

2-2-4 Basic Design Drawings

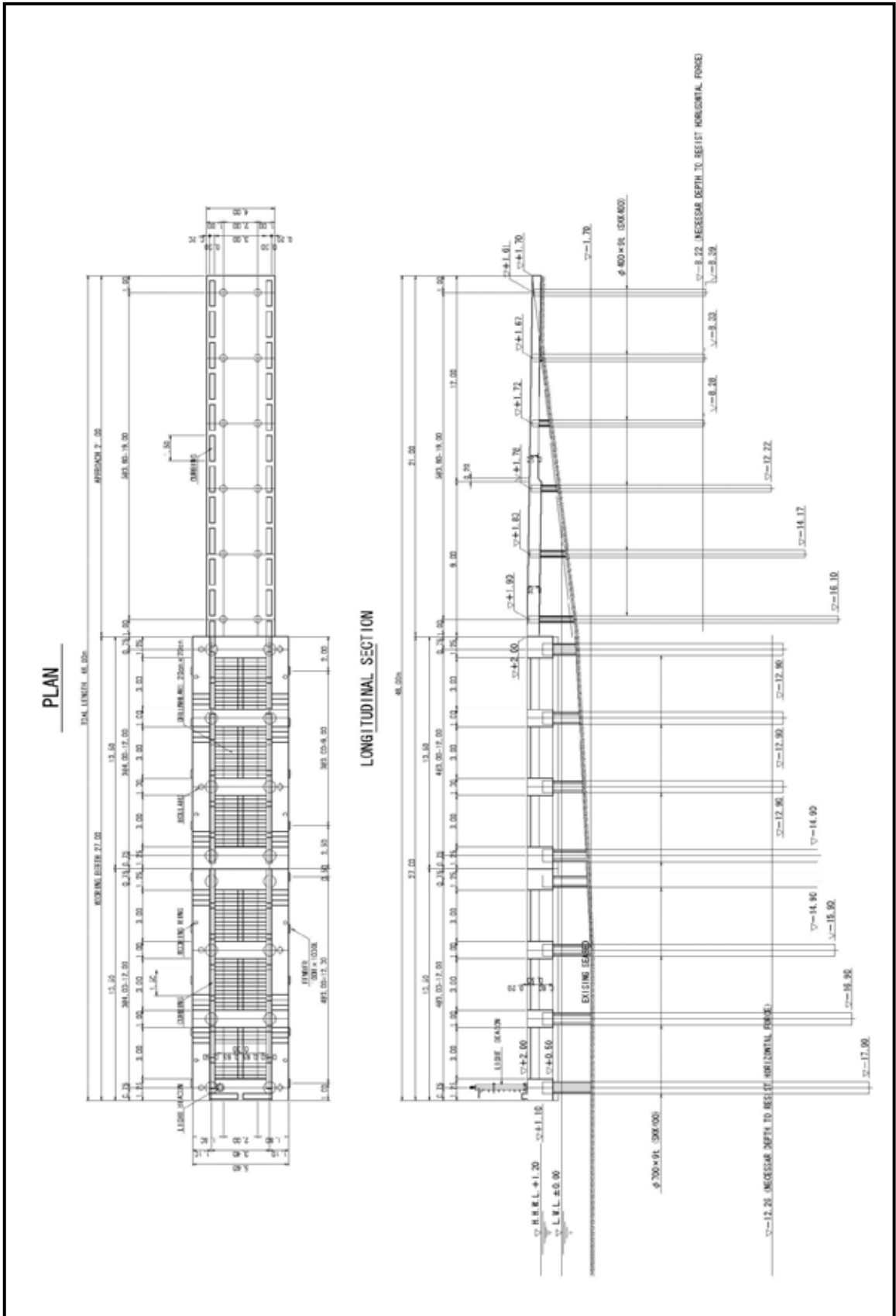


Fig.2-2-4(1) Plan and Section of Jetty

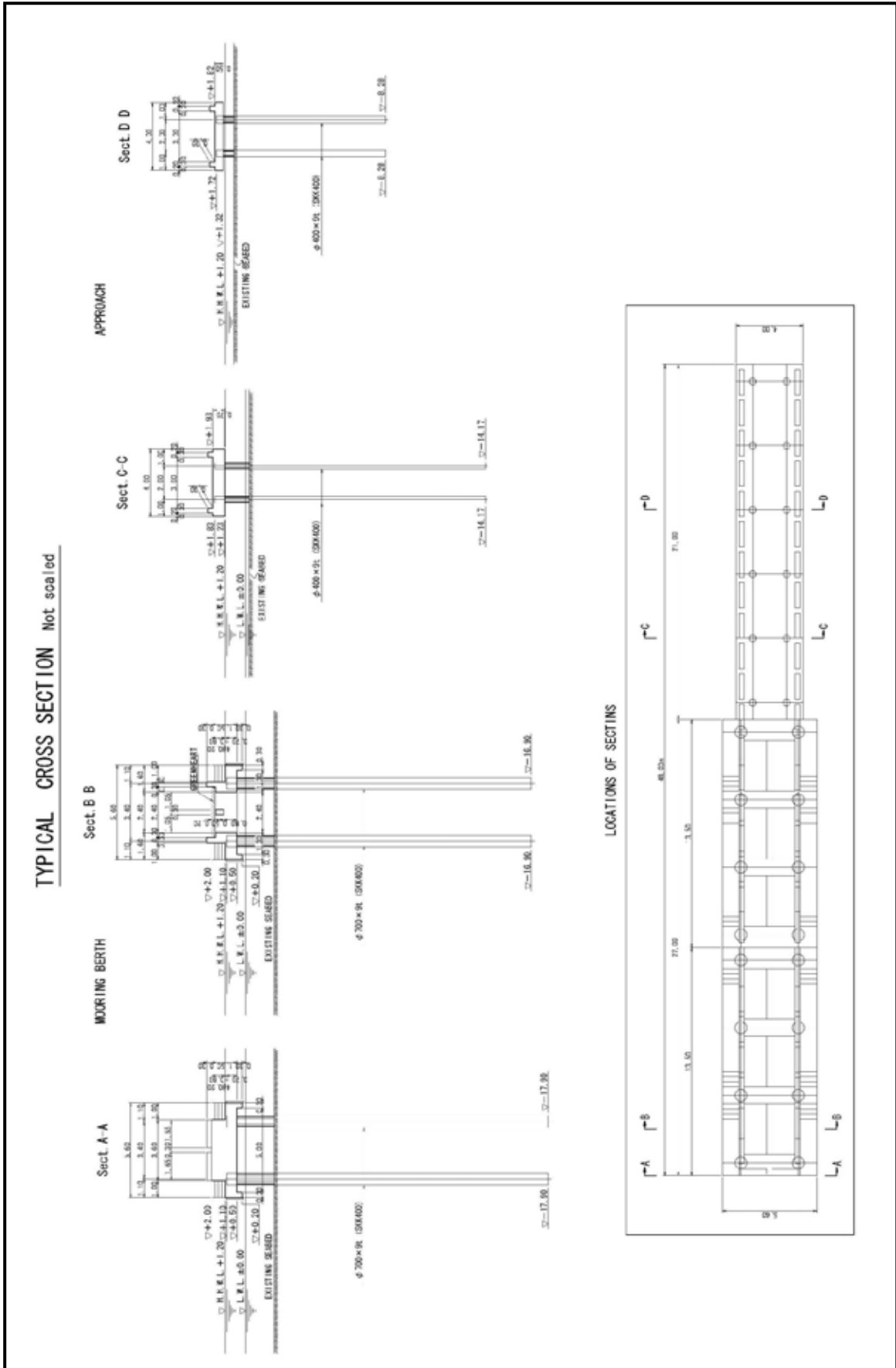


Fig.2-2-4(2) Cross Section of Jetty

DETAILS OF MOORING BERTH (1) Not scaled

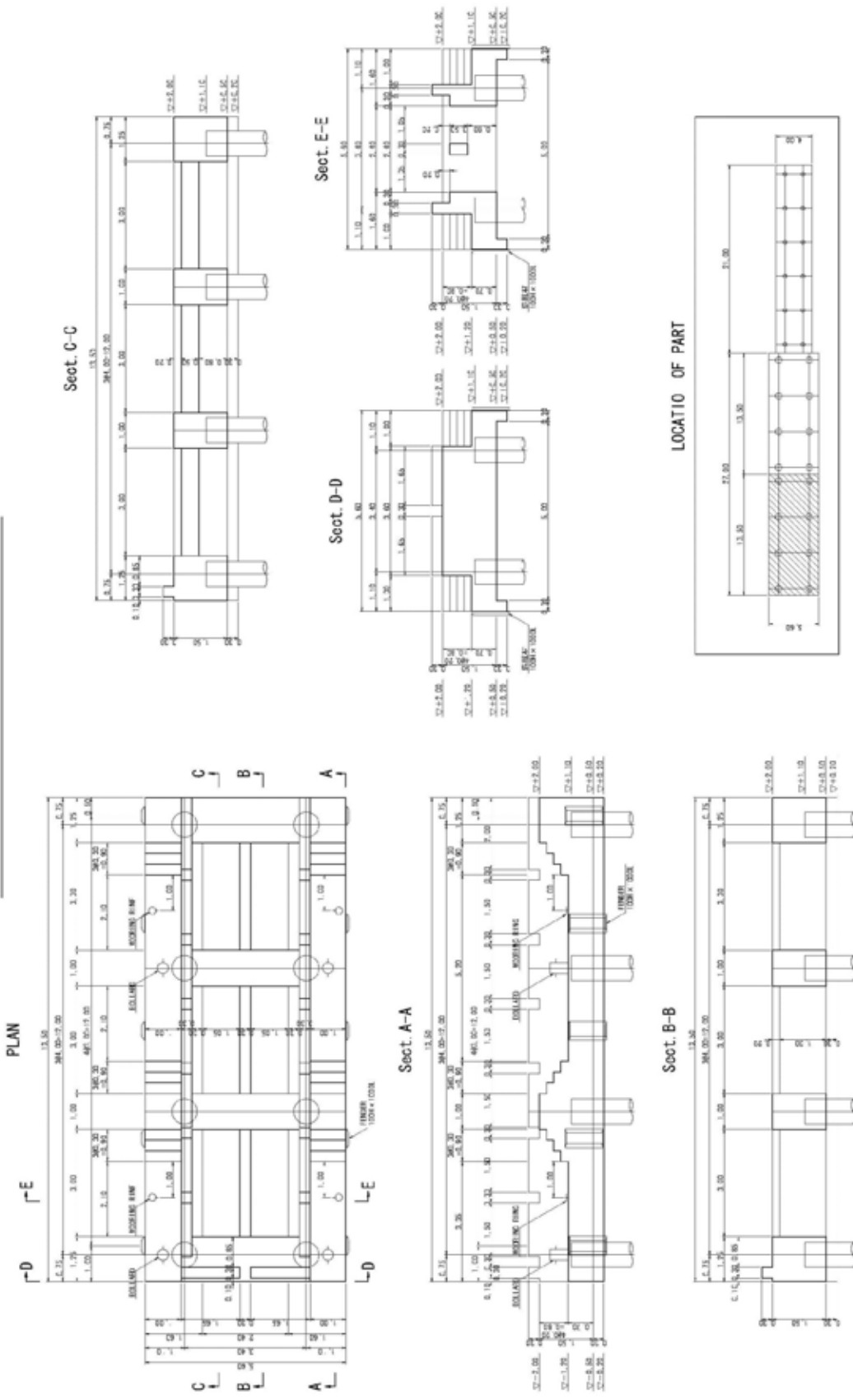


Fig.2-2-4(3) Details of Mooring Berth

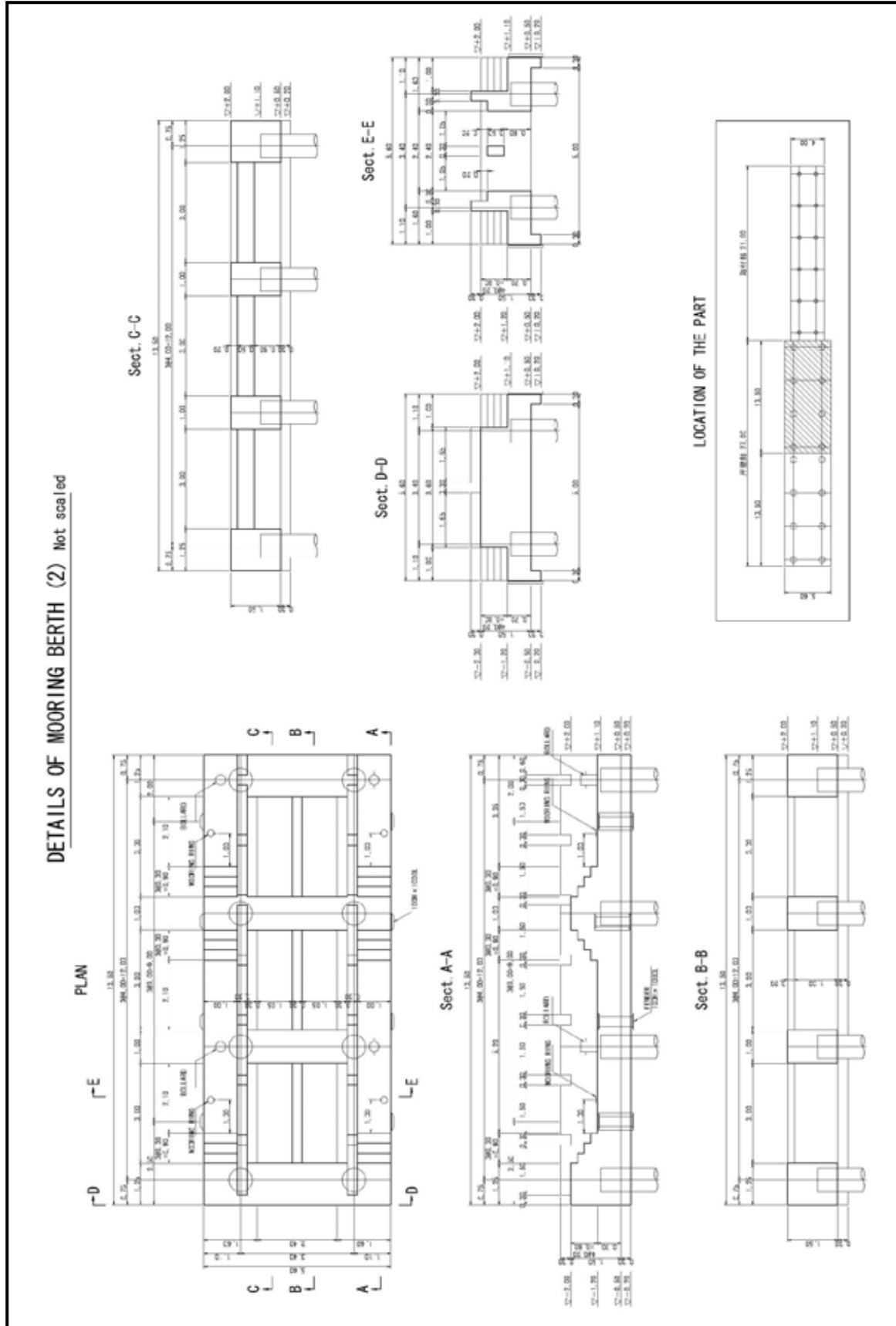


Fig.2-2-4(4) Details of Approach

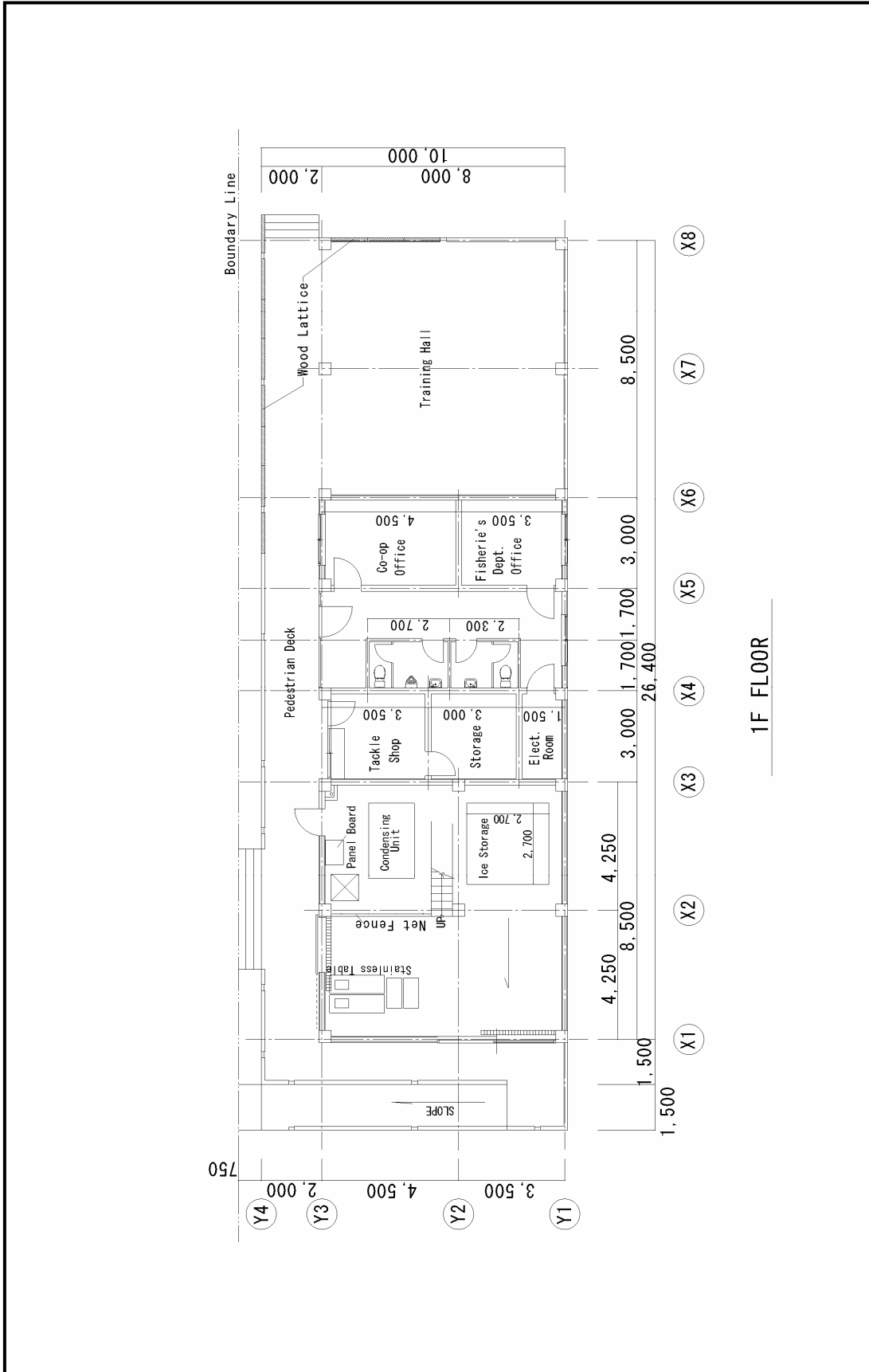


Fig.2-2-4(5) Floor Plan of Fishery Complex (Ground Floor)

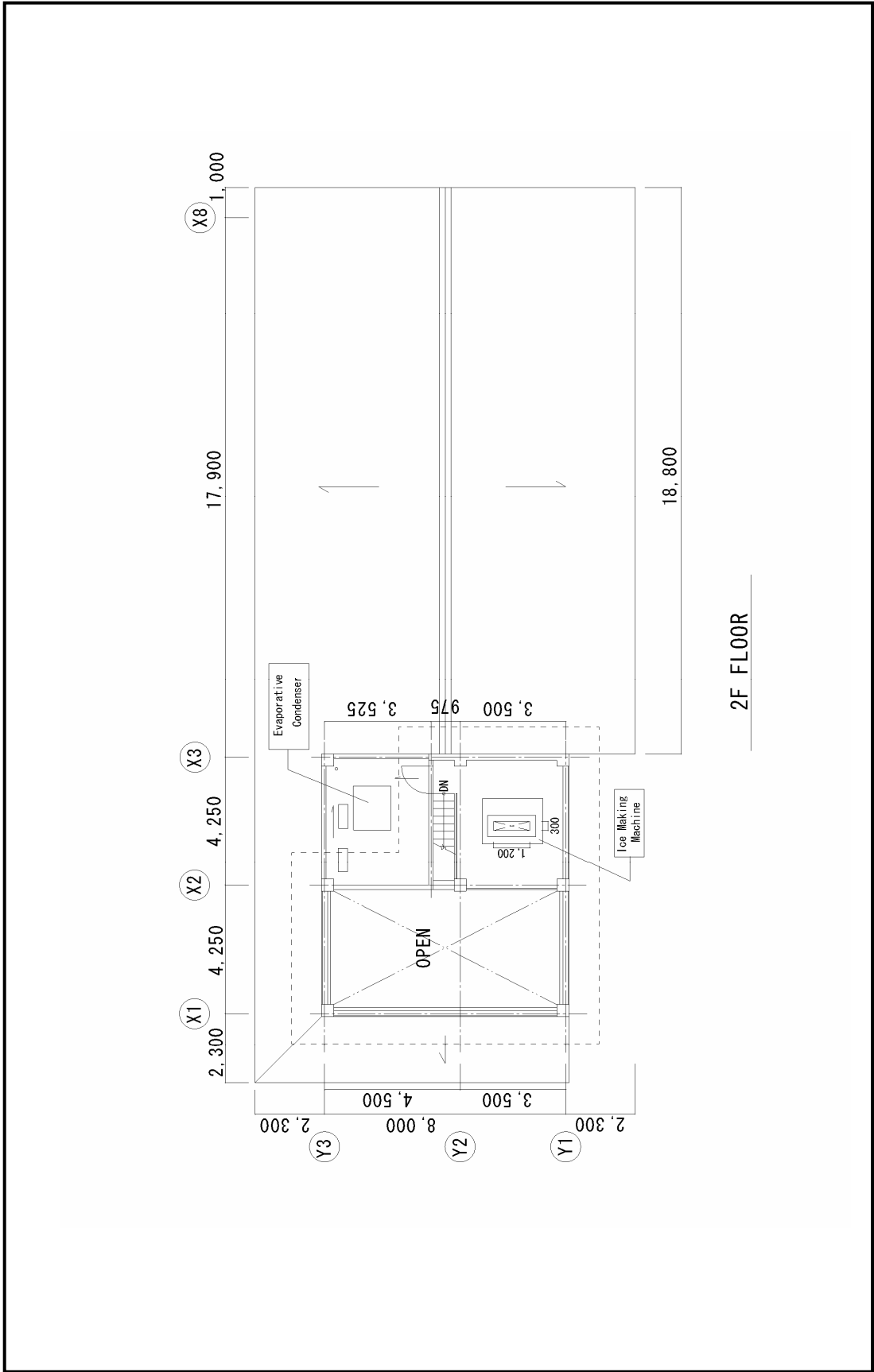


Fig.2-2-4(6) Floor Plan of Fishery Complex (First Floor)

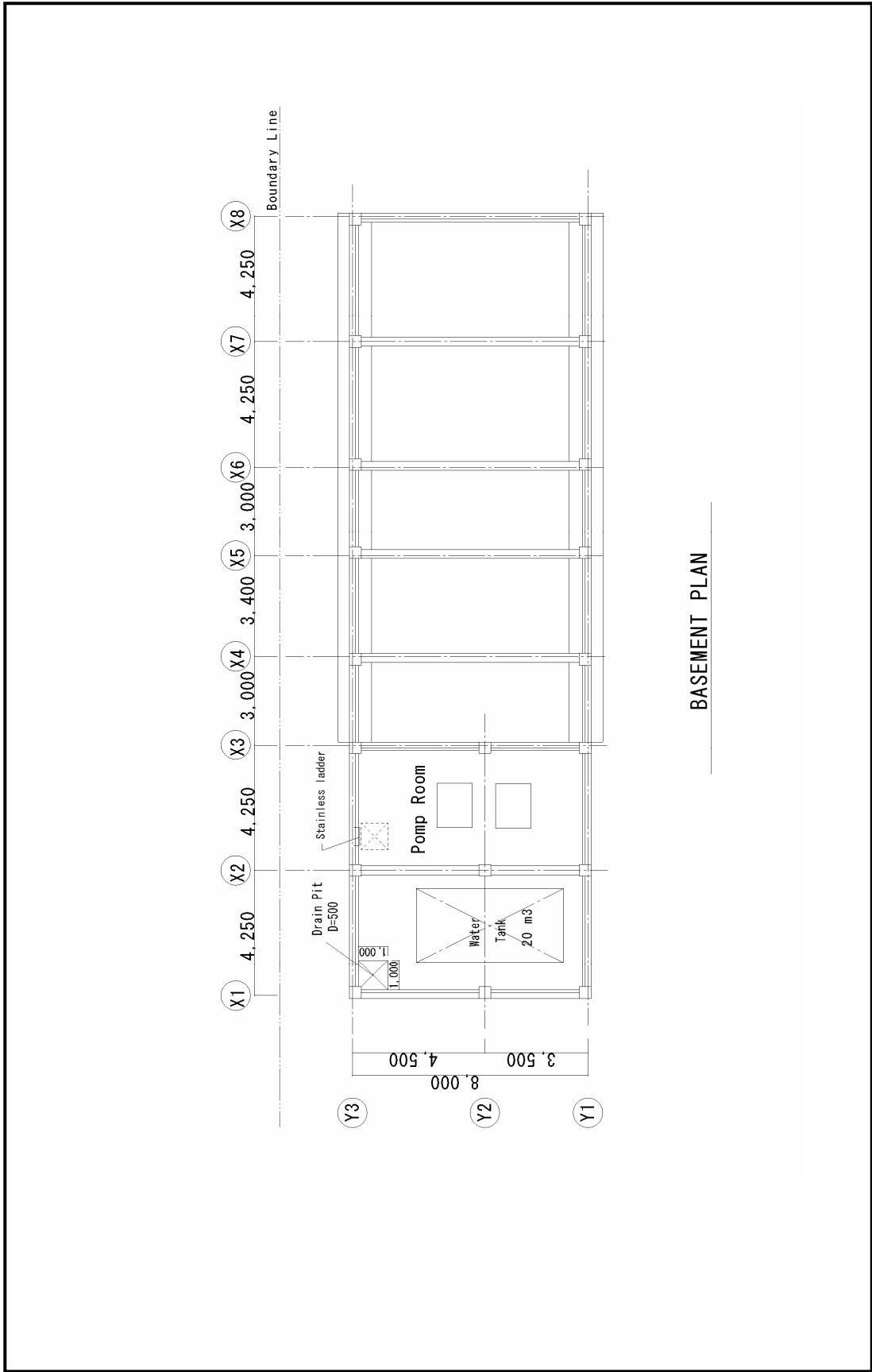


Fig.2-2-4(7) Floor Plan of Fishery Complex (Basement Floor)

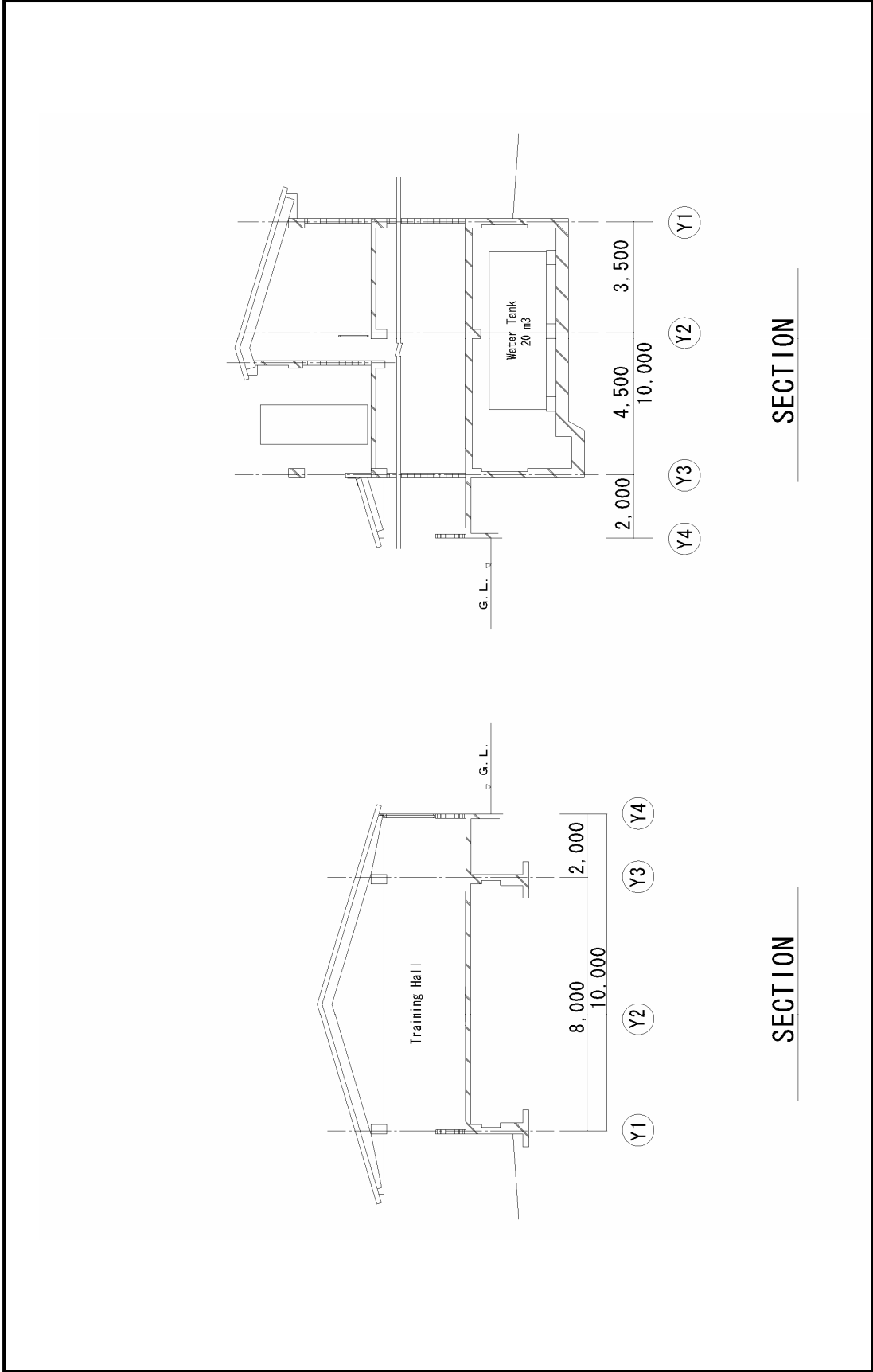


Fig.2-2-4(8) Section of Fishery Complex-1

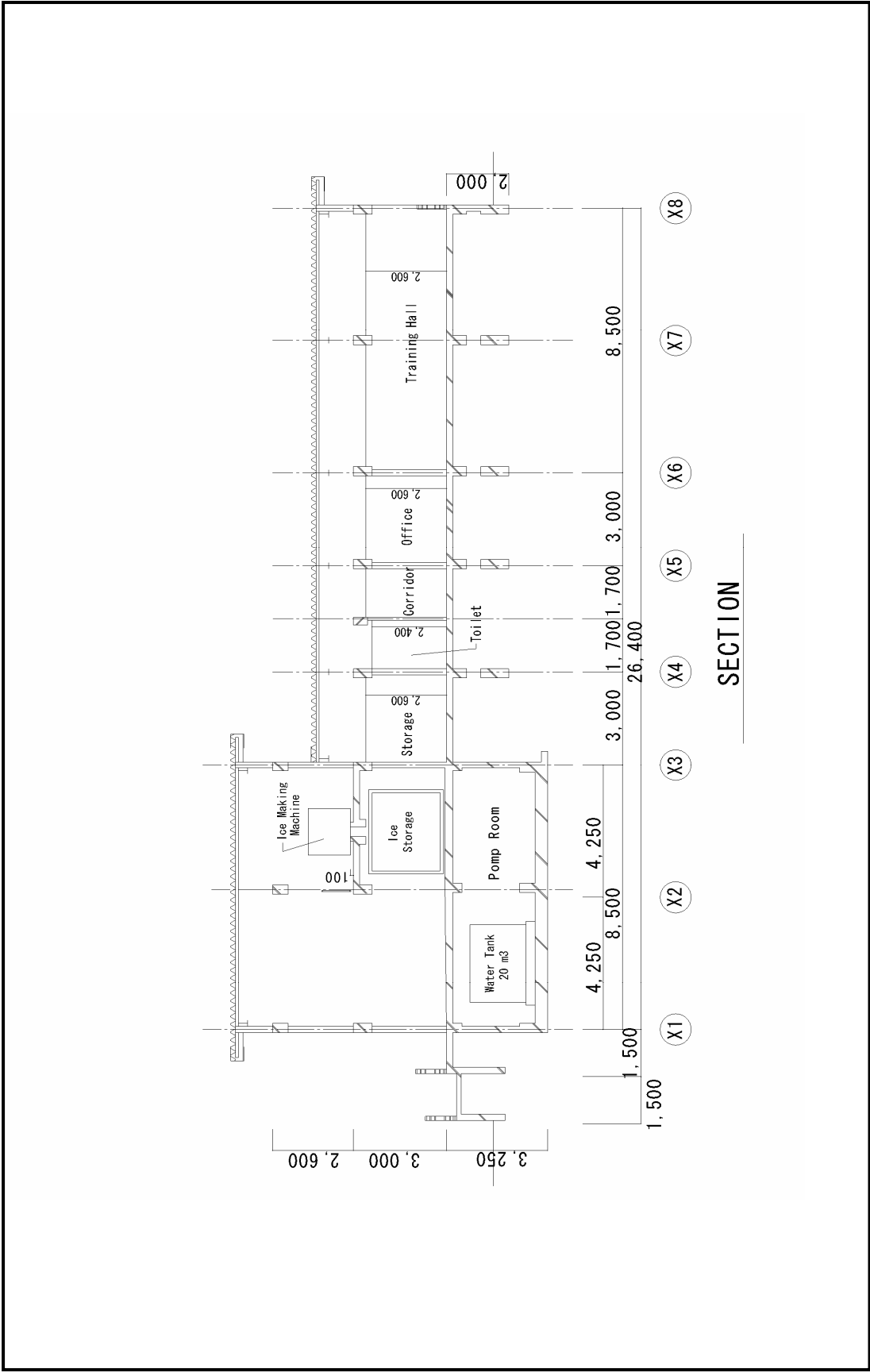


Fig.2-2-4(9) Section of Fishery Complex-2

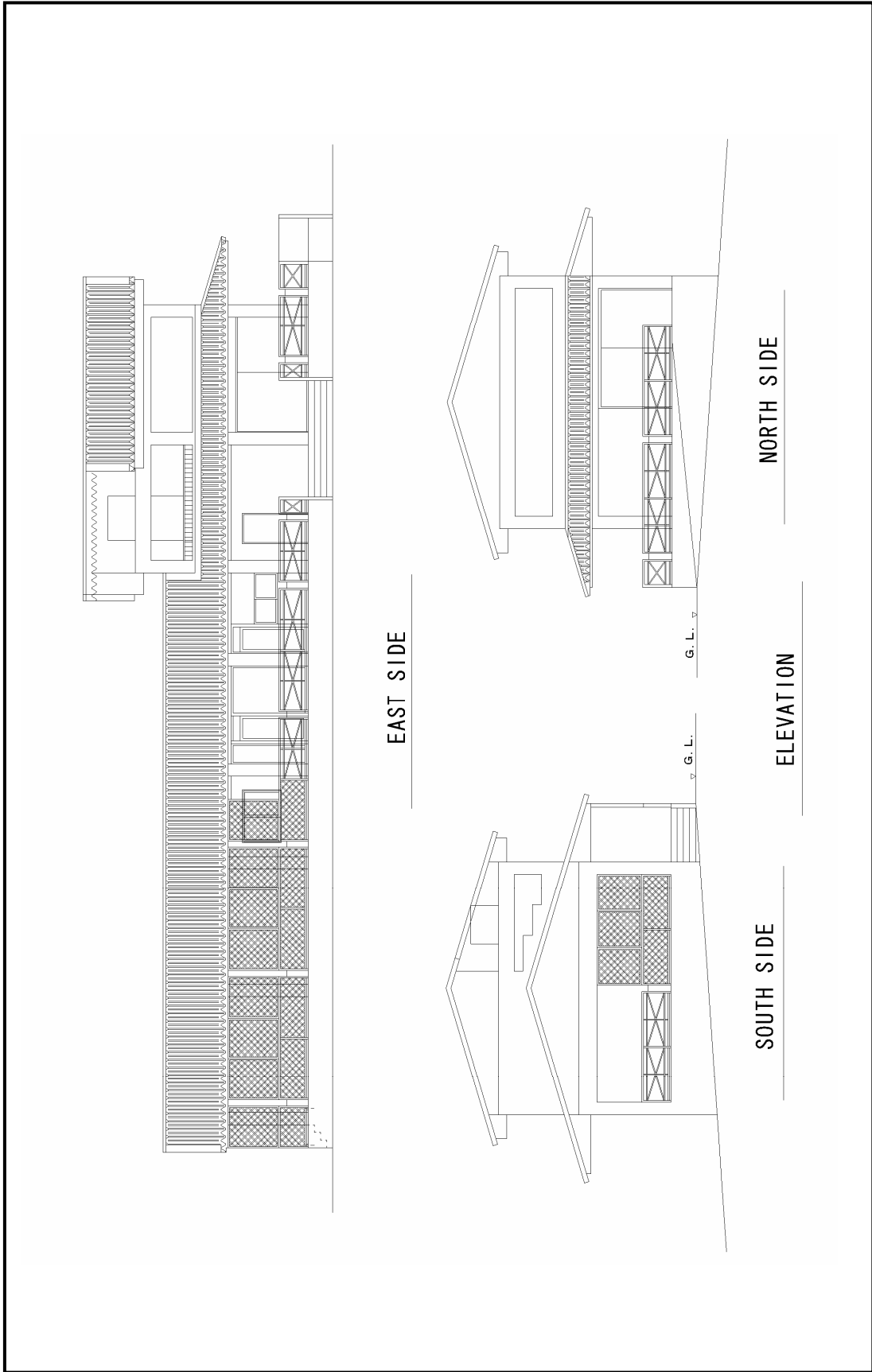


Fig.2-2-4(10) Elevation of Fishery Complex

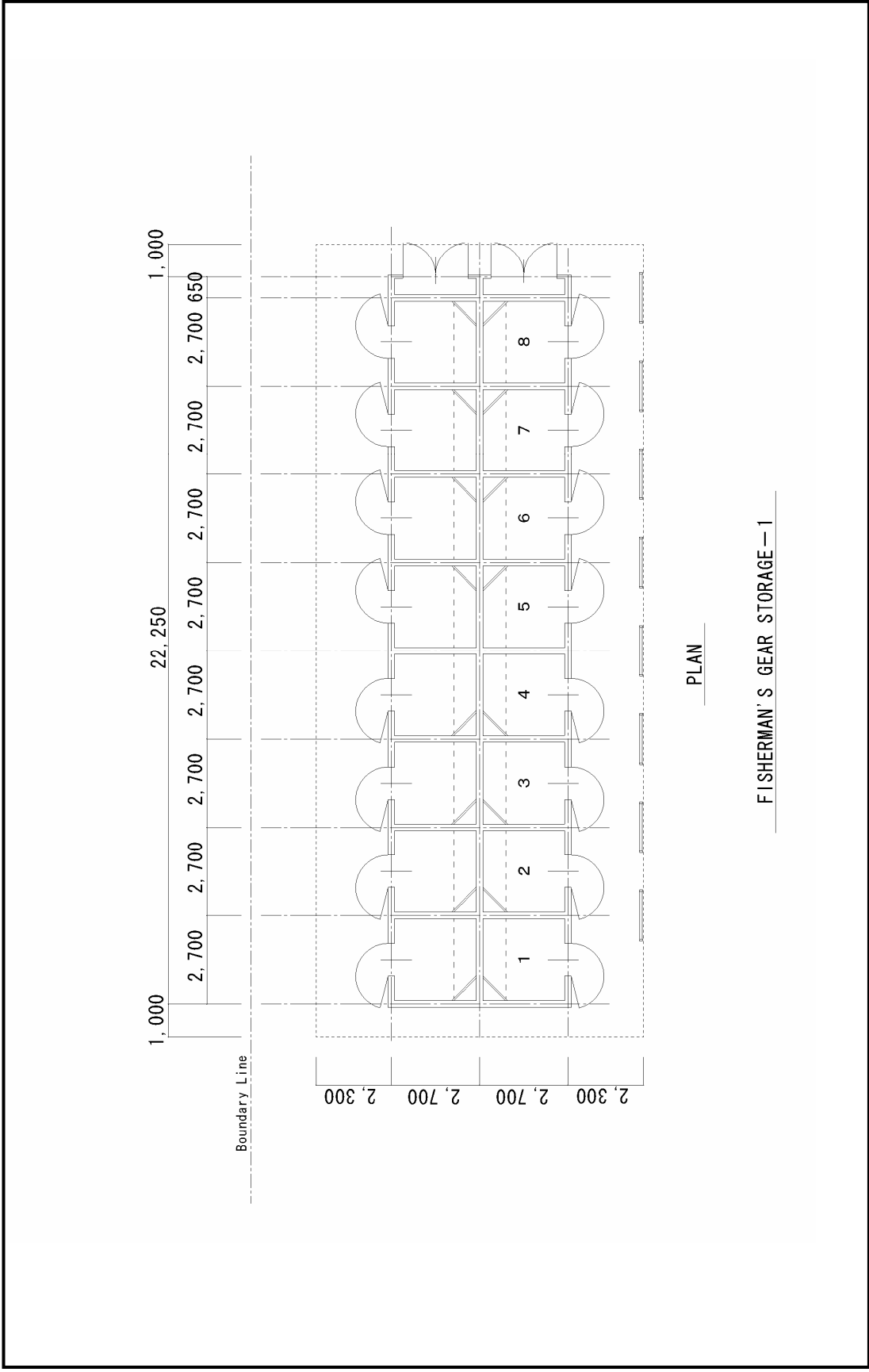
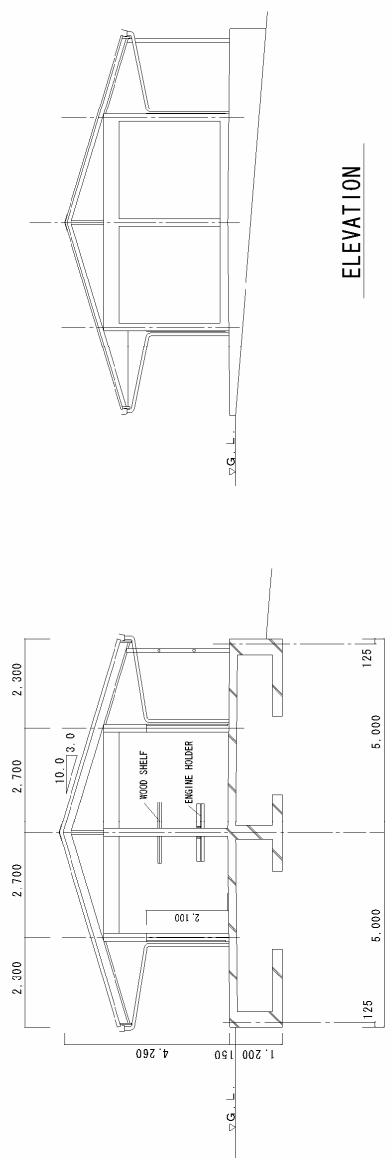
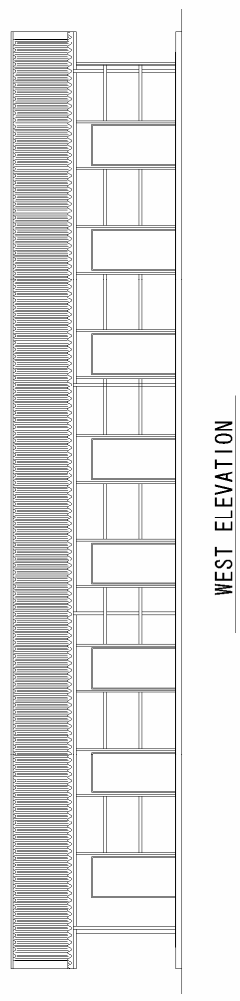


Fig 2-2-4(11) Plan of Gear Lockers-1



SECTION

ELEVATION



WEST ELEVATION

FISHERMEN'S GEAR STORAGE — 1

Fig.2-2-4(12) Elevation & Section of Gear Lockers-1

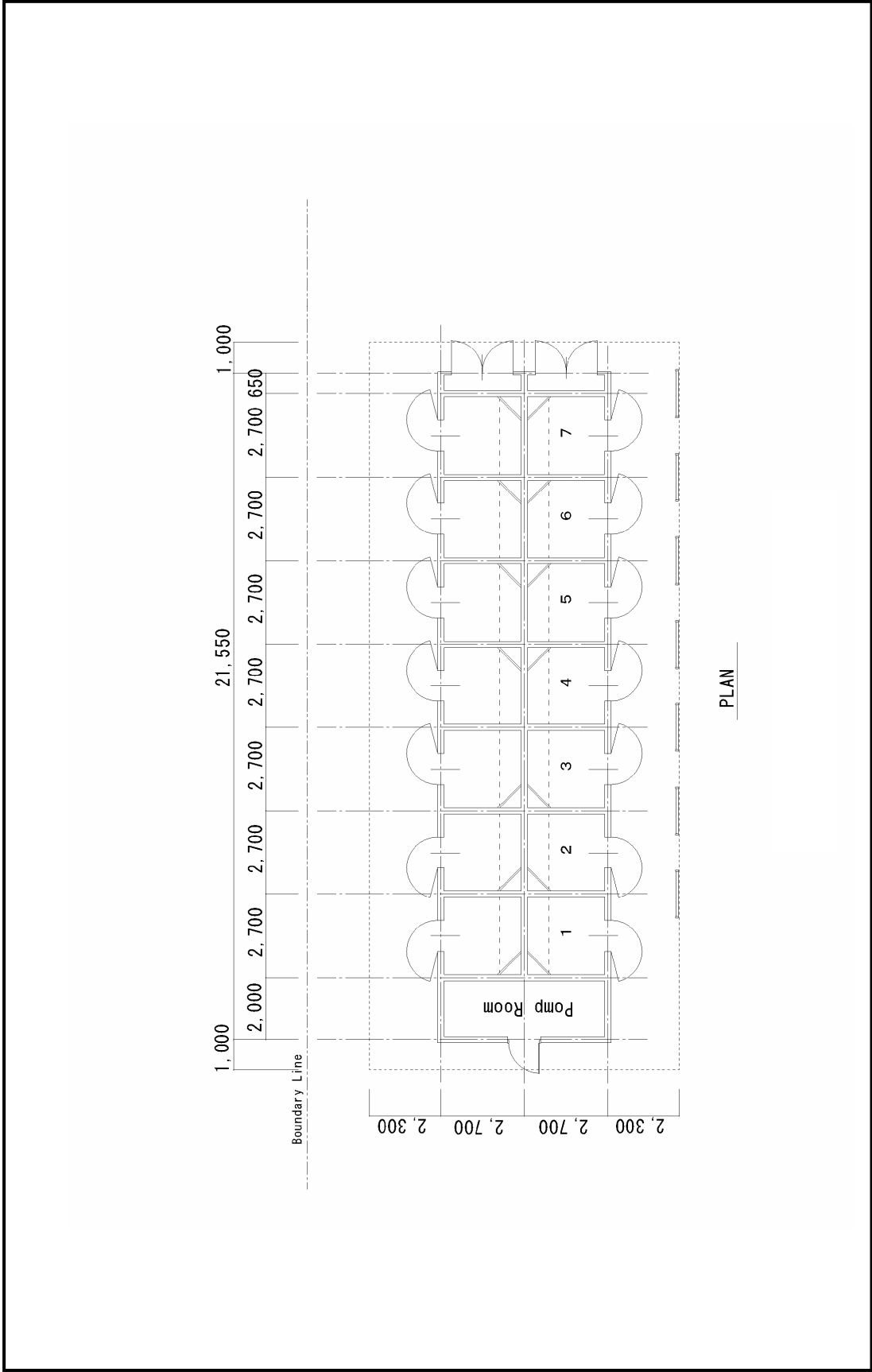
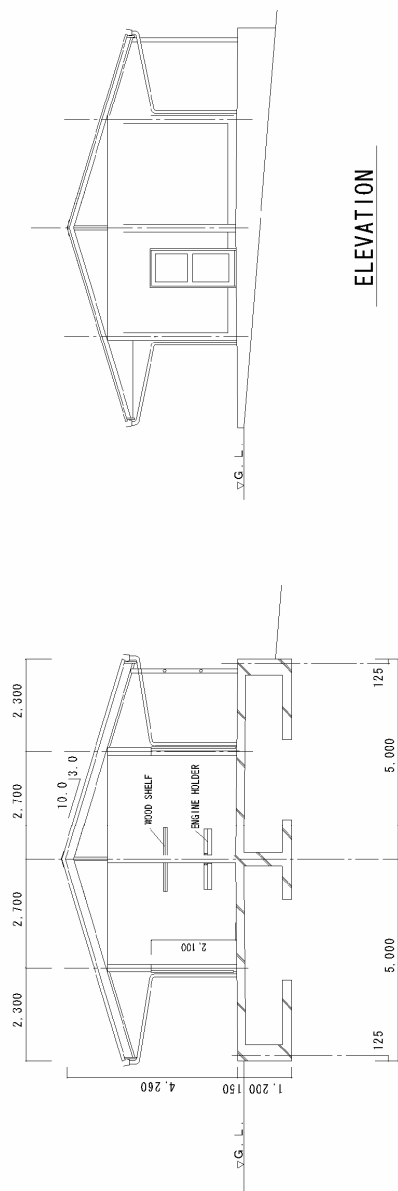
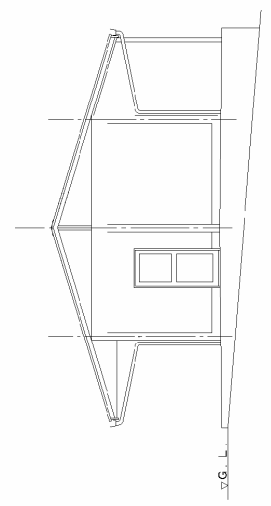


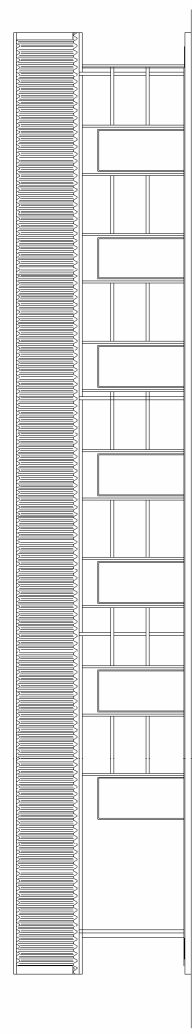
Fig.2-2-4(13) Plan of Gear Lockers-2



SECTION



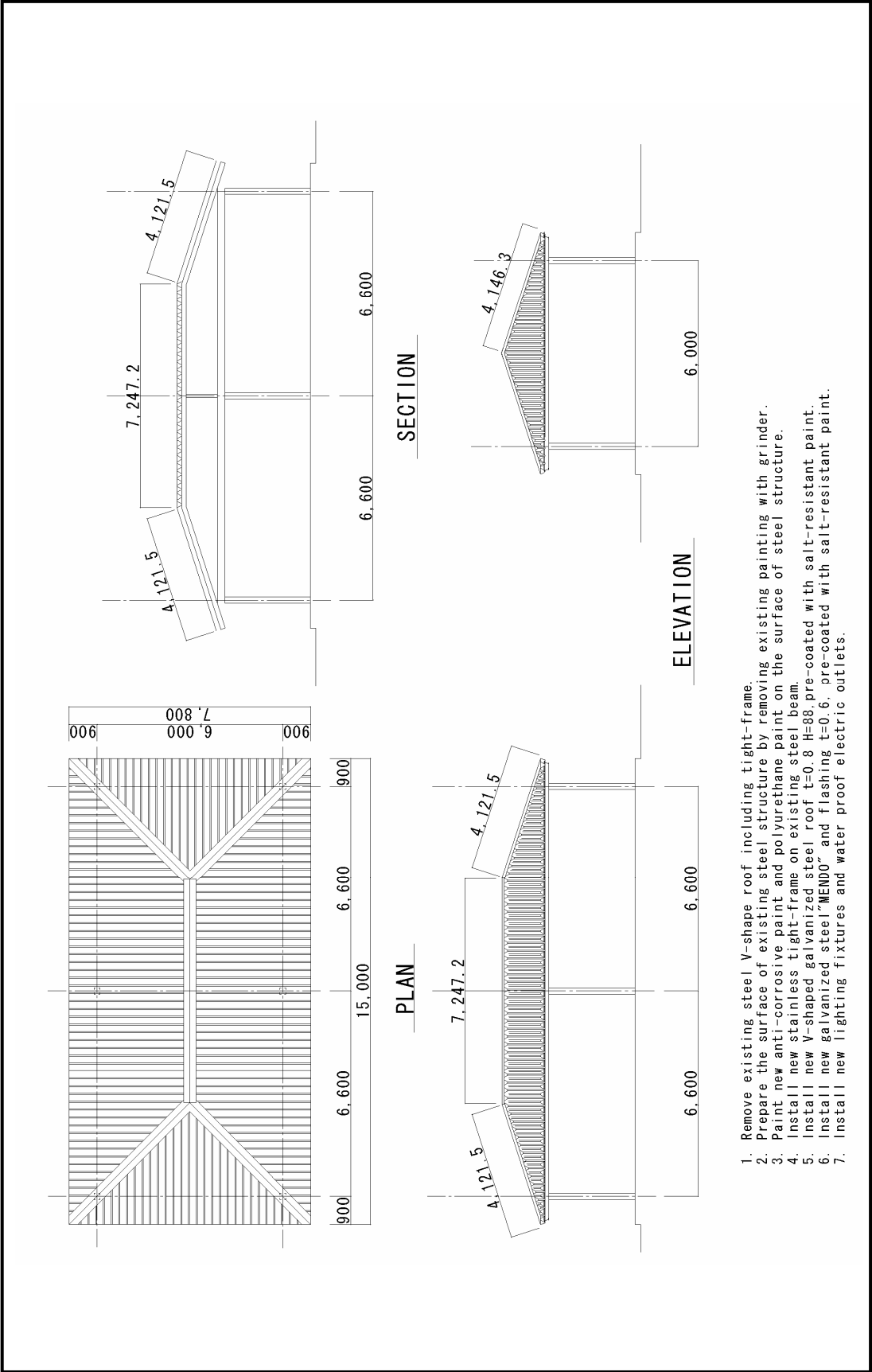
ELEVATION



WEST ELEVATION

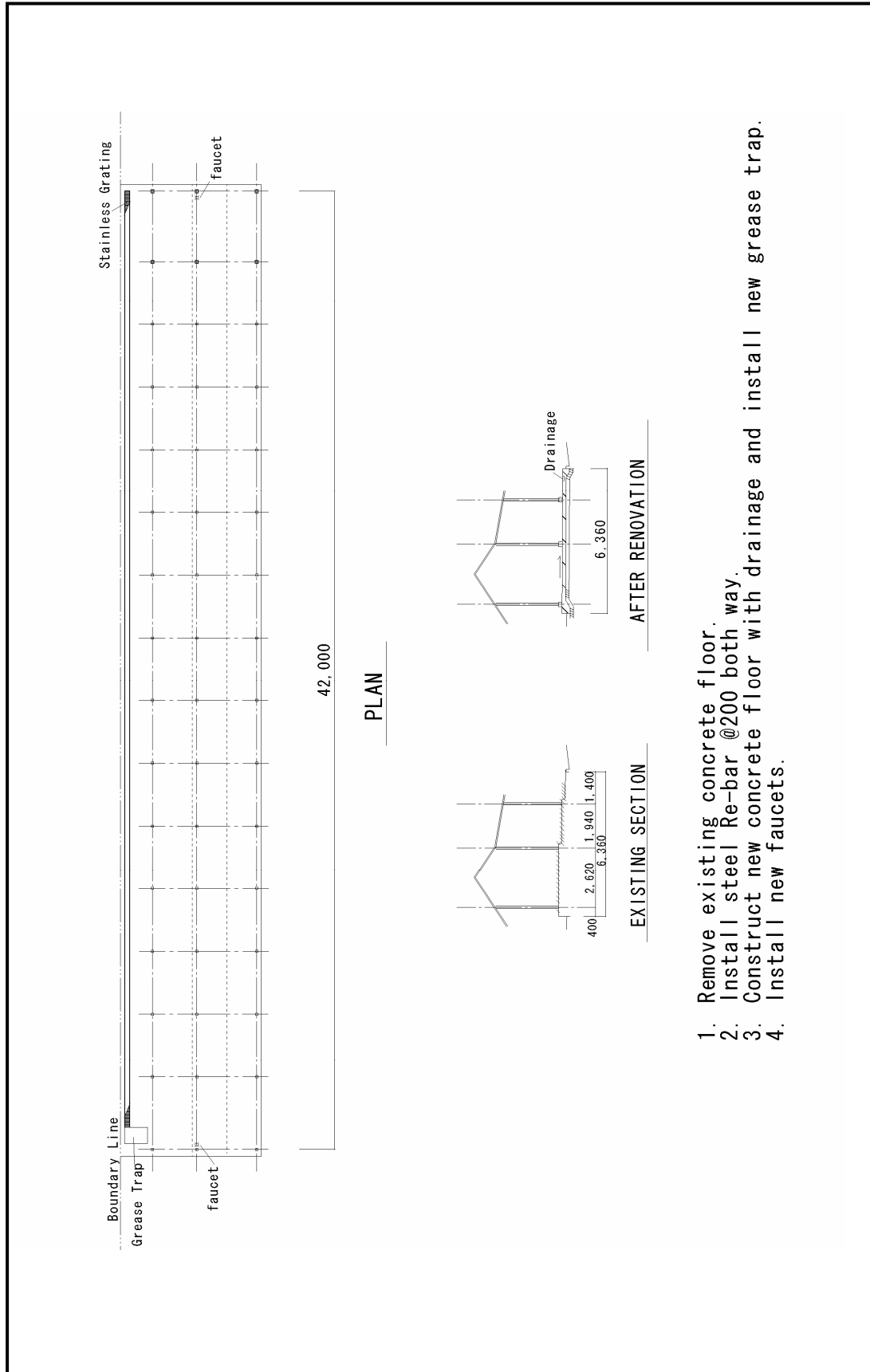
FISHERMEN'S GEAR STORAGE - 2

Fig.2-2-4(14) Elevation & Section of Gear Lockers-2



1. Remove existing steel V-shape roof including tight-frame.
2. Prepare the surface of existing steel structure by removing existing painting with grinder.
3. Paint new anti-corrosive paint and polyurethane paint on the surface of steel structure.
4. Install new stainless tight-frame on existing steel beam.
5. Install new V-shaped galvanized steel roof t=0.8 H=88, pre-coated with salt-resistant paint.
6. Install new galvanized steel "MENDO" and flashing t=0.6, pre-coated with salt-resistant paint.
7. Install new lighting fixtures and water proof electric outlets.

Fig.2-2-4(15) Repair of Workshop



1. Remove existing concrete floor.
2. Install steel Re-bar @200 both way.
3. Construct new concrete floor with drainage and install new grease trap.
4. Install new faucets.

Fig.2-2-4(16) Repair of Venders' Arcade

2-2-5 Implementation Plan

Since the project is implemented under the Japan's grant aid scheme, all the works, without delay, shall be completed within the specified period. The condition requires establishment of a suitable plan for construction methodology, materials procurement, work schedule and quality, and implementation of construction work under to supervision with suitable construction criteria.

2-2-5-1 Plans for Implementation and Procurement

(1) General description of project implementation

For implementation of the Project, after signing of the Exchange of Notes (E/N) between the Government of Japan and the government of St. Lucia, a contract for undertaking consulting services will be concluded among the two governments.

The consulting firm will prepare all documents required for the tender and conclusion of the contract such as the drawings of the project facilities, technical specifications, cost estimates and so forth. After the approval of these documents by St. Lucia, the contractor will be selected from among Japanese construction firms by examining the pre-qualifications and tender procedures.

The construction work will be performed by the selected construction firm, in accordance with the construction contract concluded by the Government of St. Lucia.

Regarding the total construction period for this project, 5.5 months will be required for detailed designs and 15 months for construction works.

(2) Plans for implementation and procurement

The project components are comprised of a jetty, a facility for landing fishing boats, fishery complex, fishing gear lockers, offices for a fisheries officer and co-op staff, a workshop, Venders' Arcade, and toilets with s septic tank. A temporary work stage of rocks in the sea will be applied for rendering execution of works on land instead of using marine crafts. The method will help minimize its cost and term. In extending the temporary stage, a silt protection curtain will be installed for prevention of sea turbidity from rocks and sand.

In constructing buildings at the site, bearing capacity of the site ground should be confirmed for meeting the specifications.

Construction firms in St. Lucia are of mostly medium or smaller scale business. The road between Vieux Fort and Soufriere was constructed by an Irish firm and a Kuwaiti firm has been involved in construction of the highway from Castries and Gros Islet in the term of 13 months since March 2006. Big contracts in St. Lucia have been made by foreign construction companies. Few local firms have experience of big contracts. Local main contractors for marine construction made subcontracts with firms in

Trinidad & Tobago. In executing marine work machinery are locally available but some special skilled engineers or technicians will be from overseas countries. Building work with mechanical and electrical work can be made by the local contractors.

An ice machine and an ice storeroom will be procured from Japan to secure their quality and durability. An engineer from the manufacturer will be involved in supervision of installing the equipment and in technical transfer of the maintenance skills.

Material and machinery being locally available will be preferentially procured for the project with minimizing the procurement from Japan for reduction of cost.

2-2-5-2 Consideration on Execution and Procurement

(1) Conditions of Local Construction Business

Construction firms

Local construction firms with full experiences will be subcontractors of a main contractor from Japan.

Construction machinery

There are leasing companies for small machinery and a company dealing larger machinery. Local construction firms with a few machines carry out their business. Machinery is available as backhoe shovels, tired-loaders, dump trucks, pile drivers, etc not to be maintained in good conditions. For a long term the execution of the work will need a crawler crane and truck cranes, which will be used for a jetty construction. Even if marine crafts or diving boats are necessary, their usage will be minimized. Machinery being locally available will be procured from St. Lucia and neighboring countries with limiting its procurement from Japan.

Laborers

A skilled engineer from a manufacturer will be involved in installation of an ice plant and its storeroom. A fully experienced engineer should supervise the work for driving piles.

Construction Material

Concrete aggregates, rubble rocks and concrete blocks for buildings are produced locally. Cement, rebar, steel frames, etc. are imported from Trinidad and Tobago, USA and EU. The quantity is normally insufficient in the local market. Considering quantity and quality of the material, required material should be imported from Japan and the third countries.

Pre-mixed Concrete

There are a few plants for producing pre-mixed concrete in Vieux Fort, Castries, etc. Considering the allowable time from production and shooting within an hour, plants meeting the requirement are confirmed. For confirming the quality with necessary tests prior to commencement of the work, pre-mixed concrete will be supplied to the site.

Safety Control

There remains no allowance from the existing buildings at the site, because of the narrow and rat-tailed land, and villagers and tourists from overseas countries come and go near the site. The situation will require sufficient measures to secure the safety for the people. Fences and sign boards keeping off from the people will be installed as the safety measures.

Considering that preparation begins in the afternoon on Friday for “Fish Friday”, construction work should be suspended in the whole afternoon. Prior to the suspension, checks of fences and sign boards will be made in advance.

(2) Considerations of Implementation Plan

Appropriate plans for temporary work, construction methods and work schedule will be made considering the natural conditions at the site.

Assignment and dispatch of Japanese staff and engineers will be planned as to match the progress of the work.

Local material will be used as much as possible with minimizing the imported from foreign countries.

A temporary yard will be needed for bar-bending, preparation of molds, stock of material and is proposed around the east side of the village. A use of the land for the work should be requested for permission to Ministry of Works, Transport and Public Utilities.

2-2-5-3 Scope of Work

(1) Scope of Work Undertaken by the Government of Japan

Consulting on detailed design, bidding assistance, and design management, etc.

Supply all construction materials and labor required for the construction work on the Japanese side of the present project.

Implementation and shipping insurance for shipping both by sea and overland imported materials that are required for materials procurement and construction on the Japanese side of this project.

Quality inspections required for materials procurement and construction on the

Japanese side of this project.

With regard to the relevant construction work infrastructure, the basic scope is as follows: all power supplies after the entrainment work on the nearest utility poles to the project site as the boundaries for responsibility, all water supplies after the water pipes have been laid internally from the project site boundary line, all waste water, and telephones up to the overhead cabling within the skeleton.

(2) Scope of Work Undertaken by the Government of St. Lucia and Grenadines

To secure land necessary for the sites of the project and to clear the debris on the container yard.

To install water supply pipes from the main supply pipes to the boundary of the project site.

To supply electricity to the nearest power utility pole to the boundary of the project site.

To procure and install office equipment, phones, and furniture, etc., needed in the offices in the Fisheries Center.

2-2-5-4 Consultant Supervision

Based on the policy of the grant aid scheme, smooth and consistent consultancy work of detailed design work and supervisory work is implemented by a consulting firm which acquires the full knowledge of the project contents prepared in the basic design study.

At the construction management stage, the consulting firm appoints a resident engineer with sufficient experiences of construction management and engineers with expertise are dispatched at the necessary timing for inspection and instructions for proper site management.

(1) Implementation Supervision Policy

The consulting firm will render appropriate services for immediate completion of the facilities without delay of the schedule through the close contact and communications with the relevant organs of the both countries and the staff concerned.

The consulting firm will provide personnel concerned of the contractor with immediate and appropriate advices and instruction to complete the facilities in conformity with the contract documents.

The priority should be given to the use of locally available material and equipment if the quality and quantities will meet the requirements of the project work.

Implementation of the project should help to show effects under a grant aid scheme, offering occasions for technical transfer of construction methods and technologies.

Appropriate advices and instructions should be given to the recipient sector for smooth

management and operation of the facilities after delivery.

(2) Supervisory Duties

1) Assistance on contracting

The consulting firm will provide assistance on selection of contractor, determine the type of contract, draft contract documents, evaluate bill of quantities and witness contract awarding.

2) Evaluation and approval of Shop Drawings

The consulting firm will evaluate and approve proper shop drawings as well as materials and equipment proposed and submitted by the contractor.

3) Management and supervision of construction work

The consulting firm will review the construction plans and schedule, etc., provide instructions to the contractor and report the progress of works to the client and JICA.

4) Assistance in procedure of payment

The consulting firm will evaluate and approve the proper invoice for the payment to the contractor, confirming the progress of the work upon partial completion and final completion.

5) Inspection and Witness

The consulting firm will inspect the work partially completed when requested by the contractor, give instructions if necessary and certify the partial completion. Upon the confirmation of completion of the works and fulfillment requirements of the contract, the consulting firm will witness the delivery of the all the facilities specified in the contract and complete its duties with the client's acceptance.

The consulting firm will also prepare reports to the Government of Japan in relation to the progress of the works, payment procedures and delivery of completed facilities.

(3) Equipment Procurement

1) Equipment Procured in Japan

The consulting firm select appropriate equipment meeting the specifications described in the construction drawings/tender documents. Having also considered thoroughly the conditions of the site, its selection is carried out from viewpoints of attachment of devices fro safety and protection, heat transfer processing, and heavy saline resistance. After the consultant's approval of the documents for proposed equipment, a contractor may start manufacturing of the equipment.

Shop drawings should be prepared considering that the machinery can be easily installed and assembled under the local site and labor conditions.

All the materials should conform to JIS standards.

2) Witness for Inspections in Japan

Manufacturer's inspections are required to confirm the conformity to production criteria on domestically specified equipment and all the inspection reports should be submitted to JICA by the consulting firm which witnesses the quantity and approve quality before packing the equipment. The following equipment is inspected by the consulting firm and a relevant organization.

The necessary documents for the inspection should be submitted to the relevant organizations two weeks before implementing the inspection. A representative from the organization witnesses the inspection for proper shipping.

Ice-maker: operation and performance inspection

Generator: operation and power generation performance inspection

Condenser: operation inspection

Auto control panel: operation inspection

All the equipment: quantity inspection and checking before packing

3) Packing and Land Transportation

Motors other than fully-sealed outboard fan shapes (i.e., motors with a cooling fan mounted in the outboard specifications) should be packed in a vacuum with type F insulation. Pressurized containers should contain nitrogen and are fully sealed, and also fully seal electrical control equipment. Marine shipping lines will be selected considering safe routes with minimum trans-shipments and minimum transportation days.

4) On-Site Installation

In considering the local conditions of labor force and logistics, easy and compact components of the machinery should be designed for minimizing local workload of laborers. At the same time, a work plan is prepared in detail and with reasonable schedule. For safe installation engineers with a thorough knowledge of installation on similar cooling and power equipment overseas are dispatched for the instruction and management of the installations.

5) Procedures from Shipping to Site Delivery

An on-site performance inspection for the machinery is implemented before shipping from the manufacturers' factories.

Inspection of quantity of the equipment is carried out, based on the packing lists before loading onto the ship.

The complete shipping documents are promptly sent to the Government of St. Lucia and JICA after completing shipping inspection and customs clearance.

The whole cargoes are shipped from Yokohama Port to St. Lucia, from which they are transported to the site.

After customs clearance, quantity and appearance of the cargoes are checked by an agent appointed the SVG Government and the Japanese Contractor. In case of any nonconformity, it should be reported to the respective organization concerned.

Mutual understanding among the personnel concerned should be acquired to solve troubles on the matter and the necessary measures should be taken, following the instructions given by the Japanese authority.

6) Expenses for Installation of Equipment

Personnel Expenses

The cost includes remuneration and travel expenses for engineers specialized for cooling machinery and related electrical work.

List of Equipment Requiring Expenses

Table 2-2-5(1) List of Equipment Requiring Installation Work

Equipment	Description of installation work	Installation of equipment
Ice machine	Installation of Machine, Piping work for coolant and water and Electrical wiring.	Compressors, ice makers, raw water tanks, etc.
Ice storeroom	Panel assembly and peripheral equipment installation, coolant pipes, and electrical wiring	Unit coolers
Septic tank	Installation of tank、 Piping work for water and Electrical wiring.	Pump, control panel

2-2-5-5 Quality Control Plan

(1) General plan for quality control

Regarding the quality control of the work, details will be indicated in the specifications of tender documents for the project, which are based on the “Criteria of Quality Control for Port Construction Work” from the “Common Specifications for Fishing Ports and Fishing Grounds Construction Work in Japan” and the “Common Specifications for

Port Construction Work in Japan”. In addition to the specifications, CUBiC, ASTEM, BS, etc. will be applied to the project.

The quality control of materials used for buildings will be performed using CUBiC and the architectural construction standards and specifications, the JASS 5 commentary therein (Architectural Institute of Japan), Common Specifications for Building Work (Ministry of Land, Infrastructure and Transport), Guidelines for Management of Building Work (Ministry of Land, Infrastructure and Transport), and the Japan Industrial Standards (JIS).

(2) Design of mix for concrete

Based on the mixture design of concrete, strength, mixing time and methods of placing of concrete will be confirmed with trial mix prior to commencement of the work. Quality control of concrete will be made with examining statistically analyzed data of concrete strength for each concrete mixture for the work.

2-2-5-6 Procurement Plan

Following points should be considered in particular when procuring construction materials, machinery and equipment necessary for implementing the plan.

(1) Procurement Policy

Machinery, Materials and equipment available in the local market should be procured as many as possible and procurement of them from Japan or third countries will be minimized.

Among the materials procured from Japan, materials that need order of manufacturing or domestic processing in Japan require time for their delivery to the Contractor for shipping. A detailed procurement and shipping plan must be established. Further, construction machinery should basically be procured locally or from neighboring countries, and procurement from Japan minimized.

1) Local Procurement

General construction materials excluding special equipment such as finished materials and equipment devices, etc., are mostly available in St. Lucia. A work plan should be established with procuring the local material. As easy procurement and quality of material in local market is prioritized, material with low availability and quality should be purchased in Japans.

Of the materials procured locally, stone and skeleton materials, which are the main materials, should be selected after thoroughly considering the production site, quality, and shipping performance, etc.

2) Costs

The least inexpensive materials and machinery are procured comparing local costs and

costs in Japan and a third country. If procuring from Japan, the additional costs of exporting costs and exemption of some duties should be considered.

(2) Procurement items

1) Construction material

Table 2-2-5(2) Source of Material Procurement

Material		Source of procurement		
		Local	Japan	3 rd countries
Civil work	Fenders, Mooring posts & rings			
	Rocks, aggregates			
	Rebar			
	Steel pipe piles			
	Cement			
	Concrete			
	Molds			
	Timber			
	Winch			
	Sliding equipment			
	Fender			
	Bollard			
	Mooring ring			
	Light beacon			
Building work	Sand, aggregate			
	Rebar			
	Cement			
	Concrete			
	Molds		○	
	Concrete blocks			
	Timber			
	Steel doors, aluminum sash, etc.			
	Wooden doors, etc.			
	Roofing			
	Glass			
	Paint			
	Tile			
Electrical work	Cable			
	Conduits			
	Switch boards			
	Switches, sockets			
	Lighting			

	Lamp Bulbs			
Mechanical work	Pipes			
	Valves			
	Hygiene equipment			
Air conditioning	Air conditioners			
	Ventilator fans and extraction fans			
Ice machine & Storeroom	Ice machine, Ice Storeroom			
Refrigeration Equipment	Insulated Fish Box			
Processing Facility	Sinks			
	Tables			
Septic Tank	Septic tank with accessories			

2) Construction machinery

The following list shows the equipment for construction with considering availability in the local market.

Table 2-2-5(3) Origin of Principal Machinery

Machinery		Source of procurement		
		Local	Japan	3 rd countries
Generator	150KVA			
Vibration hammer	60kw			
Bull dozer	15t			
Backhoe	0.5m ³			
Backhoe	1.0m ³			
Dump truck	10t			
Truck crane	25t			
Crawler crane	80t			
Tamper, rammer (60 ~ 100kg)				
Concrete vibrators				
Rebar cutters				
Bar bending machine				
Welder(270A)				

2-2-5-7 Implementation Schedule

In implementing the project under the Japan's grant aid scheme, after signing the Exchange of Notes (E/N), a Japanese consulting firm will be selected by the Government of St. Lucia with concluding a consultancy contract. Thereafter, the work will be completed with steps of detailed design, documentation for tendering, tendering and contracting, and construction work.

(1) Detailed Design Work

After the consultant contract has been concluded between the Japanese consulting firm and the Government of St. Lucia, the consulting firm will start detailed design with verification of the contract from the Japanese Government. During the detailed design stage, a full set of design documents should be prepared for bidding, based on the basic design study report. Through discussions with the Government of St. Lucia on details of facilities and machinery, approval of all the tender documents should be obtained from the Government of St. Lucia. The detailed design stage will take about 2.5 months.

(2) Tendering

The Contractor, which is a Japanese construction company, is selected determined by tender. The tender is performed in the following order, and require 3 months: letters of interest, pre-qualifications, distribution of tender documents, tender, evaluation of tenders, determination of a company, and contracting.

(3) Construction Work

After the construction contract is verified by the Government of Japan, construction work can start. In starting the site work, the contractor will need 5 months for preparation term as production of steel pipe piles, shipping of material from Japan, etc. Total construction term including the preparation term is expected to be 13 months.

The implementation schedule for the project with two is described in Table 2-2-5 (4) showing the processes from signing the Exchange of Notes (E/N) to the completion.

Table 2-2-5(4) Implementation Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Remarks
Detailed Design & Tender	■																			Consultant Agreement, Site Survey
	▨																			Design/Tender Document, Tender
	■																			Approval of Tender Documents
Procurement & Construction	▨																			Civil Work
	▨																			Manufacture of Piles, Transport
	▨																			Jetty
	■																			Boat Landing facility
	▨																			Building Work
	▨																			Manufacture of material, Transport
	▨																			Fishery Complex
	▨																			Fishing Gear Lockers
	■																			Venders' Arcade
	▨																			Workshop
	■																			Toilets/Showers
	▨																			Septic Tank

2-3 Obligations of Recipient Country

The obligations of the Government of St. Lucia have been confirmed by the government and the study team as described in the Minutes of Discussions, Record of Discussions and Inception Report during the Basic Design Study stage. They are listed below:

- To carry out Environment impact Assessment(EIA),
- To obtain permission for execution of the project,
- To secure the land for the project,
- To remove the existing facilities including the jetty at the site,
- To secure the place for dumping wastes from the construction site,
- To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities,
- To construct gates and fences in and around the site,
- To exempt taxes and to ensure unloading and customs clearance of the products from Japan,
- To exempt Japanese nationals from customs duties, internal taxes and fiscal levies,
- To accord facilities to Japanese nationals who enter and stay at St. Lucia,

To bear commissions for banking services such as advising commission of A/P and payment commission,

To maintain and use properly and effectively the facilities under the scheme, and

To bear all the necessary expenses, other than those to be borne by the Grant.

2-4 Project Operation Plan

2-4-1 Principal Framework of Operation

Department of Fisheries of the Ministry of Agriculture, Forestry and Fisheries will be an implementation agency and own the facilities of the project. Management and operation of the facilities will be entrusted to Anse La Raye Fishermen's Co-operative Society Limited under the supervision, support, and guidance of the Department of Fisheries and Department of Co-operatives. In this cooperative, it has already been established based on Co-operative Act (No.17 in 1946), which can sell fuel, oil, and fishing gears.

Department of Fisheries has sufficiently experienced entrustment of the facilities and equipment to Choiseul and Soufriere and it has been successfully conducted. It was evaluated that the Soufriere Co-operative had managed the facilities well since 2004 when the facilities were operated and the co-operative was commended as an excellent organization by Department of Co-operatives among the all the nationwide cooperatives in 2006.

A cooperative is established in the purpose of economical and social contribution to the members and the society in the spirit of helping one another. It is the reason that duty-free measures are given to cooperatives to the profits. Each cooperative society is obligated to submit financial statements to Department of Cooperatives. The Act urges the Department to observe the deficit cooperatives on the basis of the financial improvement plan for four years to be submitted by the cooperatives, though is unquestionable for the surplus.

Thus, the watch and the tutoring system of the government concerning the management of the cooperatives is established as a law, and it is thought that the management is appropriately done if basic income sources such as the fuel and ice are secured also by the Anse La Raye Cooperative.

2-4-2 Organization

The Anse La Raye Fishermen's Cooperative is composed by 81 members now. The organization is managed by five board directors as shown in Fig. 2-4-2(1). Future staff for the management of the facilities will need six people.

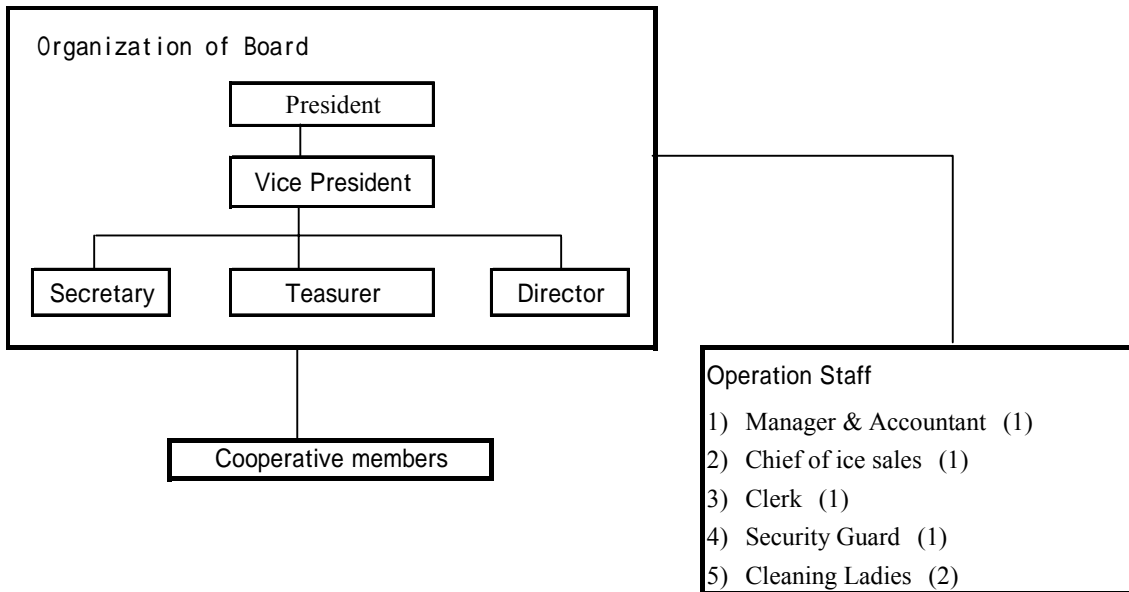


Fig. 2-4-2(1) Organization of Anse La Raye Fishermen's Cooperative

2-4-3 Management and Operation Plan

The facilities of the project in completion will be entrusted to the Anse LA Raye Cooperative Society in the course of the policy of Department of Fisheries. The activities put into operation by the Cooperative are as follows.

(1) Business Activities

- Fuel supply
- Selling lubricating oil
- Selling ice
- Selling fishing gears (Running a gear shop)
- Renting a warehouse and a retail sale booth
- Cold storage management
- Collecting landing charge
- Offering employment
- Filling up a diving tank
- Buying and selling fish

(2) Insurance Activities

- Selling (fuel and fishing gears) on credit to the members of Cooperative.

- (3) Social Activities
- Pension planning
 - Compulsory savings
 - Insurance for a ship and life
 - Scholarship
 - Selling rebate
 - Members' training for fishing etc.

2-5 Project Cost Estimation

2-5-1 Initial Cost Estimation

The total project cost will be approximately estimated at 513 million Japanese Yen, which is comprised of 506 million Japanese Yen covered by the Japanese Grant Aid scheme and 155,000 East Caribbean Dollars, being equivalent of 7 million Japanese Yen, covered by the fund of the Government of Saint Lucia.

This cost estimate is provisional and will be further examined by the Government of Japan for approval of the Grant. The costs provided by the Government of Japan and the Government of St. Lucia are shown in Table 2-5-1(1) and Table 2-5-1(2) respectively.

(1) Expenses of the Government of Japanese

Table 2-5-1(1) Project Cost Estimation
Project Cost Estimate: Approximate 507 million Japanese Yen

Items		Project Cost Estimation (¥)	
Facilities	Civil Works	1) Jetty with accessories 2) Facility for hauling fishing boats	166
	Building Works	1) Fishery Complex Building - Offices/Training hall/Processing facility/Tackle shop - Ice-making machine / Ice storeroom - Sinks/Processing tables/Insulated fish box 2) Fishermen's Gear Locker Building 3) Workshop 4) Venders' Arcade 5) Septic Tank	262
Total of Facilities and Equipment			428
Detail Design and Consultant Supervision			79

(2) St. Lucia's expenses

The cost borne by the Government of St. Lucia is estimated as EC\$155,000, which is equivalent of approx. 8% of the annual budget of the Fisheries Department (2006). Details are shown in the following table.

Table 2-5-1(2) St. Lucia's Expenses

Items	Cost (EC\$)
Demolition of the existing jetty	55,000
Demolition of the existing buildings	77,500
Electric power supply cable installation to site	2,000
Water supply pipe installation to site	500
Telephone line, Office work machinery, tools and furniture	20,000
Total	155,000

(3) Conditions of cost estimation

Base date for estimation: October 31, 2006

Exchange rate : 1US\$=¥116.65, 1EC\$=¥43.20

Construction period : Detailed design and construction period are on the progress schedule.

Others: The project is carried out under the Japanese Grant Aid scheme.

2-5-2 Operation and Maintenance Cost

Anse La Raye Fishermen's Cooperative will be responsible for management of the facilities. The cooperatives at Soufriere and Choiseul, whose activities are similar to Anse La Raye in the respect of fishing activities, operation of similar size of an ice machine and number of co-op members, maintain sound management so far. In this respect, management and operation of the both cooperatives become references that assume future management of facilities at Anse La Raye. The following table shows the number of the members of the cooperatives in three districts. After completion of the facilities, the number at Anse La Raye will be assumed to be 118 people because of the expectation of affiliation of 37 full-time fishermen in spite of 81 members at present.

Table 5-2(1) Number of Fishery Cooperative Members

	Soufriere	Choiseul]	Anse La Raye
Membership	103	91	118 (forecast)

The annual revenue and expenditure of management Anse La Raye is examined as follows in consideration of such a background.

(1) Revenue

In the income of the fishermen's cooperative, the fuel, oil, the cooking gas, the fishing gears, parts, ices, warehouse rent and the fees of the rest room use are the primary source of incomes. The income is calculated while referring to the example of two districts of the Soufriere and Choiseul for of each.

1) Sale of fuel, oil, and cooking gas, fishing gears, and parts

These are calculated referring to the example of two districts. If each of one cooperative member income is converted into the hit based on the report on final accounts of two districts (2004) that was able to be obtained, it becomes the following.

- Soufriere: EC\$ 15,145.00/ member
- Choiseul: EC\$ 12,878.00/cooperative member

The circulation income when sale of the Anse La Raye Co-op are set lower than EC\$12,000.00 and two districts per person of the cooperative member based on this data is estimated as follows.

$$\text{EC\$12,000/cooperative member} \times 118 \text{ cooperative member} = \text{EC\$1,416,000}$$

2) Sale of ice

The amount of demand is summarized as estimated in Chapter 2-2-1(2) 2 as follows during the year of ice.

- For fishing boat loading: 0.2 ton/day x 200 days = 40,000 kg
- For the fresh fish sale & storage: 0.2 ton/day x 200 day = 40,000 kg
- For Fish Friday : 0.9 ton/day x 52 day = 46,800 kg
- Other ceremonial occasions: 0.1 ton/day x 200 day = 20,000 kg

The price per bucket (11.4kg) is assumed to be EC\$5.00 that is cheaper than the actual retail price of EC\$6.00 based on the above-mentioned amount of ice to achieve the promotion of the ice use of the fishermen, and the value of sale can estimate ice for ceremonial occasions etc. as follows when calculating as a half power of the current market price as a regional contribution of the fishermen's cooperative.

- Fishing activity: $80,000\text{kg} \div 11.4 \text{ kg/bucket} \times \text{EC\$5/bucket} = \text{EC\$35,088}$
 - Fish Friday: $46,800\text{kg} \div 11.4 \text{ kg/bucket} \times \text{EC\$6/bucket} = \text{EC\$24,632}$
 - Additionally: $20,000\text{kg} \div 11.4 \text{ kg/bucket} \times \text{EC\$3/bucket} = \text{EC\$5,263}$
- Total: EC\$64,982

3) Fishing gears lockers' rent

It is judged EC\$30 a month for renting a locker for a fisherman is reasonable because EC\$30/month has been imposed on the fishermen at Soufriere. Revenue of renting lockers is estimated for 30 lockers as follows:

$$EC\$30.00 \times 30 \text{ warehouse} \times 12 \text{ months} = EC\$10,800$$

4) Rental Fees of toilets/shower

The rental fees of toilets/shower are estimated conditioning that 10 people use the facility for 365 days at a rate of EC\$1.00 on the fishermen as a rental of rest room/shower in Soufriere, and it is assumed that it operates for 365 days.

$$EC\$1/\text{day} \times 10 \text{ persons/day} \times 365\text{days} = EC\$3,650$$

(2) Expenditure

1) Cost of fuel, oil, gas, etc.

The ratio of cost to sale of the goods including the inventory two districts is as follows:.

- Soufriere: 90.9%
- Choiseul: 89%

The value of Soufriere as higher cost rate is adopted and it is assumed 91% in Anse La Raye. Therefore, the cost of the goods can be estimated as follows.

$$EC\$1,416,000 \times 91\% = EC\$1,288,560$$

2) Staff salary

As the expenditures salary for only management staff will be included because the board directors are all unpaid in the organization of the cooperative.

Annual salary for the staff is estimated as shown in the following table, considering the amount of a total annual salary as around EC\$50,000 for the staff of fishermen's cooperatives in two districts and the regionality of Anse La Raye.

Table 5-2(2) Staff Salary (assumption)

	Monthly sum	Annual sum
Management representative and accounting (1)	1,440	17,280
Ice manufacture sale chief person (1)	800	9,600
Clerk (1)	560	6,720
Security guard (1)	1,120	13,440
Cleaning ladies (2): 2 persons x 0.5 days.	520	6,240
Total	1,055	53,280

3) Electricity bill

The quantity of electricity for an ice machine and ice storeroom in operation is estimated at 11.88KWH. Conditioning 200-days-operation for 24 hours a day, the annual electric rate for the equipment is presumed to be EC\$26,801. Other electric installations (office building, sewage treatment plant, and outside light, etc.) will consume annual electricity of 27,660KWH, which will amount EC\$1,300 annually. Therefore, the annual electricity rate is assumed to be EC\$39,801.

4) Water service fee

The annual fee will amount to EC\$740 at unit rate of EC\$14.00 under the conditions that operation days will be 200days with using water of 1.2ton/day for producing 1.0ton/day of plate ice. Additionally, if EC\$800 is expected for rest room for the processing and the floor cleaning/shower, the water service fee during year becomes EC\$1,540.

5) Other office expenditure

The office expenditure of Soufriere and Choiseul is EC\$19,845, and EC\$25,614 respectively except items of expenses summed up to the above-mentioned. EC\$26,000 is estimated as office expenditure of Anse La Raye.

6) Maintenance cost of an ice machine and an ice storeroom

The amount of necessary cost for general maintenance in changing parts and expendables is calculated as shown in the following table.

Table 5-2(3) Cost of Maintenance (unit EC\$)

Annual	Annual maintenance cost	Remarks
The first-fourth annual	1,000	
The fifth annual	1,100	The main part update
The sixth-eighth annual	1,000	
The ninth annual	1,500	The main part update
The tenth-13th annual	1,000	
Total	13,600	
(average for 13 years)	(1,050)	

(3) Statutory Reserve, etc.

The cooperative is obliged to save statutory reserve, educational fund and distress fund from the business profit by the law. As stated in the financial statements of Anse La Raye Fishermen's Cooperative Society, the amount is allocated which are corresponded to the rate of 2-2-5%, 10%, and 10% of the profit amount respectively.

(4) Reserve fund for renewal of an ice machine and an ice storeroom

Savings of cost (EC\$556,400+EC\$26,700) will be needed from among the amount of the profit so that the cooperative will renew facilities for itself at the end of its life that is 13 years.

- Main body of machine including installation: EC\$556,400 (being saved in 13 years).
- Renewal of the main parts: EC\$26,700 (being saved for nine years at fifth annual and ninth annual).
- Annual even division of the sum above
 - * Renewal of machine: EC\$42,800
 - * Renewal of the main parts: EC\$3,000

(5) Profitability

The business revenue and expenditure of Anse La Raye Fishermen's Cooperative Society is calculated under the above-mentioned condition as shown in the table below. As a result, this cooperative seems to be possible to manage healthy because fiscal annual revenue and expenditure is estimated to be a surplus.

Table 5-2(4) Profitability of Anse La Raye Fishermen's Cooperative
(unit: EC\$)

Income		
	Fuel etc.	1,416,000
	Ice	64,982
	Lockers rent	10,800
	Rental fees of toilets	3,650
	Income subtotal	1,495,432
Expense		
	Cost of fuels	1,288,560
	Staff salary	53,280
	Electricity bill	39,801
	Water service fee	1,540
	Other office expenditure	26,000
	Maintenance cost	1,050
	Expense subtotal	1,410,231
Profit		85,201
Reservation money etc.		
	Statutory reserve	21,300
	Education fund	8,520
	Distress fund	8,520
	Subtotal reserve, etc.	38,340
Fund for renewal		
	Savings for machine	42,800
	Savings of main parts	3,000
	Savings fund subtotal	45,800
Gross profit		1,061

Chapter3 Project Evaluation and Recommendation

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effects

Since the independence, Saint Lucia has recognized the necessity to make a total National Development Plan and worked on various matters. The comprehensive plan that included the sustainable development issues was not made; however, each sector has made mid-term development strategy under the plan. The outline of the development strategy of Fishery's sector is as follows.

Strategic Focus

Fishery's sector has created seasonal and yearly employment in the Saint Lucian economy and greatly devoted to food safety security and gross national product however, they are underestimated in some cases. There are still potential rooms on the development of offshore resources and large size pelagic fish therefore, Fishery's sector becomes an attractive place of employment for young generation.

Recent improvement of fishery facilities is very much and the structural reform in the sector has been progressed. The enhancement of fishery's sector contributes toward diversification of economic activities through out the nation.

Priority Issues

- Protection for own Exclusive Economic Zone from illegal fishing and avoidance of the decrease of own fishery resources
- Promotion for generating proper organization concerning effective operation and maintenance management of fishery facilities now de-concentrated in Saint Lucia

Proposed strategic Interventions

The following actions are regarded to lead to the enhancement of economic devotion of Fishery's sector.

- Further training, progress and promotion of modern fishing technique
- Improvement of post harvest technology and quality control
- Plotting strategy for the improvement of fishery distribution line both in domestic and overseas market
- Formulation of the system for the modern fishery management
- Reallocation of resources to improve the role and capability of fishermen's organization and secure of future profit for fishermen
- Inducement of private sector for the improvement of commercial operation of the government owned facilities

The targets of Fishery Development Plan corresponding to these development strategies are as follows.

Promotion of fishery industries inducing the fishery facilities, modernization of fishing boats and improved fishing gears and methods

Improvement of Self-sufficiency with the production increase of fishery and aquaculture field

Raising social and economic welfare of fishermen and the families

Improving people's nutrient level by the increase of fishery production

Anse La Raye where is the project site has the following aspects in the fishery industry of Saint Lucia and is recognized that fishery industry is inevitable for the promotion of fishery village and raising of social economic level for artisanal fishermen by enhancing the mutual dependence relation with tourism that is major industry. However, the fishery facilities are the facilities constructed before the development strategies were made mentioned above and they have a lot of problems such as end of life facilities, decentralization of facility functions, non response for modernization of fishing gears and methods, weakening of the organization for the operation and management by fishermen.

【Roles and Situations of Fishery at Anse La Raye in Saint Lucia】

Deterioration of functions of the fisheries facilities and no comprehensive management and operation of the facilities despite recognition of an important place among 13 landing stations.

Supply base of cheap fish (half beak etc.) in Saint Lucian

Activity base for Anse La Raye Fishermen's Cooperative (Jurisdiction over Cul De Sac, Roseau, Anse La Raye and Canaries)

Fresh fish supply base to Anse La Raye district (Anse La Raye Village and the neighborhood)

Promotion of fishing village with close interdependence between fishing industry and tourism in the event of Fish Friday

With the background and the issues mentioned above, this project is to bring the following effects.

【Direct Effects】

Reduction of Landing Hours (Landing efficiency)

Fish is landed from beached fishing boats. For beaching boats, a lot of labor work is required as involvement of 6 persons. The hours for landing can be reduced on average to 0.5 hours from 1.5 hours at present after improvement of jetty and 2 persons are enough for landing fish at the jetty while 6 persons are involved in the

said work.

Reduction of hours for the preparation of fishing (Number of fishing boats using the jetty)
Provision of the jetty reduces hours for preparation for fishing operation such as loading of fishing nets from 1.5 hours to 0.5 hours on average as well as the landing activities stated above. Reduction of labor force for the preparation is also expected from 6 persons to 2 persons. The jetty can render services of landing fish, the in-port preparation and lying by.

Reduction of number for repairing fishing boat (Number for repairing fishing boat)

The repair of the boat bottoms and the drying of boats are necessary every day for wooden boat and once every two weeks for FRP boat under the present beaching situation. The repair work can be reduced to about once every several days for wooden boat and once a month for FRP boat with improving the jetty and at the same time, the damage to boat bottom can be greatly reduced with provision of the boat landing facility. Fishing boats can be evacuated to the road located at the backside of the fisheries facilities using the facility in hurricanes and damages of boats in rough seas can be resolved.

Upgrading of freshness for caught fish (Fish purchasing ratio, Fresh fish purchasing ratio in Fish Friday)

Supply of ice to meet the demand of 1.4 tons can improve freshness of landed fish with installing ice making machine, ice storage and insulated ice box. It will be possible to supply fresh fish to the hinterland and it is also expected to increase purchase ratio of fresh fish on Fish Friday (61%).

Increase of fishing efforts (Fish landing volume)

A lot of labor for in-port operation can be reduced and fishing efforts of fishermen can be increased to enable them to control time for selling fish that is stored with ice. The alternation of fishing activities are brought about by provision of the jetty, fish processing facilities (ice making machine, ice storage, primary processing facility and etc.), a tackle shop and fish gear lockers.

Vitalization and Enhancement of Fishermen's Cooperative (Number of registered fisherman)

Anse La Raye Fishermen's Cooperative becomes the main body for the operation and management of the fisheries facilities to be improved in the project. Currently, there is no office and the different body has operated and managed therefore, the activities to support the artisanal fishermen can not be attained. After the completion of the facilities, the operation and management body will be the Fishermen's Cooperative so the cooperative activities will be vitalized and enhanced.

Increase of the fisheries training, support for betterment of fishermen's welfare and

education opportunity by the Department of Fisheries (Number of opportunity for education and training)

Provision of the Fishermen's Hall and the cooperative offices enables the Fishermen's Cooperative to hold regular meetings and fisheries trainings, and does the Department of Fisheries to extend fisheries technologies and training/education for improvement of fishermen's welfare.

【Indirect Effects】

The project is to support fisheries policy of the Government of Saint Lucia since the operation and management by the Fishermen's Cooperative becomes possible with the improvement of the facilities in Anse La Raye, which is the last landing station among 13 places in the west coast.

Improvement of working circumstances for fishermen, increase of fishing opportunities and the income of fishermen are expected with implementing the project. Increase of fishing efforts and employment opportunities are expected also.

The Government of Saint Lucia has the plan of the development of Anse La Raye Village with the balanced promotion of tourism and fishery. In the aspect of tourism, the village has successfully planned and held the event of Fish Friday that reflects characteristics of the fishing village. The project will enable the fishermen to stably supply fresh fish and support the event with providing the facilities for ice supply, sanitation and convenient places for the event. It will result in enhancement of both activities of fishery and tourism and contribution to the Government policy of promoting the fishing village.

Table3-1(1) Effects and Improvement by the Project

Situations and problems	Implementation of measures	Effects and improvement
1. Tough loads and additional time are required for fishermen when landing fish and preparing fishing nets on the beach due to lack of berths for fishing boats.	*Provision of berths for landing, laying by and preparation.	*Improvement of landing efficiency (0.5hours are reduced) *Improvement of preparation (0.5 hours are reduced) *2 fishermen can manage in-port operation. *Fishing efforts of assistants increase.
2. No services of mooring in the landing station urges fishermen to beach their boats, which results in increase of expenses for repair of boats' bottoms.	*Provision of berths for fishing boats. *Improvement of the workshop. *Introduction of the facilities for hauling fishing boats to the workshop.	*Drastic decrease of occasions of repairing boats' bottoms. *Easy evacuation of boats from sea to land and decrease of damages of boats.
3. Insufficient supply of ice causes insufficient maintenance of quality of fresh fish.	*Provision of an ice making machine and ice storeroom. *Provision of insulated ice boxes.	*Sufficient supply of ice brings about increase of quality of fresh fish and decrease of the post-harvest loss. *Increase of amount of fresh fish to be sold.
4. Fishermen are obliged to secure time for selling fish by themselves due to no facilities for keeping quality of fish and to lose opportunities of fishing efforts.	*Provision of Jetty *provision of Fishery Complex *Provision of a tackle shop and fishing gear lockers	*Fishermen's devotion to fishing operation, being free from restricted time for selling fish. *Decrease of tough loads of in-port operation. *Safe storage of fishing nets and engines.
5. Deterioration of the aged fisheries facilities and their management by different bodies suffer activities of fishermen's cooperative, which targets social and economical improvement of fishers' welfare.	*Provision of an office for the cooperative. *Provision of a fishermen training hall, which renders services for conferences, training, seminars, etc.	*Implementation of regular conferences, training, etc. *Possible improvement of social and economic welfare of fishermen

4-2 Recommendations

Anse La Raye Fishermen's Cooperative Society Limited is recommended to effectively operate and manage the facilities with implementing the followings after completion of the facilities. The Department of Fisheries is also recommended to conduct the relevant items listed below for assisting the Cooperative.

(1) Appropriate operation and management

With assistance of the Department of fisheries and the Department of Cooperatives, the Cooperative at Anse La Raye is expected to run the fisheries facilities on stand-alone basis and annually reserve the fund for renewal of the ice making machine and ice storeroom from the profits which will be generated with saving operation costs and efficiently managing the facilities.

For promotion of the fishery and tourism at Anse La Raye, general understanding should be required to render services of the fisheries facilities to the foreign tourists and local visitors on Fish Friday. The cooperative should be responsible for efficient operation and management of the facilities.

(2) Implementation of training and seminars for fishermen

The cooperative should take responsibility to conduct training of fishing technologies and seminars for advance of their welfare, to reserve necessary funds from the profits, and to contribute to promotion of the fishing village.

(3) Collection of more accurate fisheries statistics

The department of Fisheries conducts sampling surveys at several landing stations and estimates the fish catch statistically. Anse La Raye, for example, was a sampling station for fish catch but no survey is conducted. It is believed that more detailed survey will bring about accurate data, which may result in easier comprehensive administration of the Department. The survey may reveal the difference between market prices of fish and fish prices directly sold by fishermen and it may produce basic data for improvement of fishermen's welfare. In addition to them, fundamental data for researching fish resources and fish catch should be collected for the fisheries administration by the Department of Fisheries. Provision of an office for a Fisheries Extension Officer will help the monitoring survey.

(4) Management of the jetty for safe and efficient in-port operation

The jetty is deemed to be congested with fishing boats for their own purposes, since the scale of the jetty is designed for minimum services of landing, preparation and lay-by berths. For safe and efficient management of the facility, rules for using the facility should be formulated for fishermen on the basis of significant improvement of operation time.

(5) Safe fishing operation and establishment of evacuation of fishing boats

In hurricanes, fishing boats are obliged to be evacuated ashore at Anse La Raye Village or from the Bay, in which no natural or artificial breakwater exist, to calm waters in other places. For the evacuation, meteorological information on hurricanes should be promptly transmitted to fishermen through the Cooperative and establishment of the system for transmitting such information is recommended. The Department of Fisheries is recommended to assist the Cooperative for the coordination with the Meteorological Services. The both parties require collaboration for instructing fishermen not to approach the jetty in high seas.

(6) Establishment of fish transaction

Transactions of fish might be carried out not only in the fish processing facilities but on the jetty. The Cooperative is recommended to demonstrate its initiative for establishing the rules of fish transactions to be conducted at the sale counter in the fish processing facilities. The Co-op is also recommended to formulate the system that the Co-op buys all the fish from the fishermen, who are refunded by the Co-op according to sale of fish catch. The formulation of the rules of transactions is expected to enhance activities of quality control of fish to supply fresh fish to consumers.

(7) Promotion of ice use

Fishermen supply fresh fish to not only the domestic market but foreign tourists and local visitors on Fish Friday. The situation requires the quality of fresh fish to satisfy these tourists and use of ice for fishing and fish distribution should be promoted by the Cooperative for fishermen to increase income by improvement of fish quality and to decrease volume of post-harvest loss.

(8) Monitoring of beach

The sand beach at Anse la Raye shows slight rate of erosion. The beach just in front of the fisheries facilities might be scoured by high waves due to short distance from the shoreline. For properly protecting the fisheries facilities along the shoreline, regular monitoring of the beach configuration should be conducted and some shore protection facilities should be installed, if necessary.

(9) Maintenance of the jetty

Open mouths of the jetty, which are designed for releasing uplift pressure by waves, are usually covered with blocks of greenheart timber for traffic on the jetty. In high seas they should be removed from the positions. Even if they are flown away, however, they will be purchased from the local market.

Appendices

A-1 List of the Study Team Members

(1) Basic Design Study Team

Name	Assignment	Organization
Official Member		
Mr. Noriaki NAGATOMO	Leader	Team Director, Rural Development Team, Project Management Group , Grant Aid Management Department, Japan International Cooperation Agency (JICA).
Mr. Shin MARUO	Coordinator	Rural Development Team, Project Management Group , Grant Aid Management Department, Japan International Cooperation Agency (JICA).
Consultant Member		
Mr. Eiichi MATSUURA	Project Manager	ECOH CORPORATION
Mr. Masafumi ITO	Port Engineering	ECOH CORPORATION
Mr. Takeyosi HANADA	Architectural/ Facilities/ Equipment Planning	D.I.C. CORPORATION
Mr. Takahisa AOYAMA	Construction/ Procurement Planning/Cost Estimation	ECOH CORPORATION

(2) Draft Report Explanation Team

Name	Assignment	Organization
Official Member		
Mr. Shin MARUO	Sub-Leader	Rural Development Team, Project Management Group , Grant Aid Management Department, Japan International Cooperation Agency (JICA).
Consultant Member		
Mr. Eiichi MATSUURA	Project Manager	ECOH CORPORATION
Mr. Masafumi ITO	Port Engineering	ECOH CORPORATION
Mr. Takeyosi HANADA	Architectural/ Facilities/ Equipment Planning	D.I.C. CORPORATION

A-2 Study Schedule

(1) Basic Design Study Team

	Mr. Noriaki NAGATOMO	Mr. Shin Maruo	Mr. Eiichi MATSUURA	Mr. Masaomi ITO	Mr. Takeyoshi HANADA	Mr. Takahisa AOYAMA
	Team	Coordinator	Project Manager	Port Engineering	Architectural/ Facilities/ Equipment Planning	Construction / Procurement Planning/ Cost Estimation
1 Oct 8 Sun	NRT(11:25) → CHI(8:45) → MIA(15:15)		NRT(12:00) → JFK(11:00)			
2 9 Mon	MIA(8:00:25) → SLU(13:50) Visit to JOCV Office		JFK(10:25) → SLU(13:45)			
3 10 Tue	Visit to Other Fisheries Facilities		Visit to Other Fisheries Facilities			
4 11 Wed	Discussion with DOF		Visit to Other Fisheries Facilities	NRT(20:40) → JFK		
5 12 Thu	Team Meeting		Meeting with Department of Fisheries for Explanation of Report, Discussion on the Report and Coordination of Schedule	JFK		
6 13 Fri	Discussion on Draft Minutes of Discussions		Discussion on Draft M/D	Visit to Project Site		
7 14 Sat	Visit to Project Site		Visit to Project Site	Preparation of Site Survey		
8 15 Sun	Examination & Analysis of data & Information			Team Meeting		
9 16 Mon	Discussion on Draft M/D and Signing M/D, Report to JOCV Office, SLU(19:05) → POS(21:00)			Preparation of Site Survey		
10 17 Tue	Report to EOI in Trinidad & Tobago, POS(14:40) → MIA(18:40)			Preparation of Site Survey		
11 18 Wed	LA(13:15) → NRT(16:35)		Signing M/D	Preparation of Site Survey		
12 19 Thu			Data Collection & Field Work	Preparation of Site Survey		
13 20 Fri			Data Collection & Field Work	Preparation of Site Survey		
14 21 Sat			Data Collection & Field Work	Preparation of Site Survey		
15 22 Sun			Data Collection & Field Work	Preparation of Site Survey		
16 23 Mon			Data Collection & Field Work	Preparation of Site Survey		
17 24 Tue			Data Collection & Field Work	Site Survey		
18 25 Wed			Data Collection & Field Work	Site Survey		
19 26 Thu			Data Collection & Field Work	Site Survey		
20 27 Fri			Data Collection & Field Work	Site Survey		
21 28 Sat			Data Collection & Field Work	Site Survey		
22 29 Sun			Data Collection & Field Work	Site Survey		
23 30 Mon			Analysis of Data	Analysis of Data		
24 31 Tue			Data Collection & Field Work	Data Collection & Field Work		
25 Nov 1 Wed			Data Collection & Field Work	Data Collection & Field Work		
26 2 Thu			Data Collection & Field Work	Data Collection & Field Work		
27 3 Fri			Analysis of Data & Preparation of Report to EOI	Discussion with Department of Fisheries		
28 4 Sat			SLU → POS	Data Collection & Field Work		
29 5 Sun			Report to the Embassy of Japan POS → JFK	Collection & Analysis of Data		
30 6 Mon			JFK → NRT	SLU		
31 7 Tue			JFK → NRT	JFK		
32 8 Wed			JFK → NRT	JFK		
33 9 Thu			JFK → NRT	JFK		
34 10 Fri			JFK → NRT	JFK		
35 11 Sat			JFK → NRT	JFK		
36 12 Sun			JFK → NRT	JFK		
37 13 Mon			JFK → NRT	JFK		
38 14 Tue			JFK → NRT	JFK		
39 15 Wed			JFK → NRT	JFK		
40 16 Thu			JFK → NRT	JFK		
41 17 Fri			JFK → NRT	JFK		
42 18 Sat			JFK → NRT	JFK		
43 19 Sun			JFK → NRT	JFK		
44 20 Mon			JFK → NRT	JFK		
45 21 Tue			JFK → NRT	JFK		
46 22 Wed			JFK → NRT	JFK		
47 23 Thu			JFK → NRT	JFK		
48 24 Fri			JFK → NRT	JFK		
49 25 Sat			JFK → NRT	JFK		
50 26 Sun			JFK → NRT	JFK		
51 27 Mon			JFK → NRT	JFK		
52 28 Tue			JFK → NRT	JFK		
53 29 Wed			JFK → NRT	JFK		
54 30 Thu			JFK → NRT	JFK		

(2) Draft Report Explanation Team

DATE				Official Member		Consultants' Member	
				Mr. Shin MARUO Sub Leader	Mr. Eiichi MATSUURA Project Manager	Mr. Msaafumi ITO Port Engineering	Mr. Takeyoshi HANADA Architectual/Facilities /Equipment Planning
1	2	24	Sat	X		NRT(12:00) JFK(11:00)	
2		25	Sun			JFK(10:25) SLU(13:45)	
3		26	Mon			Meeting with Department of Fisheries for Explanation of the Draft Final Report(DF	
4		27	Tue	NRT	Discussion with Department of Fisheries on DFR		
5		28	Wed	SLU	Discussion with Department of Fisheries on DFR		
6	3	1	Thu	Discussion with Department of Fisheries on the Draft M/D		SLU	JFK
7		2	Fri	Singing on M/D Courtesy call to the Ministry of External Affairs Report to JICA Saint Lucia Office		JFK	
8		3	Sat	Preparation of the Report		NRT	
9		4	Sun	SLU POS		X	
10		5	Mon	report to the Embassy of Japan in Trinidad & Tobago POS MIA LAX			
11		6	Tue	LAX			
12		7	Wed	NRT			

A-3 List of Parties Concerned in the Recipient Country

- (1) Ministry of Agriculture, Forestry and Fisheries
 - Mr. Martin A. Satney Permanent secretary
 - Mr. A. Dunley Auguste Deputy Permanent secretary
 - Mr. Vaughn A. Charles Chief Fisheries Officer
 - Mr. Rufus George Deputy Chief Fisheries Officer
 - Ms. Susana Scott Biologist
 - Ms. Petronila Polius Anse la Raye Fisheries Extension Officer
 - Mr. Seon D. Ferrari Soufriere Fisheries Extension Officer
 - Mr. Takafumi Toshihara JICA Expert

- (2) Ministry of Labour Relations, Public Services & Cooperatives
 - Ms. Sherill St. Catherine Registrar of Cooperatives, Co-op Dept.
 - Ms. Althea Jean Caesar Cooperative Officer

- (3) Ministry of Communications, Works, Transport and Public Utilities
 - Mr. Jude Regis Chief Engineer

- (4) Ministry of External Affairs, International Trade and Civil Aviation
 - Mr. Cosmos Richardson Permanent Secretary

- (5) Ministry of Physical Development, Environment & Housing
 - Mr. Augustin Poyotte Chief Architect
 - Mr. Critophor De Myers Chief Surveyor

- (6) Ministry of Social Transformation, Culture and Local Government
 - Mr. Urania Joseph Community Development Officer for Anse La Raye

- (7) Ministry of Health, Human Services, Family Affaire and Gender Relations
 - Mr. Parker Ragnanan Senior Environmental Health Officer
 - Mr. Ernie Pierre Environmental Consultant

- (8) Village Council of Anse La Raye
 - Mr. Andrew Collymore Village Clerk

- (9) Office of Prime Minister (National Emergency Management Organization)
 - Mr. Juian Du Bois Deputy Director

(10) Fish Marketing Corporation

Mr. Vincent Peter	General Manager
Ms. Martha Augustin	Financial Controller
Mr. David George	refrigeration Technician

(11) Saint Lucia Air and Sea Port Authority

Mr. Dwayne C. Tobias	Chief Engineer
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(12) Meteorological Services

Mr. Denis Chang-Seng	Acting Director
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A-4 Minutes of Discussions

(1) Basic Design Study

1) Minutes of Discussions

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON ANSE LA RAYE FISH LANDING FACILITY DEVELOPMENT PROJECT
IN SAINT LUCIA

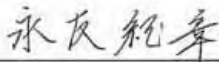
Based on the results of the Preliminary Study, the Government of Japan decided to conduct a Basic Design Study on the Project for Anse La Raye Fish Landing Facility Development Project (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Saint Lucia the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Noriaki Nagatomo, Team Director, Rural Development Team, Project Management Group III, Grant Aid Management Department, JICA, and is scheduled to stay in the country from 9 October to 14 November, 2006.

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

As a result of discussions and field survey, both parties confirmed the main items described on the attached sheets.

Castries, 13 October, 2006



Noriaki Nagatomo

Leader
Basic Design Study Team
Japan International Cooperation Agency



Vaughn A. Charles

Chief Fisheries Officer
Ministry of Agriculture, Forestry and Fisheries
Saint Lucia

ATTACHMENT

1. Title of the Project

The title of the Project is "Anse La Raye Fish Landing Facility Development Project".

2. Objective of the Project

The objective of the Project is to promote artisanal fisheries by providing fisheries facilities in Anse La Raye.

3. Project Site

The site of the Project is located in Anse La Raye as shown in ANNEX-I.

4. Responsible and Implementing Agency

4-1. The Responsible Agency is Ministry of Agriculture, Forestry and Fisheries.

4-2. The Implementing Agency is Department of Fisheries, Ministry of Agriculture, Forestry and Fisheries.

5. Items requested by the Government of the Saint Lucia

Based on the priority confirmed between the Government of Saint Lucia and the Preliminary Study Team, both sides made discussions and the items listed in ANNEX-II were finally requested by the Saint Lucia side.

The Team explained that JICA will assess the appropriateness of the requests after further study and analysis, and will recommend to the Government of Japan for approval. And the Team explained that the Project components provided by the Japan's Grant Aid Scheme in 1987 are difficult to be renewed or replaced simply. The Saint Lucia side understood the explanation by the Team and urged the Team to do all within its mandate to ensure the delivery of the Project components.

6. Japan's Grant Aid Scheme

The Saint Lucia side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Saint Lucia as explained by the Team and described on the Minutes of Discussions signed by the Preliminary Study Team and the Government of Saint Lucia on 30 March, 2006.

7. Schedule of the Study

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- 7-1. The consultants will proceed to further works in Saint Lucia till 14 November, 2006.
- 7-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in February, 2007.
- 7-3. In case that the contents of the report is accepted in principle by the Government of Saint Lucia, JICA will complete the final report and send it to the Government of Saint Lucia by the end of March, 2007.

8. Other relevant issues

8-1. Organization for Operation and Management of the Facilities

The Team requested to Saint Lucia side to prepare the draft plan of Management Committee of the facilities based on the commitment on the letter sent to the Leader of Preliminary Study Team by the name of Chief Fisheries Officer, dated on 7 April, 2006. The Saint Lucia side agreed to present the plan to the Team by 3 November, 2006.

8-2. Removal of Existing Facilities

The Saint Lucia side agreed to remove existing facilities including jetty by the implementation of the Project with its own expenses, and report the completion of the removal works to JOCV Saint Lucia Office promptly.

8-3. Basic Infrastructure Preparation

The Saint Lucia side agreed to provide basic infrastructure such as electricity, water supply, etc. available for the Project site, while those infrastructure inside the Project site would be provided by the grant aid.

8-4. Permission Necessary for the Project

The Saint Lucia side agreed to get permission necessary for the Project from the organizations concerned prior to the construction of facilities. The Saint Lucia side explained that the permission for the Project would be got after draft report would be prepared by JICA in February, 2007.

8-5. Environmental Impact Assessment (EIA)

The Team requested to the Saint Lucia side to inform of the terms of reference and procedures on EIA. The Saint Lucia side agreed to present them to the Team by 3 November, 2006.

8-6. Responsibility on the Execution of the Project

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The Ministry of Agriculture, Forestry and Fisheries shall be responsible for the results of the execution of the Project on the basis of all documents and drawings prepared as a result of the Study.

8-7. Land Ownership of the Project Site

The Saint Lucia side explained that the Project site is owned by the Government of Saint Lucia and promised to present Land Ownership Certificate by 3 November, 2006 to the Team.

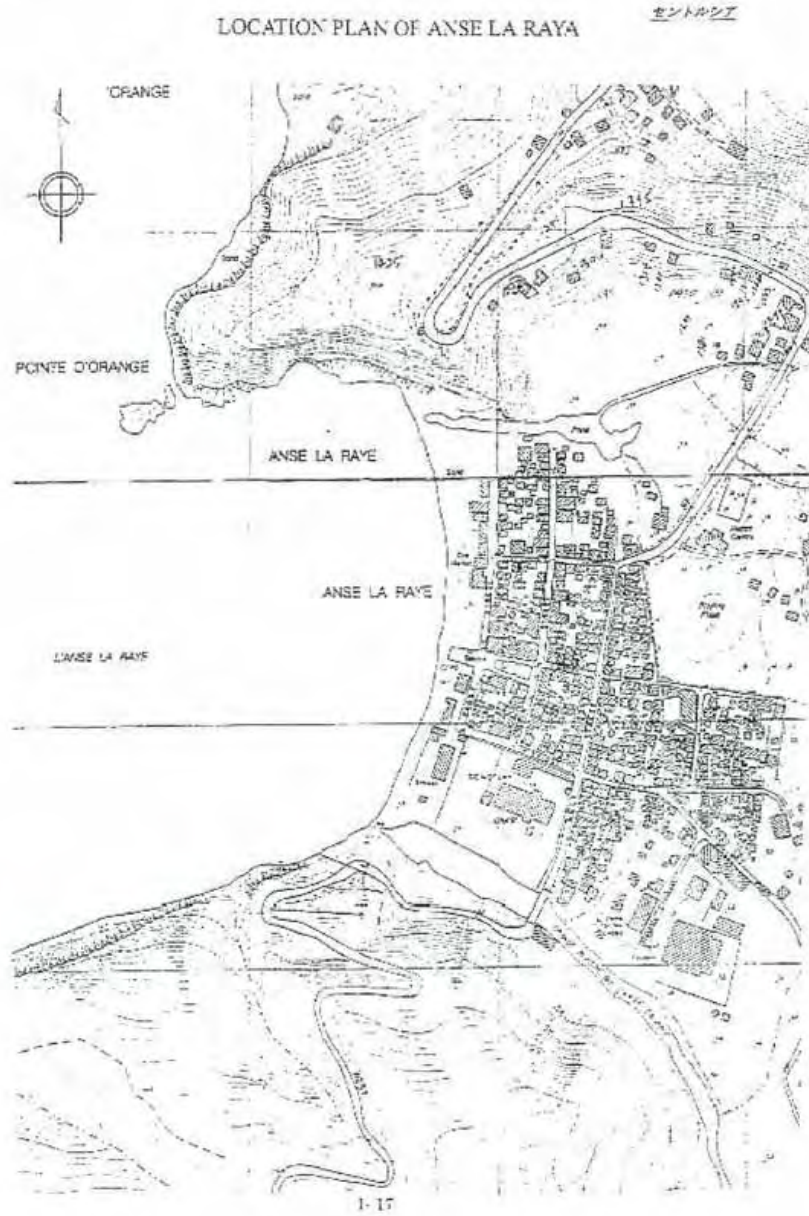
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ANNEX-I Map of the Project Site

-II Items Requested by the Saint Lucia Side

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ANNEX-I Map of the Project Site



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ANNEX-II

Items Requested by the Saint Lucia Side are as follows;

- Trestle type Jetty
 - Steel pipe piled structure with concrete decks for upper structure
 - Overall length 50m
 - Jetty width 5m
 - The piled under structure must have anti corrosive treatment
 - Jetty accessories (fender) bollards
- Slipway
 - To be structured with piles
 - Approximate length 14m
 - Approximate width 3m
- Fishing gear lockers 30 units 2 lots with toilet and bathroom
- Fish processing complex
 - R.C. Block construction 240m²
 - Ice making machine 1t/day
 - Ice storage 2t
 - Refrigeration unit $\pm 5^{\circ}\text{C}$
 - Electrical control device
 - Water supply piping
- Venders' arcade
- Cooperative retail shop and fishermen training room
 - R.C. Block construction 140m²
- Drainage / storm drain and septic treatment

Items excluded from the requests are as follows;

- Shore protection
- Site premise pavement, Fencing / lightning system, Car parking lot should be responsibility of the Government of Saint Lucia
- Outlets for oil, fuel and water should be responsibility of the fishermen's cooperative in Anse La Raye

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(1)

2) Record of Discussions

**RECORD OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON ANSE LA RAYE FISH LANDING FACILITY DEVELOPMENT PROJECT
IN SAINT LUCIA**

The Basic Design Study Team (hereinafter referred to as "the Team"), held discussions with the officials concerned of Saint Lucia and conducted a field survey at the study area. As a result of discussion and field survey, both parties confirmed the main items described below.

Castries, 3 November, 2006



Eiichi Matsuura
Project Manager
Basic Design Study Team
ECOH Corporation



Vaughn A. Charles
Chief Fisheries Officer
Ministry of Agriculture, Forestry and Fisheries
Saint Lucia

1. Organization for Operation and Management of the Facilities

The Team requested to Saint Lucia side to prepare the draft plan of Management Committee of the facilities based on the commitment on the letter sent to the Leader of Preliminary Study Team by the name of Chief Fisheries Officer, dated on 7 April, 2006. The Saint Lucia side submitted the draft plan of Management Committee of the facilities on 3 November, 2006.

2. Permission Necessary for the Project

The Saint Lucia side agreed to get permission necessary for the Project from the organizations concerned prior to the construction of facilities. The Saint Lucia side explained that the permission for the Project could be got after draft report by JICA in February, 2007.

3. Environmental Impact Assessment(EIA)

The Team requested to the Saint Lucia side to inform of the terms of reference and procedures on EIA. The Saint Lucia side submitted them to the Team on 3

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November, 2006. The Saint Lucia side explained the relationship between the procedures of EIA and permission necessary for the Project. The Team confirmed them as shown the attached time schedule.

4. Land Ownership of the Project Site

The Saint Lucia side explained that the Project site is owned by the Government of Saint Lucia and submitted Land Ownership Certificate on 17 October, 2006.

5. The Location of New jetty and Slipway

The Team explained the proper locations of jetty and slope to the Saint Lucia side. The Saint Lucia side indicated the best location of them to the Team.

6. The Refrigeration unit

The Team explained the unnecessary of refrigeration unit to the Saint Lucia side. The Saint Lucia side agreed to eliminate the refrigeration unit as a component.

7. The type of Ice and refrigerant medium for cooling unit

The Team explained to be examined the type of plate of ice and Ammonia as the refrigerant medium for the cooling unit. The Saint Lucia side accepted them.

8. Venders Arcade

The Saint Lucia explained the close interdependence relation with Fish Friday and the fishermen of Anse La Raye. The Saint Lucia side prepared the strongly request letter of consideration of the improvement of vender arcade as the important component requested.

END

Attached-1 The draft plan of management committee of the facilities

Attached-2 TOR of EIA

Attached-3 Letter of consideration of Vender Arcade as the important component for the Project

Attached-4 Land Ownership Certificate



2) –Attachment I

Ministry of Agriculture, Forestry and Fisheries

5th Floor, Sir Stanislaus James Building
Castries, Saint Lucia



Communications on this subject
should be addressed to:
Chief Fisheries Officer
and the following Number
quoted:

1 November 2006

Mr. Noriaki NAGATOMO
Team Director, Rural Development Team,
Project Management Group III,
Grant Aid Management Department,
Japan International Cooperation Agency (JICA)

Dear Mr. NAGATOMO

The Department of Fisheries of the Ministry of Agriculture, Forestry and Fisheries is committed to the establishment of a Management Committee to oversee the day to day operations of the Fisheries facilities in Anse La Raye after the completion of the project.

The committee will comprise the following:

Representatives of the Anse La Raye Fishermen's Co-operative Society (2 persons)


Representative Anse La Raye Village Council (1) person)

Representative Department of Fisheries

Representative Department of Co-operatives

Representative from the Community

Please be guided accordingly.


Vaughn A. Charles
Chief Fisheries Officer

Ministry of Agriculture, Forestry and Fisheries

5th Floor, Sir Stanislaus James Building
Castries, Saint Lucia



Communications on this subject should be addressed to:

Chief Fisheries Officer
and the following Number quoted:

1 November 2006

Mr. Noriaki NAGATOMO
Team Director, Rural Development Team
Project Management Group III
Grant Aid Management Department,
Japan International Cooperation Agency (JICA)

Dear Mr. NAGATOMO

The Department of Fisheries would like to inform the following steps/guidelines for Terms of reference which may influence the preparation of an Environmental Impact Assessment (EIA and a time schedule for the submission of the said Terms of Reference by the Department of Fisheries to the Development Corporation Authority (DCA).

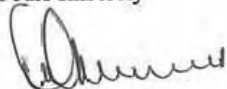
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|----------|---|
| Step I | Project Plans submitted to DCA for approval |
| Step II | Plans reviewed by the Department of Fisheries for input and preparation of Terms of Reference for EIA or EIS if necessary |
| Step III | Terms of Reference submitted to DCA and developer for preparation of EIA or Environmental Impact Statement based on recommendation by the Department of Fisheries |
| Step IV | Review of EIA or EIS by the Department of Fisheries to ensure all areas of concern are addressed and mitigative and monitoring protocols are in place |

The review time for the project plans, the preparation of the Terms of Reference and its submission to the DCA, and final approval of EIA or EIS by the Department should be done within twenty-one working days.

Please note for the Anse La Raye Project the Department will submit to the DCA an Environmental Impact Statement based on Terms of Reference that will be developed after the plans for the project have been submitted by the consultant Engineers to the Department of Fisheries.

Please be guided accordingly.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Vaughn A. Charles', written in a cursive style.

Vaughn A. Charles
Chief Fisheries Officer

Ministry of Agriculture, Forestry and Fisheries

5th Floor, Sir Stanislaus James Building
Castries, Saint Lucia



Communications on this subject
should be addressed to:
Chief Fisheries Officer
and the following Number
quoted:

1st November 2006

Mr. Noriaki NAGATOMO
Team Director, Rural Development Team,
Project Management Group III,
Grant Aid Management Department
Japan International Cooperation Agency (JICA)

Dear Mr. Nagatomo,

The village of Anse la Raye is one of the primary areas in Saint Lucia, for the production of Coastal Pelagics and these species of fish are very important to the economic development of the Anse la Raye community.

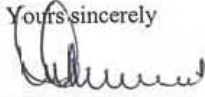
As a result of the heavy dependence of the community on fishing and the need to diversity the economy, the fishers and vendors were encouraged to engage in some value added activity to the fish landed and so the Fish Friday activity was born. This activity now attracts in excess of six hundred (600) persons every Friday night and provides for much needed economic activity to the village.

The activity is conducted in vending booths that were temporarily constructed and lack the basic amenities such as water, which is necessary to provide for improved sanitary conditions, in keeping with internationally accepted standards for the sale processed fish products. The construction of new vending facilities will enhance this activity and the village and will provide for the necessary basic amenities (water and electricity), all of which is necessary for the sale of fishery products under internationally accepted sanitary conditions and in keeping with Hazard Analysis and Critical Control Point (HACCP).

Therefore the Government of Saint Lucia strongly request and recommend the construction of new vending facilities as part of this project.

In anticipation of your favorable response,

Yours sincerely

A handwritten signature in black ink, appearing to read "Vaughn A. Charles". The signature is written in a cursive style with a large initial "V" and a long, sweeping underline.

.....
Vaughn A. Charles
Chief Fisheries Officer

(2) Draft Final Report Explanation

MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY ON
ANSE LA RAYE FISH LANDING FACILITY DEVELOPMENT PROJECT
IN SAINT LUCIA
(EXPLANATION ON DRAFT REPORT)

From October to November 2006, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Anse La Raye Fish Landing Facility Development Project (hereinafter referred to as "the Project") to Saint Lucia, and through discussion, field survey, and technical examination of its results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Government of Saint Lucia on the components of the draft report, JICA sent to Saint Lucia the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is managed by Mr. Satoru Hagiwara, Group Director, Project Management Group III, Grant Aid Management Department, JICA, and headed by Mr. Shin Maruo, and is scheduled to stay in Saint Lucia from 25th February 2007 to 4th March 2007.

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

Castries, 2nd March 2007



Satoru Hagiwara

Draft Report Explanation Team
Japan International Cooperation Agency



Vaughn A. Charles

Chief Fisheries Officer
Ministry of Agriculture, Forestry and Fisheries
Saint Lucia

ATTACHMENT

1. Components of the Draft Report

The Saint Lucia side agreed and accepted in principle the components of the draft report explained by the Team including obligations of the recipient country, which are mentioned in Chapter 3 of the draft report.

2. Japan's Grant Aid scheme

The Saint Lucia side understood the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Saint Lucia as explained by the Preliminary Study Team and described in Annex-2 and Annex-3 of the Minutes of Discussions signed between the Saint Lucia side and the Preliminary Study Team on 30 March, 2006.

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 Lucia by April 2007.

4. Other relevant issues

4-1. Project Implementation Committee

The Saint Lucia side explained that a Project Implementation Committee would be established for smooth construction works of the Project prior to the commencement of works of the Project and that consist of the following members:

- Chief Fisheries Officer
- Representative of the Ministry of Social Transformation, Human Services, Family Affairs, Youth and Sports
- Representative of the Ministry of Health and Labour Relations
- Representative of Fire Services
- Representative of Police Department
- Representative of Governmental Architecture
- Representative of Anse La Raye Fisherfolks' Cooperative Society
- Representative of Anse La Raye Village Council
- Representative of the Department of Cooperatives
- Representative of Contractor and Consultant



4-2. Operation and Management of the Facilities

The Saint Lucia side explained that a Management Committee to oversee the day to day operation of the facilities would consist of the following members:

- Representatives of the Anse La Raye Fisherfolks' Cooperative Society (2 persons)
- Representative of Anse La Raye Village Council (1 person)
- Representative of Department of Fisheries (1 person)
- Representative of Department of Co-operatives (1 person)
- Representative of the Community

The Saint Lucia side explained that the Management Committee would be established prior to the completion of the Project.

The Saint Lucia side agreed to allocate necessary budget for the maintenance and renewal of the facilities on budget planning of the Management Committee.

The Saint Lucia side is responsible for the maintenance of the facilities and should take necessary measure in case of beach accesion and/or erosion in front of the facilities.

4-3. Necessary Permissions for the Project

Based on the Minutes of Discussions signed on 13 October, 2006, the Saint Lucia side agreed to obtain Construction Approval from the Development Control Authority (DCA) based on the detailed design of the Project. The Saint Lucia side explained that it would take within one month to get the Approval after the detailed design of the Project would be submitted to the Department of Fisheries. Besides, the Saint Lucia side agreed to obtain the Approval prior to the commencement of works of the Project and to send a copy to JICA/JOCV Saint Lucia Office promptly.

4-4. Basic Infrastructure Preparation

Based on the Minutes of Discussions signed on 13 October, 2006, the Saint Lucia side agreed to provide basic infrastructure such as electricity, water supply, etc. to the Project site before the construction of facilities would be completed.



4-5. Removal of Existing Facilities

Based on the Minutes of Discussions signed on 13 October, 2006, the Saint Lucia side agreed to remove existing facilities including jetty for the implementation of the Project, and report the completion of the removal works to JICA/JOCV Saint Lucia Office promptly.

Besides, the Saint Lucia side agreed to prepare substituting facilities for fisherfolks to be utilized after the removal of the existing facilities.

4-6. Environment Impact Assessment (EIA)

The Saint Lucia side agreed to prepare Environmental Impact Statement (EIS) based on the detailed design of the Project and to submit it to DCA. The Saint Lucia side explained that it would take within one month to get the permission of EIS. Besides, the Saint Lucia side agreed to obtain permission prior to the commencement of works of the Project and to inform to JICA/JOCV Saint Lucia Office promptly.

END



