

for a total of 100 days. The principle objective of exhibition training is to improve the trainees' knowledge and technique in exhibition, and to improve the quality of the exhibitions being planned by MTI.

In order to link the training results to actual exhibition, it is thought most effective to incorporate exercises into exhibition training and at the same time to conduct these practical exercises at actual exhibition so that each type of exhibition activity planned by MTI may be conducted at these sites will improve the effectiveness of practical exercises. And from the perspective of solving the difficulties in securing sites for trade exhibitions and contributing to reducing expenses -- the problems mentioned in Chapter 2 -- and, also, from the viewpoint that it would be an effective use of facilities, this plan is appropriate.

3-3-4 Functions Related to Training Plan

In order to ensure a smooth and effective execution of training plans thus far stated, there is the necessity to incorporate the following functions in PTTC:

(1) Function of Developing Teaching Materials

1) Necessity

The training by PTTC must be conducted effectively in a short period of time. The content of the training is required to have practicality that would directly contribute to Philippines' export promotion. Therefore, there are special characteristics required in teaching materials that ready-made teaching materials do not possess. As a method of effectively conveying to training participants these special characteristics, there is a high degree of necessity for incorporating a functionary for independently developing printed materials and audio-visual teaching aids.

2) Current Conditions

At present, CITEM is in charge of producing video tape teaching materials for trade training conducted by MTI. From 1984 to present, 50 video tapes were produced, and their total production expense was 7,540,000 pesos. Script writing is handled by 25 CITEM employees. However, as

tape production is subcontracted to an outside firm, the current condition is that there are problems in expensive subcontracting charges and lengthy production time.

3) Contents of the Plan

At PTTC, PTTC instructors and CITEM employees will be jointly in charge of developing software for teaching materials. As an increase in labor cost would be lower than previously paid subcontracting cost, it is planned for PTTC to employ a technician for film editing who will produce audio-visual materials.

Thus, this plan proposes the incorporation of facilities and equipment for development of printed teaching materials and audio-visual teaching materials of still and moving picture types.

(2) Function of Collecting, Organizing, and Distributing Relevant Information

1) Necessity

For execution of an efficient and comprehensive training program, the collection, organization, accumulation, and distribution of related information is vital. Specifically, the following types of information may be given as examples.

1. Training

Reference on instructors, training statistics (budget, plans, evaluation, research), teaching materials, and literature.

2. Administration

Finance, accounting, wages, and activity schedules.

3. Export Support

Statistics on export-related firms, reference on standards and norms, foreign trade statistics.

A microcomputer is a necessity to process this information efficiently.

2) Current Condition of Computer Usage

Thirty-nine personal micro computers were implemented in institutions related to MTI last year. One of these computers was set up at CITEM, and it is being utilized for processing various statistics and as a word-processor for three to five hours a day.

National Census and Statistics Office (NCSO) utilizes a multipurpose computer which accumulates data concerning domestic trade.

3) Contents of the Plan

The following plan has been devised upon the consideration that educating operations staff and developing software will require some time, and that approximately 10% of hardware cost will be required, in case of annual maintenance contract, for maintenance budget.

Table 3-11 Computer usage

Applicable Department	Usage
Administrative and Finance Div.	<ul style="list-style-type: none"> . Management of trainee data . Development of training program . Training budget control
Training Information and Publication Div.	<ul style="list-style-type: none"> . Access to catalogue & information . Development of training materials
Planning and Programming Div.	<ul style="list-style-type: none"> . Accumulation of statistical data . Analysis of plans
Each Training Div.	<ul style="list-style-type: none"> . Data on firms participating in training . Data on market research analysis . Product data file

Four numbers of computer system will be provided for the above mentioned usage. The following chart describes the system.

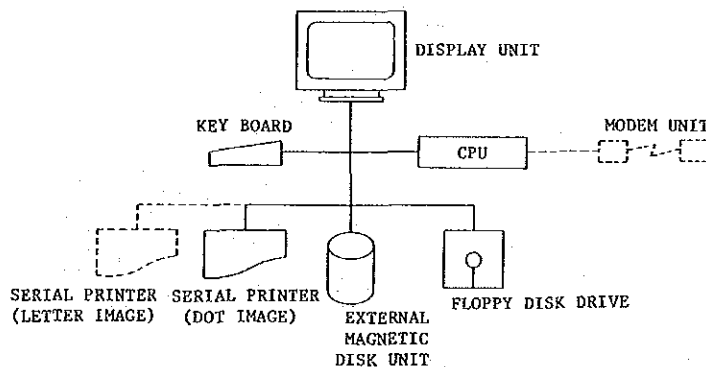


Fig. 3-4 Computer systematic diagram

3-3-5 Proposed Construction Site

(1) Location of Planned Site

The planned construction site for PTC is located in Pasay City in Metropolitan Manila. It is located on the corner of Roxas Boulevard, a main thoroughfare in Pasay, and Puyat Road. The planned construction site is reclaimed land on the north corner of ITC property. In the vicinity of the reclaimed land, there are important government facilities such as the Culture Center, PNCC, PNB, and the Government Insurance Center.

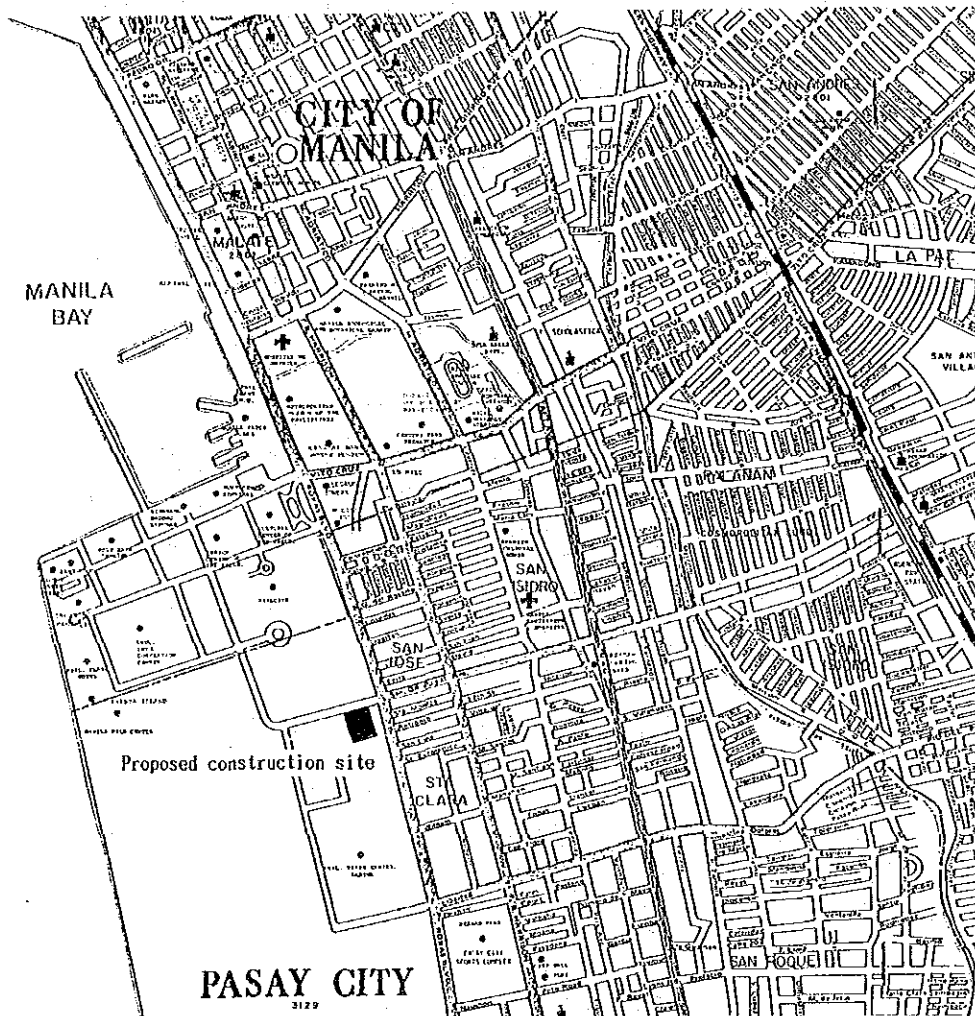


Fig. 3-5 Proposed Construction Site Location Map

(2) Conditions of the Planned Construction Site

1) Geographical Features

The planned construction site which extends 95 meters East to West and 113 meters North to South is flat. It includes existing facilities such as kiosk and a canal.

A large part of the planned site is paved with concrete.

2) Ground Conditions

The planned site is reclaimed land. The ground condition is extremely poor. Soft, silty clay layer (N value of 1 to 5) extends underground for 15 to 20 meters from the ground surface. The layer beneath this is a relatively hard, silty clay layer whose N value is 20 to 25. Over 25 to 30 meters from the ground surface is a sandy layer mixed with silt, whose N value is 50 and above. The normal underground water level is high at 2.5 to 3.0 meters from ground surface. For construction purposes, a water discharging measure is expected to be necessary. Furthermore, the site is only 2.923 meters above sea level.

(3) Infrastructure

1) Electricity

A 34.5kV 60Hz overhead electric power line is installed along the road on the west side of the planned construction site. It is possible to obtain electricity from this direction. Presently the Manila Electric Company (MERALCO) has a design plan for an underground electric power line in the area of the planned construction site. Although the actual implementation date is unclear, it is necessary to draw a basic design which can be adapted to this installation. Furthermore, the 34.5kV overhead electric power line exists inside the planned construction site. Therefore, it will be necessary to transfer it outside of the planned construction site prior to the commencement of the planned construction. The entire transfer work will be the responsibility of the Philippine side. Although there is relatively small chance of a power failure, from the viewpoint that to regain power after an accidental power failure from lightning takes considerable amount of time, and considering the equipment installed in the facility, it is necessary to take steps to prevent power failures. Furthermore, considering the conditions of

existing facilities, there is a need to take measures against changes in electrical voltage.

2) Telephone

At present, a telephone cable is installed jointly on the poles of the previously mentioned overhead electric power line.

It is planned to draw the telephone cable from this direction into the building. As with the power line, it is necessary to transfer the telephone cable. For a temporary telephone service during construction, it is possible to use the spare telephone cable extending into the existing building.

3) Waterworks

A 250 millimeter diameter pipe is situated underneath the east-side sidewalk of Roxas Boulevard located on the east side of the planned construction site. This pipe diverges from a main waterworks pipe, 600 millimeters in diameter which is buried underneath F.B. Harrison Street. The water supply for the planned construction is planned to be obtained from a branch of this 250 millimeter diameter pipe. Existing buildings (CITEM, ITC, etc.) utilize the 250 millimeter diameter pipe for their water supply as well. As water pressure has been increased recently, a booster for transporting water into existing water tanks is not being used at present. According to Metropolitan Waterworks & Sewage System (MWSS), whose jurisdiction includes the planned construction site, the planned water pressure for the branch water pipe is fixed at 1.05 to 1.75kg/cm².

4) Sewer System

At present, there is no facility for sewerage in the perimeters of the planned site. Therefore, the existing buildings utilize septic tanks for sewage. This method entails permeating the sewage to ground surface after it goes through a decomposition process in the septic tank.

When sewage does not permeate it is drained through overflow pipes into gutters located on the east and west sides of the site. Furthermore, rainwater drainpipes are situated on the site of existing buildings, and rainwater, wastewater, and sewage treatment water from the site are planned to be drained into this rainwater drainpipe. This rainwater

drainpipe is situated alongside the existing building, and it drains water into Liberta Channel located on the south side of the site. In Metropolitan Manila, rainwater drainpipes come under the jurisdiction of MPWH. Sewage pipes (laid in any part of Metropolitan Manila) come under the jurisdiction of MWSS, and rainwater drainpipes situated in the reclaimed land including the planned site comes under the jurisdiction of Culture Center of the Philippines (CCP).

5) Gas

A 125 millimeter diameter gas pipe lies underneath Roxas Boulevard, which is on the east side of the planned site. A gas pipe for the planned construction is planned to be diverged from this gas pipe. The calorific value of this gas is $5,300 \text{ kcal/Nm}^3$, and its supply pressure is 0.14 to 0.56 kg/cm^2 . There is only one gas plant in Manila, and it comes under the jurisdiction of Manila Gas Corporation (MGC). The gas plant is equipped with a naphtha gas tank of 60,000 gallons, LPG 1,000 tons; $10,000 \text{m}^3$. Its supply capability is $35,000 \text{Nm}^3/\text{day}$.

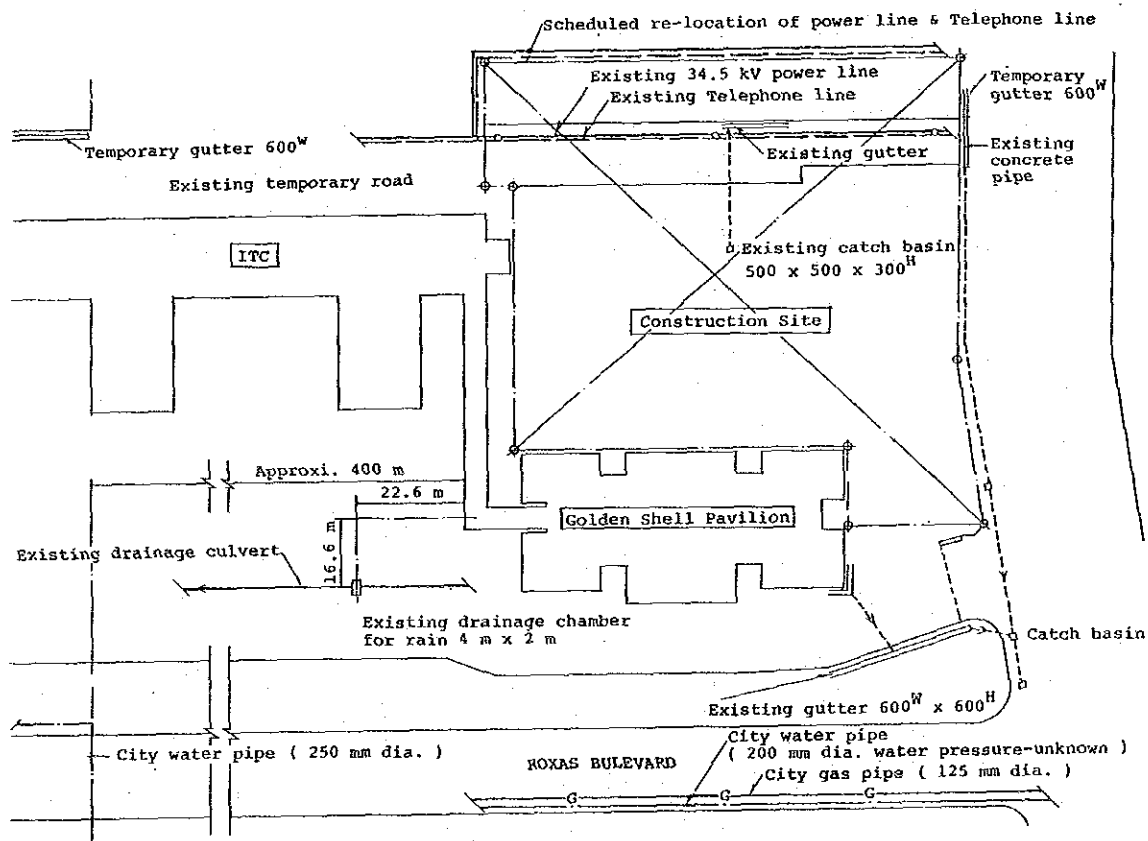


Fig. 3-6 Infrastructure near the construction site

3-3-6 Outline of Facilities and Equipment

In order to attain the objectives of this project, the following facilities and equipment are believed to be necessary.

(1) Facilities

1. Training Lecture Facilities:

Seminar room (three capacity types: 80, 50, 25)

2. Practical Exercise Facilities for Inspection Training:

Practical exercise room for furniture inspection, practical exercise room for garment and textile inspection, practical exercise room for food inspection

3. Practical Exercise Facilities for Exhibition Training:

Practical exercise room for Exhibition

4. Self-study and Information Facilities:

Library, L/L room

5. Instruction Material Development Facilities:

Audio-visual aid production room, printing room, dark room

6. Administration Facilities, etc.:

Director's room, deputy director's room, office, expert's room, faculty unit, examination room, cafeteria

(2) Outline of Equipment

1. General Training Equipment:

Typewriter, copy machine, printing machine, vehicle, personal computer, library tables, shelves, card holders, etc.

2. Inspection and Testing Training Equipment:

. Furniture inspection and testing equipment
. Textile and garment inspection and testing equipment
. Food inspection and testing equipment

3. Exhibition Training Equipment:

Knockdown stage, mannequins, dress racks, exhibition modules, food exhibition machineries, etc.

4. Audio-visual aids:

Video projector, OHP, 35mm slide projector, 16mm film projector, audio-visual aid production/editing machinery, L/L machinery, etc.

3-3-7 Personnel Plan

(1) Staff Personnel Plan

The plan for assigning a number of employees in each department to operate PTT activities which have been described here up to now is proposed as follows:

Executive Director's Office

Executive Director, Deputy Director, Director's Secretary
Assistant Director's Secretary, Typist

Total 5

Administration and Finance Division

Head, Chief(2), Staff(4 - Administration: 2, Finance: 2)
Typist & Clerk(2), Messenger(4), Telephone Operator(1),
Machine Operator(4), Property Supply(2), Driver(4), Janitor(2)

Total 26

Planning and Programming Division

Head, Chief, Staff(7 - Evaluation: 1, 2 for Training
Programming of each Training: 6)

Total 9

Training Information and Publication Division

Head, Chief, Staff(5 - Information: 2, Publication: 3),
Librarian(2), Printing(2), A/V Production(11)

Total 22

Trade Training Division

Head, Chief, Staff(9 - Trade Business: 3, Trade Management: 3,
Language: 3)

Total 11

Inspection Training Division

Head, Chief, Staff(9 - Wood Furniture: 3, Garments &
Textile: 3, Food: 3)

Total 11

Exhibition Training Division

Head, Chief, Staff(5 - Exhibition Management: 3,
Exhibition Training: 2)

Total 7

It is expected that the total number of necessary staff will be 91 as is detailed above.

On the other hand, the Philippine side has its own personnel plan as shown in Table 3-12. Since the Philippine Government is taking a policy of austerity now, the staff capacity will be achieved in a 5-year plan.

Table 3-12 Staff Assignment and Required Number

DIVISION	1st Year					3rd Year					5th Year				
	CHIEF	ASST. CHIEF	TS	CS	TOTAL	CHIEF	ASST. CHIEF	TS	CS	TOTAL	CHIEF	ASST. CHIEF	TS	CS	TOTAL
EXECUTIVE DIRECTOR'S OFFICE	①	①	1	2	5	①	①	1	2	5	①	①	1	2	5
ADMINISTRATION AND FINANCE DIV.	1	2	4	19	26	1	2	4	19	26	1	2	4	9	26
PLANNING AND PROGRAMMING DIV.	1	1	5	2	9	1	1	6	2	11	1	1	7	4	13
TRAINING INFORMATION AND PUBLICATION DIV.	1	1	13	7	22	1	1	13	7	22	1	1	13	11	26
TRADE TRAINING DIV.	1	1	4	5	11	1	1	4	5	11	1	1	5	8	15
INSPECTION TRAINING DIV.	1	1	3	3	8	1	1	6	3	11	1	1	9	4	15
EXHIBITION TRAINING DIV.	1	1	2	3	7	1	1	2	3	7	1	1	3	4	9
TOTAL	① + 6	① + 7	32	41	88	① + 6	① + 7	36	42	93	① + 6	① + 7	42	52	109

Note: ① Executive Director
 ○ Deputy Director
 TS Technical Staff
 CS Clerical Staff

Remarks: . Contents of the Executive Director's Office are the director's secretary, assistant director's secretary, and typist.
 . Administration and Finance Department's clerical staff is made up of typist and clerk(2), drivers(6), messengers(4), telephone operator(1), building management personnel(4), and property suppliers(2), making 19 in total.
 . The Training Information and Publication staff includes the audio-visual aid production technical staff which is made up of one each of the following;
 production manager, cameraman, assistant cameraman, editor, VTR technician, lighting technician, sound engineer, assistant sound engineer, utility man, and general technician, making 11 in total.

The staff capacity, 109, which the Philippine side is planning is more than the necessary numbers, 91, mentioned earlier. However, the actual staff number of the project is expected to be less than the staff capacity. Because actual staff number of MTI is below the staff capacity as seen in Table 3-13. Therefore it is deemed appropriate to take 91 as staff numbers for planning a scale of the project.

Table 3-13 Staff capacity condition of MTI

	Staff	Actual No. of	Ratio	Contract	Total	1985 Budget (reference)	
						Approved Appropriation (1,000 of pesos)	Allotment (1,000 of pesos)
Office of the Minister	251	197	78	43	240	39,075	36,729
Foreign Trade Service Corp. (FTSC)	83	61	73	-	61	48,962	42,962
Price Stabilization Council (PSC)	48	18	37	-	18	1,602	1,447
Philippine Patent Office (PPO)	179	145	81	4	149	10,025	9,850
Bureau of Industrial Development (BID)	98	60	61	7	67	7,024	5,161
Bureau of Small and Medium Industries (BSMI)	64	45	70	3	48	5,327	4,992
Product Standards Agency (PSA)	142	105	73	4	109	9,266	7,551
Bureau of Domestic Trade (BDT)	107	66	61	3	69	6,911	6,536
Bureau of Foreign Trade (BFT)	186	116	62	6	122	24,286	23,419
Others	-	-	-	-	-	60,928	55,951
TOTAL	1,158	813	70	70	883	213,406	194,598

Note: Since the regional offices and CITEM's budget are included, the itemized totals do not match. The staff will consist mainly of newly recruited, but the Training Information and Publication department's nine technical staff will be supplied from CITEM, and a part of the staff for the three training sections of trade, inspection, and exhibition will be transferred from MTI affiliated departments and FDC.

(2) Instructors' Personnel Plans

The make-up of the instructors and their respective fields of specialization are as follows:

Table 3-14 Personnel arrangement of instructors

Field In charge of	Trade training			Export inspection training				Exhibition training	Total	
	Trade business	Trade management	Japanese business language	Wood products	Garments and textile products		Food products			Exhibition
					Basic	Advanced	Inspection	Process		
Full-time	3	3	1	4	2	3	2	2	2	22
Guest lecturer	7	3	2	3	2	1	0	0	0	18
Total	10	6	3	7	4	4	2	2	2	40
Note				Full-time instructors will be from NACIDA and PSA	Of five full- time instructors 3 will be from PTRI, 1 from PSA		The four full-time instructors will be from FDC			

The trade training and exhibition training instructors will be recruited from among competent individuals from BFT, CITEM, BOI, and other trade related government institutions, public colleges, and enterprises. In addition, business Japanese instructors will be recruited from government, public colleges, and linguistic schools.

3.4 Technical Cooperation

In order to enhance the effectiveness of PTTC after its opening, the Philippine government is strongly requesting for project type technical cooperation from the Japanese government. In response, the Japanese government decided to conduct an investigation concerning technical cooperation, and through the Japan International Cooperation Agency, it dispatched a survey team during the periods listed below. The mission team confirmed the request contents, investigated the appropriateness and possibilities of them, evaluated the findings, and discussed with the Philippine side concerning the cooperation details.

Contact Survey Mission (technical cooperation)

October 7 to October 15, 1985.

Preliminary Survey Mission (technical cooperation and grant aid)

March 30 to April 6, 1986

Long-term Survey Mission (technical cooperation)

June 18 to July 1, 1986

According to the views of the Japanese government, the contents of project type technical cooperation which will be possible to realize, at present, are as follows:

(1) Field of Technical Cooperation

Trade training including business Japanese training, export inspection training and exhibition training of wood products including those made of bamboo and rattan, garments and textile products, frozen food products, canned and bottled food products, and fruit juice beverages.

(2) Duration of Technical Cooperation

Period necessary after signing the Record of Discussion concerning technical cooperation (however, 5 years maximum).

(3) Contents of Technical Cooperation

1. Dispatch of Japanese Experts

The Japanese side is considering the dispatch of the following

experts:

Long-term Expert

A total of eight persons including a leader and a coordinator.

Short-term Expert

As the necessity arises in the three fields of trade training, export inspection, and exhibition training, temporary and other experts will be assigned.

2. Training of Philippine Counterparts in Japan

During the technical cooperation period, training will be conducted in Japan as the need arises. The Japanese side is considering taking in four trainees annually, for a total of 20 over the duration.

3. Equipment Supply

All necessary equipment will be supplemented, during the technical cooperation period including the period prior to the opening of the center.

CHAPTER 4

BASIC DESIGN

CHAPTER 4 BASIC DESIGN

4-1 Design Policy

The following policies should be considered for the basic design.

- (1) The facility must meet the local geographical and climatic requirements

In the Philippines, the rainy season lasts from May to October and during this season the islands are deluged by rainstorms accompanied by strong winds. Severe heat, high humidity and strong sunshine must also be taken into account. Furthermore, since the construction site is on reclaimed land facing Manila bay, the facility should be able to withstand damage from salt.

- (2) The contents of the facility shall be determined in accordance with the basic policy of a Project Type Technical Cooperation Plan.

The project shall provide the optimum required facilities and related equipment necessary for the project type technical cooperation which is scheduled to be initiated by the Japanese Government by the end of 1986. Thus, scale, grade and usage of the facilities, equipment will be determined according to the Project Type Technical Cooperation Plan. Furthermore, an implementation schedule of the project will also be examined to make sure that the construction work can be completed within the scope of the technical cooperation plan.

- (3) The facility plan should absorb future expansion and changes to facilitate efficient use of the facilities.

The facility plan must be flexible enough to cope with future expansion and changes in training programs and activities. That is to say that efficiency in the use of the facility has to be maximized by creating flexibility in floor plan, structure and equipment layout plan.

- (4) The maintenance cost of the facilities shall be examined

Natural ventilation and natural lighting should be taken into

consideration in the architectural planning to reduce energy costs. At the same time, it is highly encouraged to apply local construction materials and local construction methods for ease of maintenance. Durability is one of the most important criteria when construction materials are selected.

(5) The Facility shall harmonize with its environment.

The construction site is in the center of Manila and is surrounded by the PNCC, a Culture Center, the Philippine National Bank (PNB) and other important institutions. The facility will be a part of this cityscape, therefore it must match the environmental conditions of the site.

4-2 Design Conditions

The following design conditions should be considered for the basic design.

4-2-1 Conditions of Nature

The facility must match the local climate and other natural conditions. The following conditions shall in particular be taken into consideration in designing the facility:

(1) Heavy Rain

The proposed construction site is situated in an area with a typical tropical climate; the rainy season lasts from May to October and the dry season from November to April. The rain is especially heavy in August when typhoons cause heavy, intense rainfall. On the premise that the facility will be used even when it rains, it is essential to consider the water proofing capacity, means for leakage and measures to prevent rain water from blowing in.

(2) Damage by Salinity

The construction site is on reclaimed land facing Manila bay and is about 1 kilometer from the sea.

Consequently, it is necessary to consider durability of construction materials to withstand exposure to saline breezes and saline water.

(3) High Temperature and High Humidity

Manila and its vicinity has a hot and humid climate with small temperature variations throughout the year. The average maximum temperature is over 30 deg.C and the humidity is between 70 - 85% all year round. Therefore, countermeasures in the architectural plan such as natural ventilation and mechanical air conditioning are necessary to maintain a comfortable environment within the facility.

(4) Earthquakes

The Philippines is situated on the circum-pan-Pacific earthquake belt and

has experienced large-scale earthquakes in the past. Earthquakes are frequent and those registering magnitude 6 or more are reported every year. It is essential to consider the aseismic structure and preventive means from cracking.

4-2-2 Soil Conditions

According to the boring test results of the site, the ground at the site is soft and saline with high ground water level. Therefore, it is necessary to consider the following ground conditions:

(1) Soft Ground

The site is on reclaimed land and a layer of soft silty clay continues down to 26m below the ground level. therefore, it is expected that piles with approximately 30m length will be necessary for the construction. Multiple examinations concerning the pile method, cost and construction period etc. are necessary.

(2) Ground Water Level

The ground water level is as low as 2.0m. It is necessary to consider a water discharge method upon excavation for foundation girders etc.

(3) Salinity

A high density of salinity is contained in the soil of the site. Salinity weakens durability of construction materials and shortens the life span of the building.

This situation requires special measures such as using sulphate resisting concrete, especially for the structural body exposed to earth.

4-2-3 Local Construction Situation

The Philippines has a well-established basic construction industry. A large quantity and wide range of construction materials are produced and the skill of the workmen is high. There are also large-scale design firms and construction companies which receive a considerable amount of orders. The following shall be taken into consideration for the basic design under these conditions:

(1) Construction Equipment and Materials

Most of the basic construction materials are produced locally and are widely used. However, in terms of quality, amount of supplies, and price, they do not compare favorably with Japanese products. In particular, the limited variety of colours and configurations of the construction materials will pose severe restrictions on design.

(2) Construction Regulations

All buildings in the Philippines are regulated by a building code, a fire code, mechanical and electrical design standards and others that have to be understood upon design. In addition, there are also regulations that govern construction permits, the application for building plans and other procedures. The time required to go through all these procedures should be accounted for in the project implementation schedule.

(3) Local Construction Skills

Local construction companies are large in scale and they are well provided with heavy machines. It has been pointed out that their construction schedule control, personnel management and quality control are not as good as they ought to be. However, with the assistance of a Japanese construction company, it will be possible to execute construction work with good workmanship in a short period of time. This is a factor which must be duly considered in order to reduce construction time.

4-3 Basic Plan

4-3-1 Proposed Construction Site and Layout Plan

(1) Proposed Construction Site

The construction site is on the north of the International Trade Center (ITC) which also comprises a permanent exhibition hall and multi-purpose conference hall (the Golden Shell Pavilion). The original site was about 4,200m². But since this was not adequate for the scale and the contents of the proposed facility, it was agreed to enlarge the site. As a result, some of the existing buildings will be demolished so that the site which faces Senator Gil J. Puyat road may have a total area of 9,800m².

Vehicle traffic will have direct access to the facility from Puyat road and pedestrians can enter by walking along the sidewalk on Puyat street from Roxas avenue. These are two of Manila's main streets. They are crowded during the rush-hours and this location is also extremely convenient for visitors. Furthermore, as the area around the site is newly developed reclaimed land on Manila bay, it is managed by the government and there are many modern buildings such as the PNCC, a Culture Center, the PNB, the Government Insurance Center and others. It is considered to be a business area, but can be considered a cultural and administrative zone as well.

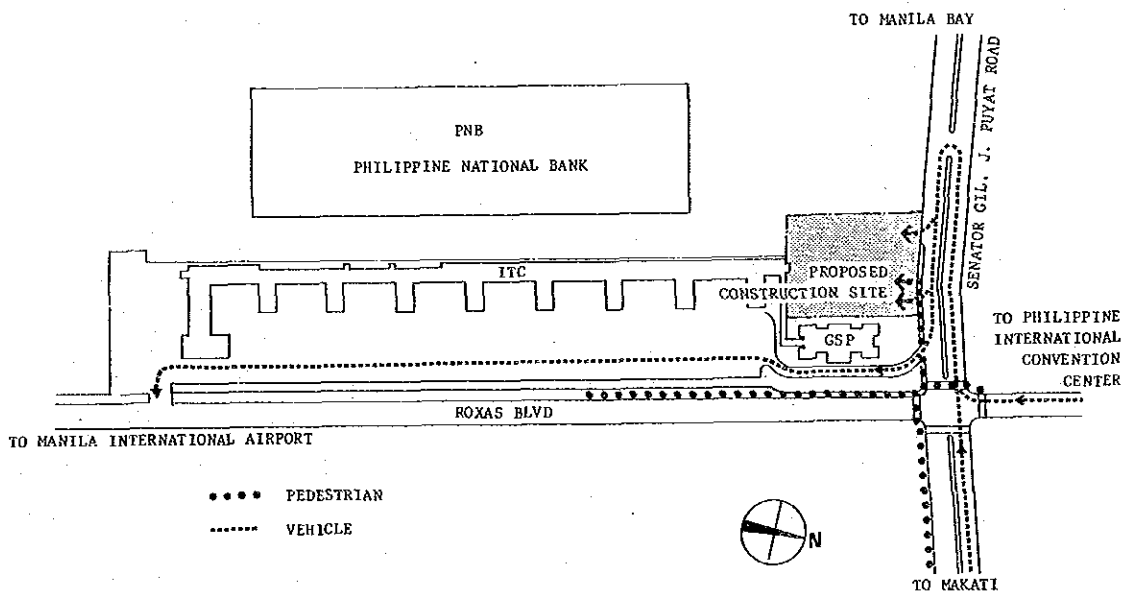


Fig. 4-1 Proposed construction site

(2) Layout Plan

1) Overall Construction Site Plan

From the shape of the construction site and the scale of the facility, the building will take the form of one block. The environment will impose restrictions on the project and determine its general characteristics. Taking these restrictions into account, the total construction site has been divided into the following functions for the efficient use of the site.

1. As the site is comparatively small, the building will be located in the middle of the site while the remaining area will be left as untouched as possible.
2. A reasonably large piece of land on the north side of the site which faces Senator Gil J. Puyat road will be used as a front yard for the main entrance.
3. Visitors are also expected to approach from the Golden Shell Pavilion side which is located on the east side of the site. To this end, an open space will be left between the two facilities as a buffer and to provide a gardened passage for pedestrians.
4. The south side of the site will be connected to the permanent exhibition hall of ITC. Therefore a service road will be provided on this side between the existing building and the proposed facility.
5. Since there will be a service road from Puyat road to the ITC permanent exhibition hall on the west side, a service yard will be provided on this side of the facility to take care of incoming and outgoing goods for the facility.

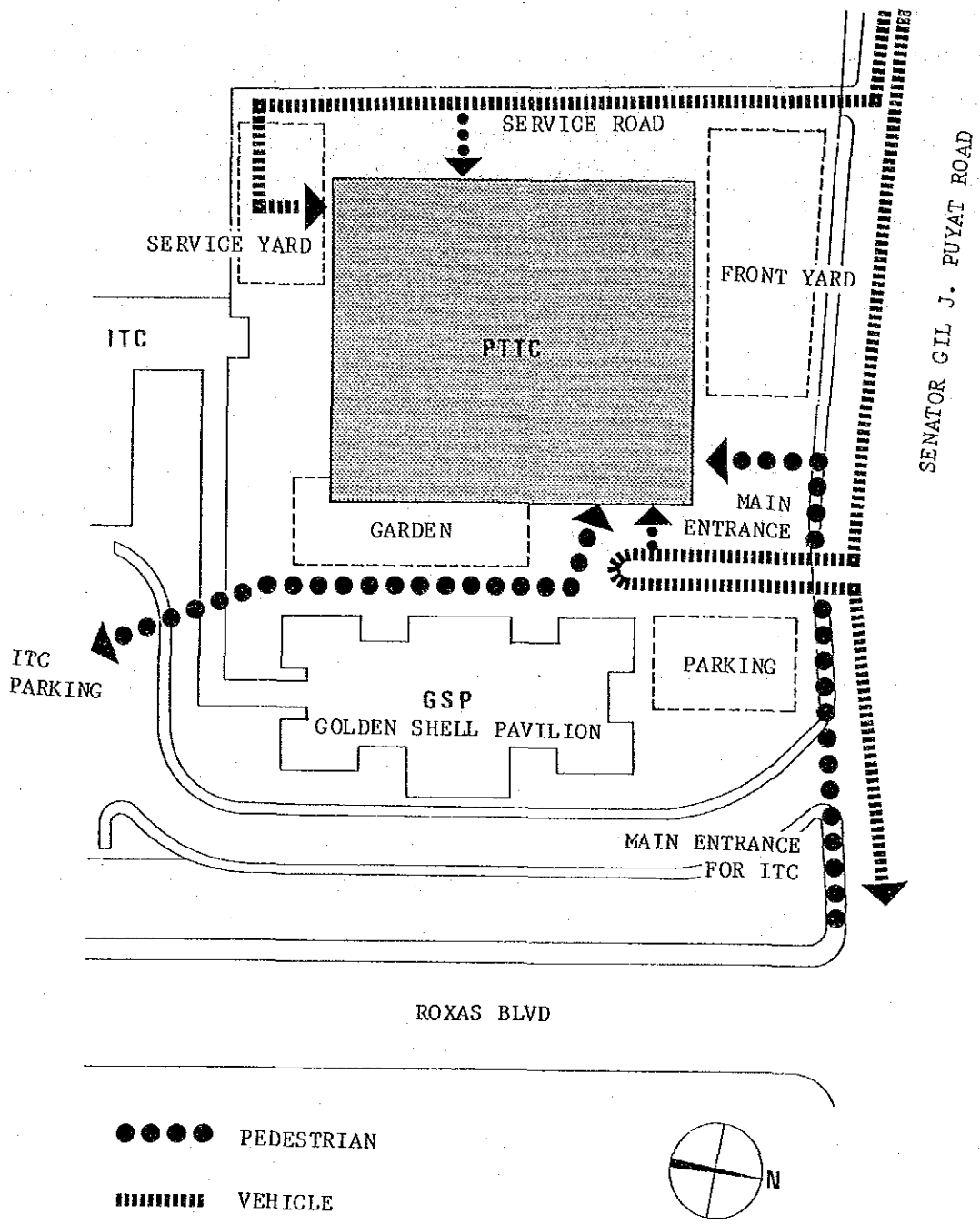


Fig. 4-2 Circulation plan of the site

2) Site Plan

The facility will be divided into two blocks depending on functions.

1. Main Block
2. Exhibition Training Hall Block

The main block primarily consists of the training facilities, the administration facilities and the common facilities with court garden and side corridor type architectural plan. It is located on the northwest part of the site and the view of Manila bay and natural ventilation are taken into consideration.

The common facilities which include the entrance hall are located on the northeast part of the site to take into consideration the pedestrian access from the northeast corner of the site and the close connection with the multi-purpose assembly hall (Golden Shell Pavilion).

It is judged that the exhibition training hall block shall be located on the south side of the site to take into consideration the continuous relation with the existing permanent exhibition hall of ITC and the possibility of future expansion.

Based on the above mentioned concept of site plan, the two blocks are planned to form a building in one body which is located on the middle of the site.

Since it is impossible to cope with the future expansion within the site, there are two possibilities for the expansion; namely, to extend the site area westward and/or to secure land and demolish existing buildings. In any case, the layout plan will make it possible to cope with the future expansion of each block.

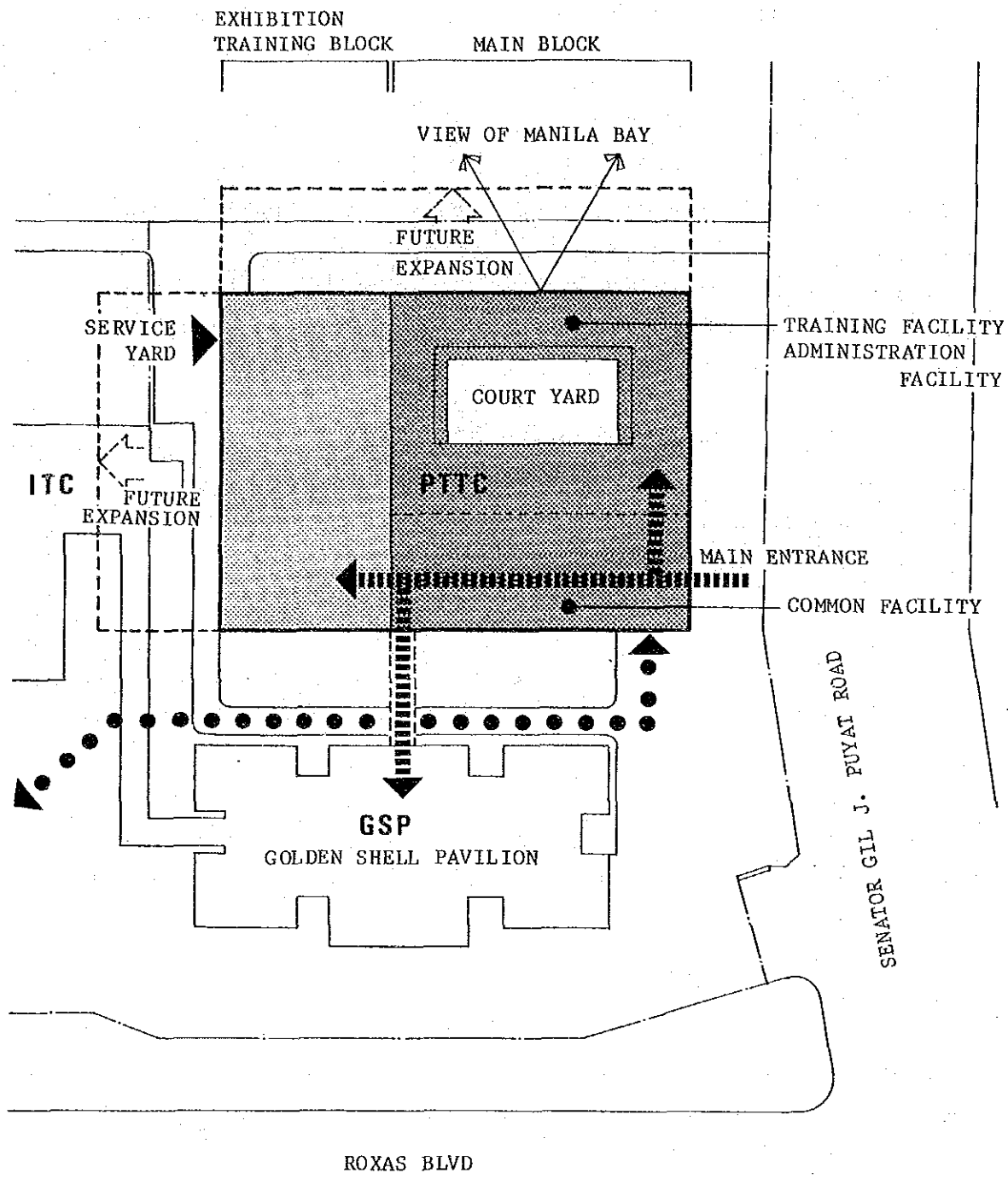


Fig. 4-3 Site layout concept

4-3-2 Architectural and Engineering Plan

(1) Floor Plan

1) Floor Plan Constituents

Based on the layout plan, the entire facility has been divided into the following constituents whose functions are indicated to be the standard for the floor plan:

a. Main Block

1. Training Facilities:

The facilities are composed of four seminar rooms of three types and training facilities such as furniture inspection training, garments and textile inspection training and food inspection training. These facilities will be laid out on the second floor. Since the second floor will mainly be used by the trainees, administration is facilitated and the efficient use of each room will be enhanced. The furniture inspection and training facilities are located on the first floor in consideration of the necessary unloading of large furniture and the vibrations generated by testing machines.

2. Administrative Facilities:

The administrative facilities are composed of office rooms for each department, the director's rooms, rooms for experts and a faculty unit which have been laid out on the third floor of the main block. The open type large offices are adopted and will be separated into different sections by furniture and panel partitions, to make future alterations possible. Rooms are laid out around the courtyard and the view of Manila bay and natural ventilation are taken into consideration.

3. Common Facilities:

. Information and Service facilities

For convenient use by visitors, the library, the L/L room, the A/V studio and other information supply and production facilities, as well as the cafeteria will be located on the first floor of the main block near the entrance hall. The library and the

L/L room will be accessible from the entrance hall to encourage independent visitor use.

. Entrance hall

As an invitation space to each facility and to each room, the entrance hall is designed to have a dynamic floor plan where people can gather easily. To put it more definitely, a floor plan which enables the people on the first floor of the entrance hall to perceive the activities on each floor of the main block should be adopted. Additional facilities to be installed in the entrance hall such as the information counter and the cashier's office are located near the main entrance.

b. Exhibition Training Hall Block

The exhibition training hall is designed as a multi-purpose facility with a large floor area and a high ceiling. It will mainly be used for public exhibitions, lectures and ceremonies. As a large number of visitors can be expected, the hall is designed to have a floor plan which enables visitors to enter directly from the entrance hall by means of a large passage. To handle the flow of goods coming in from the service road on the west side of the site, an open service yard as well as storage and service entrances are located on the west side. A control room for light and sound is located on the second floor to have a good view of the hall.

2) The Functions and size of Major Rooms

a. Seminar Rooms

The seminar rooms will be used for lecture type classes and seminar type courses. They will be mainly trade training course but the rooms will also be used for inspection training course and exhibition training course. The number of rooms and their size have been determined according to the contents of training curricula and are as follows:

1. Seminar Room (I)

This seminar room will seat 80 people and be used for A2 and A4 trade training courses. It will have a floor area of 162 m^2 (13.5m x 12.0m) which is calculated based on the layout of 1.8m x 0.4m desks that seat three.

2. Seminar Room (II)

This room shall be used for trade training courses A2 and A4 and E2 and E3. The room will seat 50 and have a floor area of 108 m² (9.0m x 12m) which is calculated based on the layout of desks that seat three.

3. Seminar Room (III)

According to the training curricula, two rooms for 25 people each shall be provided. One room shall be used for B1 and B2, language training course L3 and exhibition training course E1. The other room is to be used for L1 and L2 language training courses and as a lecture room for the three courses of inspection training. Each room will have a floor area of 67.5m² (7.5m x 9.0m) which is calculated based on the layout of desks that seat three.

In order to accommodate changes in the seating capacity and lecture formats, the two seminar rooms will be separated by furniture or movable partitions. For example, seminar rooms (I) and (II) can be combined into one room by removing the partition between the two rooms. This combined room would seat 156 using desks for three people and could then be used for medium scale lectures. Likewise, the two seminar rooms (III) can be combined and would then have a capacity of 81 people. According to the curricula, the seminar rooms will be used during the following number of days in a year:

Table 4-1 Estimated occupant of seminar room

SEMINAR RM	NOS. OF ROOM	SEAT NOS.	USAGE	COURSE NAME	NOS. OF OC-CUPANT	OCCUPANCY						
						(days/session)x(session/year)x(ratio)= days/year						
Seminar RM (I)	1	80	Trade Training	A1	50~80	5	x	12	=	60		
			Trade Training	A4	50~80	3	x	4	=	12		
			Total									72
Seminar RM (II)	1	50	Trade Training	A2	50	3	x	6	=	18		
			Trade Training	A3	50	3	x	12	=	36		
			Exhibition Training	E2	50	10	x	2	=	20		
			Exhibition Training	E3	50	10	x	2	=	20		
			Total									94
Seminar RM (III)	2	25	Trade Training	B1	15~25	10	x	6	=	60		
			Trade training	B2	15~25	5	x	2	=	10		
			Language Training	L3	10~30	60	x	1	=	60		
			Exhibition Training	E1	20	10	x	2	=	20		
			Total									150
			25	Language Training	L1	10~30	60	x	1	=	60	
				Language Training	L2	10~30	60	x	1	=	60	
				Furniture Inspection W1-W3		10	20	x	9	x 1/4	=	45
				Garment Inspection	G1	5~15	15	x	4	x 1/4	=	15
				Garment Inspection	G2	5~15	10	x	4	x 1/4	=	10
				Food Inspection	F1	20	10	x	3	x 1/4	=	7.5
Total									205			

b. Inspection Training Rooms

The required inspection training rooms will be listed in accordance with the training curriculum and the contents of the practice subjects. The size of each room will depend on the floor plan based on the layout of machinery and furniture. Necessary inspection training rooms and their size are described as follows:

1. Furniture Inspection Training Room

1-month courses for 10 trainees each will be held nine times a year to provide inspection training in wood furniture (W1 course),

bamboo furniture (W2 course) and rattan furniture (W3 course). The training will mainly consist of furniture testing, paint testing and packing material testing. The following rooms are required:

- . Furniture testing laboratory
- . Packing material testing laboratory
- . Paint testing laboratory
- . Wood working room
- . Storage etc. Total approx. 200m²

2. Garments and Textile Inspection Training Room

A general inspection training course (G1) and an advanced inspection training course (G2) will be conducted. Each course will be comprised of 10 trainees and will offer training in various types of inspection training as regards garments and textiles. The following rooms are required:

- . Chemical evaluation laboratory
- . Physical evaluation laboratory
- . Visual inspection laboratory
- . Sewing room
- . Washing room
- . Balance room, Preparation room Total approx. 180m²

3. Food Export Inspection Training Room

Two courses, the food inspection training course (F1) and food processing inspection training course (F2) will be held. Each course will be comprised of 20 trainees and will give inspection training in frozen food, canned food, bottled food and fruit juice.

The following rooms are required:

- . Chemical evaluation laboratory
- . Sensory evaluation laboratory
- . Cooking room
- . Preparation room
- . Store
- . Dark room etc. Total approx. 200m²

c. Exhibition Training Hall

This room will be used for exhibition training courses E2 and E3. These courses will be comprised of 50 trainees each who are divided into groups of two trainees. Exhibition training will be given in the four subjects listed below and the space required is calculated based on exhibition booth size.

Table 4-2 Minimum required area for exhibition training

Practice subject	Booth Size
1. Agricultural product exhibition training	3m x 3m = 9.0m ²
2. Furniture and large product exhibition training	3m x 4.5m = 13.5m ²
3. High fashion product exhibition training	3m x 3m = 9.0m ²
4. Practice in the use of exhibition machinery	3m x 3m = 9.0m ²
Area required per unit	40.5m ²

Thus 25 units will require an area of 1,000m² and, adding the passage area of 1,000m² (operating ratio 50%), the total area of the exhibition training hall is 2,000m².

d. Library

The library will perform useful information services such as providing trainees and the general public with a reading room, a place to study and books to take out. According to the training curriculum, between 130 and 180 trainees will be present in the facility at the same time. If the utilization rate is 10% as it is in Japan - the result of a Japanese statistical survey - 13 to 18 seats would be required. It has been determined that the library shall have 15 seats, 5 of which are carrel style and the remaining 10 are grouped around large tables.

Some 3,500 volumes on 20 bookshelves are estimated to be housed as is seen in other similar facilities.

The above plan will require a floor area of approximately 100m².

e. L/L room (language laboratory)

The L/L room will be located next to the library since it is expected to be used mainly for self-study. Although the training curriculum suggests that between 10-30 trainees would use the L/L facility at one time, it can be assumed that one class would usually be separated into two groups when it is employed to examine the language skill of the trainees. Consequently, the L/L facility will need 10 system units and 1 master unit. A floor area of approximately 55m^2 is necessary for this room.

f. Offices

On the basis of the employment plan, and to consider Philippine customs and the conditions of existing similar facilities, offices are planned to be open type large offices.

In order to absorb future changes in number of staff, all the office sections are planned on the same floor. In addition, layout of office furniture will be modularized in grids of $1.8\text{m} \times 1.8\text{m}$, which is slightly larger than the Japanese office module dimensions of 1.6m . However, this is judged to be appropriate in consideration of local office customs - desks are generally larger as is the space between desks - and the local climate. The size of each office is calculated based on the number of people working there, the space allotted to each person and layout of furniture. Assumed floor area allotted to each person is 20m^2 for manager class employees, 5m^2 for ordinary employees and 4m^2 for assistants. Below is a list of the number of employees in each section and their respective floor area:

Table 4-3 Design occupant in office room

DIVISION	STAFF NOS.						REMARKS
	EXECUTIVE DIRECTOR	DEPUTY DIRECTOR	CHIEF OFFICER	ASSISTANT OFFICER	TS & CS	CS & OTHERS	
EXECUTIVE DIRECTOR'S OFFICE	1	1			3 (3)		
ADMINISTRATION AND FINANCE DIV.			1	2	4 (4)	11 *(11)	excluding driver-6, Janitor-2
PLANNING AND PROGRAMMING DIV.			1	1	7 (11)		
TRADE INFORMATION AND PUBLICATION DIV.			1	1	5 *(9)		excluding A/V production staff-11, Librarian-2, Printing staff-2
TRADE TRAINING DIV.			1	1	9 (13)		
INSPECTION AND TESTING TRAINING DIV.			1	1	9 (13)		
EXHIBITION TRAINING DIV.			1	1	5 (7)		

() : Staff Number in Organization Chart

g. Cafeteria

With the objective to provide the facility staff, teachers and trainees with light meals, tea and other refreshments, a cafeteria will be planned. The maximum number of people that are expected to stay in this building at the same time is 180; consisting of 100 office staff and teachers and 80 trainees. Since it is assumed that two-thirds of these or 120 people will take lunch in 2.5 shifts, the cafeteria is designed to seat fifty. Necessary floor area is $70m^2$ for the cafeteria and $15m^2$ for kitchen.

When there are exhibitions or other activities in the exhibition training hall, many more people are expected to frequent the cafeteria, therefore temporary seats can be available in the entrance hall outside the cafeteria.

h. Entrance Hall

The entrance hall will be used as a place where various kinds of information on trade will be displayed. The following exhibitions will be conducted.

- . Exhibitions to publicize information on the center activities
- . Exhibitions to announce trade training plans and results
- . Exhibitions to show the progress of Philippine trade and the cooperation relationship between Japan and the Philippines
- . Exhibitions and spot sales of export products
- . Exhibitions belonging to the exhibition training hall

When MTI sponsored exhibitions are held in this facility, according to the past results, it is expected that enough space for 150 participating companies will be necessary. Therefore the entrance hall is designed to have a floor area of 1,000m² so that exhibition booths can be set up if necessary.

(2) Section Plan

According to investigation made by the Philippine Bureau of Coast & Geodetic Survey, the ground level at the construction site is 2.923m above sea level. Since the highest reported water level at high tide is 1.289m (27th of August 1984), the site was still 1.60m above the water level at that time.

Furthermore, the site is about 1km from the sea shore, so no damage to the facility even at high tide can be expected. As the site is higher than the surrounding area, water can be quickly discharged. Even when the nearby roads are flooded, the existing buildings on the site are not affected by the rain water. It is concluded that it is unnecessary to take any measures to prepare for floods and that the first floor can be of the same level as the existing buildings on the site.

The height of each floor is determined to be an average of 4.2m taking the height of girders, the dimensions of air conditioning ducts and the required ceiling height into consideration. For this project, in order to shorten the time for the piling work and to reduce the number of piles and columns by applying a long span structural system, the girders will be slightly deeper than conventional ones.

The ceiling height of the exhibition training hall will be 7 m to enable a greater variety of exhibition methods. The building shall have the same type of flat roof as the surrounding high-rise buildings, but the pitch will be steeper to improve water-proofing efficiency by better drainage. Approximately 2.0m deep balconies will be provided to shut out the sunshine. Since the balconies shall be used only for maintenance work, it will not matter if the balcony floors get wet during rain, as long as rain water is not blown into the building. Since many people are expected to use the passages around the courtyard and many people will linger there, the passage is also designed not to be affected by blown rain water.

Even though most of the rooms are equipped with air conditioners, openable transom windows will be provided along the passages and large windows will be provided along balconies to secure natural ventilation and natural lighting. This will save energy by shortening the operating time of the air conditioners and reducing energy costs.

(3) Structural Plan

1) Outline of the Structure

The building will be used as a trade training facility. The scale of the building is shown below:

Trade training facility

Number of stories	3 stories above ground
Height of each floor	4.2m
Roof height	Approximately 13.3m
Area	Approximately 5,500m ² (including the entrance hall)

Exhibition training facility

Number of stories	1 story above ground
Floor height	Approximately 13.3m
Roof height	Approximately 13.3m
Area	Approximately 2,000m ²

2) Structural System

Since exhibition facilities require a large floor area, this facility will include 30m wide span structure. Thus, the girders will be of a steel truss and reinforced concrete slab will be laid on them firmly to take plane rigidity, high temperature and humidity into consideration. The columns and the crossbeams will be of steel framed reinforced concrete.

Reinforced concrete structure which is most commonly applied in the Philippines will be adopted for the training and administration facility to take into consideration the construction work, construction period and construction cost.

3) Foundation System

The construction site is on reclaimed land with very bad soil conditions, a soft (N value 1-5) silty clay extends down to a depth of 15m. Further down is a comparatively hard layer of silty clay (N value 20-25) and after a depth of 25 to 26m there is a silty sand layer with N value more than 50. The ground water level is also as high as 2.5 to 3.0m below the ground. Consequently, it is concluded that the pile foundation system is appropriate. There are some types of piles such as cast-in-situ concrete piles, precast concrete piles and steel pipe piles. In consideration of the construction period, construction work and cost, it has been determined that precast concrete pile which is commonly used in local construction will be used.

In addition, it is necessary to use sulphate resisting concrete for piles, foundations, foundation girders etc. which are exposed to earth.

4) Structural Materials

Concrete : Normal concrete $F_c=210\text{kg/cm}^2$
(four week age strength)

Steel bar	: 16mm or less	SD30,	Fy=3,000 kg/cm ²
	19mm or more	SD35,	Fy=3,500 kg/cm ²
Steel frame	:	SS41,	Fy=2,400 kg/cm ²
High strength bolt	:	F10T,	Fy=90,000 kg/cm ²

5) Structural Design Codes and Standards

The Philippine National Structural Code for Building (PNSCB), the American Concrete Institute Standard and the Japanese Structural Calculation Standard will be employed.

6) Design Load and External Force

1. Dead Loads

The dead loads will be calculated by the weight of structural materials and the finish materials.

2. Live Loads

Live loads are in accordance with the PNSCB, Chapter 1, Sec. 1.4, Table 1.04-A, 1.04-B, 1.04-C and 1.05-A.

. Main Live Loads

Offices, seminar facilities	2,400 Pa	245kg/m ²
Training facilities, library	3,600	370
Halls, machine room	4,800	490
Toilet	1,900	195

. Reduction of Live Loads

When the live load supported by the member is less than 490kg/m², following reductions in unit live load shall be permitted in the design of columns, piers, girders, beams, trusses, and foundations.

$$R = 0.86 \times A$$

R: Reduction ratio (%)

A: Area supported by the member (m²)

$$R = 60\% \text{ and } 0.231 (1 + DL/LL) \times 100$$

3. Seismic Force

The Philippines is situated on the circum-pan-Pacific earthquake belt and is often afflicted with earthquakes.

Therefore, it is necessary to apply earthquake proofing design.

Seismic force will be calculated in accordance with PNSCB, Chapter 2, Sec.2.1

Base shear (V)

The following formula shall be used for calculating the base shear:

$$V = ZIKCSW$$

Z: Regional coefficient, Zone I-C (1.4)

I: Coefficient of importance (1.0)

K: Building Shape Coefficient (1.0)

C: Coefficient calculated in the formula below (C 0.12)

$$C = \frac{1}{15\sqrt{T}}$$

$$T = \frac{0.05hn}{\sqrt{D}}$$

D : The dimension of the structure, in feet, in a direction parallel to the applied force

hn: Building height in feet

S : Numerical coefficient for site-structure resonance

Where,

CxS need not to exceed 0.14

W : total dead load

Thus, the base shear (v) used in this building is,

$$V = ZIKCSW = 1.4 \times 1.0 \times 1.0 \times 0.14 \times W = 0.196W$$

4. Wind Pressure Force

The wind pressure force is calculated in accordance with PNSCB, Chapter 4, sec. 2.3.

. Basic wind velocity V (Zone II)

$$V = 49 \text{ m/sec}$$

. Wind pressure

Height (m)	Wind pressure (kg/cm ²)
0 - 9	150
9 - 30	200
30 -	250

5. Bearing Capacity of Pile

Bearing capacity of pile is calculated in accordance with Japan Architectural Foundation Structure Design Standard.

$$R_u = 1/3 \times 30 \times N \times A_p$$

R_u : Bearing capacity of pile

N : Average N value between $4d$ above pile tip and $1d$ below.

A_p : Cross section of pile tip

(4) Electrical Facilities Plan

1) Power supply facilities

The building will be provided with a electric room.

1. High-voltage Electricity

The electric power 3-phase 3-wire 60Hz 34.5kV will be led into electric room from Meralco's (Manila Electric Company) power line (which will be installed along the west boundary of the site), and substation facilities will be installed in the electric room in

order to transform from 34.5kV to 3-phase 3-wire 60Hz 230V. Service cable from Meralco's power line, concrete pedestal and underground piping for cables will be included in the Project.

2. Low-voltage Electricity

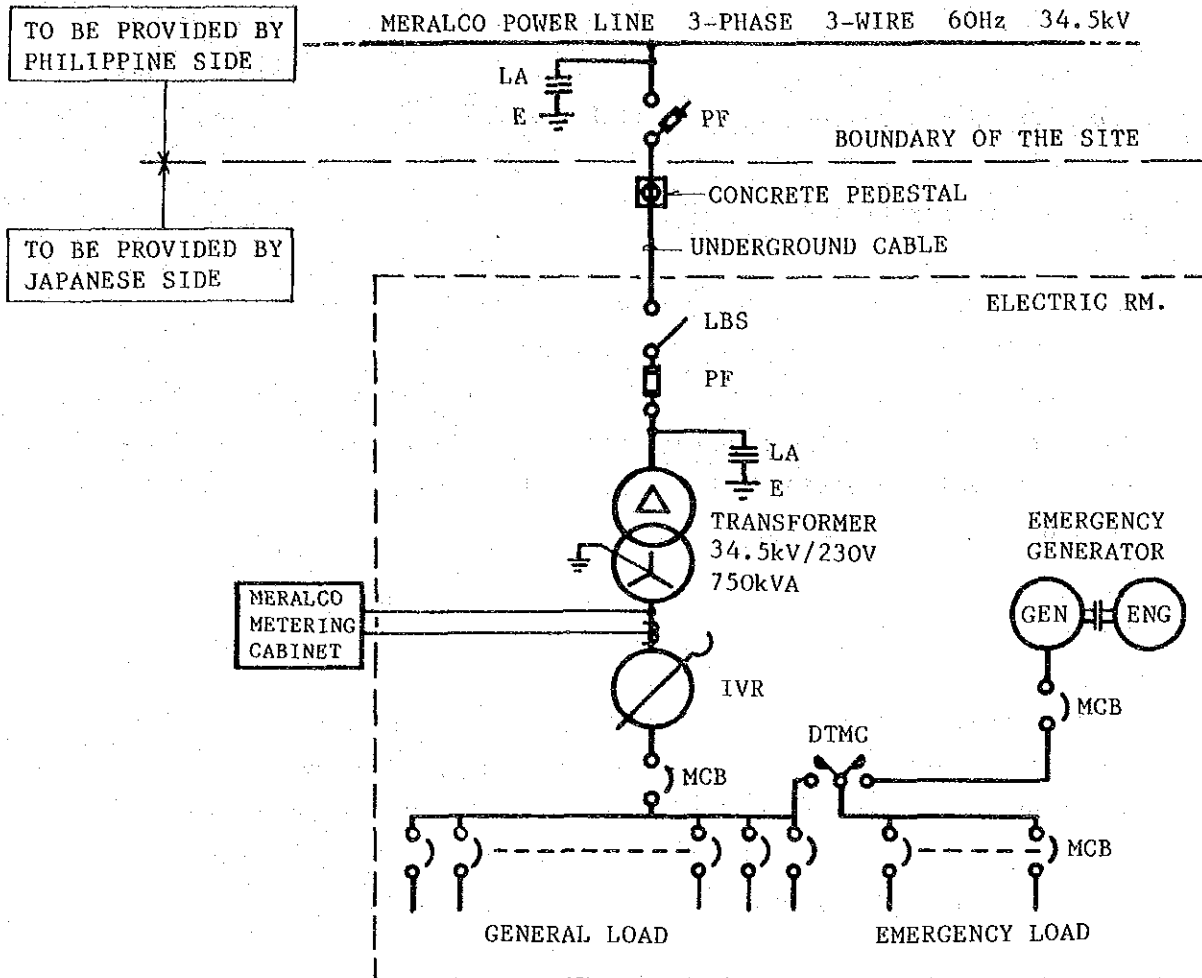
A low-voltage switch board will be installed in the electric room from which electric power will be supplied to each load. The electric capacity necessary for the Project will be about 750kVA. As a measure of voltage regulation, an induction-type automatic voltage regulator (IVR) will be provided at the primary side of the low-voltage switch board.

3. Emergency Generator

An emergency generator will be provided in the electric room as an emergency power source for fire extinguishing equipment, emergency lighting and a part of inspection and testing equipment which will require the electric power in the event of city power failure. The capacity of the generator will be about 150 kVA.

4. Power Supply Diagram

The outline of power supply system and construction demarcation are shown in Fig. 4-4.



Legend PF : Power fuse
 IVR : Induction type voltage regulator
 MCB : Molded case circuit breaker
 DTMC: Double throw magnetic contactor
 LA : Lightning arrester

Note : Meralco metering cabinet, current transfoemer and related works are to be performed by the Phillipine side.

Fig. 4-4 Power supply diagram

2) Motor Control System

The motor control system is to handle power to the air-conditioning and plumbing equipment and control the operation of such equipment. The guard office will be provided with a remote control panel to enable remote operation of air-conditioning equipment and indication of water levels.

3) Lighting System

Fluorescent lamps will mainly be used for the light source, however, high ceiling rooms such as the exhibition training hall and entrance hall will be provided with mercury lamps and fluorescent lamps in consideration of lighting efficiency.

Recessed-mounting type lighting fixtures will be provided for offices, seminar rooms, etc. and surface-mounted or pipe suspended types for stores, mechanical rooms, etc.

In addition, escape light will be installed near exit doors and corridor which are effective for escape.

There will be at least one lighting fixture in each room (except stores, toilets and so on) which will be connected to the generator circuit to ensure safety in case of city power failure.

The following table shows targeted illumination level:

Table value of illumination level for the laboratories are set higher than other rooms since visual inspection is included in the function of those rooms.

Table 4-4 Illuminance

Name of room	Illuminance (Lux)
Offices	300 - 400
Seminar room	300 - 400
Library	300 - 400
Printing room	300 - 400
Conference room	300 - 400
Cafeteria	150 - 250
Exhibition training hall	300 - 400
Laboratory (having visual inspections)	800 - 1,000
Laboratory (not having visual inspections)	500 - 600
AV studio	150 - 250
Control room	250 - 350
Store	50 - 150

4) Sockets

The required amount of sockets will be provided as a power source for training equipment and small electrical appliances. Exclusive use distribution panels will be installed in inspection rooms, A/V studio etc. Computers and AV equipment are to be supplied the power from AVR (static type automatic voltage regulator).

5) Telephone System

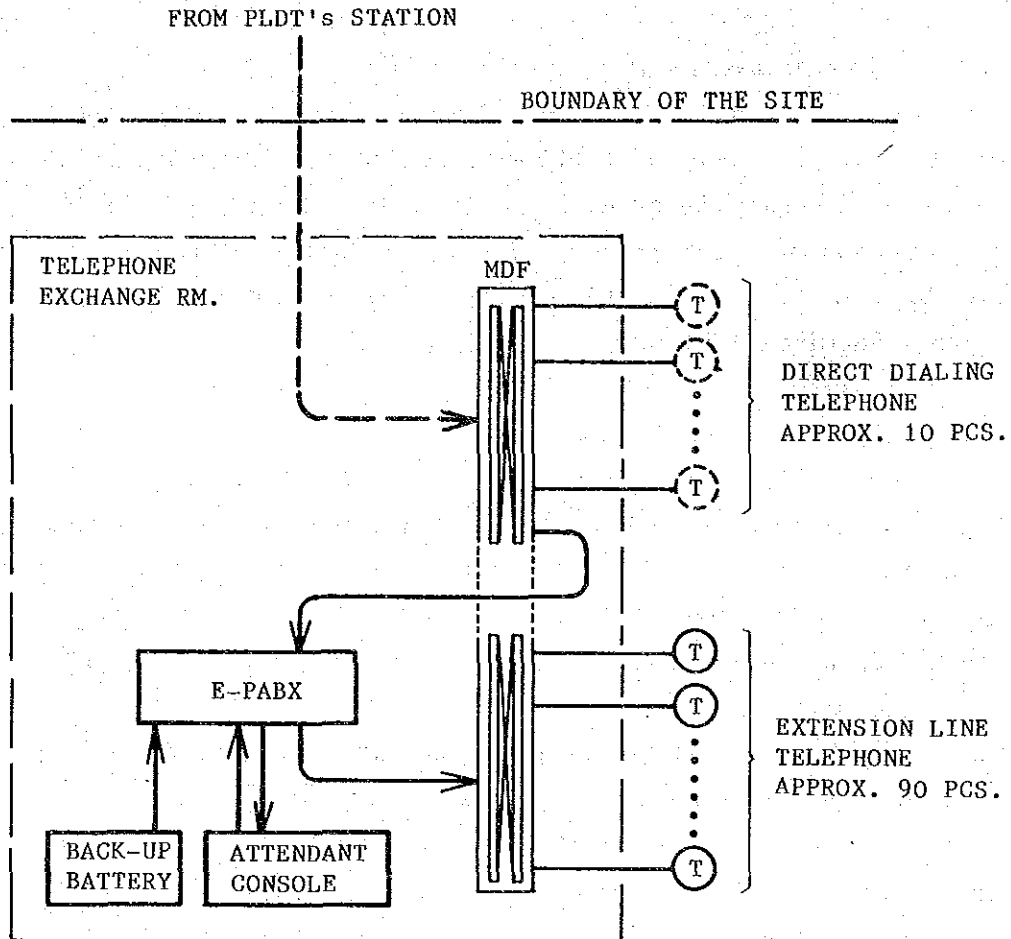
Electronic PABX, attendant console back-up battery unit will be installed in the telephone exchange room. The following rooms will be provided with extension line telephones:

Executive director's room	Conference room
Deputy director's room	Library
Secretary office	Offices
Control room	Guard office
Printing room	Clinic
Exhibition training hall	Cashier
Laboratory	Reception
Preparation room	

The E-PABX equipment will have a capacity of about 15 central office lines and 90 extension lines.

Furthermore, it is expected that 10 direct dialing telephones will be required.

The outline of the telephone system diagram and construction demarcation are shown in Fig. 4-5.



- Note :
1. COL cables from PLDT's station to MDF are to be provided by the Philippine side.
 2. Piping from MDF to the boundary of the site is to be provided by the Japanese side.
 3. Direct dialing telephones and related works are to be provided by the Philippine side.

Fig. 4-5 Outline of telephone system

6) Automatic Fire Alarm System

An automatic fire alarm system will be installed in conformity with the Fire Code of the Philippines and Regulation and with the guidance of the local fire department. The main control panel will be in the administration office room and a sub-control panel in the guard office. The type of detectors to be used are heat detecting type. Zoning of

protection area is to be less than 600 sq.meters for one (1) fire alarm area.

7) Public Address System

The public address system will be provided for the purpose of making general and emergency announcements in the building. An amplifier (with microphone and selector switch) will be installed in the administration office to send messages to seminar rooms, laboratories, offices, corridor, entrance hall, etc.

8) Lightning Protection System

A lightning protection system will be installed to prevent damage due to lightning.

9) TV Master Antenna System

A TV master antenna will be installed on the roof and a TV antenna outlet will be provided to the following rooms.

Control room	Cafeteria
Executive director's room	Seminar room
Deputy Director's room	Office
Conference room	

However, the television sets are not included in the Project.

(5) Mechanical Facilities Plan

1) Design Ambient Air Conditions

1. Outside Design Air Conditions

Outside Design air conditions are determined according to ASHRAE.

Temperature:	34 deg.C (Dry bulb)
Humidity :	28 deg.C (Wet bulb)

2. Inside Design Air Conditions

Temperature: 25 deg.C (Dry bulb)

Especially, the air temperature and humidity in the garments physical laboratory shall be maintained at a constant level.

The following air temperature and humidity shall be kept in physical evaluation laboratory as follows.

Temperature: 20 deg.C \pm 2 deg.C (Dry bulb)

Humidity : 65% \pm 5% (R.H.)

2) Air Conditioning System

An individual air conditioning system shall be employed considering easy maintenance and easy correspondence in case of breakdown of cooling equipment.

3) Cooling Equipment System

An air-cooled packaged type air conditioner shall be used since the type is popular in the Philippines and in view of easier maintenance than water-cooled systems.

4) Ducting System

In the A/V studio, inspection training room, physical evaluation laboratory, exhibition training hall etc. where even temperature, low noise level and control of air pressure are required, and single duct system will be employed to supply and return the cool air.

5) Piping System

Drain pipes to discharge condensed water from air-cooled packaged type and refrigerant pipes between indoor and outdoor cooling equipment shall be provided.

Drain pipes shall be PVC pipe and refrigerant pipe shall be copper tube.

6) Ventilation System

Each laboratory will be provided with an exhaust fan to discharge air and gas.

The kitchen and locker room shall be equipped with fans for discharge of used air and for fresh air resupply.

The garments chemical laboratory shall have a PVC fan and PVC duct to discharge the corrosive exhaust gas.

7) Automatic Control System

Indoor air temperature is to be controlled by means of room thermostats or insertion temperature sensor where the ducting system will be applied.

In the physical evaluation laboratory where a constant air temperature and humidity has to be maintained, room thermostat and humidity sensor shall control the compressor, re-heaters and a humidifier in the air-conditioner to ensure constant indoor air condition control.

Duct-type air conditioner will be operated by remote control.

8) Air Conditioning and Ventilating Area

Air conditioned and ventilated area shall be shown in Table 4-5.

Table 4-5 Air conditioning and ventilation area

ROOM NAME	AIR CONDITIONING			VENTILATION			REMARKS
	DUCTING	NONE DUCTING	INDIVIDUAL	AIR SUPPLY & EXHAUST	AIR SUPPLY	AIR EXHAUST	
SEMINAR RM (I)	○						SEMINAR RM(I) & (II) will be used as one room. (CINEMA, SLIDE PROJECTION)
SEMINAR RM (II)	○						
PROJECTION RM	○					○	EXHAUST
SEMINAR RM (III)		○				○	VENTILATION
SEMINAR RM (III)		○				○	VENTILATION
LIBRARY, L/L RM	○						
A/V STUDIO	○					○	TARGET ALLOWABLE NOISE LEVEL (NC-30-35)
CONTROL RM	○						
PRINTING RM	○					○	VENTILATION
DARK RM	○					○	EXHAUST OF ODOR
EXHIBITION TRAINING HALL	○						CONTROL OF EVEN AIR TEMPERATURE
(FURNITURE) TESTING LABO.	○					○	CONTROL OF INDOOR AIR PRESSURE
WOOD WORKING RM	○					○	
PACKING MATERIAL TESTING LABO.	○						
PREPARATION RM	○						
(GARMENTS & TEXTILE) PHYSICAL EVALU. LABO.	○					○	CONSTANT AIR TEMP. & HUMIDITY (20±2°C, 65±5%)
CHEMICAL EVALUATION LABO.	○					○	EXHAUST OF EXPERIMENTAL GAS
SEWING RM	○						
VISUAL INSPECTION LABO.	○						
WASHING RM						○	
BALANCE RM	○						
(FOOD) CHEMICAL EVALUATION LABO.	○					○	CONTROL OF INDOOR AIR PRESSURE
COOKING RM						○	EXHAUST
SENSORY EVALUATION LABO.	○					○	CONTROL OF INDOOR AIR PRESSURE
DARK RM	○					○	EXHAUST OF ODOR
STORE						○	VENTILATION
EXECUTIVE DIRECTOR'S ROOM			○			○	"
DEPUTY DIRECTOR'S RM			○			○	"
SECRETARY OFFICE			○			○	"
TEAM LEADER'S RM			○			○	"
EXPERTS' RM			○			○	"
FACULTY RM			○			○	"
CONFERENCE RM			○			○	"
OFFICES		○				○	"
CLINIC	○					○	"
TEL. EXCH. RM			○			○	"
CAFETERIA		○				○	VENTILATION
KITCHEN				○			
ENTRANCE HALL	○						CONTROL OF EVEN AIR TEMPERATURE
TOILETS						○	
PANTRY						○	
LOCKER RM				○			
STORE						○	

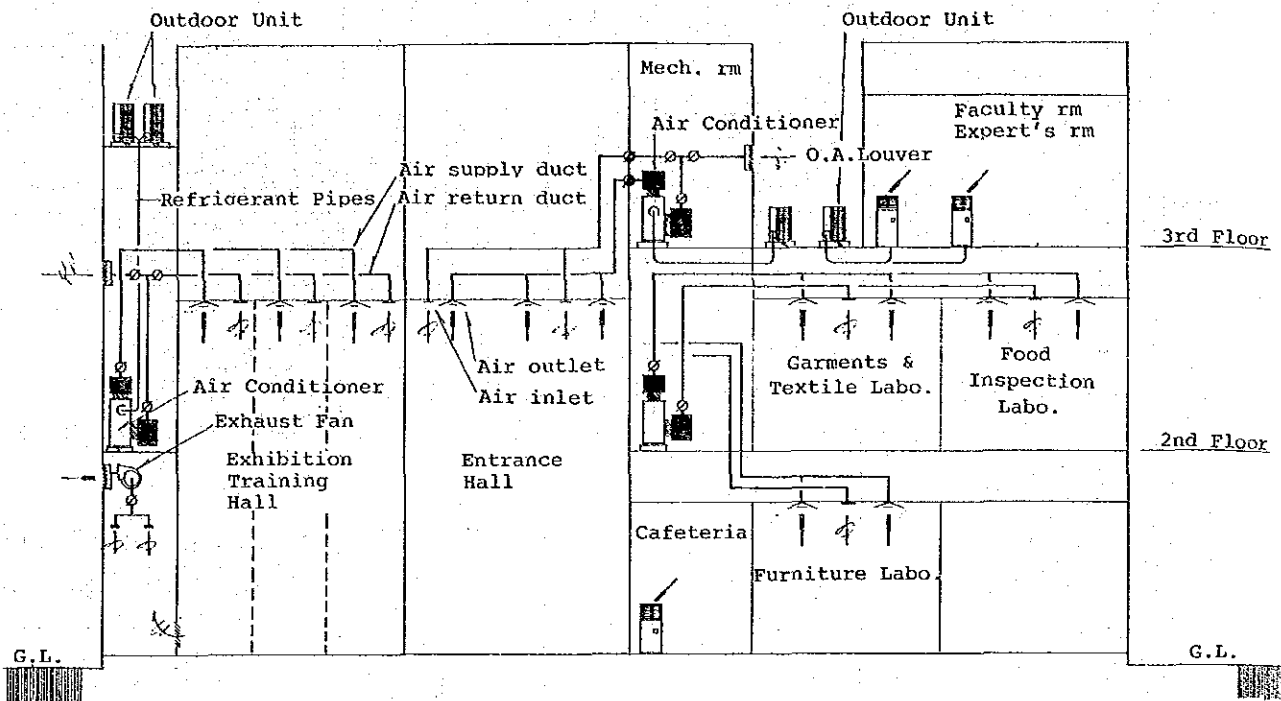


Fig. 4-6 Schematic ducting diagram

(6) Plumbing and Sanitary Facilities Plan

1) Potable Water Supply System

A city water pipe of 100mm dia. (water pressure $1.05 - 1.75 \text{ kg/cm}^2$), which will be prepared near the east boundary line of the site will be led into an underground concrete-made reservoir.

The water will be lifted to a concrete-made elevated tank by lift pumps, and will be distributed to the necessary portion by gravity.

The pipe material will be shock-resistant vinyl chloride pipes.

2) Domestic Hot Water Supply System

Domestic hot water will be supplied to the garments washing room, laboratories, kitchen etc. by means of a gas water heater.

Deoxidized copper pipes (M-type) will be used for domestic hot water piping.

3) Drainage and Vent System

Public drainage for rain water is laid near the site.

Soil water and waste water will be discharged into the public drainage on the east side of the site after the treatment by a septic tank.

Waste water from laboratories will be treated in a neutralization chamber before being discharged into the public drainage.

Combined drainage piping system for soil water and waste water in both outdoor and indoor except the waste water from laboratories will be applied.

Grease in the kitchen waste water will be removed by a grease trap.

PVC pipes will be used indoors and concrete pipes will be used outdoors.

Regulated value of NPCC (National Pollution Control Commission) will be applied to disposed water from the site.

4) City Gas Supply System

City gas will be supplied to the kitchen and the laboratories from the city gas pipes near the east boundary of the site.

Calorific value of city gas is $5,300 \text{ kca/Nm}^3$.

5) Sanitary Fixtures Installation

Western-style water closets, urinals, wash basins, a water closet for handicapped, slop sinks, etc. will be installed.

6) Fire Extinguishing System

According to an agreement with Pasay City fire department, indoor fire hydrant systems (wet stand pipes), siamese connections, fire extinguishers, and an automatic sprinkler system for exhibition training hall, entrance hall, seminar room I and II will be installed.

7) Kitchen Equipment

The kitchen will be equipped with a dust table, sinks, working tables, a refrigerator with freezer, a gas range, a pan rack and an ice maker.

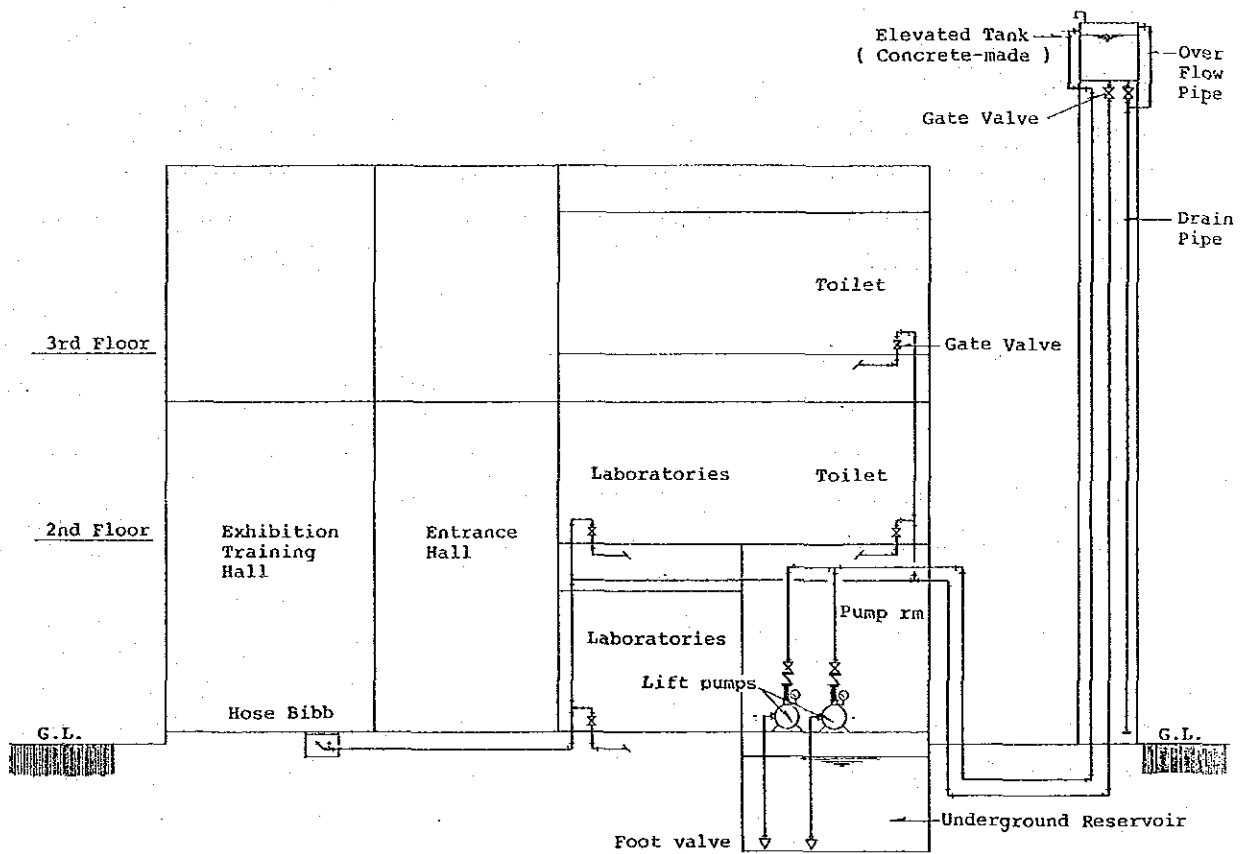


Fig. 4-7 Schematic water supply piping diagram

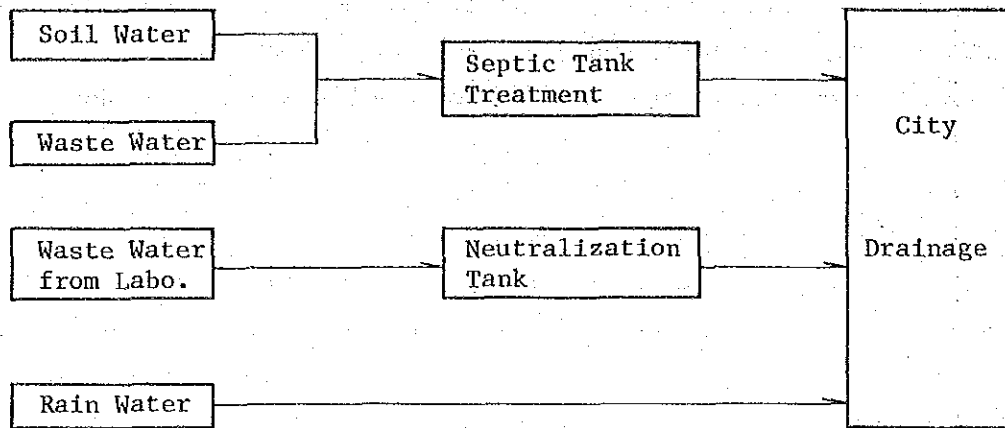


Fig. 4-8 Flow of drainage system

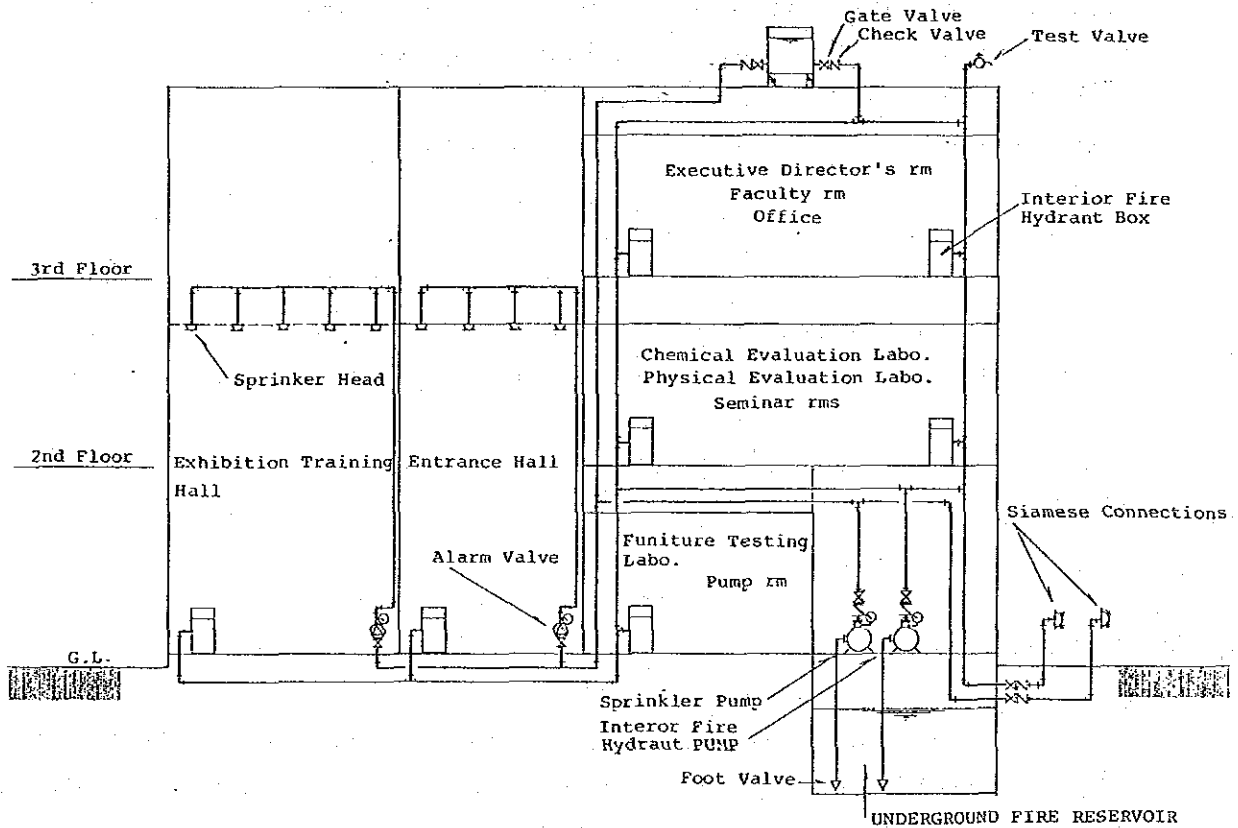


Fig. 4-9 Schematic fire extinguishing piping diagram

(7) Building Material Plan

The building materials and architectural details shall be determined to take function, climate, local construction conditions, the construction period, construction costs and maintenance costs into consideration.

1) Structural Materials

The facility will be of a reinforced concrete structure which is commonly adopted in the Philippines. There is no need to mix concrete on the site since ready-mixed concrete is locally available. However, Japanese reinforcing steel bar has better quality and a lower price than local ones. A steel frame structure will be employed for the long-span sections in the exhibition training hall and the entrance hall.

2) Finishing Material

Durability and easy maintenance are the main criteria for selecting finishing materials. It is particularly important that main finishing materials for exterior walls, roof etc. are selected from the well established materials which are economical and durable.

a. Roof

The roof shall be reinforced concrete flat slab with layers of asphalt water-proofing membrane on insulation for the protection of the water-proofing layer from the sunshine. This durable and reliable water-proofing method has been used in many Japanese grant aid projects. The roof of the entrance hall will have skylights for natural lighting.

b. Exterior Walls

The exterior walls will be finished with structure paint on cement mortar steel trowel finish, and cement mortar bush hammer finish will also be applied partially. Although structure paint is more expensive than regular paint, it has excellent weather-proofing properties and requires less maintenance cost. Cement mortar bush hammer finish and

cement mortar washing finish are common finishing methods employed locally. However, as minute differences in mixing the aggregate causes ununiformity in color, both methods involve a reduction of the number of workmen for achieving ununiformity of the color. Consequently, they have been regarded unsuitable for projects of this scale especially when the construction period is limited. Cement mortar bush hammer finish will therefore be used only partially.

c. Floors

The floors in the seminar rooms, inspection training laboratories, offices etc. will be finished with plastic tiles. Plastic tiles are manufactured locally, and they are easy to maintain and are commonly used in the Philippines.

Cement mortar washing finish will be adopted for the floor in the entrance hall. This is one of local construction methods and a major advantage of this finish is that it does not get slippery even when it gets wet. A disadvantage is that it tends to crack when used over a large area. Thus, it will be necessary to separate the area with brass joints etc. The floors in the library and the cafeteria will be wooden flooring. Since the floor of the exhibition training hall will be carpeted when it is used for exhibition and to avoid being damaged when unloading, cement mortar steel trowel finish with brass joints will be employed for the floor.

d. Interior Walls

The reinforced concrete walls will be finished with paint on cement mortar steel trowel finish. The prefabricated partitions with light gauge steel frame will be employed to take sound insulation property into consideration. The use of prefabricated partitions will enable the room to be flexible to future changes, contribute to shortening the construction period and lower the total weight of the building which will resulting lower cost.

Toilet walls will be finished with locally produced ceramic tiles to take water proofing and water resistance property into consideration. The baseboard material will be selected - depending on the type of finishes used on the floors and walls - from vinyl floor boards,

hardwood paint finish and marble etc. to take durability and water resistance into account.

e. Ceilings

In general, rooms will be provided with suspended ceilings to conceal air conditioning ducts and to maintain a good sound environment to consider the grade of existing facilities. Mineral acoustic ceiling with a light gauge steel bed will be mainly used and a wooden ceiling with wooden bed will be used for corridors and the entrance hall. In order to cope with a great variety of exhibition methods in the exhibition training hall, grid pipes from which panels can be suspended will be partially installed.

f. Doors and Windows

The exterior window frames shall be made of aluminum. Locally, wood, steel, aluminum and other materials are used for window frames. It has been determined that aluminum window frames shall be used for the facility because aluminum frames are outstanding in their easy maintenance, air tightness and rust resistance. Doors installed inside the building will be made of wood to follow local methods. But it is essential to use well dried material to avoid warping. Special care has to be taken to prevent the occurrence of termites in toilets and other places where the humidity is high.

The exterior doors will be either steel doors or aluminum frame doors. Since most rooms in the building will be air conditioned and will be seldom used at night, except the language training facilities, insect screens will not be installed.

4-3-3 Equipment Plan

The equipment plan consists of the following categories:

- . General training equipment
- . Audio-visual equipment
- . Export inspection training equipment
- . Exhibition training equipment

Based on the following criteria, equipment has been selected and their quantity determined:

1. To conform to the contents of training plan.
2. Not to cause serious troubles in maintenance, control and operation to refer to the preliminary survey result.
3. Quantity to be within the appropriate range as compared to the number of trainees and training method.

The grade of the equipment is not very high. This can be understood in view of the preliminary survey results of related or similar facilities. Furthermore, when technical transfer within the framework of Japanese technical cooperation is considered, the facility will be extremely useful in the future and will amply fulfill its objectives as a training center.

In the Philippines trade training is usually performed by means of video tapes and slides etc. All such materials have been produced by CITEM. The audio-visual material used in this project is planned to be based on the result of studies of CITEM materials.

On the basis of the discussions on utilization plan of computer system with the Philippine side, the micro computer system which is most appropriate when the center opens will be selected. It is planned to make it possible to use these micro computers as terminals when a mini-computer system is introduced in the future.

The main training equipment is shown in the following list:

List of Training Equipment

(I) General Training Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	Electric Typewriter	9
2	Copier Machine (B/W)	3
3	Copier Machine (Color)	1
4	Vehicles	4
	. Micro Bus	
	. Wagon	
	. Truck	
	. Van	

No.	Item	Q'ty (Pcs./Nos.)
5	Scanner	2
6	Mimeographing Machine	2
7	Micro Computer System (Including Hardware and Software)	4 Sets
8	Bookbinding	1 Set
	. Electric Puncher	(1)
	. Electric Binding Drill	(1)
	. Electric Paper Guillotine	(1)
	. Manual Paper Guillotine	(1)
	. Paper Jogger	(1)
	. Binding Machine(Adhesive)	(1)
	. Binding Machine(Combo type)	(2)
	. Heavy Duty Stapler	(2)
9	Microfiche Reader (with printer)	1 Set
10	Book Truck (with wheels)	1
11	Step	1
12	Photo Enlarger	1 Set
13	Processing Supplies for B/W Film and Photopaper	1 Set

(II) Audio Visual Equipment

No.	Item	Q'ty (Pcs./Nos.)
Seminar RM (I)		
1	Video Projector Set	1 Set
	. Video Projector Set (1/2 inch)	(1)
	. Speaker	(2)
	. Screen	(1)
	. Monitor TV	(4)
2	Over Head Projector Set	1 Set
	. Over Head Projector	(1)
	. Screen	(1)

No.	Item	Q'ty (Pcs./Nos.)
3	Sound System Set for Lecture	1 Set
	. Amplifier with Mixer	(1)
	. Wireless Receiver	(1)
	. Microphone with Stand	(2)
	. Wireless Microphone	(2)
	. Antenna for Wireless Microphone	(4)
	. Speaker	(4)
Seminar RM (II)		
4	Video Projector Set	1 Set
	. Video Projector Set (1/2 inch)	(1)
	. Speaker	(2)
	. Screen	(1)
5	Over Head Projector Set	1 Set
	. Over Head Projector	(1)
	. Screen	(1)
6	Sound System for Lecture	1 Set
	. Amplifier with Mixer	(1)
	. Microphone with Stand	(2)
	. Speaker	(4)
Projection RM (for Seminar RM (I) + (II))		
7	16mm Movie Projector	1
8	35mm Slide Projector	1
9	Monitor Speaker	1

No.	Item	Q'ty (Pcs./Nos.)
Seminar RM (III-1)		
10	Video Projector Set	1 Set
	. Video Projector Set (1/2 inch)	(1)
	. Speaker	(2)
	. Screen	(1)
11	Over Head Projector Set	1 Set
	. Over Head Projector	(1)
	. Screen	(1)
Seminar RM (III-2)		
12	Over Head Projector Set	1 Set
	. Over Head Projector	(1)
	. Screen	(1)
Library		
13	Video Monitor Set (1/2 inch)	1 Set
L/L RM		
14	Language Learning System Set	1 Set
	. Master System	(1)
	. Student Booth Set (10 booths)	(1)
Exhibition Training Hall		
15	35mm Slide Projector Multi System Set	1 Set
	. 35mm Slide Projector with Dissolve Controller	(4)
	. Program Controller	(1)
	. Multi Screen	(1)

No.	Item	Q'ty (Pcs./Nos.)
16	Sound System Set	1 Set
	. Amplifiers with Mixer and Wireless Receiver	(1)
	. Cassette Tape Deck	(2)
	. Stage Microphone with Stand	(3)
	. Wireless Microphone with Stand	(1)
	. Antenna for Wireless Microphone	(4)
	. Ceiling Speaker	(35)
	. Portable Speaker	(6)
	. Monitor Speaker	(2)
17	Stage Lighting System Set	1 Set
	. Stage Light Set	(1)
	. Lighting Baton and Hanger Set	(1)
	. Lighting Dimmer Set	(1)
18	Stage Curtain Set	1 Set
AV Studio		
19	TV Camera Set	2 Sets
	. 3-tube Color Video Camera	(1)
	. Tripod with Dolly	(1)
	. Servo Zoom Control Unit	(1)
	. Head Set (Intercom)	(1)
20	Monitor TV with Stand	1
21	Monitor Speaker	2
22	Microphone with Boom Stand	2
23	Microphone with Desk Top Stand	1

No.	Item	Q'ty (Pcs./Nos.)
24	Lighting Set	1 Set
	. Ceiling Lighting Set	(1)
	. Ceiling Hanger Set for above	(1)
	. Portable Lighting Dimmer Kit	(1)
	. Floor Stand Type Lighting Kit	(1)
AV Studio Control RM		
25	Audio Master System Set	1 Set
	. Audio Mixer and Amplifier	(1)
	. Cassette Tape Deck	(1)
	. Record Player (Turntable)	(1)
	. Monitor Speaker	(2)
	. Microphone with Stand	(1)
	. Head Set	(2)
26	Video Master System Set	1 Set
	. Special Effect Generator	(1)
	. Universal Chroma Keyer	(1)
	. Wipe Pattern Extender	(1)
	. Vectorscope	(1)
	. Camera Control Unit	(2)
	. Video Cassette Deck (3/4 inch)	(1)
	. Waveform Monitor	(1)
	. Monitor TV	(2)
	. Camera Monitor TV (B/W)	(2)
27	Title Composer System Set	1 Set
	. Title composer	(1)
	. Monitor TV	(1)
	. Videotizer	(1)

No.	Item	Q'ty (Pcs./Nos.)
28	Video Editing System Set	1 Set
	. Monitor TV	(2)
	. Video Cassette Deck (3/4 inch)	(2)
	. Editing Controller	(1)
	. Time base Corrector	(1)
29	Filmchain System Set	1 Set
	. 35mm Slide Projector	(2)
	. Filmchain Multiplexer	(1)
	. 3-tube Color Vidio Camera	(1)
	. Camera Control Unit	(1)
	. Monitor TV	(1)
	. Video Cassette Deck (3/4 inch)	(1)
30	Duplicating System Set	1 Set
	. Video Cassette Deck (3/4 inch)	(1)
	. Video Cassette Deck (1/2 inch, VHS)	(1)
	. Video Cassette Deck (1/2 inch, Beta)	(1)
	. Monitor TV	(2)
31	Portable Video Taking System Set	1 Set
	. 3-tube Color Video Camera with Tripod	(1)
	. Microphone	(1)
	. Microphone for Camera	(1)
	. Servo Zoom Control Unit	(1)
	. Portable VTR (3/4 inch)	(1)
	. Portable Monitor TV	(1)
	. Portable Battery Light Kit	(2)
32	35mm Camera Set	1 Set
	. 35mm Still Camera Set	(1)
	. Tripod	(1)
	. Speed Light	(1)

No.	Item	Q'ty (Pcs./Nos.)
33	Portable Sound Amplifier Set for Lecture (with Microphone and Speaker)	1 Set

(III) Export inspection Training Equipment

No.	Item	Q'ty (Pcs./Nos.)
A. Wood, Bamboo and Rattan Furniture		
1	10-ton Universal Testing Machine	1
2	Furniture Testing Machine	1
3	Wood Moisture Tester	5
4	Electric Oven Dryer	1
5	Electric Tools	5 Sets
6	Vacuum Dust Collector	1
7	Salt Spray Tester	1
8	Pencil Scratch Tester	1
9	Adhesion Tester	1
10	Cross-cut Tester	1
11	Portable Thickness Tester	5
12	Du-Pont's Impact Tester	1
13	Oil Bubble Viscometer	6 Sets
14	Cross-cut Guide	10
15	Rotary Abrasion Tester	1
16	Mullen's Bursting Tester	1
17	Bending Tester for Paperboard	1
18	Sponge Compression Tester	1
19	Abrasion Fastness Tester	1
20	Enlargement Color TV System	3 Sets
21	Optical Microscope	5
22	Camera for Microscope	3 Sets
23	Electronic Thermometer with Recorder	3
24	Stroboscope for Revolution Measurement	3
25	Automatic Balance (400g Capacity)	5

No.	Item	Q'ty (Pcs./Nos.)
26	Electronic Top Loading Digital Balance (6,000g Capacity)	5
27	Platform Scale (100kg Capacity)	3
28	Standard Unit of Weight (1g-500g, 1kg, 2kg)	10 Sets
29	Standard Unit of Weight (5kg, 10kg, 20kg, 50kg)	1 Set
30	Thermometer, Portable Type	5
31	Thermometer, Mercury Type	30
32	Timer with Alarm	10
33	Lux Meter	3
34	Volt Meter	10
35	Ampere Meter	10
36	Circuit Tester	10
37	Digital Multimeter	10
38	Convex Ruler	20
39	Vernier Calipers	30
40	Micrometer	20
41	Thickness Gauge, Dial Type	10
42	Push/Pull Scale (3 Types)	10
43	Hand tools for Wooden Work	5 Sets
44	Fork Lift (Manual type)	1
45	Vice	8
46	Sanding Machine	1
47	Compressor for painting with Spray Gun and Filter	1 Set
48	Laboratory Table	1
49	Cabinet for Chemicals	2
50	Table for Testing Equipment	16
51	Blackboard with Casters	3
52	Wall Cabinet	12
53	Assorted Glass Cylinder	1 Set
54	Hygrometer	1
55	Barometer	1
56	Hot Plate	1
57	Gloss Meter	2

No.	Item	Q'ty (Pcs./Nos.)
B. Garments and Textile		
1	Abration Tester	1
2	Tearing Strength Tester	1
3	Mullen's Bursting Tester	1
4	Pilling Tester	1
5	Tensile Strength Tester	1
6	Yarn Twist Tester	1
7	Refrigerator	1
8	Spectrophotometer (for Ultraviolet rays)	1
9	Spectrophotometer (for Infrared rays)	1
10	Standard Hydrometer	1 Set
11	Fabric Streak Analyzer	1
12	Fade-O-Meter	1
13	Launder-O-Meter	1
14	Crock Meter	1
15	Electronic Top Loading Digital Balance	1
16	Electronic Top Loading Digital Balance (Precision)	1
17	Gas Chromatograph	1
18	Column Filling Up Apparatus	1
19	Electric Oven Dryer	1
20	Hot Plate	2
21	Water Bath	3
22	Vacuum Pump	1
23	Perspiration Tester	1
24	PH Meter	2
25	Rotary Evaporator	1
26	Shaker	1
27	Gray and Blue Scale	3 Sets
28	Assorted Glasswares and Supplies	1 Set
29	C/E 65 Standard Source	1
30	Washing Machine	2
31	Washing Machine with Dryer	1
32	Sewing Machine (Conventional)	2
33	Sewing Machine (Industrial)	2

No.	Item	Q'ty (Pcs./Nos.)
34	Optical Microscope	2
35	Camera for Microscope	1 Set
36	Flat Iron	3
37	Ironing board	3
38	flammability Tester	2
39	Yard Setting Machine	1
40	Inspecting Machine	1
41	Rules, Straight and Curved	1 Set
42	Pantograph	1
43	Convex Ruler	4
44	Cutters	1 Set
45	Drying Shelves for Glasswares	1
46	Draft Chamber	1
47	Laboratory Table	2
48	Cabinet for Chemicals	3
49	Table for Testing Equipment	16
50	Blackboard with Casters	3
51	Wall Cabinet	14
52	Timer with Alarm	3

C. Food

1	Water Activity Test Apparatus	4
2	PH Meter	4
3	Refractometer	9
4	Assorted Glasswares and Supplies	1 Set
5	Drying Shelves for Glasswares	3
6	Moisture Meter	2
7	Pipet Stand	3
8	Pipet Case	1
9	Pipet Washer	1
10	Electric Oven Dryer	1
11	Salt Meter	1
12	Water Distiller	1
13	Titration Set	1

No.	Item	Q'ty (Pcs./Nos.)
14	Micro Diffusion Analyzer	1
15	Pressed Weight Determination apparatus	1
16	Vernier Calipers	10
17	Magnifying Desk Lamp	3
18	US Standard Shieves with Receivers	1 Set
19	Thermometer, Dial Type	20
20	Thermometer, Glass Type	30
21	Recording Thermometer	2
22	Electronic Top Loading Digital Balance	5
23	Shear Press and Fibrousness Tester	1
24	Viscometer	2
25	Timer	5
26	Motor Drill	1
27	Platform Scale (50kg Capacity)	1
28	Cooling Box	3
29	Carrying Cart	4
30	Slicer	1
31	Macbeth-Munsell Colorimeter	1 Set
32	Cork Borer	3 Sets
33	Steamer	4
34	Assorted Kitchen Utensils for Sensory Evaluation	1 set
35	Microwave Oven	2
36	Can Seam Test Kit	10 Sets
37	Can Opener	6
38	Vacuum Gauge	10
39	Assorted Cooking Utensiles	1 Set
40	Gas Range/Oven	1
41	Electric Range	1
42	Electric Oven	1
43	Chest Freezer	1
44	Refrigerator	1
45	Sealing Machine	2
46	Mixer/Blender	4
47	Constant Low Temperature Chamber	1
48	Convex Ruler	5

No.	Item	Q'ty (Pcs./Nos.)
49	Projector	1
50	Torque Meter	2
51	Rheo Meter	1
52	Thickness Gauge	5
53	Laboratory Table	4
54	Cabinet for Chemicals	2
55	Cooking Table	4
56	Table for Testing Equipment	13
57	Blackboard with Casters	2
58	Wall Cabinet	15

(IV) Exhibition Training Equipment

No.	Item	Q'ty (Pcs./Nos.)
Common Equipment		
1	Exhibition Modules (Consisting of 120 Booths with Carpets, Spotlights, etc.)	1 Lot
2	Negotiation Table	120
3	Negotiation Chair	240
4	Mannequins (Full Body)	35
5	Mannequins (Half Body)	20
6	Dress Rack	25
7	Abstracta System	50 Sets
8	Knockdown Stage	1 Set
9	Forklift (Manual) and Hand Trolley (1 each)	1 Set
10	Lighting Panel/Supporting Materials	3 Sets
11	Drawing Machine	4 Sets
12	Rolling Tower	1
13	Vacuum Cleaner	2
14	Floor Polisher	2

No.	Item	Q'ty (Pcs./Nos.)
Food Exhibition/Kitchen Demonstration Equipment		
15	Display Freezer (Chest Type)	2
16	Display Refrigerator (Upright Type)	4
17	Microwave Oven	2
18	Electric Range/Oven	2
19	Mixer/Blender	4
20	Food Warmer	2
21	Juice Dispenser	2

(V) Training Fittings

No.	Item	Q'ty (Pcs./Nos.)
1	Seminar Desk (Seminar RM)	70
2	Lecturer's Desk (Seminar RM)	4
3	Seminar Chair	210
4	Lecturer's Chair	4
5	Storage Cabinet (AV Studio Control RM, Expert's RM, etc.)	19
6	Work Table (AV Studio Control RM)	2
7	Stool (AV Studio Control RM)	24
8	Desk (Executive Director's RM, Expert's RM, etc.)	38
9	Chair (Executive Director's RM, Expert's RM, etc.)	47
10	Book Cabinet (Executive Director's RM, Expert's RM, etc.)	6
11	Meeting Table (Team Leader's RM)	1
12	Meeting Chair (Team Leader's RM, etc.)	5
13	Conference Table (Conference RM)	1
14	Meeting Chair (Conference RM)	12
15	Desk (Expert's RM)	6
16	Partition (Expert's RM, Library)	12
17	Book Shelves (Expert's RM, Library)	18
18	Counter (Faculty RM)	1
19	Reading Table (Library)	7
20	Library Counter (Library)	1

No.	Item	Q'ty (Pcs./Nos.)
21	Work Table (Library, Printing RM, etc.)	12
22	File Cabinet (Library)	3
23	Microfilm Cabinet (Library)	2
24	Magazine Rack (Library)	1
25	Newspaper Rack (Library)	1
26	Card Catalogue Cabinet (Library)	1
27	Reading Chair (Library)	16
28	Dining Table (Cafeteria)	16
29	Dining Chair (Cafeteria)	50
30	Table for Sensory Evaluation (Laboratory)	4
31	Storage Rack (Laboratory)	6
32	Storage Cabinet (Laboratory)	21
33	Work Table (Printing RM, Laboratory)	21
34	Computer Rack	4
35	Floppy Disk Cabinet	3
36	Work Table, Stainless (Laboratory)	4
37	Sewing Table (Laboratory)	1
38	Laboratory Stool (Laboratory)	95
39	Dictionary Stand (Laboratory)	1

4-3-4 Basic Design Drawings

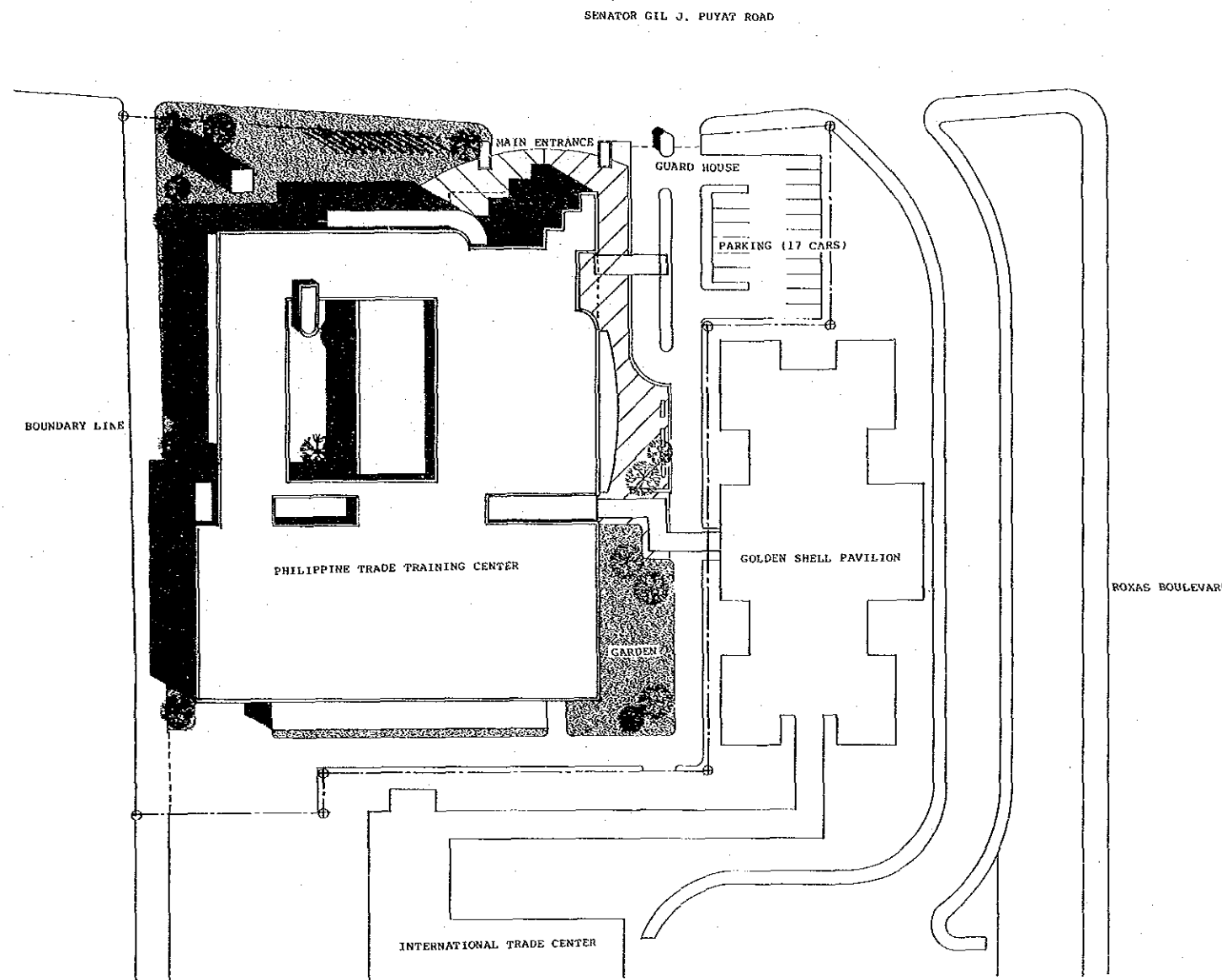
(1) List of Drawings

01	Site Plan	1:1000
02	Ground Floor Plan	1:400
03	2nd Floor Plan	1:400
04	3rd Floor Plan	1:400
05	Elevation (1)	1:400
06	Elevation (2)	1:400
07	Section	1:400

(2) Floor Area (square meters)

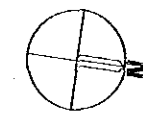
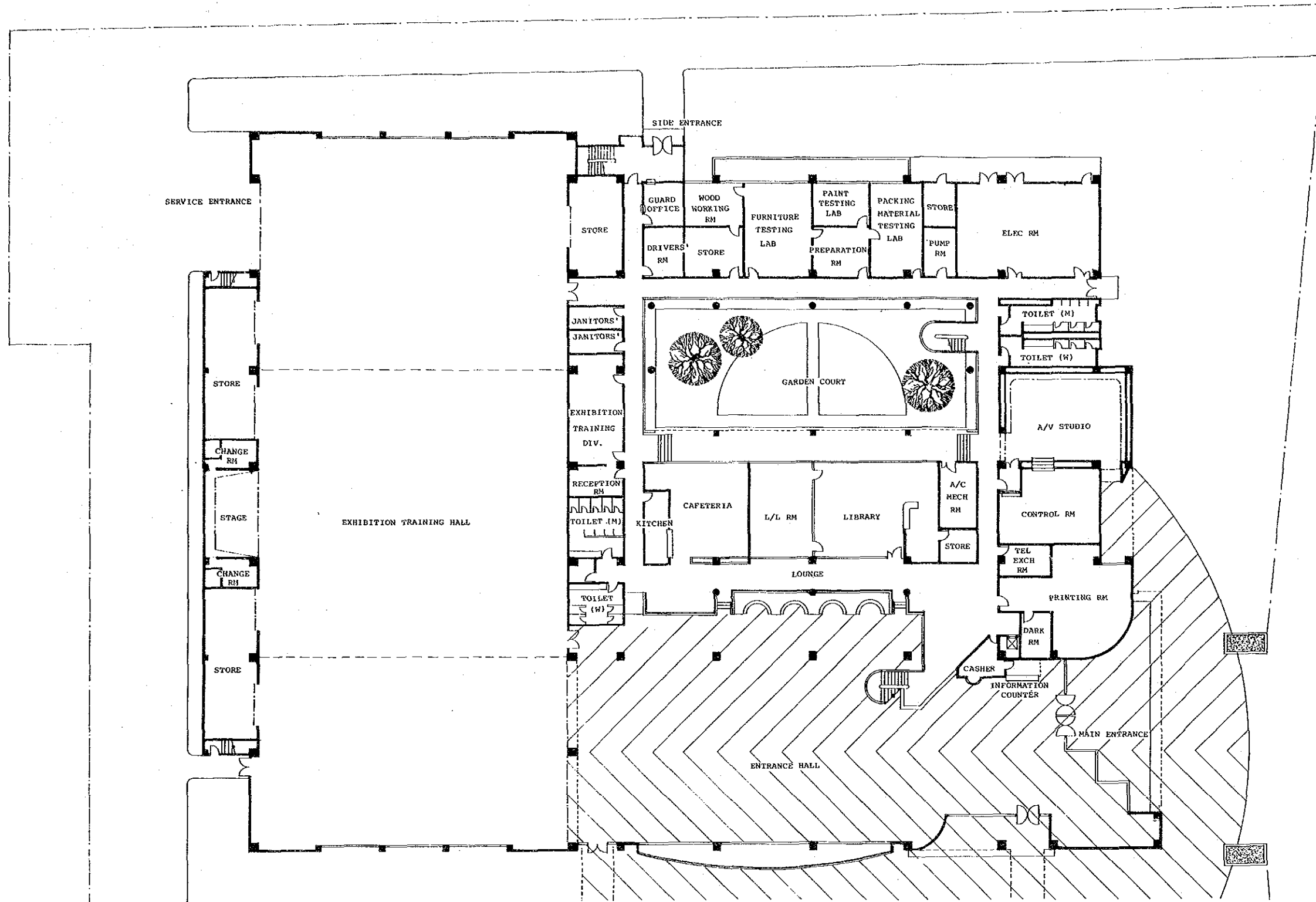
Floor	Area
Ground	4,752.0
2nd	1,655.0
3rd	1,287.0
Total	7,694.0m ²

A floor area of 539.0m² for the exterior corridors, the staircases and the balconies is excluded.



THE PHILIPPINE TRADE TRAINING CENTER

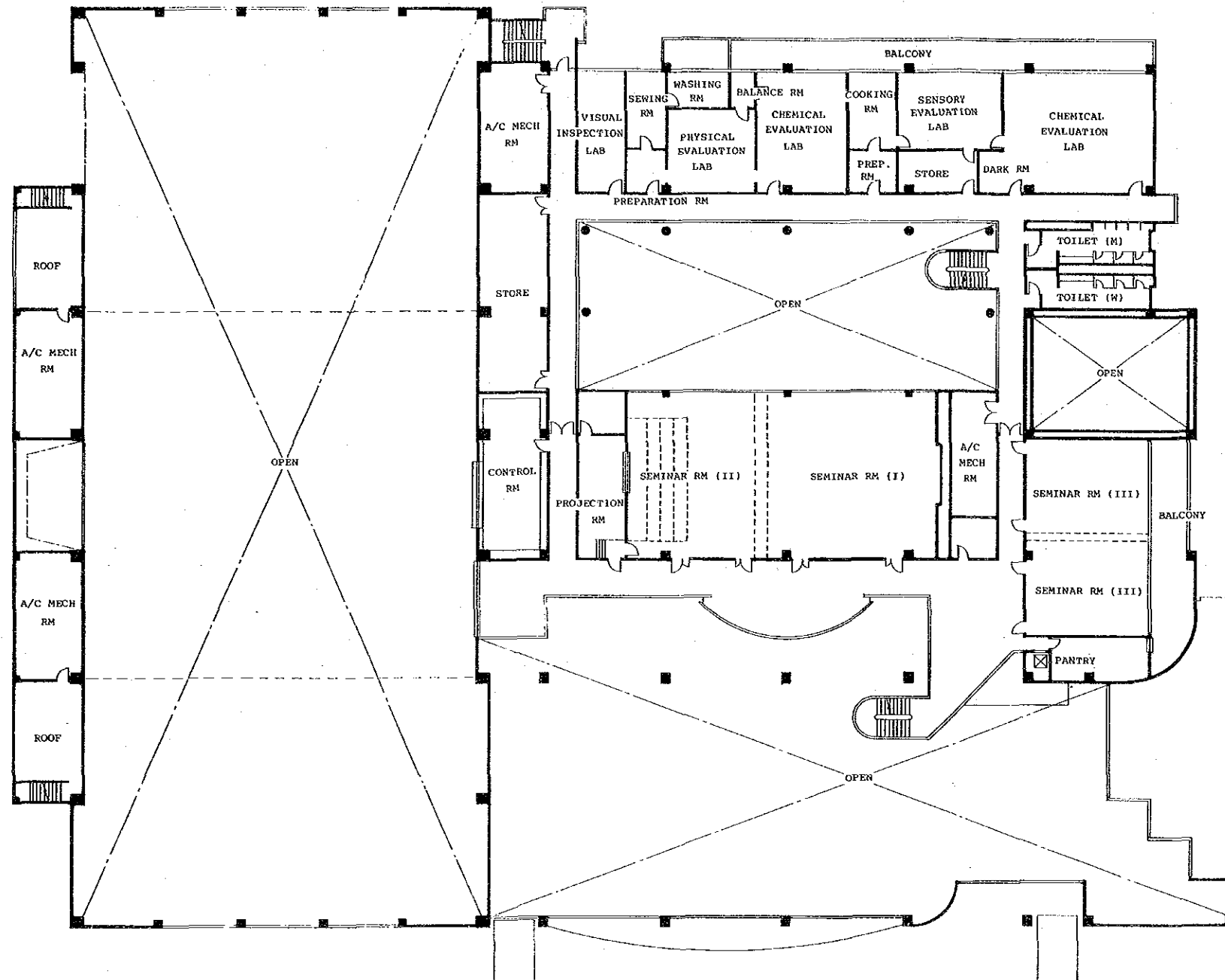
SITE PLAN 01



THE PHILIPPINE TRADE TRAINING CENTER

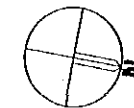
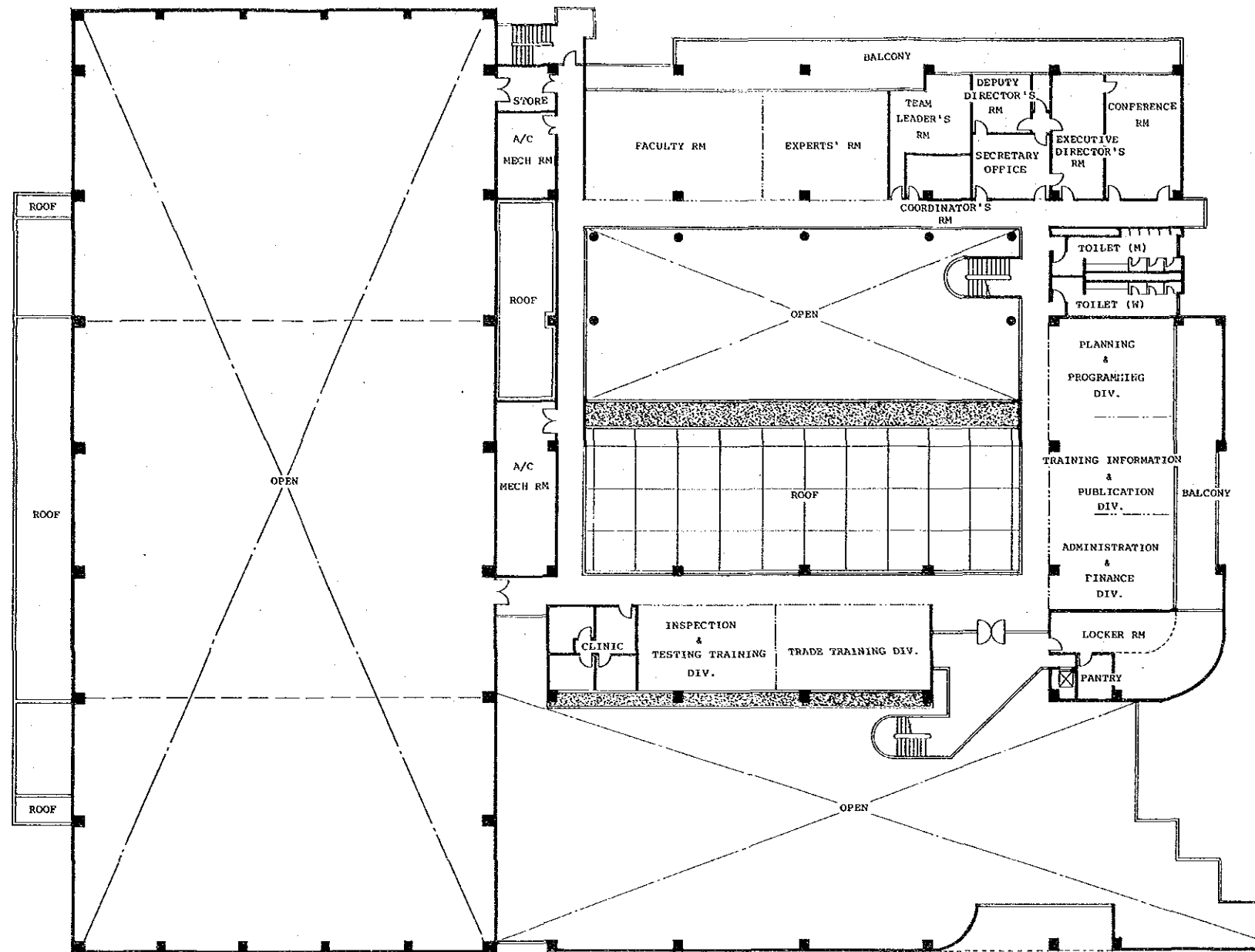
GROUND FLOOR PLAN

02



THE PHILIPPINE TRADE TRAINING CENTER

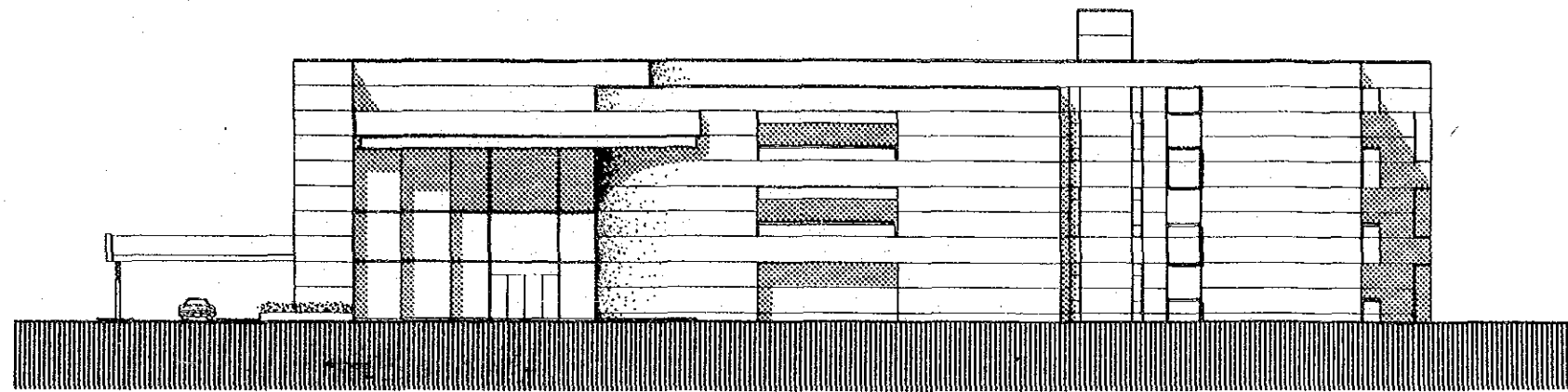
SECOND FLOOR PLAN **03**



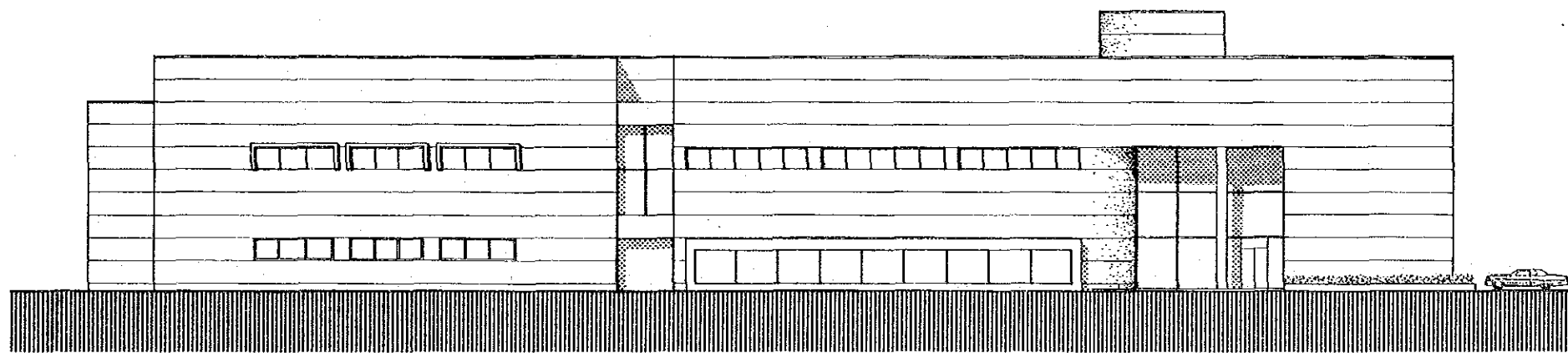
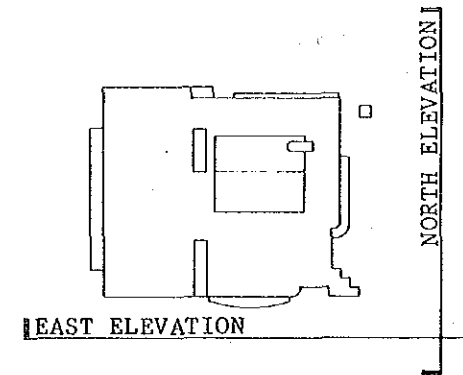
THE PHILIPPINE TRADE TRAINING CENTER

THIRD FLOOR PLAN

04



NORTH ELEVATION

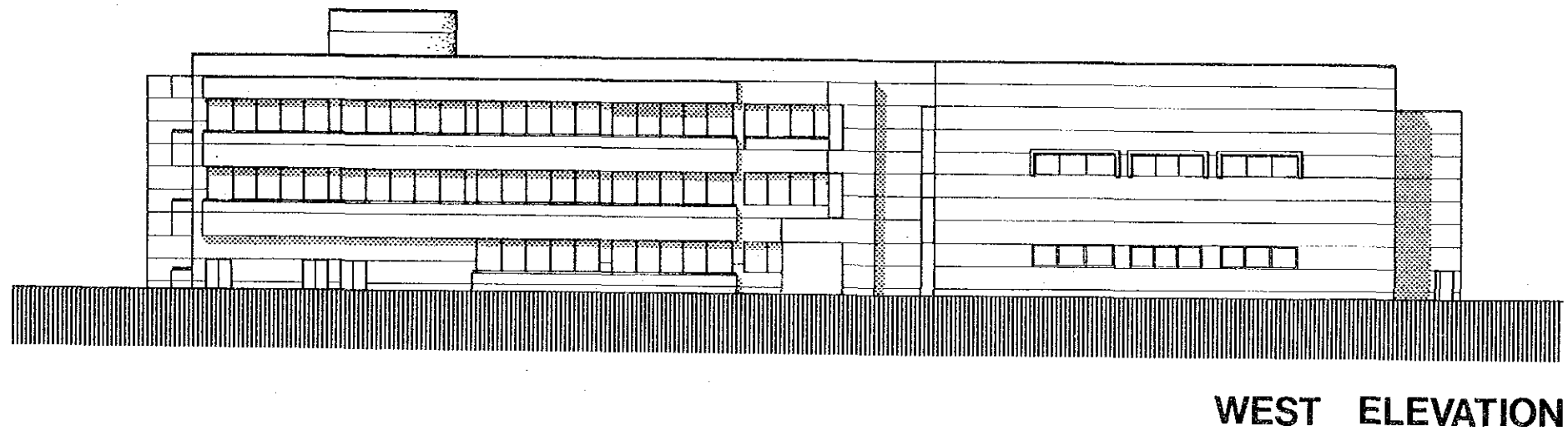
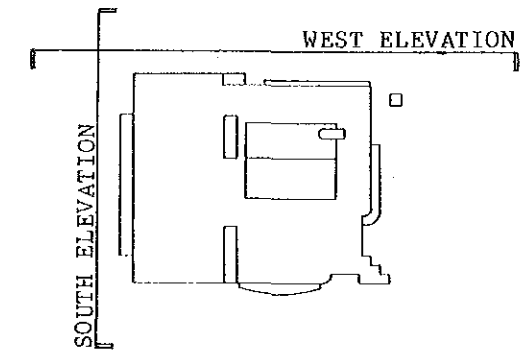
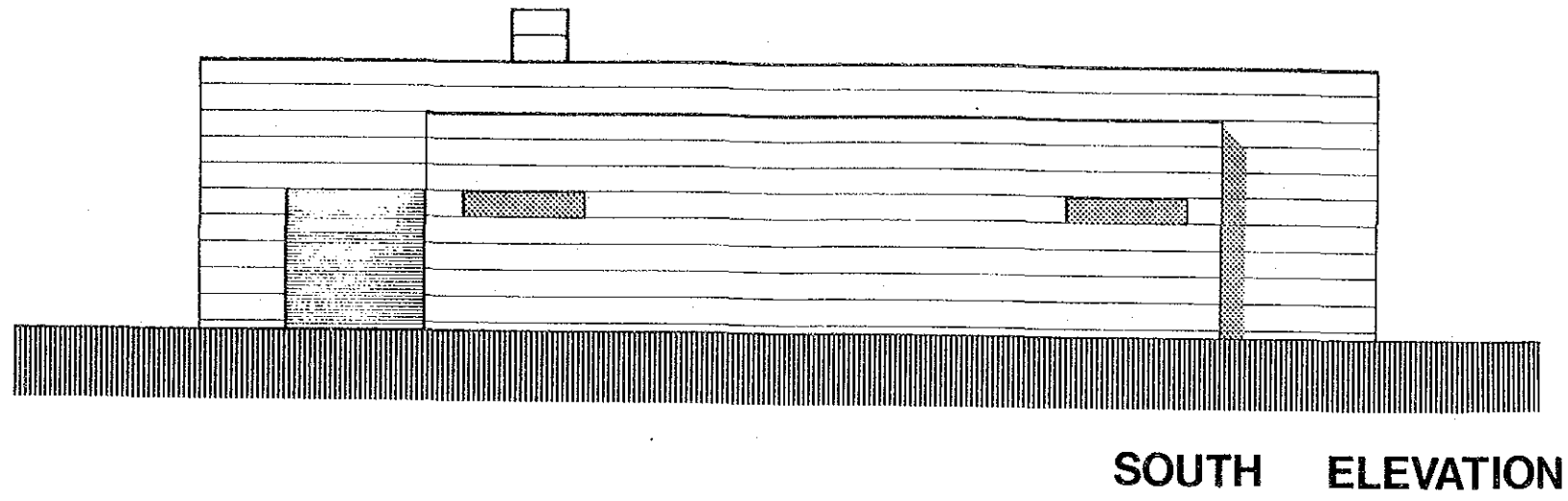


EAST ELEVATION



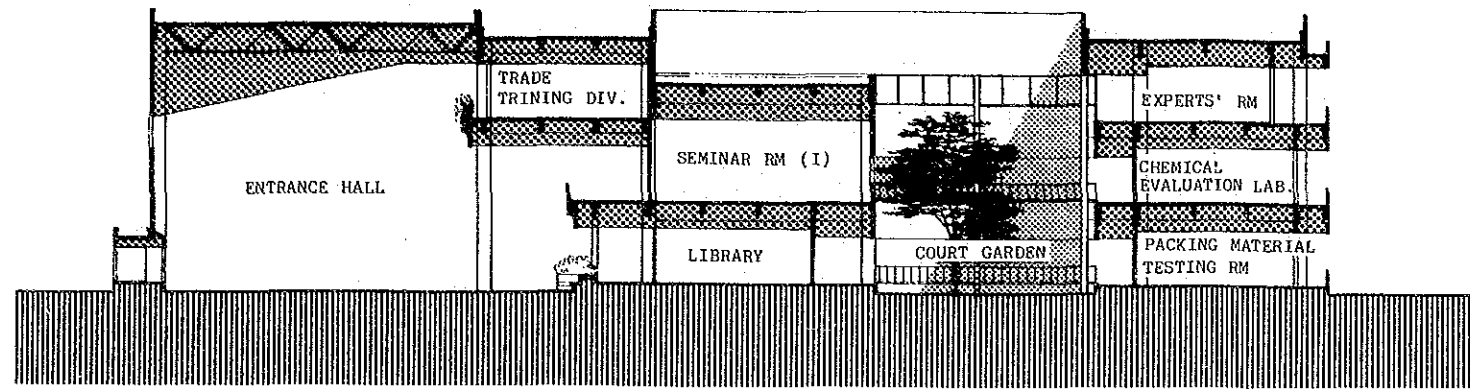
THE PHILIPPINE TRADE TRAINING CENTER

ELEVATION 05

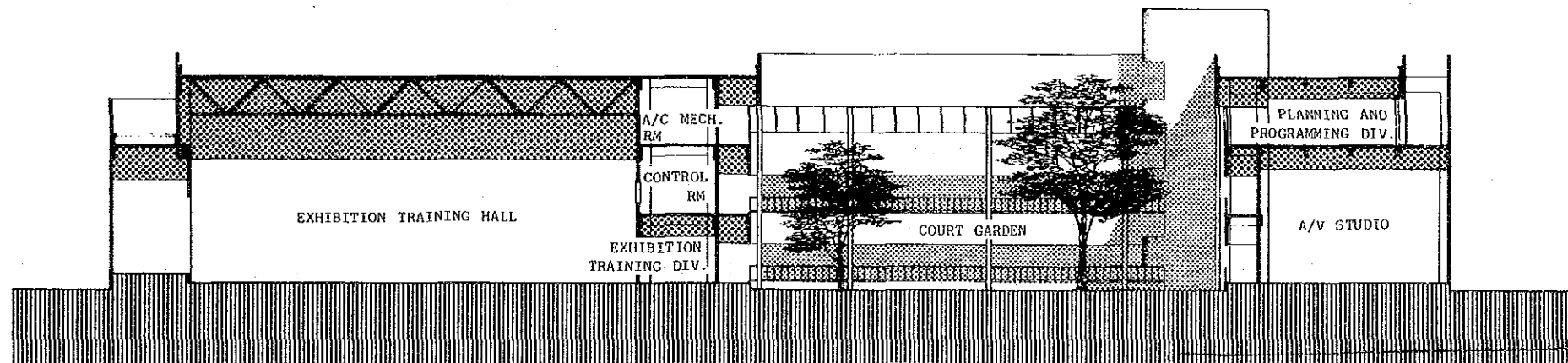
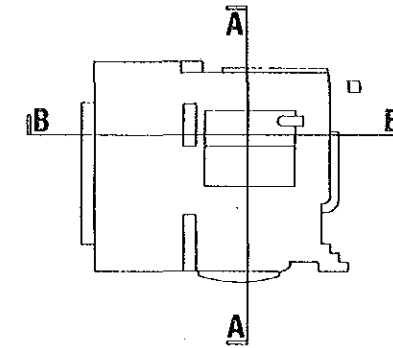


THE PHILIPPINE TRADE TRAINING CENTER

ELEVATION 06



SECTION A-A



SECTION B-B



4-4 Construction Work Plan

4-4-1 Construction Situation and Construction Work

The construction of PTTC will be conducted according to the framework of the grant aid program of the Japanese Government. This project will be formally started after the project is approved by both governments and the Exchange of Notes is duly signed and exchanged. The Government of the Republic of the Philippines will appoint a Japanese consultant, and detail design of the facility and equipment will be started.

After detail design documents are completed, the construction work will be conducted by a Japanese corporation which will be selected by tender. The period of construction is expected to be approximately 13 months when the scale and contents of the facility and condition of construction site are taken into consideration. In particular, since the construction site is on reclaimed land and the ground is soft, piling works will be necessary.

In the Philippines, it is necessary to obtain a building permit in accordance with the Philippine building code. The building code requires the signatures of a locally licensed architect, a civil engineer, a registered mechanical engineer, a registered sanitary engineer and a registered electrical engineer when the application for a building permit is submitted. After the application is submitted it will take approximately 35 days until the construction permit is issued.

If it is required to start the construction works before the building permit is issued, only the permit for the construction of foundation and excavation will be issued.

The rainy season in Manila continues for six months, from May to October. During the rainy season, it rains for one to two hours every day. However, it will not be a serious hindrance for the construction. During typhoons, part of Manila city is flooded by the heavy rain because the water drainage facilities are inadequate. However, the water drainage at the construction site is comparatively good.

Of the construction work which the Philippine side will be responsible for, the leveling and adjusting of the construction site (including the land for temporary offices, temporary workshop and material storage), the demolition of the existing facility, removal and relocation of existing installations and temporary supply of water, electricity and telephone

facilities need to be completed before construction starts. And during the period of detail design, it is necessary to define the commencement time of respective construction work by each work item, including the permanent work by the Philippine side, and to have extensive prior consultation in order to ensure smooth progress of the work.

4-4-2 Scope of Work

The project will be implemented according to the framework of the Japanese Government Grant Aid and with the cooperation of both governments. The scope of work will be as follows:

(1) Work by the Japanese Side

1) Infrastructure:

1. Electrical power supply:

Electrical power supply facilities including electrical transformer facilities after receiving high voltage electricity, high voltage lead cable, concrete pedestal and construction of underground pipe conduits for high voltage lead cable.

2. Telephone:

Construction of underground pipe conduits from the electric poles near the boundary of the construction grounds to the telephones switchboard room MDF. Also, construction of all telephone facilities after the telephone switchboard machine.

3. Water supply:

Water supply facilities for the area within the boundary of the construction site.

4. Water Drainage:

Drainage facilities within the construction site (rain water, sewage and other miscellaneous water drainage) disposal of and connection to public rain drainage.

5. City Gas:

Laying of city gas pipes inside the boundary of the construction site.

2) Building:

Construction of building and installations which are indicated in the basic design report.

3) Exterior work:

Exterior construction work including roads, pavements in the site and court garden which are indicated in the basic design report (excluding the planting of greenery).

4) Equipment:

Training and inspection equipment indicated in the equipment list of the basic design report.

5) Transportation of materials and equipment:

Packing, shipment, ocean freight, insurance, unloading and inland transportation for construction materials and training and inspection equipment which are exported to the Philippines.

(2) Work by the Philippine side

1) Infrastructure:

1. Site preparation:

Clearing obstacles, such as existing buildings and trees, and leveling of the construction site.

2. Electric Power:

Installing high-voltage power transmission line (34.5 kV) up to near the boundary of the construction site and installation of a two-way switch at construction division points as well as

constructing a metering installation.

3. Telephone:

Construction of a main wire lead cable up to the telephone switchboard room MDF within the construction site.

4. Water supply:

Construction of a diverging city water pipe from the city water main (diameter of pipe 250mm), including the water meters, up to the boundary of the construction site.

5. City gas:

Construction of divergent city gas pipe, which will be diverted from the main city gas pipe (diameter of gas pipe 125mm), including a pressure reducing valve, a gas meter, up to the boundary of the construction site.

6. Others:

- . Removal and relocation of existing installations in the construction site such as electric wire, telephone, sewerage pipe, water supply pipe etc.
- . Offer of the space for the site office, workshop, material stock yard etc.
- . Temporary supply of water, electricity and telephone for the construction work.

2) Buildings:

Construction of buildings and installations which are not indicated in the basic design report.

3) Exterior work:

Access roads, planting. Gates and exterior fence if necessary.

4) Equipment:

Furniture and fixtures which are not indicated in the basic design report.

5) Taxes for transportation of materials and equipment:

Custom clearance procedure at the harbor in the Philippines for the imported construction materials and training inspection equipment. All the payment for customs clearance, unloading and inland transportation.

6) Approval, permission and application:

Approval, permission, application and bank arrangement which will be needed for implementing the project and bearing of all related expenses and commissions.

7) Tax exemptions:

Based upon the authorized contract, customs taxes and other public finance surcharges shall be exempted for Japanese personnel who are involved in the construction works.

8) Provision of convenience:

Based upon the authorized contract, Japanese personnel who are involved in the construction project shall be accorded with convenience necessary for entering and staying in the Philippines to perform their duty.

9) Others:

All expenses which are necessary for implementing the project, other than those which are covered by the Japanese government's grant aid.

Among the works by the Philippine side, it is necessary that the item 1)-1 (site preparation), 1)-6 (others) and the permission to the construction and bank arrangement in the item 6) are completed before the construction conducted by the Japanese side begins. Also, all the works by the Philippine side need to be completed prior to the completion of the construction by the Japanese side. In particular, items 1)-2, 3, 4 and 5 must be completed at least two (2) months before the completion of the project, to secure the time for the final inspection of the facilities and equipment.

(10) Approximate Cost Estimate of the Philippine Work

Following is the cost estimate of the preliminary work and construction work which the Philippine side will be responsible for. In order to implement the project smoothly, and for efficient utilization of the facilities, the Philippine side needs to appropriate a budget, execute the design and the construction at an appropriate time:

1) Preliminary Construction Work

. Removal of existing facility	50,850 Ps
. Transplantation of trees within the construction site and leveling land after plants are transplanted.	14,700 Ps
. Leveling of the land added to the construction site	91,600 Ps
. Removing and transferring electric wires, telephone cable, supply and sewage waterway	283,510 Ps
. Temporary electric power supply (3phase 230V 200kVA)	216,000 Ps
. Temporary telephone installation (two circuits)	36,000 Ps
. Temporary city water supply construction (diameter of water supply pipe 50mm)	8,220 Ps
. Building permit	40,575 Ps

Total 741,455 Ps

2) Permanent Construction Work

. Electric power supply	50,000 Ps
. Telephone installation	140,000 Ps
. City water supply	120,200 Ps
. City gas supply	51,500 Ps
. Exterior work	1,358,000 Ps
. Equipment (general furniture, blind etc.)	1,403,100 Ps

Total 3,122,800 Ps

4-4-3 Supervision Plan

In accordance with the Japanese Government Grant Aid procedure, the consultant shall make a design and supervision contract with the Government of the Philippines, and supervise the construction of the project. The purpose of supervision is to check whether the construction work is being executed properly according to the design documents and to improve the quality of the products through giving instructions, suggestions and coordination from the fair stand point in order to ensure the proper performance of the construction and equipment procurement contract.

The service of the consultant will include the following:

(1) Cooperation in works related to tender and contract

The consultant shall prepare tender documents necessary for selection of Japanese incorporations who will be engaged in construction work and equipment procurement, perform the tender, and give advice on conclusion of the contract.

(2) Instruction, advice and coordination to contractors

The consultant shall review the project schedule, construction plan etc. and offer instructions, advice and coordination to contractors.

(3) Inspection and approval of shop drawings and manufacturing drawings

The consultant shall examine and approve shop drawings, manufacturing drawings and documents which shall be submitted by contractors.

(4) Confirmation and approval of construction equipment and materials as well as training and inspection equipment

(5) Report of work progress

The consultant shall comprehend the schedule and conditions of the construction and report the progress thereof to the Philippine side.

(6) Inspections

During the period from the commencement of the work to its completion the consultant shall inspect the facility and the training equipment when necessary to ensure the quality and function of the facility and equipment.

Judging from the facilities contained in this construction plan, the consultant shall dispatch one resident engineer to stay at the construction site during whole of construction process in order to execute the above mentioned duties. In addition, engineers shall be sent to the construction site whenever necessary during the progress of construction for all necessary inspections, instructions and coordination.

And the consultant shall brief a person in Japan who is in charge of liaison with the site and establish a back up system.

Also, the consultant shall report progress, disbursement, completion, turning over, etc. of the project to the Japanese Government authorities concerned.

4-4-4 Construction Materials Procurement Plan

Since construction activities in the Philippines are on the decline, production of construction materials has decreased.

However, the main construction material stock has been secured, and therefore, material cost has not been substantially raised for the moment.

The reinforcing steel bar and cement are produced locally according to the Philippine standard which is based on the American standard (ASTEM, etc.). Though the strength of the reinforcing steel bar is sufficient, bending sometimes causes cracks. In the case of cement, 20% more cement needs to be used to secure the necessary strength compared to Japanese products. The quality of wooden fittings is good, but the quality of tiles is not consistent.

Materials for the mechanical equipment, such as PVC pipe, steel pipe, concrete pipe, galvanized steel sheet, electric wire, packaged-type air-conditioners and sanitary fittings are produced locally. The quality of the galvanized steel sheet differs according to each manufacturer.

though the connection hardware for sanitary ware are manufactured locally, the function of them is unstable.

All of the equipment other than wooden worktables are scheduled to be imported from Japan, since most of them are not produced in the Philippines.

(1) Materials to be procured in the Philippines:

- . cement
- . aggregated (sand, gravel)
- . bricks
- . concrete block
- . timber
- . plywood
- . roof tile
- . wooden fittings
- . glass (clear 3mm to 5.5mm thick)
- . paint
- . slate products
- . concrete pipes
- . plastic tiles
- . marble
- . stoneware floor tile
- . wooden furniture
- . wall paper (vinyl cloth, etc.)
- . some electric wires

(2) Materials to be imported from Japan

- . steel reinforcing bar
- . steel frame
- . white cement
- . aluminum windows and doors
- . steel doors
- . steel roller shutter
- . fitting hardware
- . training & inspection equipment
- . asphalt waterproofing
- . partition
- . sliding door
- . processed metallic parts
- . glass wool
- . sanitary ware
- . structure paint

4-5 Implementation Schedule

The execution of the project will commence after the two governments sign the Exchange of Notes on the grant aid of the Japanese Government. The government of the Philippines will appoint a Japanese corporate consultant company. Then a design and supervision contract will be made between the Government of the Philippines and the Japanese consultant. The implementation schedule will be roughly divided into the following three stages, detail design, tender procedure and supervision.

(1) Detail Design

After the design and supervision contract is made and verified by the Japanese Government the detail design will be started. In the detail design stage, tender documents such as detailed design drawings, technical specification documents, instructions to tenderers shall be prepared based on the Basic Design Study Report.

In the course of this stage the consultant shall confer with parties concerned from the Philippine side on the content of the facility and equipment and obtain approval from the Philippine side.

(2) Tender Procedure

The construction company and the equipment supplier shall be appointed by tender. The tender will be processed in the procedure of tender notice; examination of qualifications of tenderer (Japanese corporations), tender, evaluation of tender amount, appointment of the construction company and equipment supplier and signing of contract. The whole tender procedure will take approximately one (1) month.

(3) Construction

After signing the construction contract, the construction will commence under verification by the Japanese government. Judging from the scale of facilities, local meteorological conditions and other local construction conditions, the construction including equipment procurement is expected to take approximately 13 months.

With the above mentioned conditions in mind, the entire construction process is scheduled as is shown in Fig. 4-10.

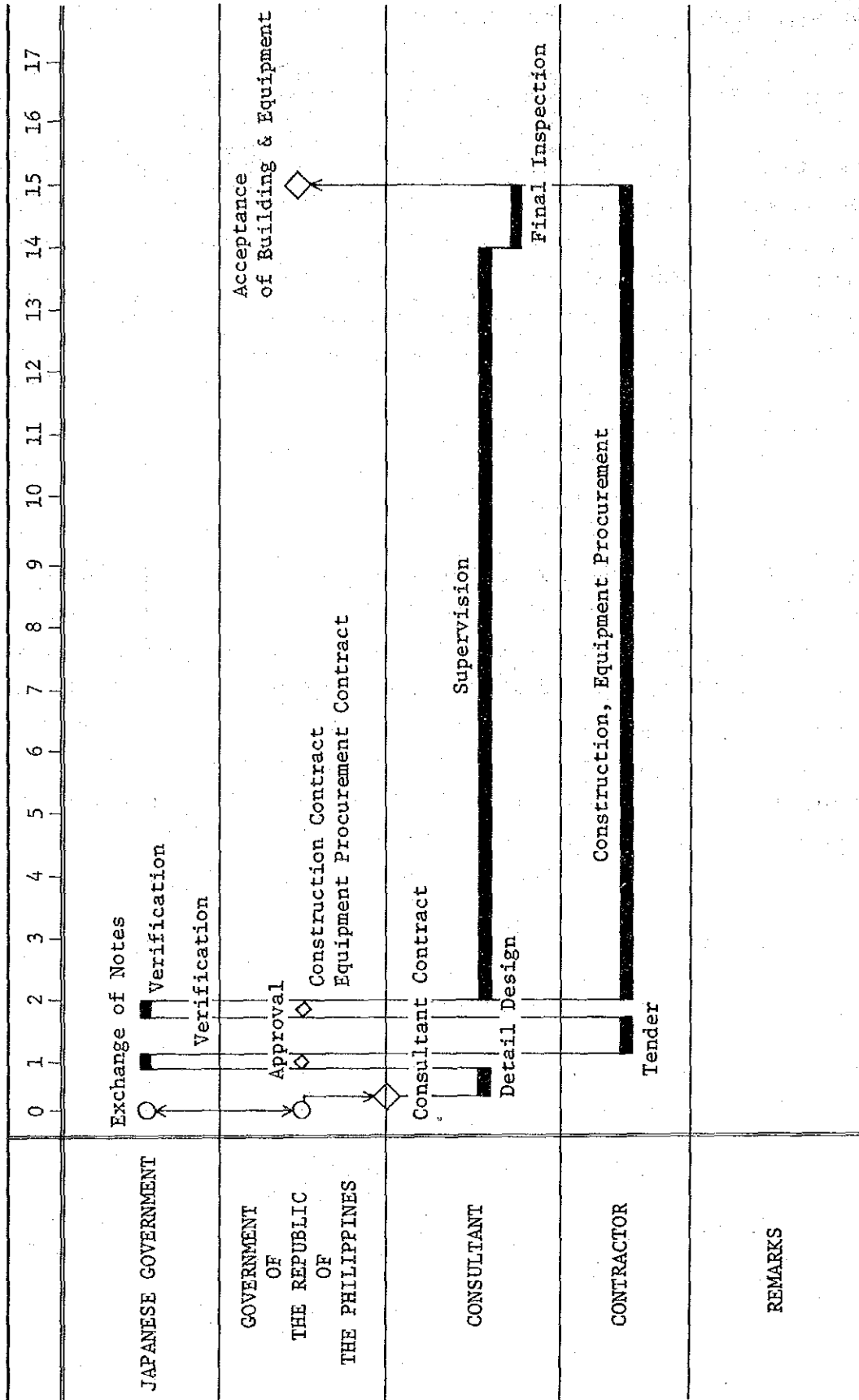


Fig. 4-10 Implementation schedule

4-6 Maintenance and Administration Costs

4-6-1 Maintenance and Management of Facility and Equipment

The facility and the equipment shall be designed to facilitate maintenance and control. In addition, the personnel who will be responsible for the mechanical equipment and inspection and training equipment of PTTC shall be given training in operation, inspection and maintenance when the construction work is drawing to a close.

Instruction manuals for all equipment and other pertinent documents required to maintain and administrate the facility and equipment shall be submitted when the facility is handed over.

4-6-2 Maintenance and Administration Costs

PTTC's maintenance and administration costs consist of personnel costs and facility operating costs. PTTC will require a staff of 110 employees in its first year. The figure will rise to 131 employees in five years which include FDC and MTI staff temporarily attached to the facility. However, an estimate of the facility operating costs and personnel costs is calculated for total number of 113, 22 faculty members and 91 staff employees which is proposed in 3-3-7. The following table is the estimate based on the unit price of 1986:

Table 4-6 Personnel costs

Post	No. of Employees	Total Annual Salary (Ps/year)	Average Annual Salary per Person(Ps/year)	Remarks
Executive Director	1	101,100	101,100	
Deputy Director	1	87,900	87,900	
Chief Officers	6	400,500	66,750	
Assistant Officers	7	404,700	57,814	
Technical Staff	33	1,345,476	40,772	
Clerical Staff	43	851,400	19,800	Includes non-technical staff
Faculty Staff	22	1,535,600	69,800	
Total	113	4,726,676		
Total personnel costs	Salaries (1,538,100 Ps/year) of staff temporarily transferred from MTI and FDC will be paid by respective departments so actual 4,726,676 - 1,538,100 Ps/year = 3,188,576 Ps/year			

Table 4-7 Facility operation costs

Category	Item	Costs (Ps/year)	Remarks
Light and heating costs	Electricity	2,092,800	
	Water	111,100	
	Gas	35,500	
Facility maintenance and administration costs	Vehicle maintenance	480,000	
	Security	1,152,000	
	Cleaning	480,000	
	Facility repair costs	511,200	
	Equipment repair and parts	600,000	
Office and communication costs	Office supplies	1,800,000	
	Communication costs (tel, etc)	2,400,000	
Health and Welfare	Health and welfare	120,000	
	Reading materials (magazines)	40,000	
Operating costs	Advertising, pamphlets	1,800,000	
	Printing	400,000	
	Training related costs	2,578,600	
Insurance	Facility insurance	720,000	
Other costs	Miscellaneous	50,000	
Total costs		15,371,200 Ps/year	

The maintenance and administration costs for PTTC are;

personnel costs	3,188,576 Ps/year
Facility operating costs	15,371,200 Ps/year
Total	18,559,776 Ps/year
	= 18,560,000 Ps/year

Thus, the annual maintenance and administration cost for PTTC is approximately 18,560,000 P. The breakdown of the operating costs are as follows:

a. Electricity

1. Load

Item	Equipment Load	Estimated Power Consumption
Lighting	150 kW	11,000 kWh/month
A/C	490 kW	39,400 kWh/month
Sanitary	20 kW	2,000 kWh/month
Exhibitions	150 kW	9,700 kWh/month
Audio-visual	30 kW	1,500 kWh/month
Others	30 kW	1,500 kWh/month
Total	870 kW	68,100 kWh/month

2. Maximum Demand

Estimated maximum demand ratio is assumed 70%

Maximum Demand = 870 kW x 0.7 = 609 kW

3. Estimated monthly power consumption

68,100 kWh

4. Cost Calculation (According to the regulation of Manila Power Co.)

. 68,100 x 1.5815 Ps = 107,700.15 Ps/month

. Power Distribution Costs

* Minimum rate

609 kW x 12.60 Ps = 7,637.40 Ps/month

* Energy costs

609 kW x 200 H x 0.42 Ps = 51,156.00 Ps/month

. Exchange Adjustment Costs

51,156.00 Ps x 0.1523 = 7,791.06 Ps/month

total of 1) - 3) = 174,320.61 Ps/month

= 174,400.00 Ps/month

b. Water Costs

Monthly average water consumption:

1,811 m³/month

Water costs: Water costs will be paid according to commercial water rates.

Table 4-8 Water charge

Consumption	Water charge
0 - 25 m ³	Flat charge = 117. ⁷⁰ Ps
26 - 1,000 m ³	4. ⁷⁰⁷⁵ P/m ³ X 975 m ³ = 4,589. ⁸¹ Ps
1,001 - 1,811 m ³	5. ⁶¹⁰⁵ P/m ³ X 811 m ³ = 4,550. ¹¹ Ps
Total	9,257. ⁶² → 9,258 Ps/month

Water charge per one year will be as follows.

$$9,258 \text{ Ps/month} \times 12 \text{ month} = 111,096$$

$$= 111,100 \text{ Ps/year}$$

c. City Gas Costs

Monthly average consumption of city gas: 725m³

Table 4-9 City gas charge

Consumption	City gas charge
Fixed charge	100 Ps
1 - 500 m ³	9. ⁹⁵ P/m ³ X 500 m ³ = 1,975 Ps
501 - 725 m ³	3. ⁹⁰ P/m ³ X 225 m ³ = 877. ⁵ Ps
Total	2,952. ⁵ → 2,953 Ps/month

City gas charge per one year will be as follows.

$$2,953 \text{ Ps/month} \times 12 \text{ months} = 35,436$$

$$= 35,500 \text{ Ps/year}$$

4-6-3 Income

The principal income of PTTC will consist of trainee lecture fees. Lecture fees will be collected from private participants only, as trainees connected with related government institutions can attend the lectures free of charge. However, private participants shall only have to pay their own training costs. Therefore, it is necessary to calculate the lecture fees per person on the premise that all trainees including participants from government institutions shall equally pay for part of the training costs. The following table shows the lecture fees that were charged during 1985 for related trade lecture course:

Table 4-10 Result of the trade related training implemented by MTI during 1985

TRAINING FIELD	TOTAL INCOME FROM LECTURES	TOTAL PARTICIPANTS (person/day)	AVERAGE COST (Ps/s person . day)
INDUSTRIAL DEVELOPMENT	69,850	460	152
PROJECT DEVELOPMENT	351,250	2,530	139
TECHNICAL TRAINING	209,000	1,200	174

As can be seen in the table, trainees were charged approximately 140 Ps - 175 Ps per person. Based on the curriculum the total number of trainees will be between 15,150 - 22,210 people day. If the income from lectures is calculated according to past practice, the facility will have the following income:

2,121,000 Ps (15,150/people.day x 140 Ps/person.day)

3,886,750 Ps (22,210/person.day x 175 Ps/person.day)

This amount roughly corresponds to the estimated cost of PTTC training - 2,578,600 Ps - so a part of the training costs can be met with lecture fees paid by participants.

Other PTTC income will derive from rent of the exhibition training hall for purposes other than training and of public use of the cafeteria. However, this type of income is unstable and will therefore not be included in this estimate of PTTC income.

4-6-4 Evaluation of Maintenance and Administration Costs

Maintenance and administration costs for PTTC is directly financed by the Ministry of Trade and Industry. The following table shows the budget and budget allotments of the Ministry of Trade for 1986:

Table 4-11 Breakdown of MTI budget for 1986

(Thousands of Pesos)

	APPROVED APPROPRIATION	RESERVES	ALLOTMENT	PERCENTAGE OF TOTAL BUDGET
1. OFFICE OF THE MINISTER PROPER AND SUPPORT SERVICES	46,575	7,878	38,697	19.7
2. FOREIGN TRADE SERVICE CORPS	40,515	961	39,554	17.1
3. PRICE STABILIZATION COUNCIL	2,420	717	1,703	1.0
4. BUREAU OF DOMESTIC TRADE	8,654	1,257	7,397	3.7
5. BUREAU OF INDUSTRIAL DEVELOPMENT	8,342	2,695	5,947	3.5
6. BUREAU OF SMALL AND MEDIUM INDUSTRIES	5,157	574	4,583	2.2
7. PRODUCT STANDARDS AGENCY	10,529	1,776	8,753	4.4
8. BUREAU OF FOREIGN TRADE	19,298	5,137	14,161	8.2
9. CITEM	45,470	10,938	34,532	19.2
10. PHILIPPINE PATENT OFFICE	9,686	1,043	8,643	4.1
11. FIELD OFFICES	39,856	8,340	31,319	16.9
TOTAL	236,502	41,213	195,289	100.0

As already stated, 18,560,000 Ps is required to maintain and administer PTTC. When income from lecture fees (2,121,000 Ps) is subtracted, 16,439,000 remains, an amount which will have to be covered by MTI capital. The budget growth rate for MTI during the period 1985 - 1986 was 10.8% of fixed budget or 0.4% of allotted capital. Allowing for financial conditions in the Philippines and assuming that 1988, the year the facility will start operating, will be similar to that of 1986, the maintenance and administration costs of PTTC will account for 6.95% of MTI's budget. PTTC is not yet part of the budget, however, CITEM, which is closely connected with the current project, has received a budget of 19.2% for all its 146 employees, so a budget allotment of 6.95% for PTTC seems highly probable.

CHAPTER 5

EVALUATION OF THE PROJECT

CHAPTER 5 EVALUATION OF THE PROJECT

Over the past ten years, the degree to which the economy of the Philippines has relied on exports has been a hefty 19.0% on average. One can see a 1.4% increase from an average 18.3% for the five year period 1975 to 1979, to 19.0% average for the five year period 1980 to 1984. This shows that the importance that exports play in the economy of the Philippines and suggests it will become still more important in the future.

The structure of trade for the Philippines has been characterized by a chronic import surplus. And while recently one sees a trend towards reduction in the excess of imports, generally there has been little change, with the import surplus generally averaging 5.3% the GNP of over the last ten years.

In order to improve this condition and take a positive, active leadership role in economic growth, reinforcement and promotion of establishment of a structural, long-term point of view in regards to exports, is desired.

The ratio of non-traditional export goods to total exports in 1974 was 16.2%. But in 1984, it reached 67.5%, or two-thirds of total exports. Furthermore, the ratio of non-traditional export goods as a percentage of GNP recorded a rapid rise from 4.6% in 1975 to 14.8% in 1984. Clearly then this means that the exports of non-traditional products are essential for the Philippine trade and economy in the future. The ratio as a percentage of total exports of wood products, garment and textiles products exports, and food products, recorded a remarkable growth rate of 7.0% in 1974 to 21.5% in 1981 (however, since 1982 the number has shown a tendency to decline). However, on the other hand, the percentage of the three non-traditional export products to total exports of non-traditional products has been showing consistently a downward course from 43.0% in 1974 to 24.0% in 1984.

From the above, it is easy to come to the judgment that it is necessary to adopt a policy of actively strengthening export promotion, in regards to the project related to these three goods. Especially, since these goods are directly related to primary industries, or they are labor

intensive, their export is expected to result in great increase in employment opportunities. The percentage of export of the above three goods to GNP, for the last five year period, 1980 to 1984, has been on average 3.6%. The percentage of import surplus to the GNP for the same time period has been calculated at an average of 5.1%.

Accordingly, assuming other conditions remain unchanged, if the percentage of exports of these three goods to GNP were more than 8.7% (2.4 times that of the present ratio), it could be said that the import surplus could be erased.

(1) Effects of Training in Trade Business and Management

Mastering technology and knowledge about exporting through training in trade business and trade management plays a large role in creating a base for improvement in export orientation of the government and private sectors as well as cultivating a desire to export. At the same time, if this kind of climate pervades the affiliated government and private sectors, export related business will be expedited, and troubles will be reduced. As a result, customers' perceptions of trust will increase, and unnecessary expenses will be decreased.

These should ultimately result in increases in orders, sales, and profits. Especially, specialized training finding customers, to business negotiations and conclusion of a contract, will result in increased customers and accordingly, contribute to increasing sales and orders. Advertising, publicity, and information services, as well as trade related publicity and public relations such as overseas trade representative departments, will produce the long-term effects of cultivation of latent customer demand and increases in orders. These will ultimately create increases in sales and orders in the long-run.

Furthermore, the most important, advanced, and influential training plans include market research and market forecasting strategy, marketing, merchandising, and other market-related and product strategies. Through these, it is possible to make more accurate determinations about the right price, right quality, right quantity, and right product line that satisfy customers' needs. Ultimately, through the improvement of product competitiveness of Philippine products, and expansion of the

export market share, increases in orders, sales, and profits will be realized.

Table 5-1 Effects of trade training

CONTENTS OF TRAINING	<ol style="list-style-type: none"> 1. Trade systems, trade terminology, identifying customers, related laws and regulations, business negotiations, agreements, finance, orders, manufacturing, inspections, packing, transportation, insurance, customs clearance, ship loading, collecting payments, other export related knowledge 2. Technology for the above 3. Identifying customers, business negotiations, agreement, and other export related sales 4. Advertising, publicity, information service, overseas trade representative department, other export related public relations 5. Market research, market forecasting strategy, marketing, merchandising, other export related market and product strategies
PRIMARY EFFECTS	<ol style="list-style-type: none"> 1. Cultivate export mindedness, improve desire to export, speed up business functions (time savings), reduction in troubles, improvement in trust, reduction in costs (indirect effect) 2. Increase in the number of customers (direct effect) 3. Cultivation of latent customers, increase in opportunities for orders (long-term effect) 4. Specification of customers, proper pricing, proper quality, right quantity, products to meet customer's desires (long-term effect)
SECONDARY EFFECTS	<ol style="list-style-type: none"> 1. Growth of orders, increase of sales, reduction in costs, growth of profits (indirect effect) 2. Increase in orders, increase in sales (direct effect) 3. Increase in sales, increase in orders (long-term effect) 4. Improvement in product competitiveness, expansion of export market share, order growth, increase in sales, increase in profits (long-term effect)

(2) The Effects of Export Inspection Training

Export inspection training emphasizes the three important areas for the current circumstances of the Philippines:

Standardization and development of norms for export inspections, sampling plans and techniques, testing technology, processes, applications, and evaluations, inspection processes, grading, sanitation, insect control (in the case of food products), and the like are directly connected to the growth and expansion of reliability, reduction of trouble, control of quality, and improvement in quality of export goods. And ultimately

through the expansion of market share and strengthening of the competitiveness of products they will produce growth of sales, orders, and profits.

Table 5-2 Effects of export inspection training

CONTENTS OF TRAINING	<ol style="list-style-type: none"> 1. Export Inspection Training <ol style="list-style-type: none"> 1. Development of export standards and norms 2. Sampling plan and process 3. Testing technology, process, application, evaluation 4. Inspection process, evaluation 5. Sanitation, insect control (in the case of food products)
PRIMARY EFFECTS	Improvement of quality, quality control, reduction in trouble, increase in trust.
SECONDARY EFFECTS	Improvement in the competitiveness of products, expansion in the market share of exports, growth in orders, growth in sales, growth in profits.

(3) The Effects of Exhibition Training

Holding and participating in trade fairs and exhibitions will produce long-term results in gaining latent customers and specifying a product list, along with increasing effectiveness of market research and advertising.

At the same time it will gain direct results in increasing customers by securing customers and agreements for business negotiation. These ultimately will result in the expansion of sales and orders.

Table 5-3 Effects of exhibition training

CONTENTS OF TRAINING	<ol style="list-style-type: none"> 1. Exhibition management and technology training <ol style="list-style-type: none"> 1. Holding trade fairs, exhibitions 2. Participating in trade fairs and exhibitions
PRIMARY EFFECTS	<p>Advertising results, market research results, development of potential customers, accurate list of products desired by customers (above are long range effects)</p> <p>Finding customers, arrange business negotiations Increase number of customers (above are direct effects)</p>
SECONDARY EFFECTS	Order growth, sales growth (long-term and immediate effects)

CHAPTER 6

CONCLUSION AND SUGGESTION

CHAPTER 6 CONCLUSION AND SUGGESTION

As has been related here up to now through the domestic analysis and the field investigations of the contents of the relevant background of the project and the examination of the requirements of the Philippine Government, the necessity of the project to establish the Philippine Trade Training Center possessing the facilities parallel to that presented here and as per the contents of the presented report is deemed to be very high. The proposed construction site faces Roxas Boulevard, one of the major thoroughfares in Metropolitan Manila, and it is adjacent to the International Trade Center, which is frequented by many foreign people who are involved in foreign trade. In the vicinity, there are important government related facilities, such as the Culture Center and the PICC. The proposed site for construction of the trade training facilities is appropriate due to its great convenience for contact with affiliated government institutions and ease of access for the participants in the training.

As for the building, taking into mind the facility's functions, contents, structure, mechanical and electrical plan and construction plan; single-story with the roof made of steel frame structure is appropriate for the exhibition related facilities, and the rest of the building is of three-story reinforced-concrete structure. The scale of the floor area of 7,694.0 square meters is appropriate.

As was mentioned in Chapter 5, the project is highly useful to the Philippine society and the grant aid of the Japanese Government in regards to the establishment of the PTTC is highly appropriate.

To achieve the rapid actualization of the project and, after completion, to carry out its smooth operation, and in order to achieve the objectives of the initial stages, the following items are proposed:

(1) Regarding the Implementation of the Project

1) Prompt implementation of approval procedures for each phase:

There exists time restrictions since the project is proceeded in conformity with the Japanese grant aid plan. It is necessary to carry

out promptly such procedures as contracts relating to execution of construction, supply of equipment, consultants, and Exchange of Notes for this purpose.

2) Smooth implementation of the work by the Philippine side:

It is anticipated that the work by the Philippine side will be steadily carried out since Japanese grant aid plan for the Philippines' MTI has already been explained by the survey team several times. But it is necessary that budget measures be taken at the proper time in conjunction with the Philippine government's fiscal year and that the removal of existing buildings on the construction site, provisions of electrical power for construction, etc., be completed before the start of the Japanese side construction work, and that providing permanent supplies of electric power and water etc. be completed at least two months before the completion of the project for inspection and test run of equipment and facility.

3) Other Cooperation Required for Promoting Construction:

Since it is necessary to carry out business matters rapidly to promote construction, including negotiations with other government bodies, customs clearance, transportation, and banking procedures, the establishment of an implementation system equipped with proper business management capability is desired in the implementation phase which includes construction.

4) Establishment of System of Execution

As stated under 3-3-1, restructure of MTI has not yet been finalized. For smooth operation of the project, it is desired that this restructuring be rapidly decided, and a system of execution be established.

(2) Regarding PTTC Training, Administrative Control

1) Administrative Control:

During the course of a year, between 2,360 and 3,020 training participants are expected at PTTC. In order to maintain a large scale plan such as this, it has become essential to have thorough preparations and drafts of attractive activity plans that are reflective of the

training needs of the participants. Furthermore, the activities and results of PTTC must be sufficient to meet the demands of fields related to Philippine trade. The implementation of the administration based on the items mentioned above by close liaison with affiliated institutions including MTI's departments is desirable.

2) Procurement and Requirements of Instructors:

PTTC is planning training that spans the many fields of trade, export inspection, and exhibition. It is desired that before PTTC opens, an executive director and appropriate instructors in each field be selected, and in cooperation with the technical cooperation experts that will be sent hereafter from Japan, a training leadership system that includes the training of instructors be established.

3) Budget Guarantee:

In order to develop the activities that have been mentioned above, there is a fundamental necessity to insure a budget for these activities. The Philippine government has recently adopted a policy of financial cutbacks. It is strongly hoped that the importance of the establishment of PTTC be understood and a reasonable budget be allocated.

4) Technical Cooperation:

Concerning the technical cooperation from Japan in relation to the project, including the preliminary study, three investigations have already been carried out. In order to increase the effects of grant aid, it is desired to continue to put forth efforts towards implementation of technical cooperation.

