOIL PROFILE STRAT. PLOT	WELL INSTALLATION	DESCRIPTION	BULK UNIT WEIGHT γ_B KN/m³	PENETRATION RESISTANCE BLOWS/0.3 m N-VALUE (N) CONE PENETRATION 20 40 60 80 100 / UNDRAINED SHEAR STRENGTH KN/m² 20 40 60 80 100	WATER CONTENT, PERCENT W_p W W_L 20 40 60 80	REMARKS AND GRAIN SIZE DISTRIBUTION
									GR SA SI CL
0.220					Ground Surface				
0	1				SAND TRACE FRAGMENTS OF SEA SHELLS		5		5 94 (1) S.G. = 2.92
0.78 / 1	2				VERY LOOSE TO LOOSE		6		13 85 (2) S.G. = 2.94
1.78 / 2				▽	BLACK, DARK BROWN, GREY AND WHITE				G.W.T. ON 2000-06-17
	3				SAND SOME GRAVEL TRACE FRAGMENTS OF SEA SHELLS		45		26 72 (2) S.G. = 3.01
2.78 / 3					DENSE				
	4				DARK GREY		53		49 48 (4)
					SAND SOME SILT AND CLAY TRACE FRAGMENTS OF SEA SHELLS VERY DENSE ORANGE BROWN AND DARK GREY				12 58 (30) S.G. = 2.44
3.78 / 4	5				SAND SOME GRAVEL, SILT AND CEMENTED PARTICLES LITTLE CLAY TRACE FRAGMENTS SEA SHELLS		81		14 64 (22) S.G. = 2.79 108.9 kg WEIGHT USED TO OBTAIN SAMPLE 5
4.78 / 5	6				VERY DENSE		77		13 66 (22) 108.9 kg WEIGHT USED TO OBTAIN SAMPLE 6
5.78 / 6					DARK GREY AND BROWN				
	7				SAND TRACE TO SOME SILT LITTLE TO SOME GRAVEL TRACE TO LITTLE CLAY		70		7 73 16 5 NON-PLASTIC 108.9 kg WEIGHT USED TO OBTAIN SAMPLE 7
6.78 / 7					VERY DENSE				
	8				TRACE FRAGMENTS OF SEA SHELLS DARK BROWN		114		13 80 (7) 108.9 kg WEIGHT USED TO OBTAIN SAMPLE 8
7.78 / 8	9				SAND SOME GRAVEL TRACE SILT AND CLAY VERY DENSE LIGHT BROWN		113		21 67 (13) 108.9 kg WEIGHT USED TO OBTAIN SAMPLE 9
8.78					END OF BOREHOLE @ 8.5m				

GROUNDWATER TABLE ELEV. / DEPTH -1.8 m / 2.0 m

SPLIT SPOON ROCK CORE DISTURBED BULK SHELBY TUBE BLOCK SAMPLE SAMPLE LOST

W_L - LIQUID LIMIT W - MOISTURE CONTENT

W_p - PLASTIC LIMIT ✳ - ORGANIC CONTENT

NATURAL VANE
REMOULDED VANE
UNCONFINED
TRIAXIAL QUICK
TORVANE
PILCON VANE

CLAY GRAVEL ORGANIC

SILT METAMORPHIC

SAND TOP SOIL

B.H. No. 2 ENCLOSURE 6

TRINTOPLAN CONSULTANTS LTD.

SHEET 1 OF 1

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

PROJECT No. 5831

RECORD OF BOREHOLE 3

ENCLOSURE 7

LOCATION N:1912089.3103 m E:325477.2490 m

BORING DATE 00-08-18 TO 00-08-18

DATUM MEAN SEA LEVEL

SAMPLER HAMMER WEIGHT } 63.5 kg, DROP 762 mm
PENETRATION TEST HAMMER WEIGHT }

BORING EQUIPMENT / METHOD ACKER SKID MOUNTED / WASH BORING

DIAMETER OF DRILL BIT 0.1 m

DRILLING MUD N/A

ELEV. (m) DEPTH (m)	SAMPLE NUMBER	SAMPLE TYPE	SOIL PROFILE STRAT. PLOT	WELL INSTALLATION	DESCRIPTION	BULK UNIT WEIGHT γ_B KN/m³	PENETRATION RESISTANCE BLOWS/0.3 m N-VALUE (N) CONE PENETRATION / UNDRAINED SHEAR STRENGTH KN/m² (20 40 60 80 100)	WATER CONTENT, PERCENT W_P W W_L (20 40 60 80)	REMARKS AND GRAIN SIZE DISTRIBUTION
									GR SA SI CL
0.730					Ground Surface				
0	1				SAND LITTLE GRAVEL TRACE SILT COMPACT		16		12 86 (3) S.G. = 3.27 G.W.T. ON 2000-08-18
0.27 / 1	2				BLACK AND WHITE SAND LITTLE GRAVEL TRACE FRAGMENTS OF SEA SHELLS AND SILT VERY DENSE		50		11 85 (4) S.G. = 2.97
1.27 / 2	3				DARK BROWN SAND SOME GRAVEL TRACE SEA SHELL FRAGMENTS AND SILT		11		31 65 (4) S.G. = 2.44
2.27 / 3	4				COMPACT		18		21 73 (6) S.G. = 3.44
3.27 / 4	5				DARK BROWN SAND LITTLE SILT AND CLAY TRACE GRAVEL		148		5 79 (16) S.G. = 2.82
4.27 / 5	6						41		6 81 (13)
5.27 / 6	7				VERY DENSE		96		SPLIT SPOON ATTEMPTED, NO RECOVERY
6.27 / 7	8						148		1 82 (17)
7.27 / 8	9				DARK BROWN		103		SPLIT SPOON ATTEMPTED, NO RECOVERY
8.27					END OF BOREHOLE @ 8.5m				

GROUNDWATER TABLE
ELEV. / DEPTH 0.2 m / 0.5 m

SPLIT SPOON | ROCK CORE | DISTURBED BULK
SHELBY TUBE | BLOCK SAMPLE | SAMPLE LOST

W_L - LIQUID LIMIT | W - MOISTURE CONTENT
W_P - PLASTIC LIMIT | ⋇ - ORGANIC CONTENT

NATURAL VANE
REMOULDED VANE
UNCONFINED
TRIAXIAL QUICK
TORVANE
PILCON VANE

CLAY | GRAVEL | ORGANIC
SILT | METAMORPHIC
SAND | TOP SOIL

B.H. No. 3 | ENCLOSURE 7

TRINTOPLAN CONSULTANTS LTD.

SHEET 1 OF 1

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

PROJECT No. 5831

RECORD OF BOREHOLE 4

ENCLOSURE 8

LOCATION N:1912059.0601 m E:325468.1673 m

BORING DATE 00-08-18 TO 00-08-18

DATUM MEAN SEA LEVEL

SAMPLER HAMMER WEIGHT / PENETRATION TEST HAMMER WEIGHT } 63.5 kg, DROP 762 mm

BORING EQUIPMENT / METHOD ACKER SKID MOUNTED / WASH BORING

DIAMETER OF DRILL BIT 0.1 m

DRILLING MUD N/A

ELEV. (m) DEPTH (m)	SAMPLE NUMBER	SAMPLE TYPE	STRAT. PLOT	WELL INSTALLATION	SOIL PROFILE DESCRIPTION	BULK UNIT WEIGHT γ_s KN/m³	PENETRATION RESISTANCE BLOWS/0.3 m N-VALUE (H) CONE PENETRATION / UNDRAINED SHEAR STRENGTH KN/m² (20 40 60 80 100)	WATER CONTENT, PERCENT W_p W W_L (20 40 60 80)	REMARKS AND GRAIN SIZE DISTRIBUTION
									GR SA SI CL
0.160					Ground Surface				
0	1				SAND SOME GRAVEL TRACE FRAGMENTS OF SEA SHELLS AND SILT		(16)		G.W.T. ON 2000-08-18 14 85 (1)
0.84 / 1	2				COMPACT TO VERY LOOSE		(16)		14 84 (2)
1.84 / 2	3						(3)		7 92 (0)
2.84 / 3	4				DARK GREY		(5)		8 89 (4)
					SAND TRACE TO LITTLE SILT AND CLAY VERY LOOSE DARK GREY				0 89 (12) S.G. = 2.92
3.84 / 4	5				GRAVELLY SAND TRACE SILT AND CLAY DENSE DARK GREY		(33)		42 51 (8) S.G. = 2.79
4.84 / 5	6				VERY DENSE		(86)		42 50 (8)
5.84 / 6	7						(11)		43 50 (7)
6.84 / 7	8				DARK BROWN		(10)		31 62 (7)
7.84 / 8	9				SILTY SAND LITTLE GRAVEL AND CLAY VERY DENSE DARK BROWN		(10)		6 69 20 5 NON-PLASTIC
					END OF BOREHOLE @ 8.5m				
8.84									

GROUNDWATER TABLE
ELEV. -0.1 m
DEPTH 0.3 m

SPLIT SPOON | ROCK CORE | DISTURBED SILK
SHELBY TUBE | BLOCK SAMPLE | SAMPLE LOST

W_L - LIQUID LIMIT | W - MOISTURE CONTENT
W_p - PLASTIC LIMIT | ✳ - ORGANIC CONTENT

NATURAL VANE
REMOULDED VANE
UNCONFINED
TRIAXIAL QUICK
TORVANE
PILCON VANE

CLAY | GRAVEL | ORGANIC
SILT | METAMORPHIC
SAND | TOP SOIL

B.H. No. 4 | ENCLOSURE 8

TRINTOPLAN CONSULTANTS LTD.

SHEET 1 OF 1

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

PROJECT No. 5831

RECORD OF BOREHOLE 5

ENCLOSURE 9

LOCATION N:1912044.4904 m E:325496.1261 m

BORING DATE 00-06-19 TO 00-06-19

DATUM MEAN SEA LEVEL

SAMPLER HAMMER WEIGHT / PENETRATION TEST HAMMER WEIGHT } 63.5 kg, DROP 762 mm

BORING EQUIPMENT / METHOD ACKER SKID MOUNTED / WASH BORING

DIAMETER OF DRILL BIT 0.1 m

DRILLING MUD N/A

ELEV. (m) / DEPTH (m)	SAMPLE NUMBER	SAMPLE TYPE	STRAT. PLOT	WELL INSTALLATION	SOIL PROFILE DESCRIPTION	BULK UNIT WEIGHT γ_B KN/m³	PENETRATION RESISTANCE BLOWS/0.3 m N-VALUE (N) CONE PENETRATION 20 40 60 80 100	UNDRAINED SHEAR STRENGTH KN/m² 20 40 60 80 100	WATER CONTENT, PERCENT W_p W W_L 20 40 60 80	REMARKS AND GRAIN SIZE DISTRIBUTION GR SA SI CL
0.200 / 0					Ground Surface					
	1				SAND SOME GRAVEL LITTLE SILT TRACE FRAGMENTS OF SEA SHELLS AND CLAY COMPACT		(11)			G.W.T. ON 2000-06-19 14 73 (13) S.G. = 2.94
0.80 / 1	2				VERY DENSE SOME CEMENTED PARTICLES		(49)			16 82 (1) S.G. = 3.82
1.80 / 2	3				DARK GREY, BROWN AND WHITE		(70)			28 61 (11)
2.80 / 3	4				SAND SOME GRAVEL TRACE SILT AND CLAY (FOUL SEWER ODOUR) DENSE		(32)			25 69 (7) S.G. = 2.51
3.80 / 4	5				DARK BROWN		(74)			SPLIT SPOON ATTEMPTED, NO RECOVERY
4.80 / 5	6				SAND SOME GRAVEL AND CEMENTED PARTICLES TRACE TO LITTLE SILT TRACE CLAY		(74)			33 61 (5)
5.80 / 6	7				VERY DENSE		(149)			39 49 (13)
6.80 / 7	8				DARK BROWN		100/15cm			SPLIT SPOON ATTEMPTED, NO RECOVERY
					END OF BOREHOLE @ 7.3m					
7.80 / 8										
8.80										

GROUNDWATER TABLE ELEV. / DEPTH 0.1 m / 0.3 m

SPLIT SPOON, ROCK CORE, DISTURBED BULK, SHELBY TUBE, BLOCK SAMPLE, SAMPLE LOST

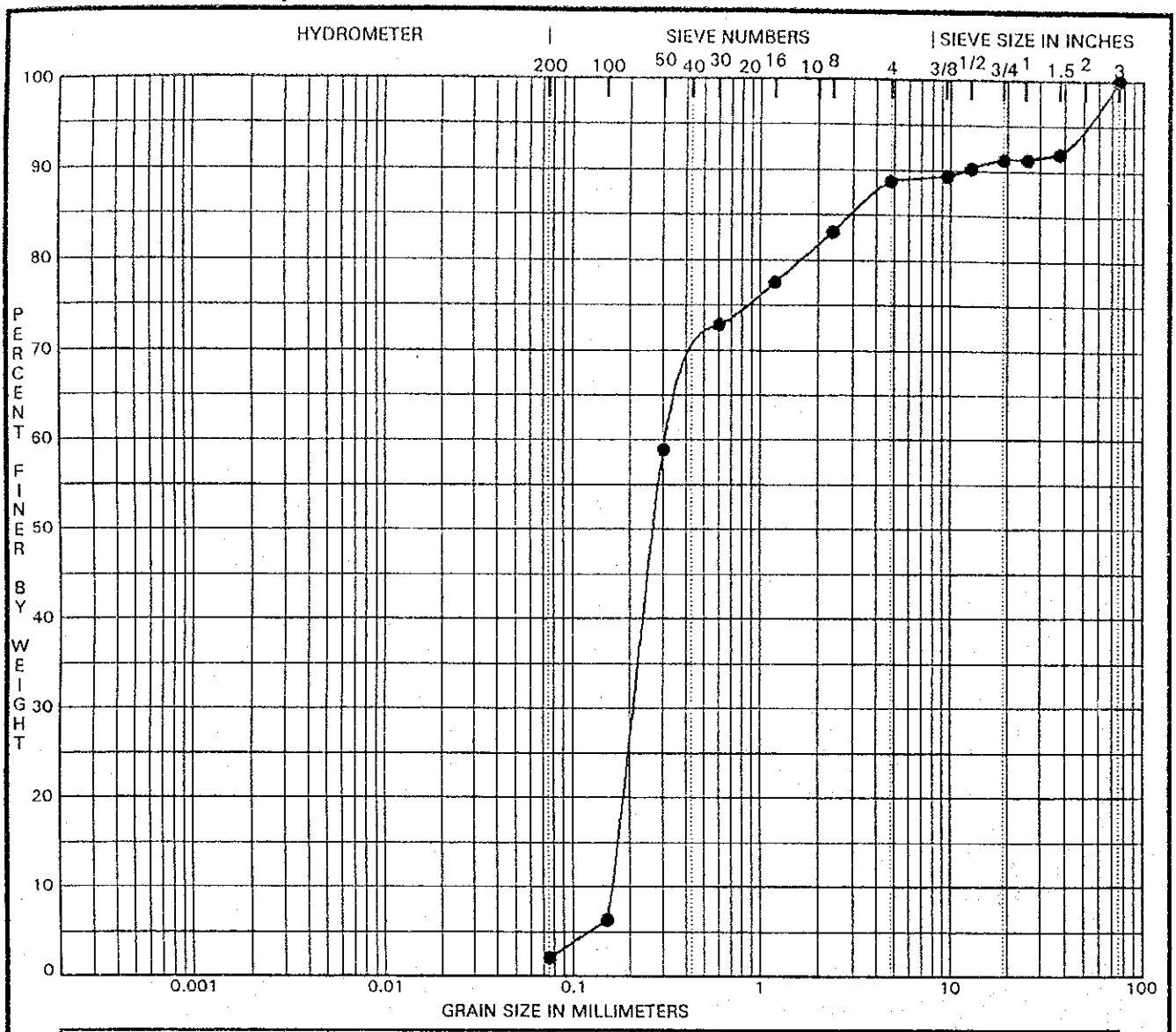
W_L - LIQUID LIMIT W - MOISTURE CONTENT

W_p - PLASTIC LIMIT * - ORGANIC CONTENT

NATURAL VANE, REMOULDED VANE, UNCONFINED, TRIAXIAL QUICK, TORVANE, PILCON VANE

CLAY, SILT, SAND, GRAVEL, METAMORPHIC, TOP SOIL, ORGANIC

B.H. No. 5 ENCLOSURE 9



CLAY	SILT	SAND			GRAVEL	
		fine	medium	coarse	fine	coarse

Borehole No.	Sample No.	Depth (m)	Sample Description
● SEABED1		–	SAND, LITTLE GRAVEL
		–	
		–	
		–	
		–	

Borehole No.	Sample No.	Depth (m)	%Clay	%Silt	%Sand	%Gravel	LL	PL	PI
● SEABED1		–	2.1		86.6	11.3			
		–							
		–							
		–							
		–							

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

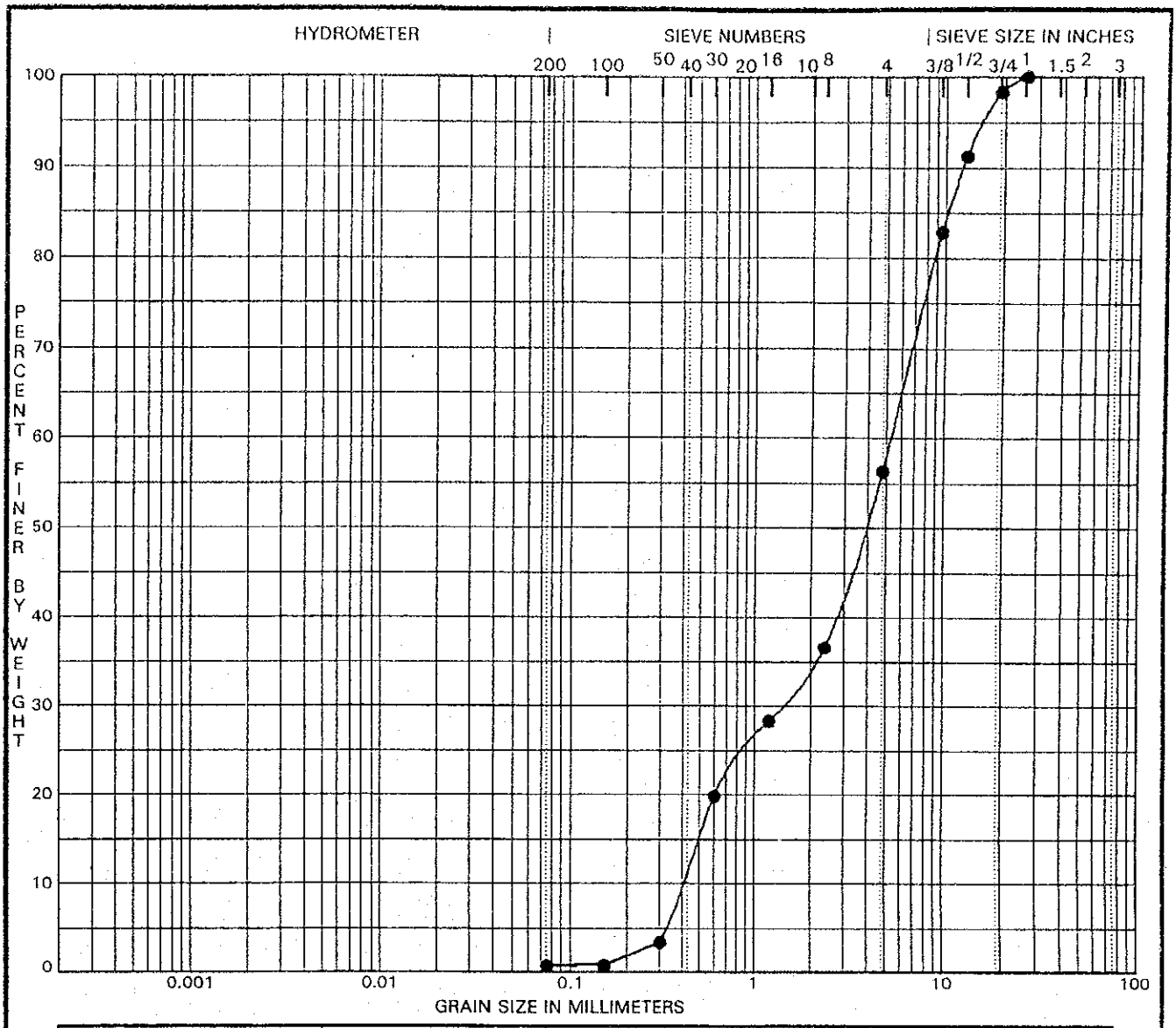
JOB NO. 5831

DATE 00-07-21

GRADATION CURVES

TRINTOPLAN CONSULTANTS LIMITED

TRINIDAD



CLAY	SILT	SAND			GRAVEL	
		fine	medium	coarse	fine	coarse

Borehole No.	Sample No.	Depth (m)	Sample Description
● SEABED2		–	SAND WITH GRAVEL AND SEA SHELLS
		–	
		–	
		–	
		–	

Borehole No.	Sample No.	Depth (m)	%Clay	%Silt	%Sand	%Gravel	LL	PL	PI
● SEABED2		–	0.7		55.6	43.7			
		–							
		–							
		–							
		–							

PROJECT GEOTECH. INVEST. FOR FISHERIES COMPLEX - BASSETERRE, ST.KITTS

JOB NO. 5831

DATE 00-07-21

GRADATION CURVES

TRINTOPLAN CONSULTANTS LIMITED
TRINIDAD

X. Tide/Current Survey Data