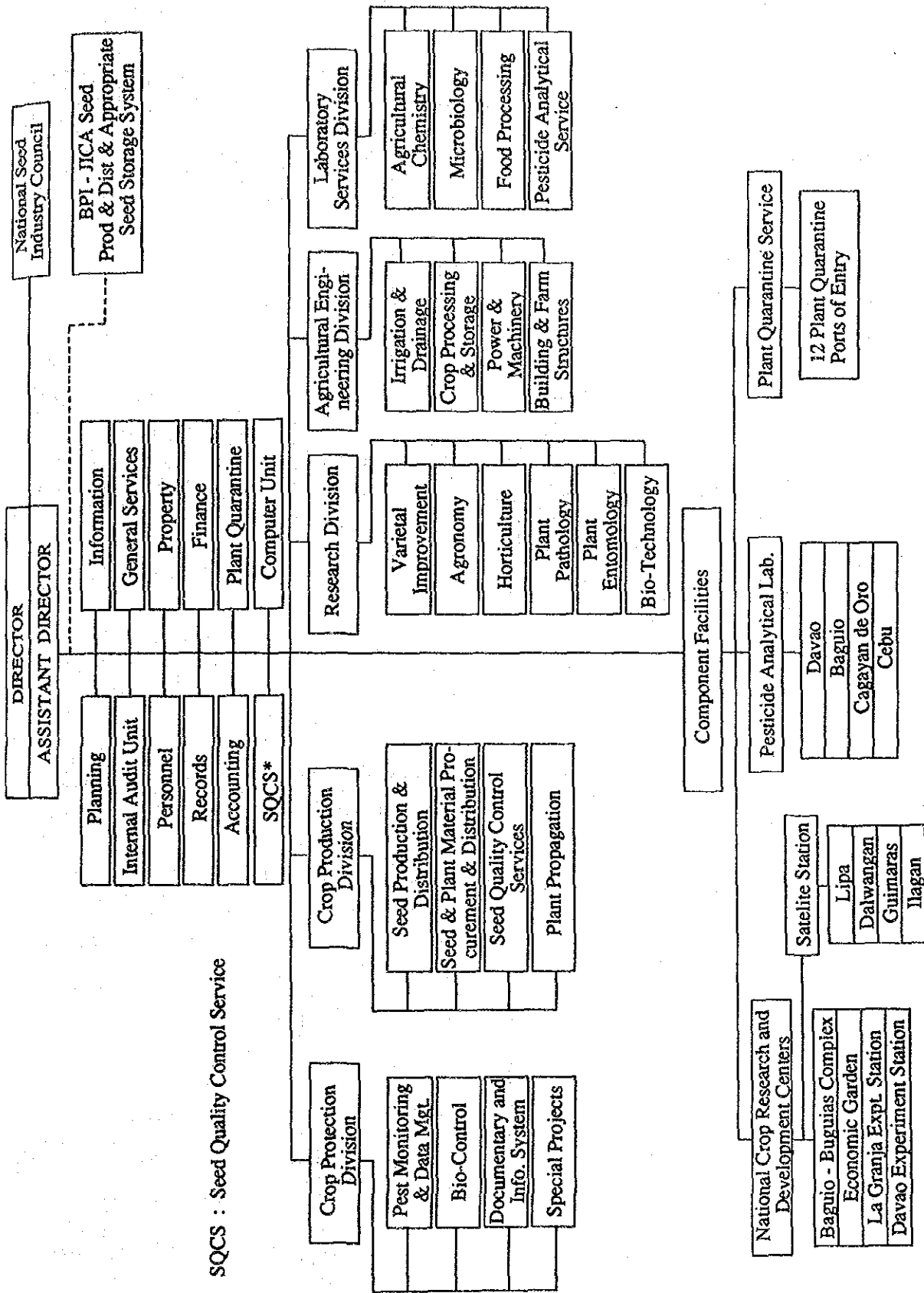


## FIGURES





\* SQCS : Seed Quality Control Service

Figure 1 Organization Structure of Bureau of Plant Industry (BPI)

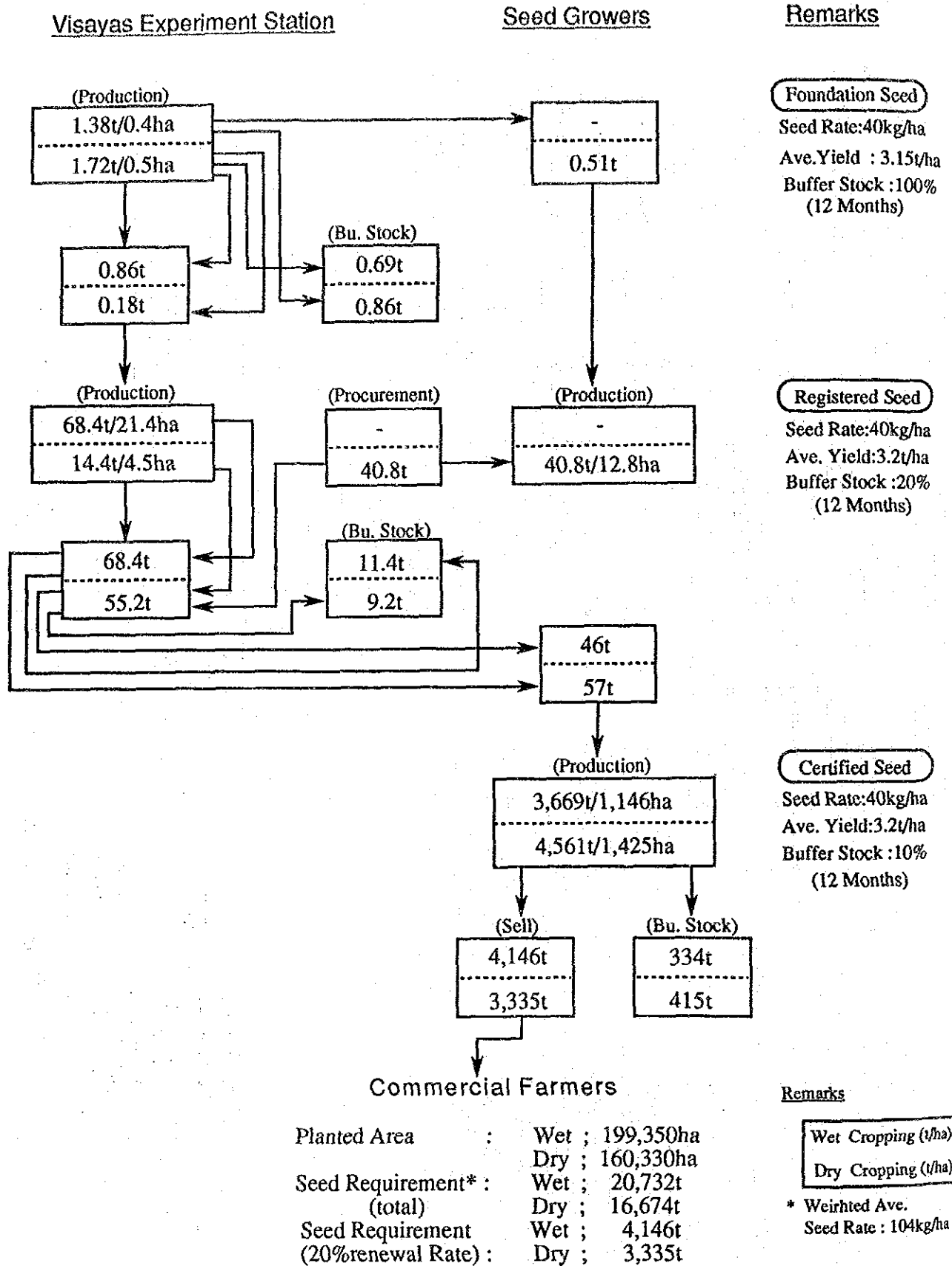
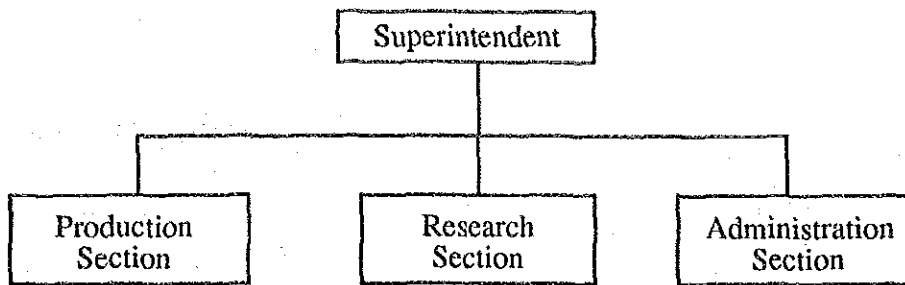
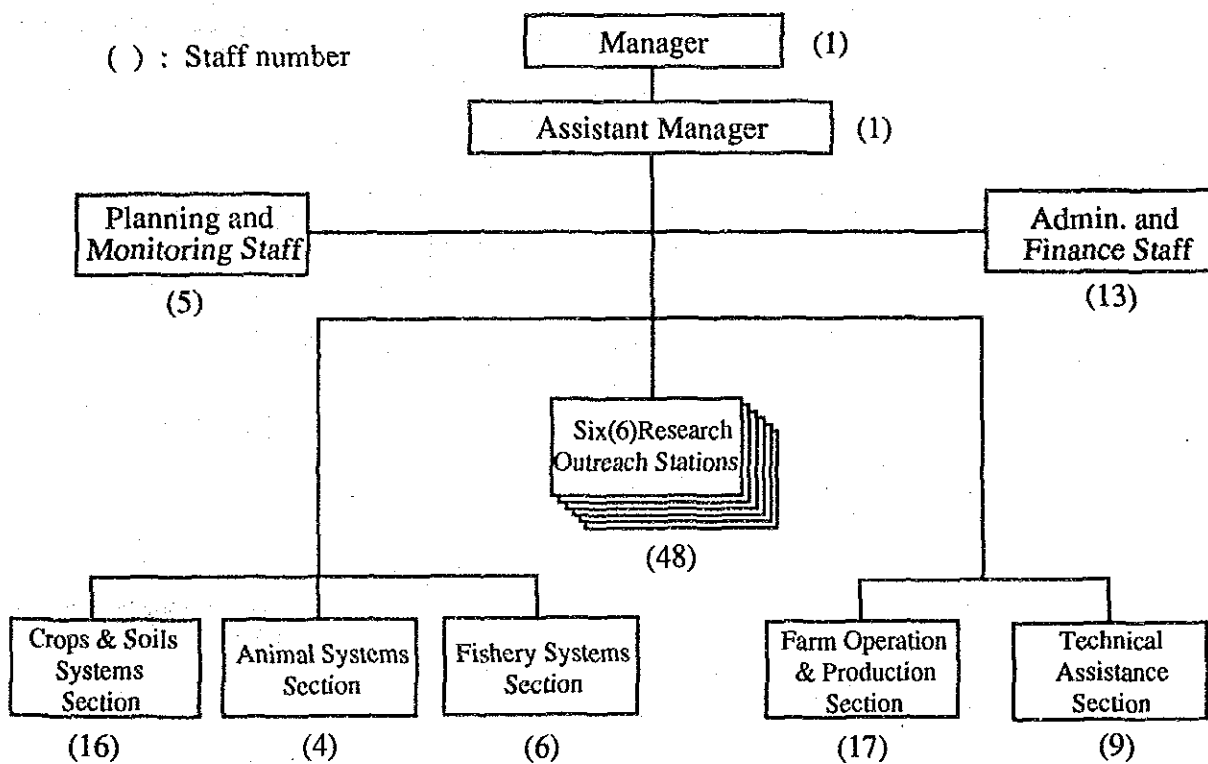


Figure 2 Estimation of Rice Seed Requirement in the Model Area

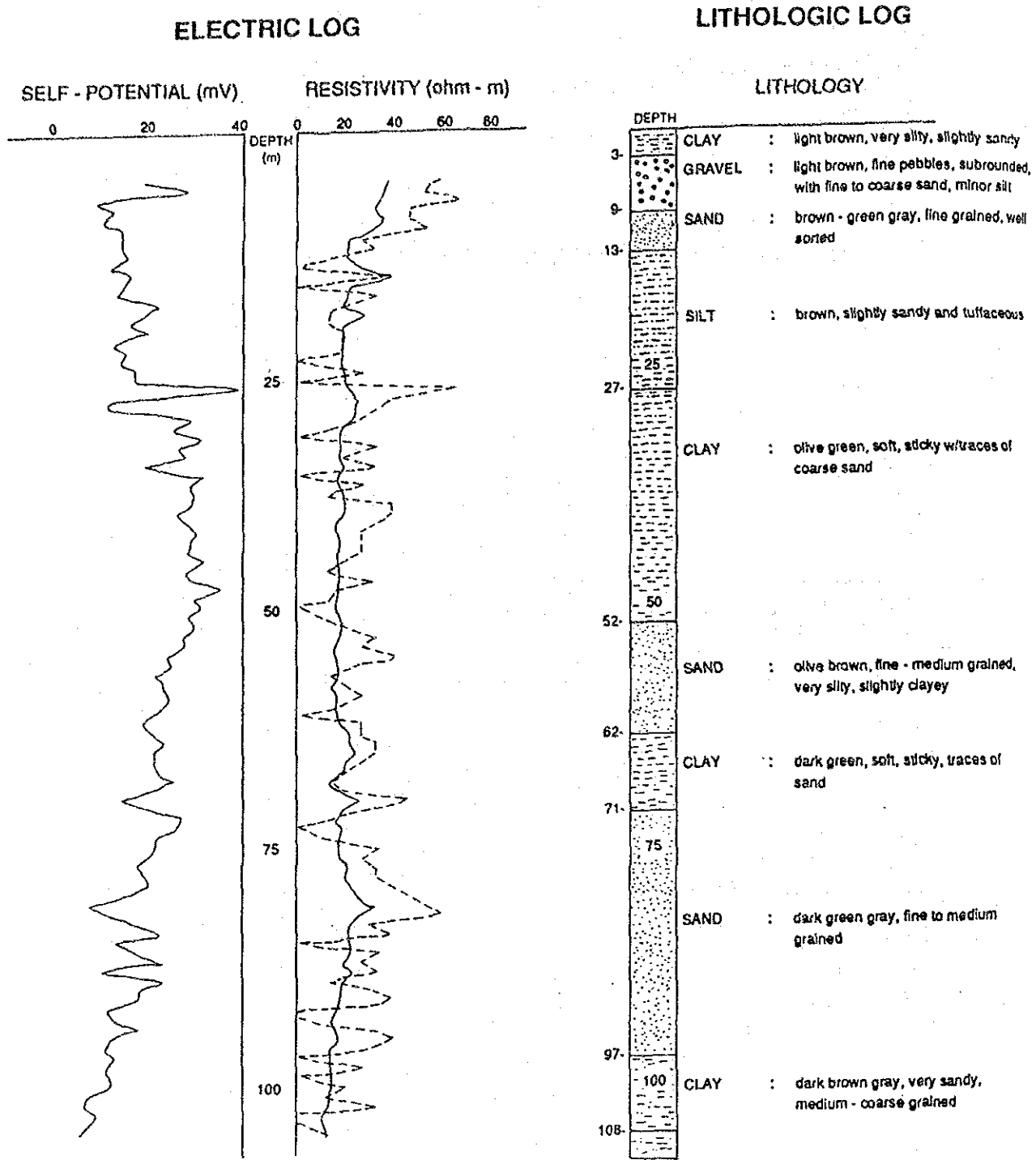


(Organization Chart of Visayas Experiment Station: As of 1991)



(Organization Charat of West Visayas Integrated Agricultural Research Center : As of 1992)

**Figure 3 Organization Chart of Visayas Experiment Station**



**Figure 4 Results of Geo-hydrological Investigation at VES (Electric Log and Lithologic Log)**

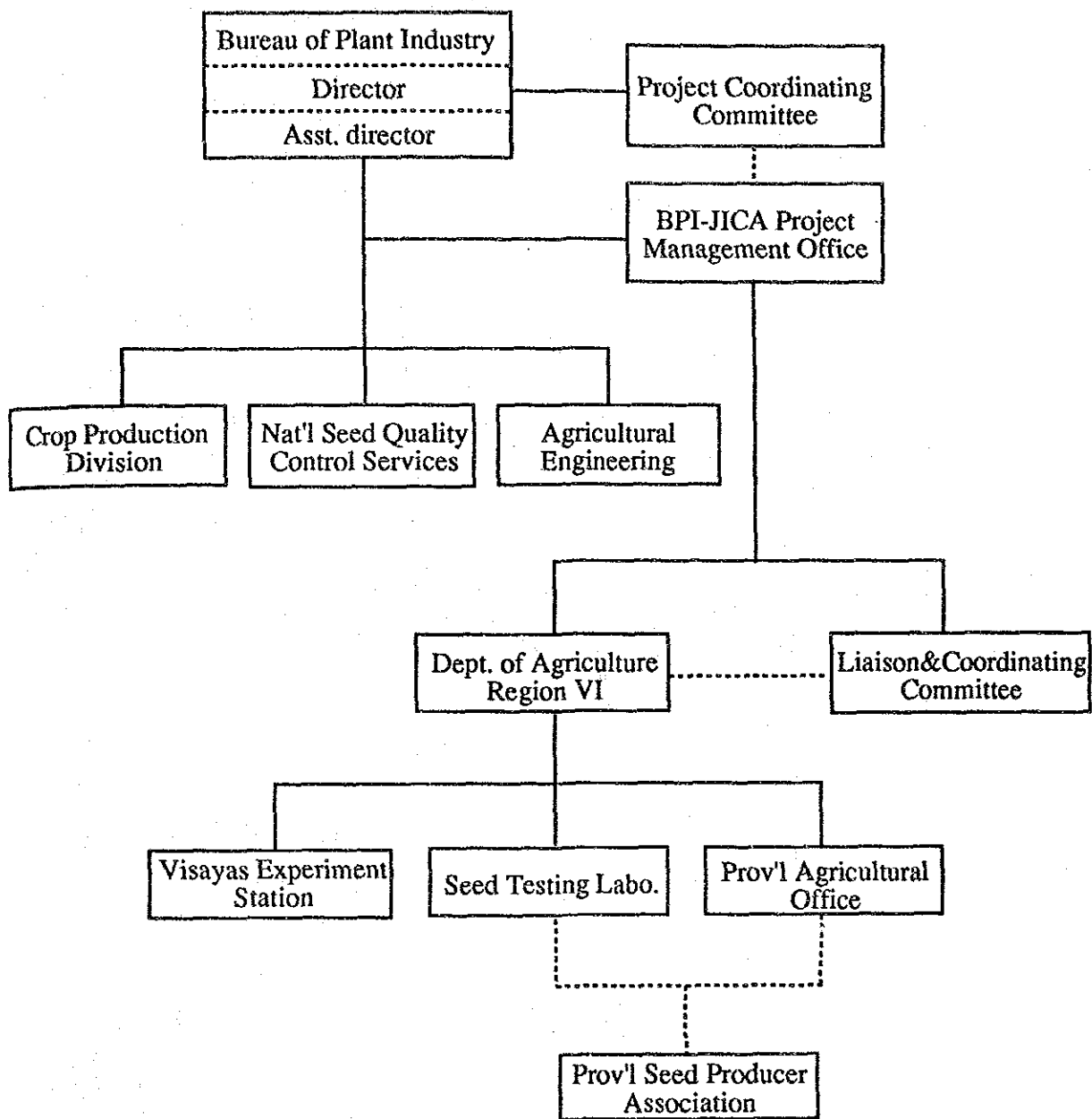


Figure 5 Organization Chart of the Project

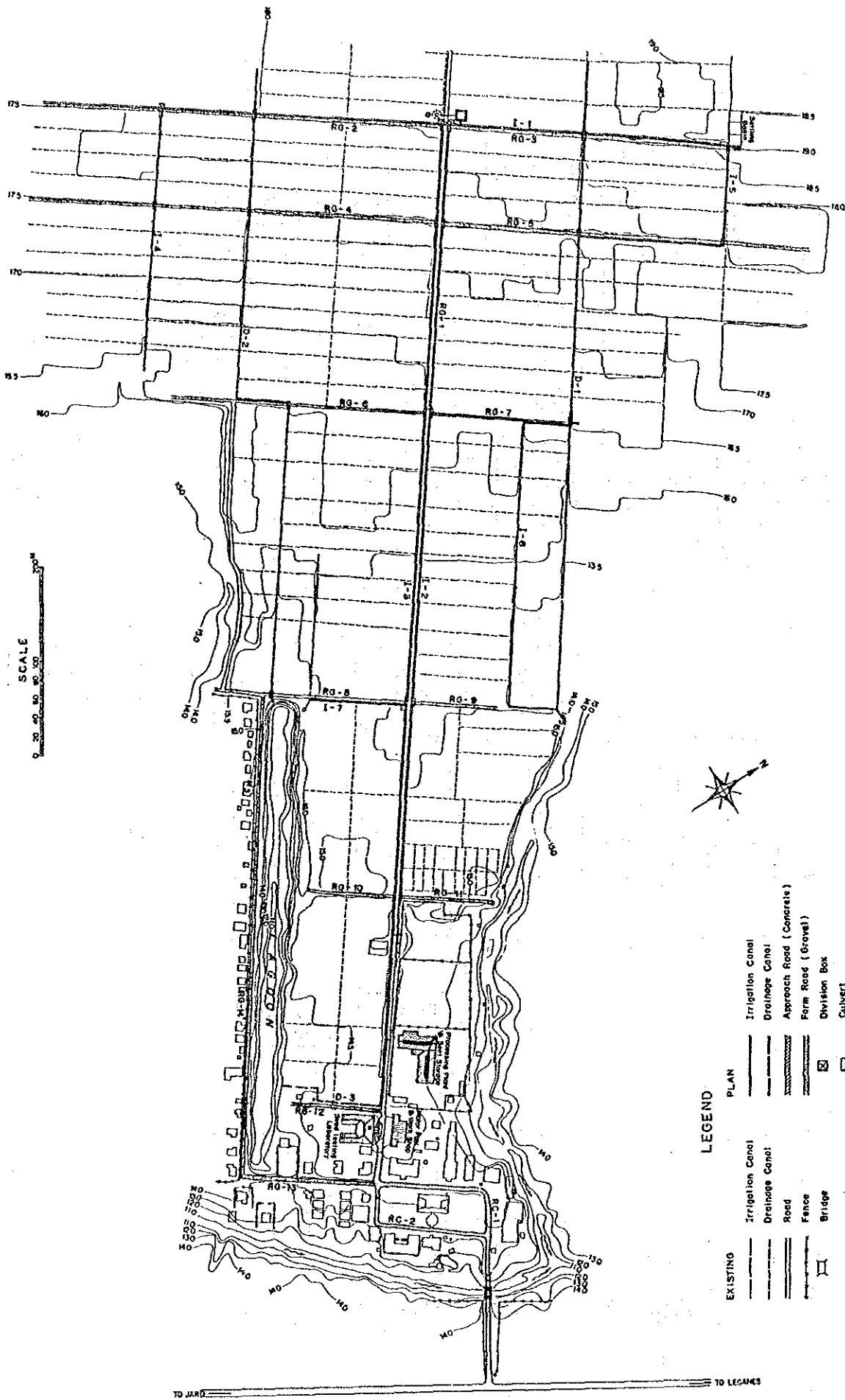


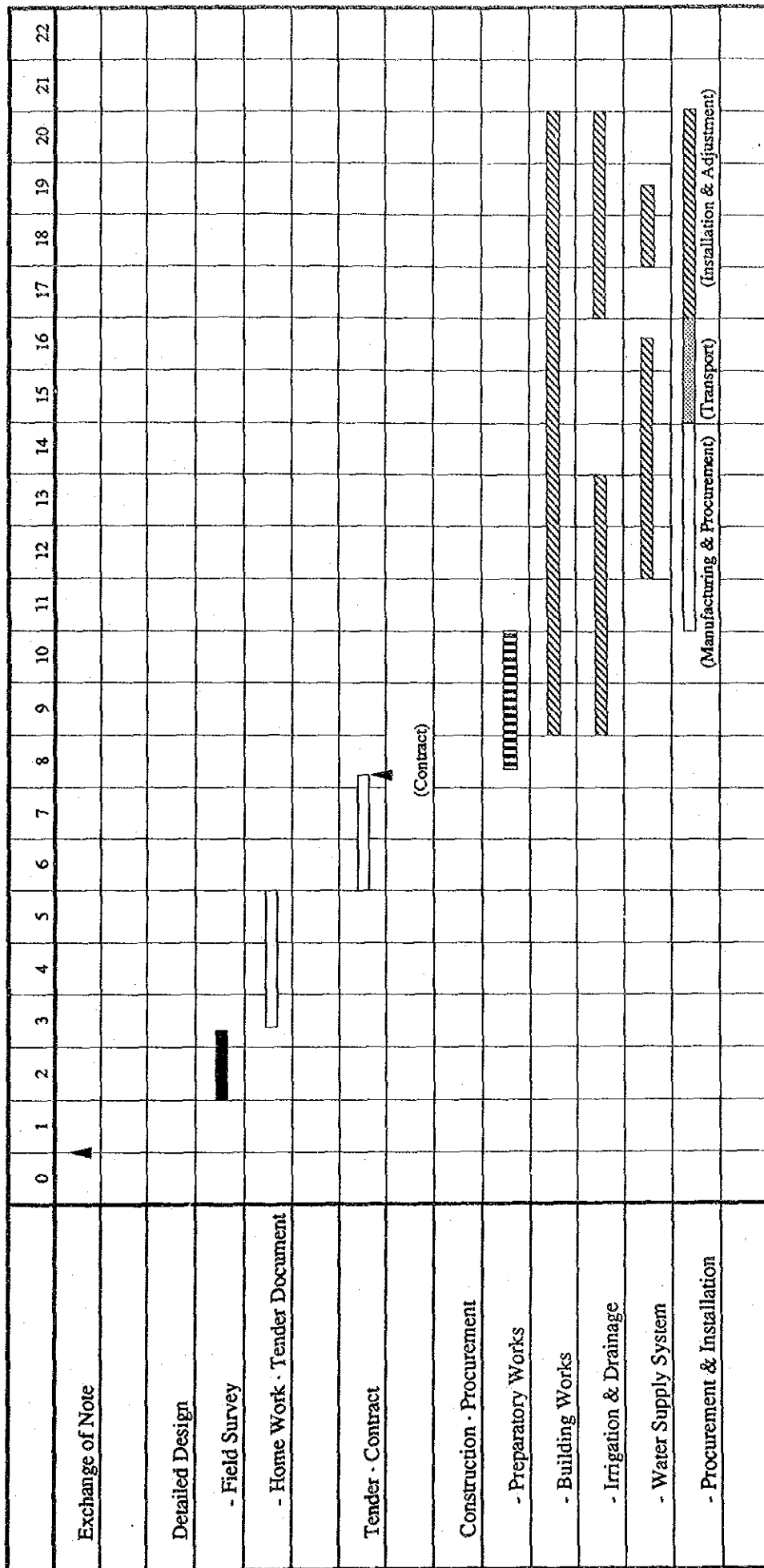
Figure 6 General Plan of Farm Land Consolidation

**LEGEND**

EXISTING	PLAN
Irrigation Canal	Irrigation Canal
Drainage Canal	Drainage Canal
Road	Approach Road (Concrete)
Fence	Farm Road (Gravel)
Bridge	Division Box
	Culvert
	Deep Well
	Water Tank
	Reservoir



**Figure 7 Tentative Implementation Schedule of the Project**





## **APPENDIXES**



## Appendix - 1

## Member List of Survey Team

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Position	Name	Home Post
Team Leader	Mr. Hideaki SOME	Ministry of Agriculture, Forest and Fishery
Seed Production Planner	Mr. Bunsaku TAYA	Fuchuyu Agricultural Extension Station, Toyama-Prefecture
Project Coordinator	Mr. Eiji INUI	Japan International Cooperation Agency
Seed Distribution Planner	Mr. Takayoshi YAMAZAKI	Nippon Koei Co., Ltd.
Architectural Designer	Mr. Masato KURODA	Nippon Koei Co., Ltd.
Land Consolidation Planner	Mr. Yoshikazu TAKAHASHI	Nippon Koei Co., Ltd.
Equipment and Facilities Planner	Mr. Hiroshi ABO	Nippon Koei Co., Ltd.
Cost Estimator	Mr. Kunio GOTO	Nippon Koei Co., Ltd.

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## Appendix - 2

## Survey Schedule (1/2)

No.	Date	Accommodation	Itinerary	Description
1	Aug. 18 (Tue.)	Manila	Tokyo - Manila	Depart Tokyo for Manila (Messrs. Some, Taya, Inui and Yamazaki)
2	19 (Wed.)	Manila		Courtesy call to AS, NEDA and DA / Discussion with BPI
3	20 (Thr.)	Manila		Discussion with BPI
4	21 (Fri.)	Munoz	Manila - Munoz	Inspection of Phil Rice and Discussion
5	22 (Sat.)	Manila	Munoz - Manila	Trip
6	23 (Sun.)	Manila	Tokyo - Manila	Depart Tokyo for Manila (Messrs. Abo, Kuroda and Takahashi)
7	24 (Mon.)	Iloilo	Manila - Iloilo	Internal meeting Field Survey at VES and Discussion
8	25 (Tue.)	Iloilo		Field Survey at VES and Discussion Inspection of Seed growers
9	26 (Wed.)	Manila	Iloilo - Manila	Discussion with BPI
10	27 (Thr.)	Manila		Discussion with DA Signing of Minutes of Meeting
11	28 (Fri.)	Manila		Data Analysis
12	29 (Sat.)	Manila	Manila - Iloilo	Leave Manila for Tokyo (Messrs. Some, Taya and Inui)
13	30 (Sun.)	Manila		Internal Meeting Data Analysis
14	31 (Mon.)	Manila		Discussion with BPI
15	Sep. 1 (Tue.)	Manila		Discussion with counterparts of BPI Discussion with the Contractor for survey
16	2 (Wed.)	Manila		Data collection of construction materials Discussion with counterparts of BPI / Data collection
17	3 (Thr.)	Manila		Data collection of construction materials Internal meeting / Data collection
18	4 (Fri.)	Manila		Data collection of construction materials Data collection at BPI
19	5 (Sat.)	Manila		Data collection of construction materials Discussion with the Contractor for Geo-hydrological Investigation
20	6 (Sun.)	Iloilo	Manila - Iloilo	Data Analysis Trip
21	7 (Mon.)	Iloilo		Discussion at VES / Inspection of Tigum Intake Field survey for farm, architecture and equipment
22	8 (Tue.)	Iloilo		Data collection of construction materials Field survey for farm, architecture and equipment
23	9 (Wed.)	Aklan Iloilo	Iloilo - Aklan	Field survey at Aklan Discussion with DA and VES / Data collection
24	10 (Thr.)	Iloilo Manila	Aklan - Capiz - Iloilo Manila - Iloilo	Field survey at Capiz Discussion with BPI
25	11 (Fri.)	Iloilo Manila	Iloilo - Antique - Iloilo	Field survey at Antique Discussion with BPI
26	12 (Sat.)	Iloilo		Data analysis / Meeting for Geo-hydrological Investigation Meeting with the Contractor for survey
27	13 (Sun.)	Manila Iloilo Manila		Data analysis Geo-hydrological Investigation

## Survey Schedule (2/2)

No.	Date	Accommodation	Itinerary	Description
28	Sep. 14 (Mon.)	Iloilo		Field survey for farm, architecture and equipment at VES Data collection of construction materials
29	15 (Tue.)	Manila Iloilo		Data collection Field survey for farm, architecture and equipment at VES Data collection of construction materials
30	16 (Wed.)	Manila Iloilo	Manila - Iloilo	Data collection Discussion at VES
31	17 (Thr.)	Manila		Discussion at BPI Data collection of construction materials
32	18 (Fri.)	Iloilo Manila		Meeting with BPI concerning result of field survey in Panay Island Field survey at VES / Data collection of construction materials
33	19 (Sat.)	Manila Iloilo		Inspection of Phil Rice / Data collection Field survey at VES
34	20 (Sun.)	Manila	Iloilo - Manila	Data analysis Field survey at VES / Meeting for Geo-hydrological Investigation Meeting with the Contractor for Geo-hydrological Investigation
35	21 (Mon.)	Manila		Meeting with BPI Data collection of construction materials
36	22 (Tue.)	Manila		Meeting with BPI Data collection of construction materials
37	23 (Wed.)	Manila / Los Banos		Data collection of construction materials Inspection of BPI Economic Garden and others in Los Banos / Data collection
38	24 (Thr.)	Manila / Quezon		Discussion with BPI concerning result of field survey and others Field survey at Quezon / Inspection of Soil Research and Development Center
39	25 (Fri.)	Manila		BPI, Japanese Embassy and JICA
40	26 (Sat.)		Manila - Tokyo	Leave Manila for Tokyo (Messrs. Yamazaki, Abo, Kuroda and Takahashi)

Notes :  
 BPI ; Bureau of Plant Industry  
 VES ; Visayas Experimental Station  
 NEDA ; National Economic Development Agency  
 DA ; Department of Agriculture

Appendix - 3 Member List of Concerning Party in the Recipient Country (1/3)

1. National Economic Development Agency (NEDA)

Dr. Marietta S. Adriano Director of Agriculture Staff

2. Department of Agriculture (DA)

Mr. Bruce J. Tolentino Under-secretary, Policy & Management  
Ms. Cecilia Astilla Development Management Office  
Ms. Lourdes Faustino Senior Agriculturist

3. Bureau of Plant Industry (BPI)

Mr. Nerius Roperos Director  
Mr. Augusto Baluyut Asst. Director  
Ms. Rustica S. Bautista Chief, Crop Production Div.  
Engr. Teresita C. Silva Chief, Agricultural Engineering Div.  
Mr. Benedicto Caballero Supervising Agricultural Development Specialist, Crop Production Div.  
Mr. Cresencio Aquino Sr. Supervising Agricultural Development Specialist, Crop Production Div.  
Ms. Benedicta Donato Chief, Production Section  
Ms. Leonida Morales Project Evaluation Officer, Planning Div.  
Ms. Erlinda P. Sevilla Chief, SQCS  
Ms. Soledad Manipot Seed Lab.  
Mr. Henrico Icatlo Engineering Div.  
Mr. Herminiano Hnelgas Engineering Div.  
Mr. Clarito Barron Agriculturist II  
Ms. Myrna Tamayo Secretary, BPI - JICA Project Office

4. Phil Rice

Dr. Santiago R. Obien Executive Director  
Mr. Hilario C. dela Cruz Jr. Chief Science Research Specialist & Head, Plant Breeding Div.  
Dr. Pompe C. Sta. Cruz Chief Science Research Specialist & Head, Agronomy - soils Div.  
Dr. Teodula M. Metra Supervising Science Res. Specialist, Agronomy - soils Div.  
Mr. Rogelio P. Limuaco Senior Science Research Specialist & Head, Seed Production and Health Unit  
Dr. Danilo C. Israel Chief Science Research Specialist & Head, Social Science and Policy Research  
Mr. Florentino M. Olivares Jr. Chief Science Research Specialist & Head, Crop Production Div.  
Mr. Jean V. Recta Senior Science Research Specialist & Head, Planning and Collaborative Project Office  
Mr. Eulito U. Bautista Supervising Science Res. Specialist & Head, Rice Engineering & Mechanization Div.



Appendix - 3 Member List of Concerning Party in the Recipient Country (2/3)

5. DA Regional Office

Mr. Vicente Y. Masaducon	Director
Mr. Maximo A. Manaay	Regional Seed Coordinator
Mr. Victorino Jover	Provincial Seed Coordinator, Iloilo
Ms. Elsa C. Porque	Provincial Seed Inspector, Iloilo

6. Seed Growers Federation

Mr. Nilo L. Jarantilla	President, Regional
------------------------	---------------------

7. West Visayas Integrated Agricultural Research Center (WESVIARC)

Mr. Dominador P. Banaylo	Superintendent
Mr. Moises C. Caguimbay	Production Sec.
Mr. Edgardo Baylon	Production Sec.
Mr. Ruperto Deysolong, Jr.	Engineering Sec.
Mr. Rodrigo S. Trio	Engineering Sec.
Ms. Modesto Sodusta Jr.	Engineering Sec.
Ms. Jesusa Argumento	Engineering Sec.

8. Seed Quality Control Service (SQCS) ( Region VI )

Ms. Dolores Delos Santos	Chief, Seed Testing Laboratory (STL)
Mr. Nemesio C. Argument	Agriculturist II
Mr. Bernardino Agor	ACC. II
Mr. Corazon Torocelillas	Agriculturist I

9. Aklan Province

Hon. Corazon L. Cabgnot	Governor
Mr. Diosdado S. Magbanua	Provincial Agricultural Officer
Atty. Pedro M. Cordova	President of Aklan Seed Growers Multi-purpose Cooperative
Mr. Ernesto P. Magallanes	Provincial Seed Coordinator
Mr. Manuel Rectar	Seed Inspector
Mr. Mr. Casiano Flores Jr.	Seed Inspector

10. Capiz Province

Hon. Esteban Contreras	Governor
Mr. Cesar Besana	Provincial Agricultural Officer
Mr. Robert G. Acevedo	Provincial Engineer (Civil Engineer II)
Mr. Jemmy Destua	Seed Producers' Multi-purpose Cooperative
Ms. Sara Pequierda	Provincial Seed Coordinator
Mr. Felipe Taleon	Seed Inspector
Mr. Samuel Aranciuo	Seed Inspector

Appendix - 3 Member List of Concerning Party in the Recipient Country (3/3)

11. Antique Province

Hon. Jovito C. Plameras Jr.

Mr. Felicito R. Tidon

Mr. Jorge M. Balena Jr.

Mr. Rodolfo M. Santiago

Mr. Tomas Sambayan

Governor

Provincial Agricultural Engineer

Provincial Seed Coordinator

President of Antique Seed Growers Association  
Incorporated

Seed Inspector

12. JICA

Shigetaka SABURI

Adviser, DA

MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY ON THE PROJECT FOR  
IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND  
ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM  
IN  
THE REPUBLIC OF THE PHILIPPINES

Based on the results of the Preliminary Study, the Japan International Cooperation Agency (JICA) decided to conduct a Basic Design Study on the Project for Improvement of Seed Production and Distribution and Establishment of Appropriate Seed Storage System (hereinafter referred to as "the Project").

JICA sent to the Philippines a study team, which is headed by Mr. Hideaki Some, Deputy Director, Crop Production Div., Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries, August 18 to September 26, 1992. The team had a series of discussions with the officials concerned of the Government of the Philippines and conducted a field survey at the study area.

As a result of discussions and field survey, both sides have confirmed the main items described in the attached sheets. The team will proceed to further work and prepare the Basic Design Study Report.

Manila, August 27, 1992

染 莫 昭

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Mr. Hideaki Some  
Leader  
Basic Design Study Team  
JICA

*Mr. N. I. Roperos*

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Mr. Neri I. Roperos  
Director  
Bureau of Plant Industry  
Department of Agriculture  
Philippines

## ATTACHMENT

### 1. Objective

The objectives of the Project are to construct and rehabilitate seed-related facilities and to procure the necessary equipment in model areas in order to improve rice seed production and distribution system as a model of seed development plan.

### 2. Project sites

The sites of the Project are Visayas Experiment Station and the rice seed distribution area under this station, and Bureau of Plant Industry in Quezon city, Metro Manila. ( Site maps are attached as Annex I . )

### 3. Executing Agency

The Bureau of Plant Industry (BPI) is responsible for the administration and execution of the Project with support of Regional Office of Department of Agriculture, Region VI. ( Implementation Organization Chart is attached as Annex II . )

### 4. Necessary items for the realization of the Project requested Government of the Philippines

After discussions with the Basic Design Study Team, the following items were judged necessary for the realization of the Project:

- (1) Strengthening of the seed-related facilities in BPI Head Office
  - 1) Construction of seed storage
  - 2) Construction of seed testing laboratory
  - 3) Procurement of seed quality control, storage and seed distribution equipment
  
- (2) Improvement of Seed Production in Visayas Experiment Station
  - 1) Construction of seed storage
  - 2) Construction of seed testing laboratory
  - 3) Construction/Improvement of seed processing plant \*
  - 4) Improvement of seed production farm
  - 5) Procurement of seed quality control and storage equipment
  - 6) Procurement of farm machineries
  - 7) Procurement of equipment related to seed distribution

\* The capacity to include the Iloilo Seed Production Association

- (3) Improvement of Seed Production Association in Capiz and Aklan
  - 1) Construction of seed storages
  - 2) Procurement of seed processing machineries

However, the final components of the Project may differ from the above items, if it is found necessary after further studies in Japan.

5. Improvement of Seed Production Association in Antique

- 1) Both sides have agreed that construction of seed storages and Procurement of seed processing machineries in Antique will be judged after further studies in Japan.

6. Japan's Grant Aid system

- 1) The Philippines side understands the system of Japan's Grant Aid as explained by the team.
- 2) The Philippines side will take necessary measures, as described in Annex III, for the smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

7. Other relevant issues

On condition that Japan's Grant Aid is extended to the Project;

- 1) the Government of the Philippines will allocate the necessary budget for the operation and maintenance the facilities and equipment provided by the Project.
- 2) the Department of Agriculture will provide the necessary personnel for operation and maintenance the facilities and equipment provided by the Project.
- 3) possession of seed production association facilities will belong to the Bureau of Plant Industry, Department of Agriculture.

8. Tentative Schedule of the Study

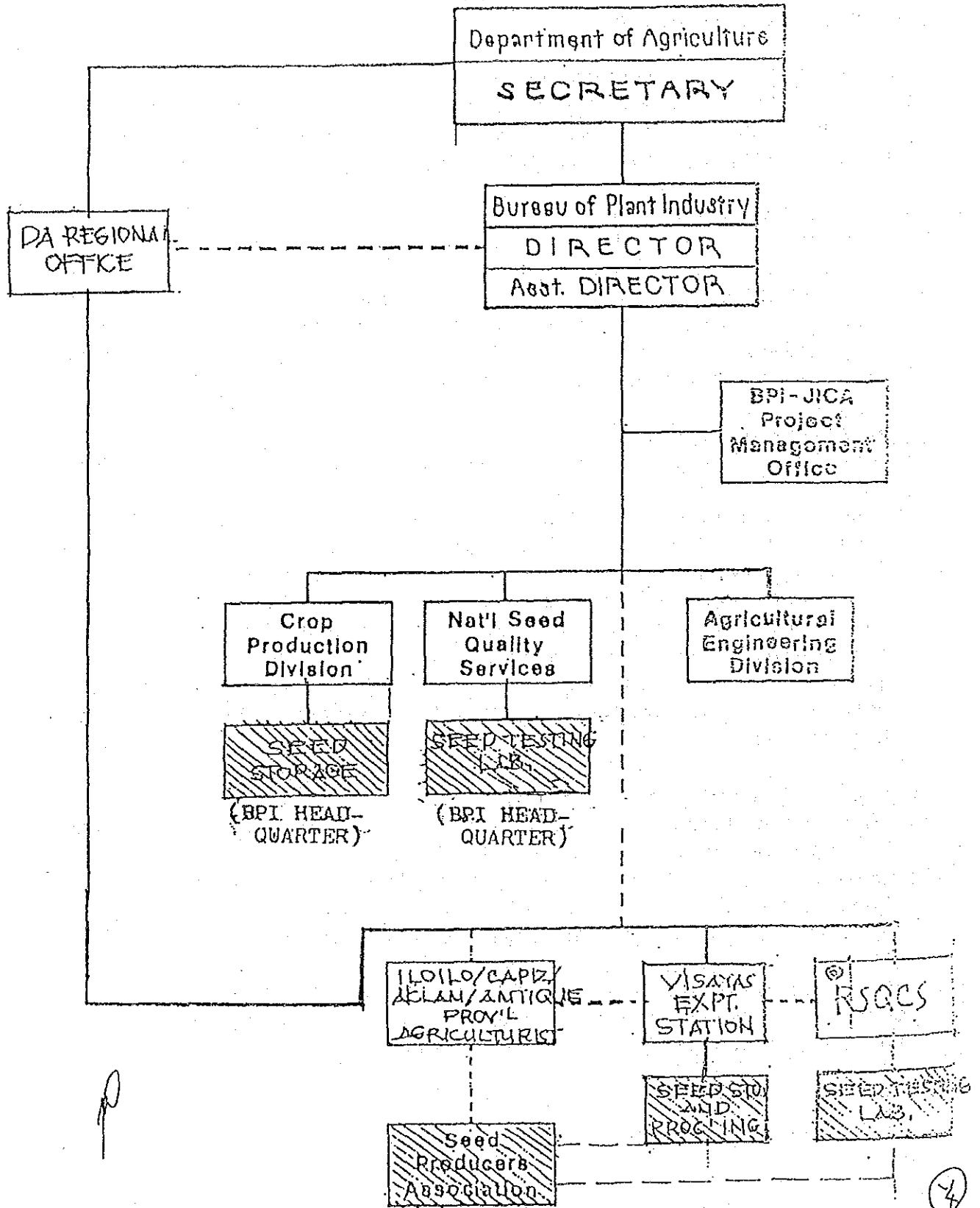
- 1) The consultants will proceed to further studies in the Philippines until September 26, 1992.
- 2) Based on the Minutes of Discussions and the results of the study, JICA will compile a draft report and dispatch a mission in order to explain its contents in January 1993.
- 3) Upon approval of the said draft report by the Philippines side, JICA will complete the final report and send it to the Government of Philippines around March 1993.



# IMPLEMENTING ORGANIZATIONAL CHART

ANNEX I.

IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM



A-10

① REGIONAL SEED QUALITY CONTROL

④

ANNEX 11

LOT 2-B-9 AREA = 1,476.46 SQ. M.

LOT 2-B-29  
BUREAU OF PLANT INDUSTRY  
AREA = 14,774.84 SQ. M.

LOT 2-B-3  
BUREAU OF SOILS  
AREA = 13,059.00 SQ. M.

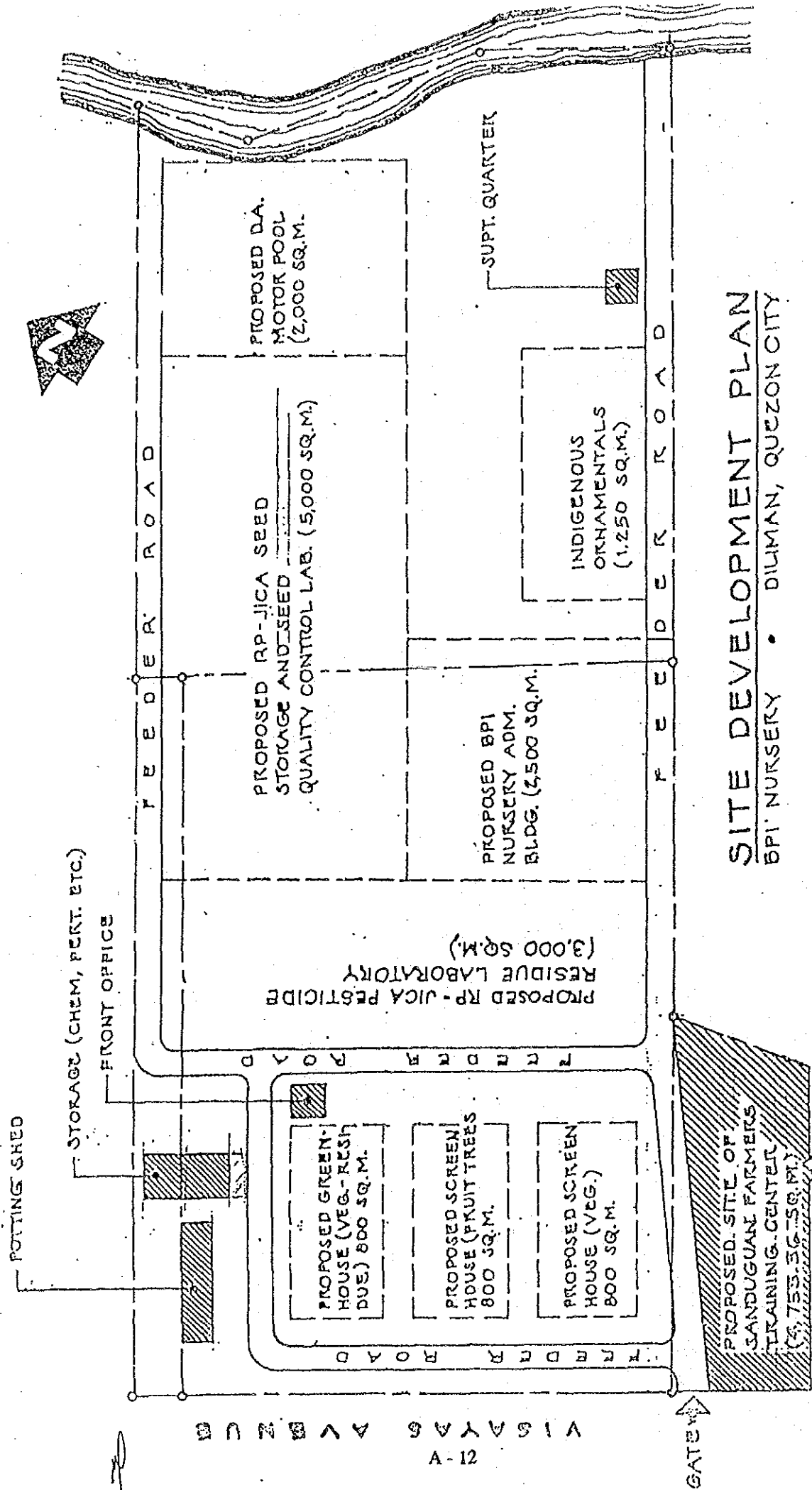
LOT 2-B-25  
PROPOSED SITE OF  
SANDUSAN FARMERS  
TRAINING CENTER  
AREA = 9,753.36 SQ. M.

LOT 2-B-4  
AGRICULTURAL PRODUCTIVITY COMMISSION  
AREA = 17,403.90 SQ. M.

VISAYAS AVENUE

BUREAU OF PLANT INDUSTRY NURSERY  
PALINAN, QUEZON CITY  
DEVELOPMENT PLAN

LOT 2-B-2a		LOT 2-B-2b	
LINES	BEARINGS	DISTANCES	
1-2	N 57° 31' E	149.00 M.	
2-3	S 32° 25' E	99.00 M.	
3-4	S 57° 31' W	149.00 M.	
4-1	N 32° 25' W	99.16 M.	
LOT 2-B-2b			
1-2	N 32° 25' E	76.00 M.	
2-3	S 15° 05' E	63.78 M.	
3-4	S 73° 03' W	7.00 M.	
4-5	S 68° 17' W	22.00 M.	
5-6	S 63° 31' W	10.38 M.	
6-7	S 74° 02' W	3.65 M.	
7-8	N 84° 56' W	3.65 M.	
8-9	N 65° 55' W	3.65 M.	
9-10	N 42° 54' W	3.65 M.	
10-1	N 32° 25' W	71.74 M.	



**SITE DEVELOPMENT PLAN**  
 BPI NURSERY • DILIMAN, QUEZON CITY

V I S I T A T I O N R O A D

A-12



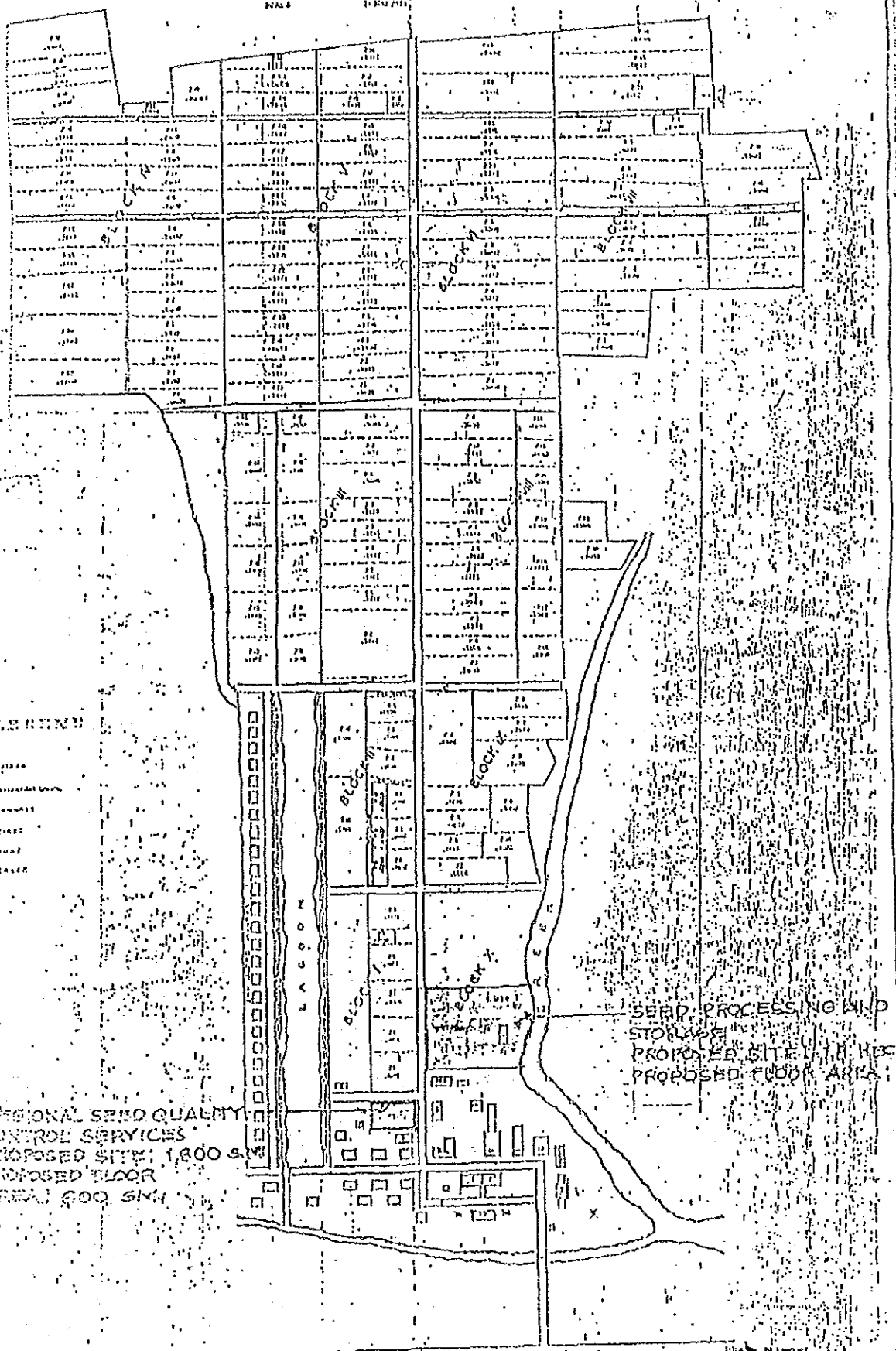


VISAYA EXPERIMENT STATION

Philippines, Inc., Manila City

TOTAL AREA 108,220 Ha.

ANNEX II-3



LEGEND

REGIONAL SEED QUALITY  
CONTROL SERVICES  
PROPOSED SITE: 1800 sq. m.  
PROPOSED FLOOR  
AREA: 600 sq. m.

SEED PROCESSING AND  
STORAGE  
PROPOSED SITE FOR  
PROPOSED FLOOR AREA



ANNEX II-4

PROJECT SITE  
(BRESY-LANOT, ROXAS CT.)

PROJECT: PROPOSED SEED STORAGE  
LOCATION: PROYL NURSERY, BRESY-LANOT,  
ROXAS CITY, CAPIZ

20

PROPOSED SITE  
(SEED STORAGE)

20 M X 100 M

PROYL NURSERY

GOVERNOR'S  
RESTHOUSE

FARMERS TRAINING  
CENTER



← TO ROXAS CITY

VICINITY MAP  
SCALE

← 5 KM FROM ROXAS CITY

LOCALITY MAP

47

SKETCH PLAN

LOT NO. 1997 MARAYATQ CAQ.

Department of Agriculture

Situated in the

Borough of CALANGCANG

Municipality of MARAYATQ

Province of AKLAN

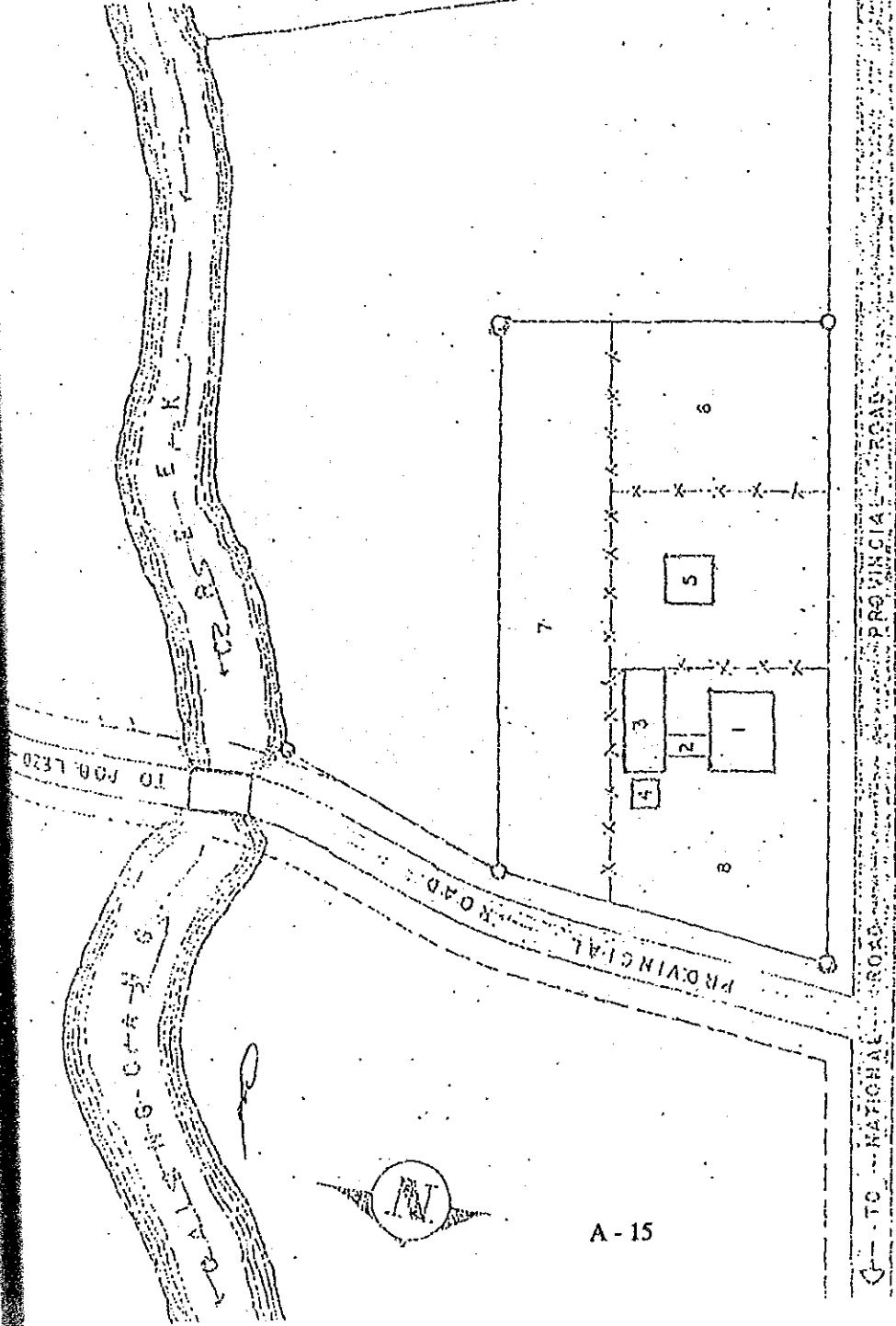
Island of PANAY

Conjoining on area of 4,607 sqm  
(0.4607 Hectares)

NOTE:

Site distance to National

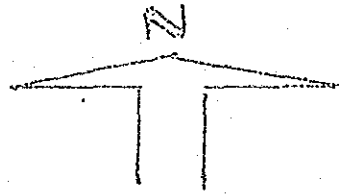
Road = 1,000 meters



LEGEND :

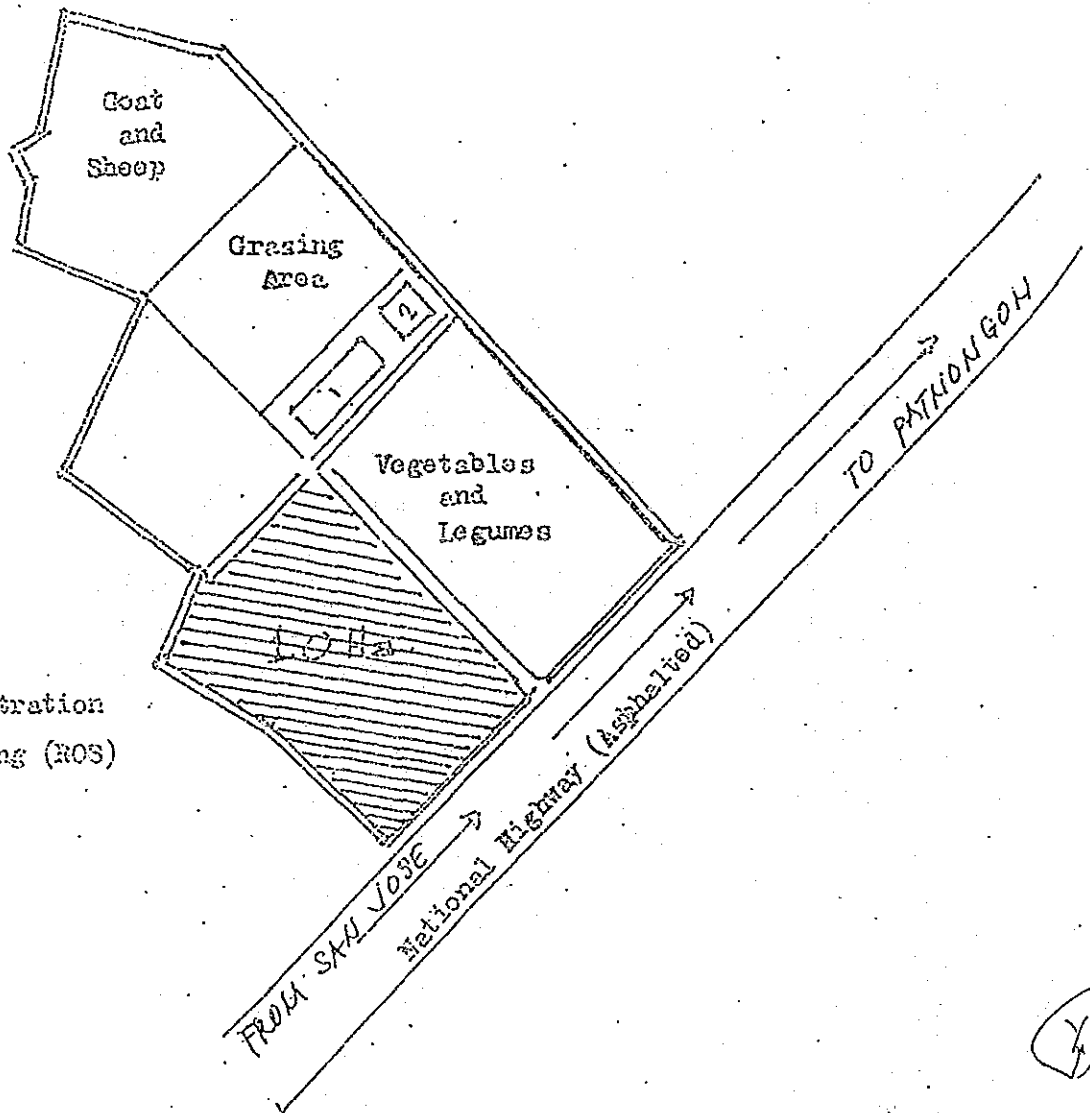
- 1. Artificial Sreeding Center
- 2. Nursery
- 3. Piggery
- 4. Existing Water Tank
- 5. BPI - NAFC Project Site
- 6. Proposed Project Site
- 7. Vegetable Row Crops
- 8. Vegetables
- 9. Existing Cyclone wire Fence
- 10. Roadwidth Widening

5



SKETCH PLAN

Lot No. 1329-A Patnongon Cadastre  
Department Of Agriculture  
Situating in the  
Barangay Of Padang,  
Municipality of Patnongon  
Province of Antique  
Island of Panay  
Containing an area of  
30,000 square meters  
( 3.0 Hectares)



Legend:

- 1. Administration Building (ROS)
- 2. Pig Pen

Handwritten initials or signature.

Handwritten mark, possibly a circled 'Y'.

Annex III

Undertakings by the Government of Republic of the Philippines

1. To secure the land necessary for the construction of the Project facilities prior to commencement of the Project.
2. To clear, level and reclaim the construction sites prior to commencement of the Project.
3. To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the sites.
4. To ensure speedy unloading, tax exemption, custom clearance of the products under the grant at the port of disembarkation.
5. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the Verified Contracts such facilities as may be necessary for their entry into the Philippines and stay therein for the performance of their work.
6. To exempt Japanese national involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Philippines with respect to the supply of equipment/machines and services under the Verified Contracts.
7. To bear commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
8. To bear all expenses, other than those to be covered by the Grant Aid necessary for the execution of the Project.
9. To assign exclusive counter part engineers/technicians, for the Project.
10. To use and maintain properly and effectively the facilities constructed and equipment purchased under the Grant.

MINUTES OF DISCUSSIONS

ON

THE BASIC DESIGN STUDY ON THE PROJECT FOR  
IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND  
ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM

IN

THE REPUBLIC OF THE PHILIPPINES

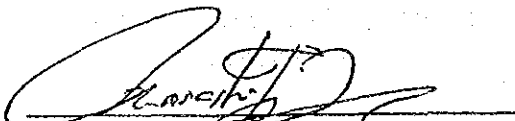
(CONSULTATION ON DRAFT REPORT)

In August 1992, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Project for Improvement of Seed Production and Distribution and Establishment of Appropriate Seed Storage System (hereinafter referred to as "the Project") to the Republic of the Philippines, and based on the discussions with the Philippines side and the examination of the results of the field survey, JICA has prepared the draft report of the study.

In order to explain and discuss the contents of the draft report, JICA sent to the Philippines a study team, which is headed by Mr. Masashi Fujita, Personnel Department, JICA, from January 25 to January 30, 1993.

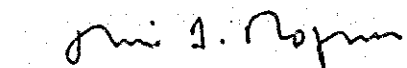
As a result of discussions, both sides have confirmed the main items described in the attached sheets.

Manila, January 29, 1993



Mr. Masashi Fujita

Leader  
Draft Report Explanation Team  
JICA



Mr. Nerius I. Roperos  
Director  
Bureau of Plant Industry  
Department of Agriculture  
Philippines

ATTACHMENT

1. Contents of the Draft Report

The Philippines side has agreed and accepted in principle the contents of the Draft proposed by the team.

2. Japan's Grant Aid System

- 1) The Philippines side understands the system of Japan's Grant Aid as explained by the team.
- 2) The Philippines side will take the necessary measures, as described in the Annex I for the smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

3. Other relevant issues

On condition that Japan's Grant Aid is extended to the Project;

- 1) the Government of the Philippines will allocate the necessary budget to the Project for securing sustainable and proper operation and maintenance of the facilities constructed and equipment purchased under the Grant.
- 2) the Government of the Philippines will complete reclamation work for the facilities constructed under the Grant prior to commencement of the Project.

*Jun I. Noyama*



4. Further Study

JICA will complete the final report with the confirmed items, and send it to the Government of the Philippines around March 1993.

*Shinji. Nagano*





Annex I

Necessary measures to be taken by the Government of the Philippines on condition that Japan's Grant Aid is extended:

1. To secure the land necessary for the construction of the Project facilities.
2. To clear, level and reclaim for the construction sites prior to commencement to the Project.
3. To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the site.
4. To ensure speedy unloading, tax exemption, custom clearance of the products under the grant at the port of disembarkation.
5. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the Verified Contracts such facilities as may be necessary for their entry into the Philippines and stay therein for the performance of their work.
6. To exempt Japanese national involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in the Philippines with respect to the supply of equipment/machines and services under the Verified Contracts.

*Mari T. Lopez*



7. To bear commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
8. To bear all expenses, other than those to be covered by the Grant Aid necessary for the execution of the Project.
9. To assign exclusive counterpart engineers/technicians for the Project.
10. To use and maintain properly and effectively the facilities constructed and equipment purchased under the Grant.

*John A. Popper*



**I. BASIC INDICATORS**

1. Name of Country	:	PHILIPPINES			
2. Capital	:	Manila			
3. Date of Independence	:	June 12, 1898			
4. Area of Territory	:	300,000 km <sup>2</sup>			
5. Population	:	60,685,000 (as of May 1, 1990)			
6. Population Density	:	202.3 person/km <sup>2</sup>			
7. Population Growth Rate	:	2.35% per year			
8. Life Expectancy	:	55 years old			
9. Political Conditions					
(1) Form of Government	:	Presidential Form			
(2) Form of National Assembly	:	Governmental affairs consists of 3 department namly ; Legislative, Executive and Judicial			
(3) Political Party	:	Multi-party System			
(4) Sovereign (President)	:	Fidel Ramos			
10. Religious Conditions	:	Catholic	:	85.0%	
		Islam	:	4.3%	
		Aglipayan	:	3.9%	
		Protestant	:	3.1%	
		Iglesia ni Kristo	:	1.3%	
		Buddist	:	0.9%	
11. Languages	:	87 languages and dialects Major are Tagalog and Cebuano English is also prevalent			
12. Racial Conditions	:	Tagalog	29.7%	Cebuano	24.2%
		Ilocano	10.3%	Ilongo	9.2%
		Bicol	5.6%	Samr-Leyte	4.0%
		Panpanga	2.8%	Pangasinan	1.8%
		Others	12.4%		

### 13. Education

- (1) Education System : Two (2) forms of education
- 1) Formal education
    - Pre-school ; (1 or 2 years, optional)
    - Primary school ; (6 years)
    - Secondary school ; (4 years)
    - Tertiary or college education ; (4 to 5 years)
    - Post-tertiary (masters and Doctorate) ; Post-secondary non-degree technical/ training (3 years)
  - 2) Non- formal
    - Educational activities for employable skills in short-term non-degree course.

Kind of School	No of School	No of Teachers*	No of Pupils
Pre-school	3,837	11,018	321,459
Elementary school	34,382	315,585	10,284,816
Secondary school	5,521	118,805	3,961,639
Tertiary or college	1,755	-	1,347,715
Non-formal school	-	-	269,011

\*) ; Teachers in government schools only

Source ; 1991 Philippine Statistical Yearbook, NSCB

## II. SOCO-ECONOMIC INDICATORS

### 1. Trend of Gross Domestic Product

Unit : million peso

Items	1986	1987	1988	1989	1990
GDP (at current prices)	91,180	95,398	101,450	107,168	109,890
GDP Expenditure (at current price)	11,413	12,350	14,064	16,049	18,377
Per Capita National Income					
- at current prices	8,930	9,685	11,564	13,250	15,307
- at 1972 prices	1,309	1,314	1,420	1,473	1,492
Per Capita Private (personal)					
- at current prices	8,644	9,172	10,274	11,723	13,715
- at 1972 prices	1,212	1,228	1,271	1,313	1,363
Population (,000 persons)	54.95	57.36	58.72	60.10	61.48
Exchange Rate to US \$ (peso)	20.40	20.57	21.07	21.74	24.38

2. Gross Domestic Product by Industrial Origin  
(at 1972 constant price)

Unit : million peso

Items	1986	1987	1988	1989	1990
Agriculture, fishery and forest	27,110	26,834	27,793	28,986	29,620
Mining and quarrying	1,574	1,574	1,615	1,563	1,602
Manufacturing	21,717	23,076	25,281	26,886	27,259
Construction	3,382	3,967	4,344	4,947	5,153
Electricity, gas and water	1,723	1,908	1,995	2,137	2,206
Transport and communication	5,105	5,251	5,487	5,761	5,977
Trade	14,337	15,153	15,998	16,795	17,352
Finance and housing	4,831	5,832	6,250	6,843	7,205
Private services	6,039	6,106	6,445	6,767	6,997
Government services	5,362	5,697	6,242	6,483	6,519
<b>Total</b>	<b>91,180</b>	<b>95,398</b>	<b>101,450</b>	<b>107,168</b>	<b>109,890</b>

3. Currency Unit Trend of Exchange Rate to US Dollar

(1) Currency Unit : Philippine peso

(2) Trend of Exchange Rate to US Dollar

Unit : peso

Item	1987	1988	1989	1990	1991
Exchange Rate to US\$ 1.00	20.568	21.095	21.737	24.311	24.479

4. Consumer Price Rate

Item	1987	1988	1989	1990	1991
Annual Inflation Rate	3.8	8.8	10.6	12.7	16.6

Source : NSO

5. Trend of Foreign Trade

(1) Trend of Foreign Trade

Unit : peso

Item	1986	1987	1988	1989	1990
Export*	98,578.64	117,608.13	149,053.39	169,717.44	198,101.93
Import	102,889.44	138,579.47	171,918.14	226,505.15	297,586.18
Balance	(4,310.80)	(20,971.34)	(22,864.74)	(56,787.71)	(99,484.25)

\* ) : Sum of domestic exports and re-exports

Source : National Statistics Office

## (2) National Commodities Traded

## 1) Agricultural Products

## a. Export

Unit: million US\$

Items	1986	1987	1988	1989	1990
Sugar	86.8	60.3	60.2	80.0	110.5
Coconut oil	332.8	380.5	408.2	376.8	360.7
Banana	130.2	121.2	146.0	146.2	149.3
Pineapple in syrup	83.5	86.3	83.2	91.3	78.2
Copra cake or meal	74.8	73.4	63.4	53.5	54.0
Desiccated coconut	44.3	75.3	78.3	78.0	60.7
Tuna, frozen except fillet	63.1	69.9	113.2	1,130.0	102.6
Coffee, raw or green, not roasted	118.8	33.1	49.9	42.0	8.0
Copra	17.5	31.9	28.0	25.2	20.5
Abaca (in '000 bales)	13.0	11.8	16.3	17.6	14.8

Source: Foreign Trade Statistics, NSO

## b. Imports

Unit: million US\$

Items	1986	1987	1988	1989	1990
Cereals and cereal preparations	168.31	134.41	228.25	337.01	437.10
Fertilizers, manufactured	83.41	89.24	107.74	103.69	117.29
Daily products and bird eggs	98.22	149.54	161.44	216.56	229.30
Feeding stuff for animal (milled)	87.05	97.64	166.50	176.97	173.90
Tobacco, tobacco manufactures	65.90	94.39	78.10	65.50	62.85
Coffee, tea, cocoa, spices	3.70	5.44	8.10	13.68	18.19
Fish, crustaceans, mollusks	18.90	30.96	35.39	36.50	47.90
Meat and meat preparations	3.67	6.93	9.80	17.76	19.14
Vegetables and fruits	16.43	18.08	36.85	51.00	42.75
Fixed vegetable oil and fats	8.39	8.99	12.49	18.39	17.42

Source: Foreign Trade Statistics, NSO

## 2) Non-agricultural Products

## a. Exports

Unit: million US\$

Items	1986	1987	1988	1989	1990
Mineral products	267.00	224.00	383.00	424.00	361.00
Mineral, fuel and lubricants	66.00	97.00	153.00	118.00	155.00
Chemicals	243.00	245.00	256.00	279.00	261.00
Textiles	44.00	68.00	71.00	88.00	93.00
Miscellaneous manufactures	2874.00	3558.00	4647.00	5689.00	6158.00
Re-export	112.00	149.00	80.00	70.00	95.00

Source: National Statistics Office, Central Bank of the Philippines for data prior to 1973

b. Imports		Unit: million US\$				
Items	1986	1987	1988	1989	1990	
Machinery and equipment	305.20	453.60	837.40	1,105.80	1,531.20	
Un-processed raw materials	997.30	1,359.90	1,386.30	1,791.80	2,357.10	
Semi-processed raw materials	3,104.90	4,092.80	4,982.50	6,329.20	6,924.20	
Supplies	321.40	370.90	384.40	504.60	538.20	
Consumer goods (non-durable)	294.60	440.00	531.10	623.90	773.80	

Source : National Statistics Office, Central Bank of the Philippines for data prior to 1973

6. Economically Active Population Employment by Sector, Daily Wage Rate and Employment by Major Industry

(1) Economic active population

Unit, 000 persons

Year	Population (15 years and over)	Active Population	Inactive Population
1985	33,646	29,911	3,735
%	100.0	88.9	11.1
1986	4,738	4,212	526
%	100.0	88.9	11.1
1987	34,840	31,670	3,170
%	100.0	90.9	9.1
1988	35,865	32,888	2,977
%	100.0	91.7	8.3
1989	36,916	33,815	3,101
%	100.0	91.6	8.4
1990	37,999	34,921	3,078
%	100.0	91.9	8.1

(2) Employment by Sector

Unit : ,000 persons

Major Industry Group	1987	1988	1989	1990
Agriculture, forestry, hunting and fishing	9,940	9,920	9,852	10,185
Mining, quarrying	157	154	133	
Construction	2,059	2,238	2,298	2,188
Manufacturing	95	83	91	
Electricity, gas, water, and sanitary services	759	858	911	974
Commerce	2,972	3,074	3,145	
Transport, communication and storage	946	1,049	1,095	1,137
Government, community, business, recreation	379	398	444	
Personal services other than domestic	3,621	3,827	3,972	4,220
<b>Total</b>	<b>20,795</b>	<b>21,495</b>	<b>21,837</b>	<b>22,517</b>

## (3) Daily Wage Rate, 1987 - 1990

Unit: peso

Items	1987	1988	1989	1990
<b>Agriculture</b>				
Metro Manila	58.27	69.33	82.88	96.42
Outside Metro Manila	57.24	69.33	82.88	96.42
<b>Non-agriculture</b>				
Plantation	46.67	47.67	72.04	85.85
Non-plantation	35.67	36.49	55.28	63.38

## (4) Employment by Major Industry

Unit: %

Major Industry Occupation	1987	1988	1989	1990
Number of person employed 15 years and over (,000 persons)	34,840	35,865	36,916	37,999
Agriculture, forestry, hunting, fishing	28.53	27.66	26.69	26.80
Mining, quarrying	0.42	0.44	0.42	0.35
Construction	5.91	6.24	6.22	5.76
Manufacturing	0.23	0.26	0.22	0.24
Electricity, gas, water, sanitary services	2.18	2.39	2.47	2.56
Commerce	8.20	8.29	8.33	8.28
Transport, communication, storage	2.72	2.92	2.97	2.99
Government, community, business, recreat	1.11	1.06	1.08	1.17
Personal services other than domestic	10.39	10.67	10.76	11.11
<u>Total</u>	<u>59.69</u>	<u>59.93</u>	<u>59.15</u>	<u>59.26</u>

## 7. Balance of Payment (1)

Unit: million US\$

Items	1986	1987	1988	1989	1990
<b>I. Current Transactions</b>					
a. Merchandise Trade	(202)	(1,017)	(1,085)	(2,598)	(4,020)
Export	4,842	5,720	7,074	7,821	8,186
Import	5,044	6,737	8,159	10,419	12,206
b. Non-merchandise Trade	783	0	(80)	303	618
Inflow	3,791	3,454	3,592	4,586	4,836
Outflow	3,008	3,454	3,672	4,283	4,218
c. Transfor (donations, etc.)	441	573	775	830	714
Inflow	445	575	778	832	717
Outflow	4	2	3	2	3
<u>Current net inflow, total</u>	<u>1,022</u>	<u>(444)</u>	<u>(390)</u>	<u>(1,465)</u>	<u>(2,688)</u>



## 7. Balance of Payment (2)

Unit: million US\$

Items	1986	1987	1988	1989	1990
<b>II. Non-monetary Capital</b>					
d. Long-term capital	815	159	(519)	379	392
Inflow	2,545	2,598	2,412	2,811	4,398
Outflow	1,730	2,439	2,931	2,432	4,006
e. Lon- term capital	114	326	986	854	469
Inflow	186	439	1,077	972	695
Outflow	72	113	91	118	226
f. Short-term capital	(814)	80	(303)	(91)	9
Errors and omission*	101	144	479	385	620
g. Monetization of gold	279	365	314	288	218
h. Allocation	(68)	(78)	83	101	797
<b>III. Overall Surplus (deficit)</b>	<b>1,247</b>	<b>264</b>	<b>650</b>	<b>451</b>	<b>(183)</b>

Source : Philippine Statistical Yearbook, 1991

## 8. Public External Debt

Unit: million US\$

Items	1984	1985	1986	1987	1988
<b>Total</b>	<b>25,418</b>	<b>26,252</b>	<b>28,256</b>	<b>28,649</b>	<b>28,039</b>
<b>Official Creditors</b>					
- Multilateral	4,090	4,486	4,688	5,033	4928
- Bilateral	2,276	2,860	3,925	5,203	6,234
- Others	139	373	374	844	723
<b>Private Creditors</b>					
- Suppliers	3,103	3,264	3,085	2,355	2,036
- Financial markets	1,089	795	828	390	399
- Banks	14,721	14,474	15,356	14,624	13,719

Source : Philippine Yearbook, 1989

## 9. Public Finance

Unit : million peso

Items	1987	1988	1989	1990	1991
Revenues	103,214	112,861	142,136	177,216	206,381
Tax	85,923	90,352	121,352	155,453	184,482
Non-tax	17,291	22,509	20,784	21,763	21,899
Expenditures	115,073	137,045	156,683	183,850	210,123
Current Operating	94,812	118,807	127,483	151,233	162,777
Capital Outlays	20,261	18,238	29,200	32,617	47,346
Net Budgetary					
Suplus / deficit	(19,459)	(24,184)	(14,547)	(6,184)	(4,519)
Budgetary					
Transactions	(11,859)	(19,277)	(10,873)	6,634	(3,742)
Net lending	(7,600)	(4,907)	(3,666)	(450)	(777)
Others					
Financing	<u>41,118</u>	<u>64,629</u>	<u>13,039</u>	<u>4,684</u>	<u>3,019</u>
Domestic (net)	34,337	47,339	1,644	(6,815)	(29,398)
External (net)	6,781	17,290	11,395	11,499	32,417
Change in each	21,659	40,445	1,500	1,500	1,500

Source : Budget of Expenditures and Sources of Financing, Dept. of Budget &amp; Management.

## 10. Expenditure by Purpose

Unit : million peso

Items	1987	1988	1989	1990	1991
Public Debt	70,223	71,321	56,498	60,871	74,763
General Services	12,559	15,730	17,453	22,144	25,982
Social Services	27,493	31,061	38,511	56,144	62,509
(% of education)	62	71	71	63	63
(% of health)	15	18	17	15	16
Economic Services	25,039	26,092	39,523	49,747	64,344
(% of agriculture)	30	32	33	34	33
(% of infrastructure)	37	50	43	34	30
Defense	70,223	71,321	56,498	60,871	74,763
<u>Total</u>	<u>205,537</u>	<u>215,525</u>	<u>208,483</u>	<u>249,777</u>	<u>302,361</u>

Source : Budget of Receipts and Expenditures, Dept. of Budget and Management &amp; Annual Finance Report, Commission on Audit.

## 11. Trend of Trade

Unit: million US\$

Items	1986	1987	1988	1989	1990
Exports to Japan	851.1	981.5	1,420.4	1,585.9	1,616.0
Import from Japan	868.3	1,121.2	1,421.3	2,043.2	2,232.0
<u>Balance</u>	-17.2	-139.7	-0.9	-457.4	-616.1

Source : Statistical Yearbook

## 12. Gross Official Foreign Reserves

Unit: million US\$

Items	1985	1986	1987	1988
Reserves (international)	1,061.14	2,458.98	1,958.68	2,058.88

Source : Central Bank of the Philippines



## ***DRAWINGS***

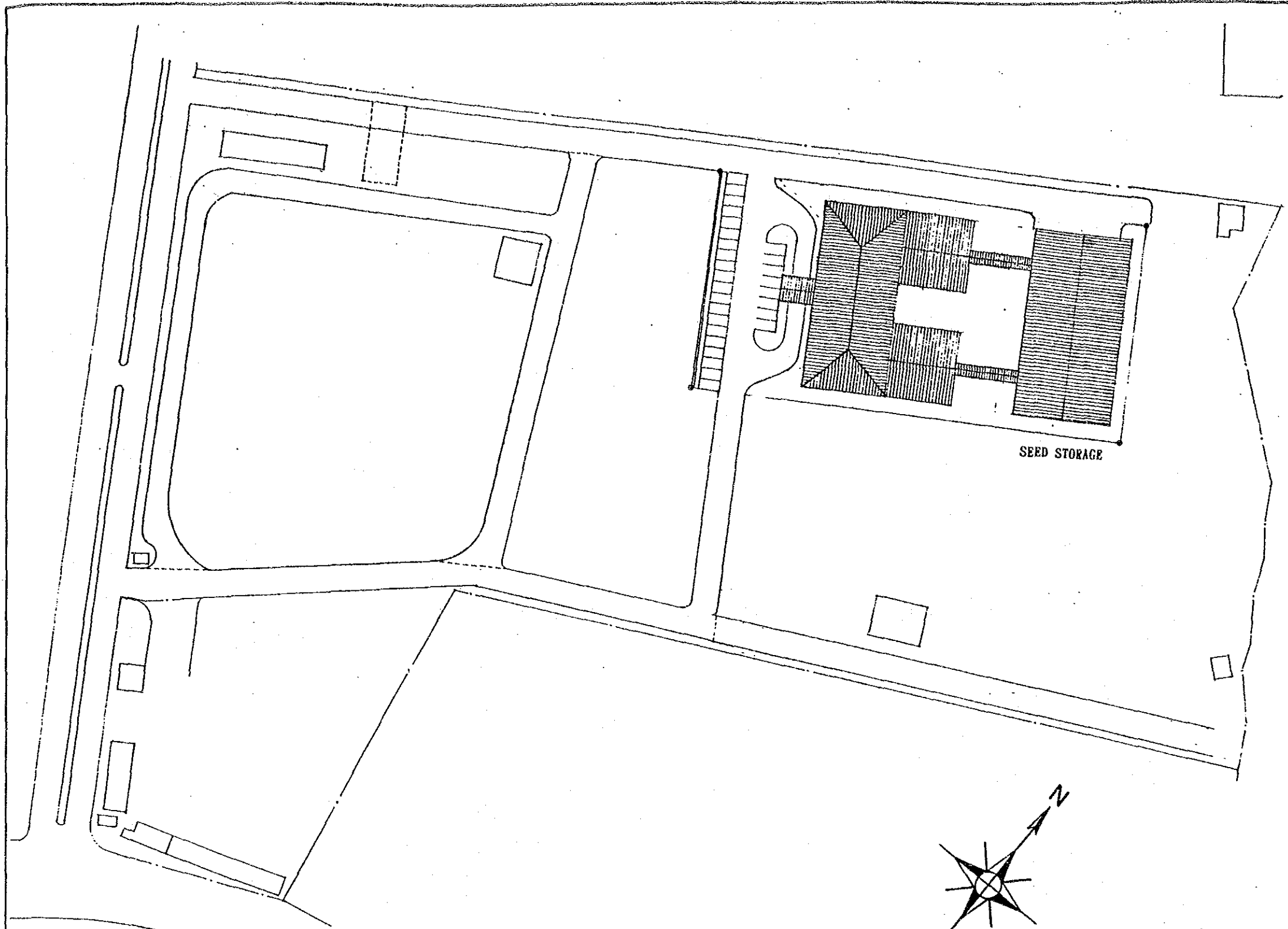


## LIST OF DRAWINGS

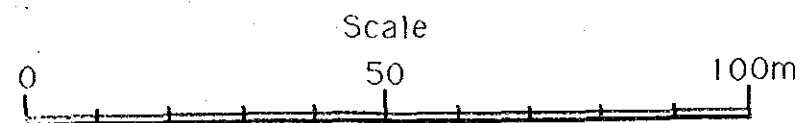
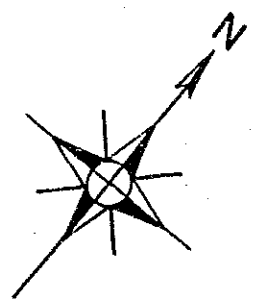
No.	Title of Drawings
<b>SEED STORAGE, SQCS AND STL</b>	
<b>Quezon City</b>	
1	General Plan
2	Seed Quality Control Service
3	Seed Storage
4 - 7	Seed Quality Control Service / Seed Storage (1/4 - 4/4)
<b>Western Visayas Integrated Agricultural Research Center</b>	
8	General Plan
9 - 12	Seed Testing Laboratory (1/4 - 4/4)
13 - 14	Motor Pool / Work Shop (1/2 - 2/2)
15 - 18	Seed Storage (1/4 - 4/4)
<b>Capiz Province (Roxas)</b>	
19	General Plan
20 - 23	Seed Storage (1/4 - 4/4)
<b>Aklan Province (Makato)</b>	
24	General Plan
<b>Antique Province (Patnongon)</b>	
25	General Plan
26 - 29	Seed Storage (1/4 - 4/4)
<b>FARM LAND CONSOLIDATION</b>	
<b>Irrigation &amp; Drainage</b>	
30	General Layout
31	Lagoon / Pump Station
32	Irrigation Canal Profile (I - 1)
33	Typical Section / Field Outlet
34	Division Box
35	Gate on Division Box
36	Culvert / Tractor Pass
37	Drainage Culvert
38	Regulating Pond
<b>Road</b>	
39	Typical Cross Section
<b>Water Supply System</b>	
40	Layout of Water Supply Station
41	Tubewell / Pump House
42	Water Tunk
43	Plan of Water Supply System
44	Pipe Fitting Arrangement



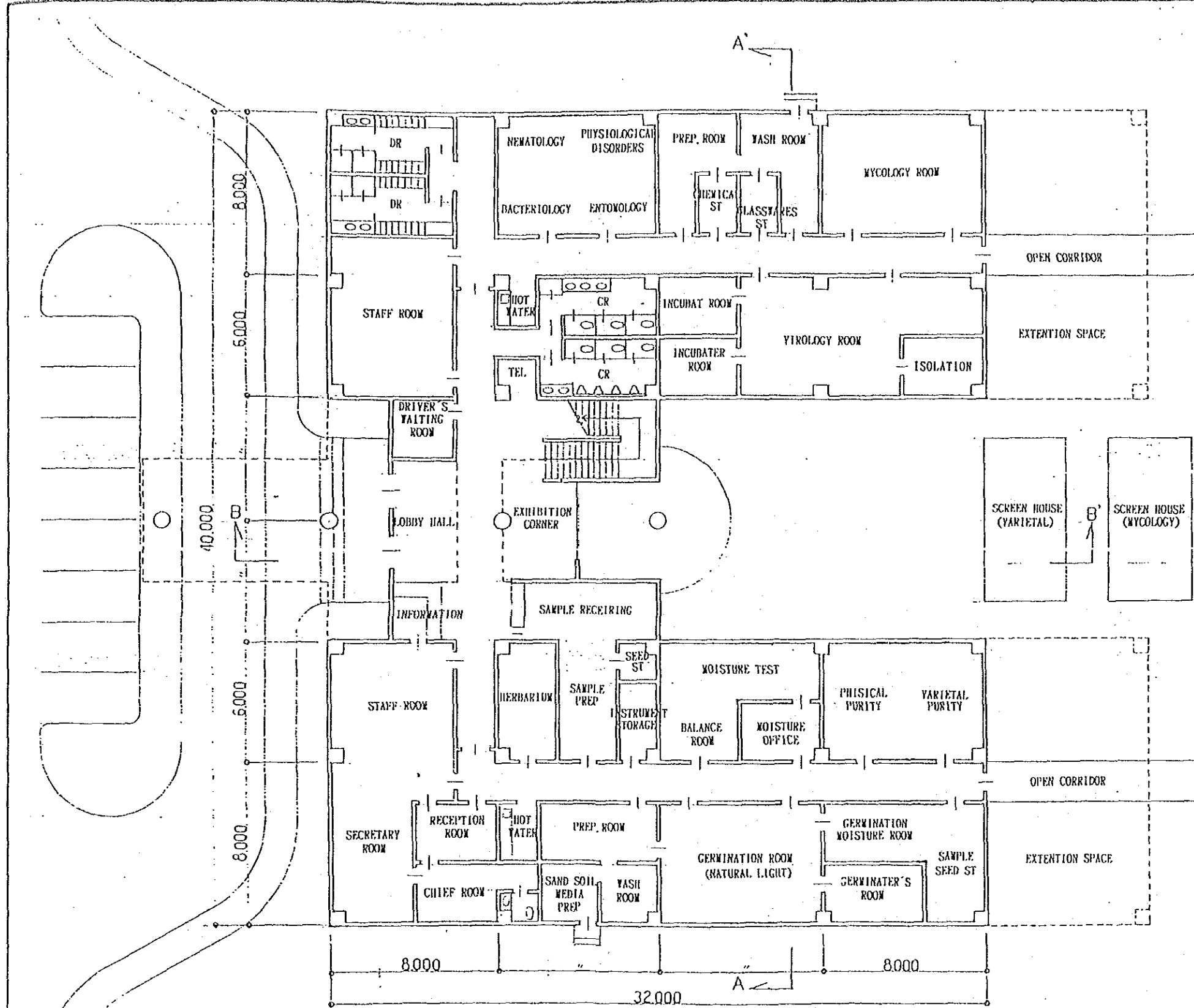




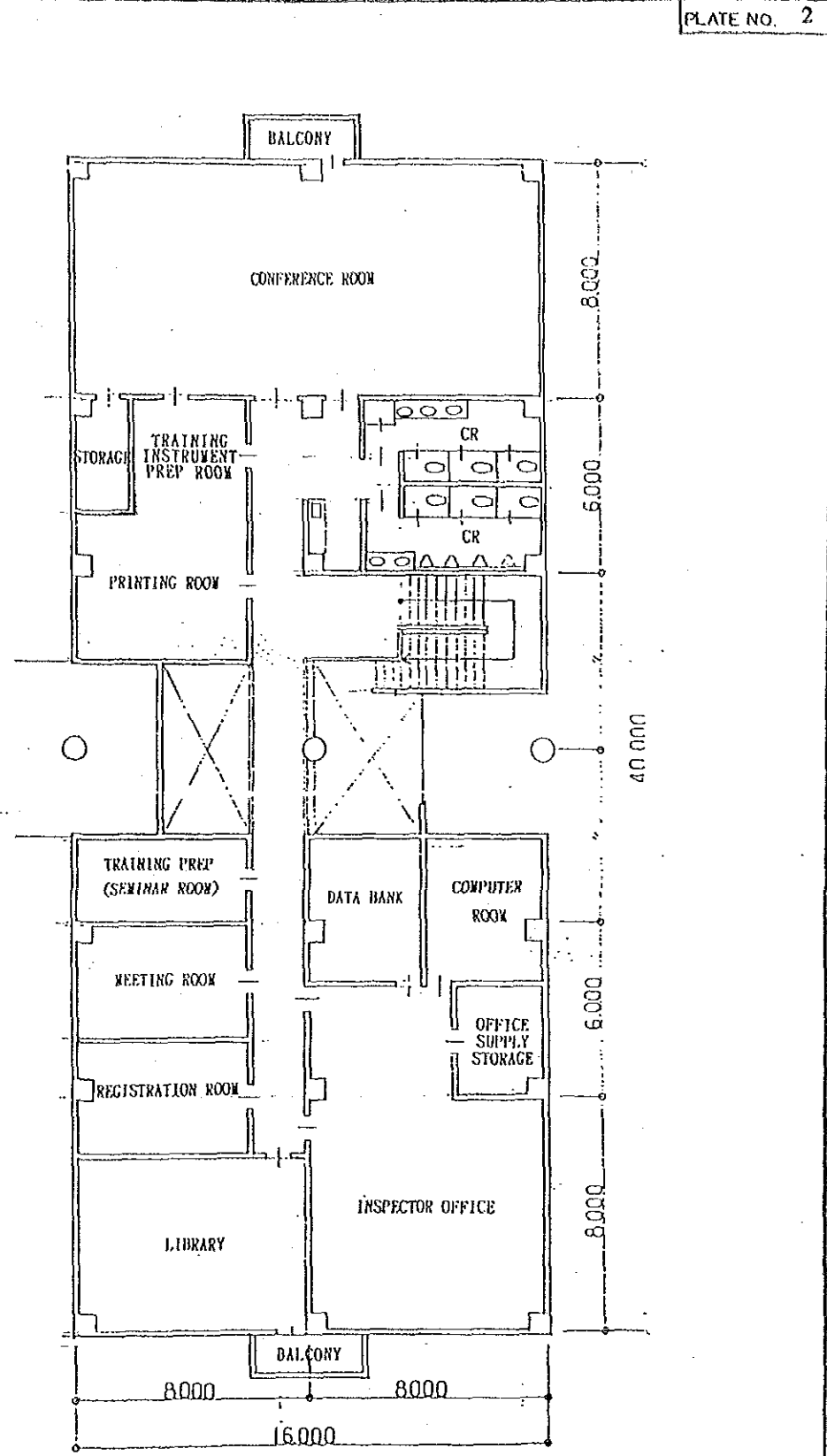
SEED STORAGE



THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Quezon City		
General Plan		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		

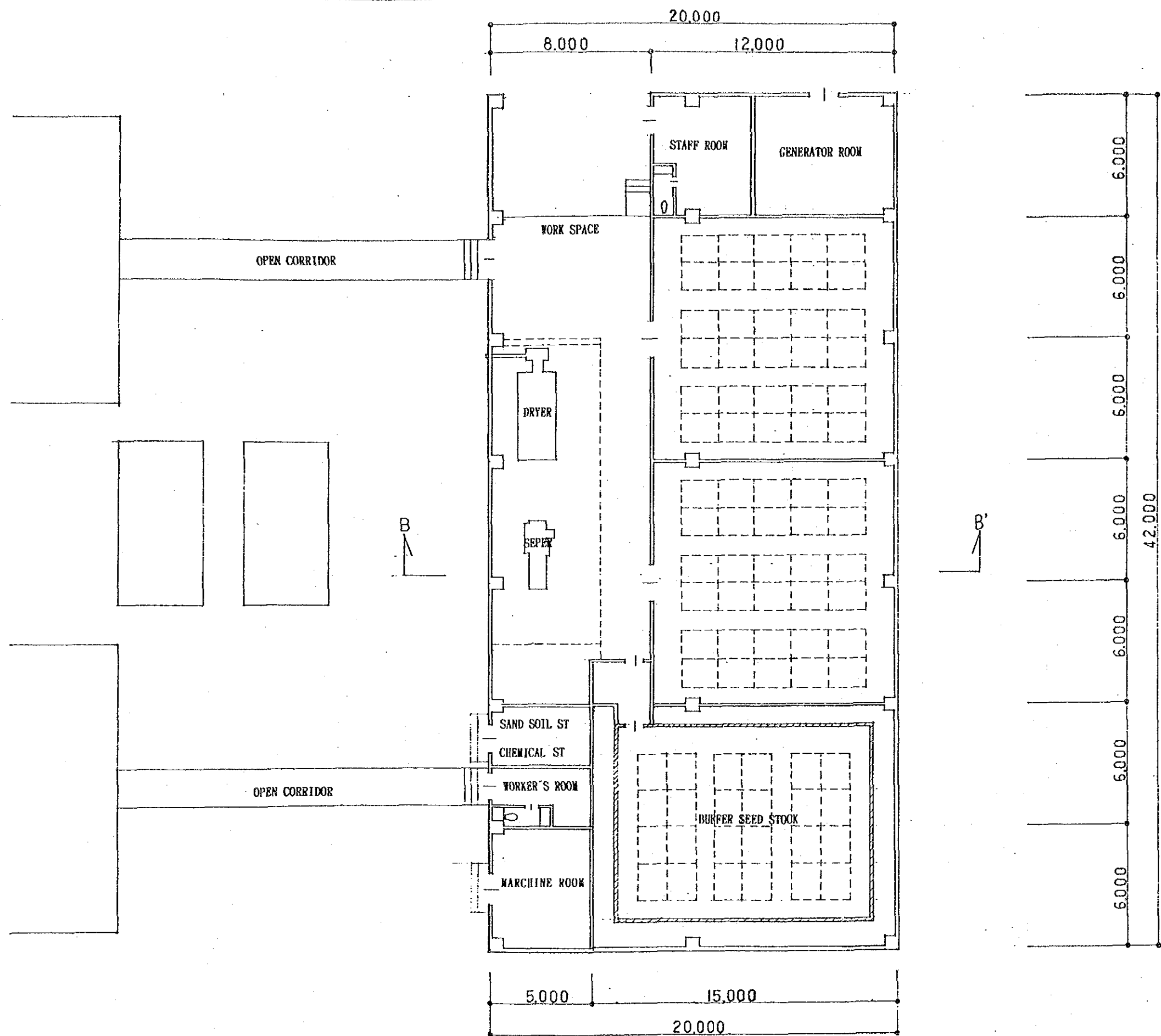


GROUND FLOOR PLAN

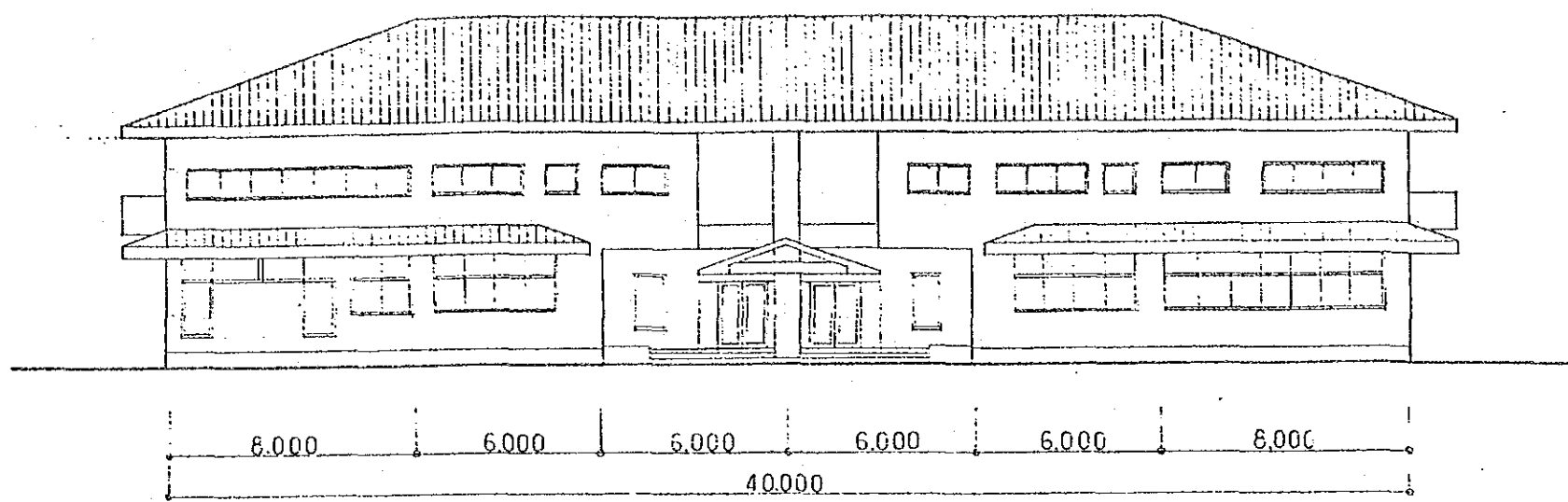


FIRST FLOOR PLAN

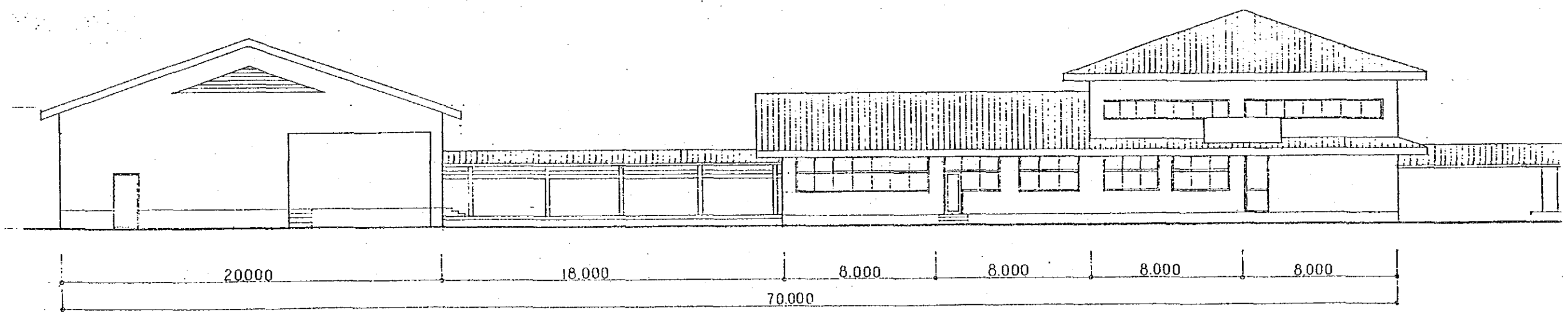
THE REPUBLIC OF THE PHILIPPINES  
 THE PROJECT FOR IMPROVEMENT OF SEED  
 PRODUCTION AND DISTRIBUTION AND  
 ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM  
 TITLE OF DRAWING  
 Quozan City  
**Seed Quality Control Service**  
 Date \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY



THE REPUBLIC OF THE PHILIPPINES  
THE PROJECT FOR IMPROVEMENT OF SEED  
PRODUCTION AND DISTRIBUTION AND  
ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM  
TITLE OF DRAWING  
Quezon City  
**Seed Storage**  
Date \_\_\_\_\_ Drawing No. \_\_\_\_\_  
JAPAN INTERNATIONAL COOPERATION AGENCY

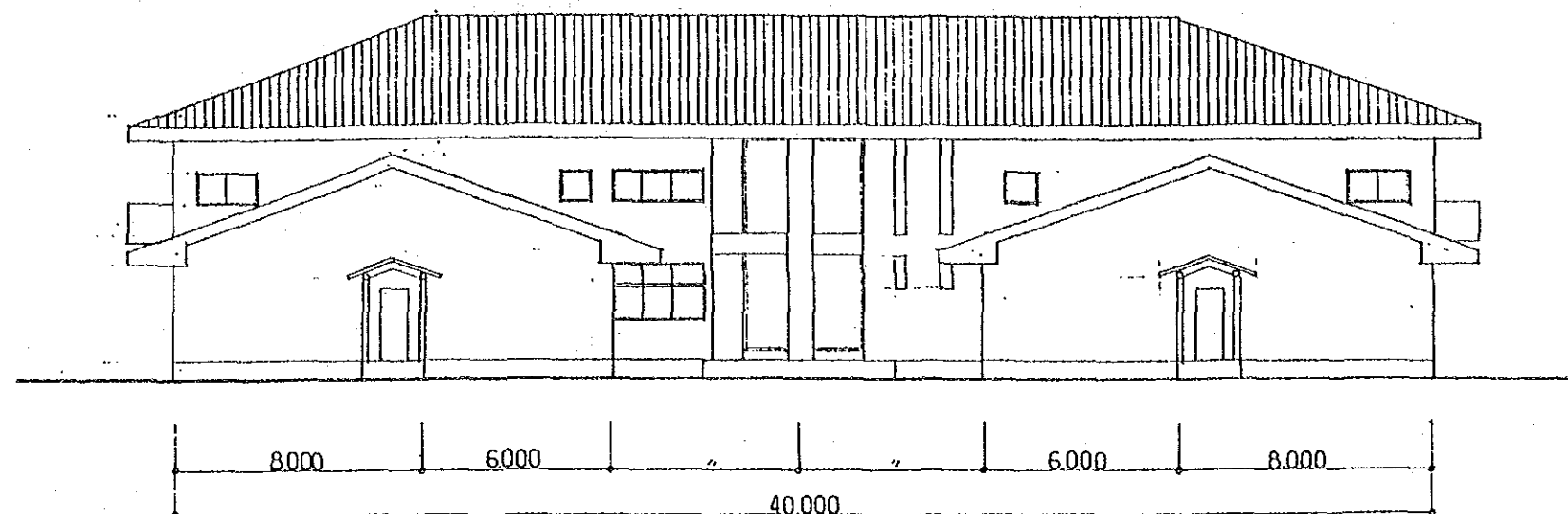


WEST ELEVATION

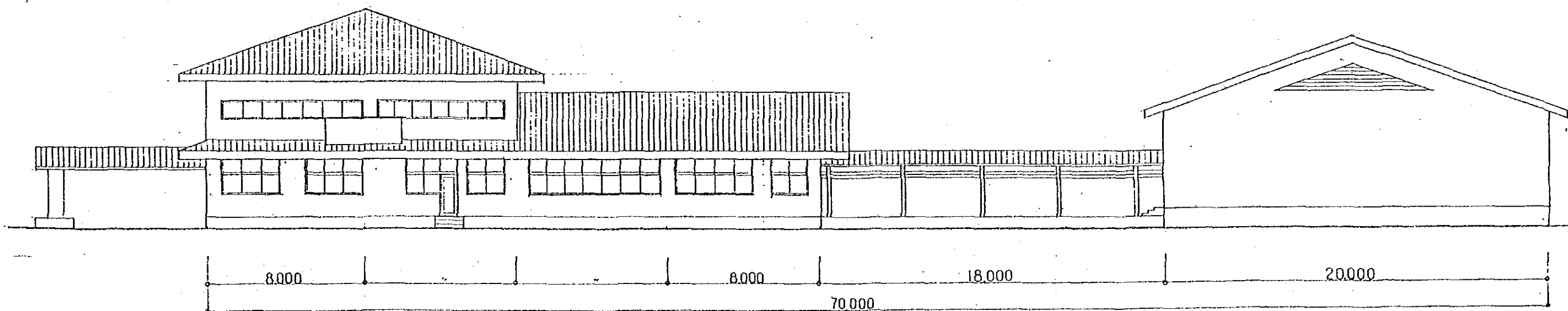


NORTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Quozon City		
Seed Quality Control Service / Seed Storage (1/4)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		

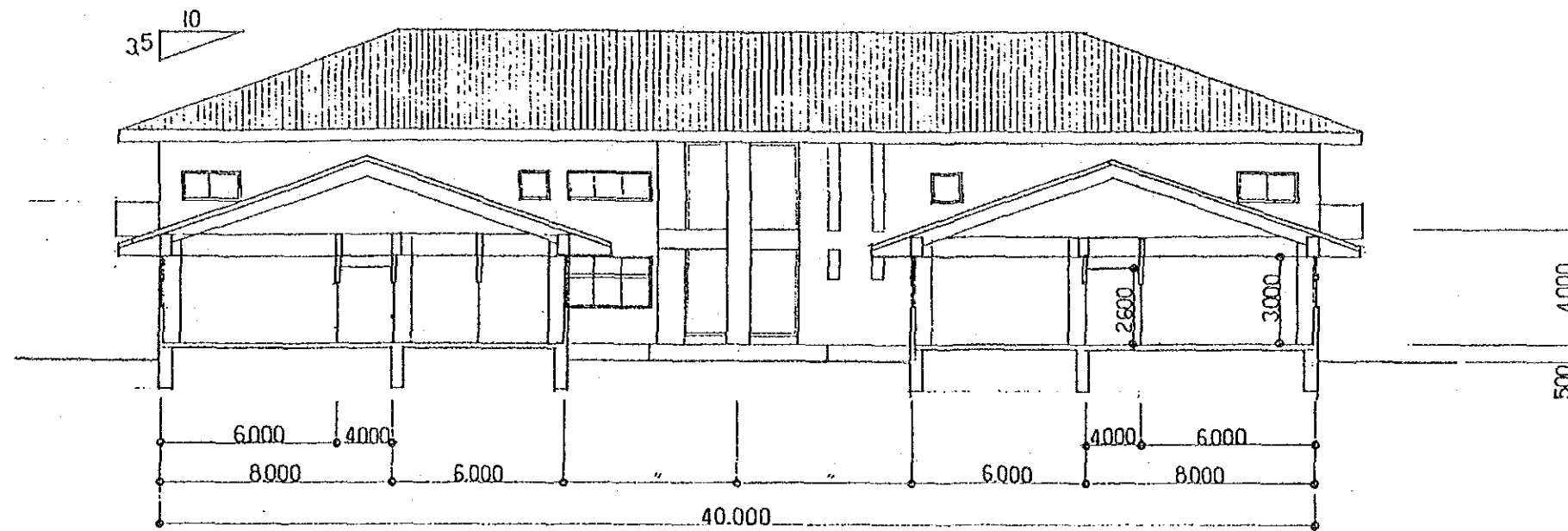


EAST ELEVATION

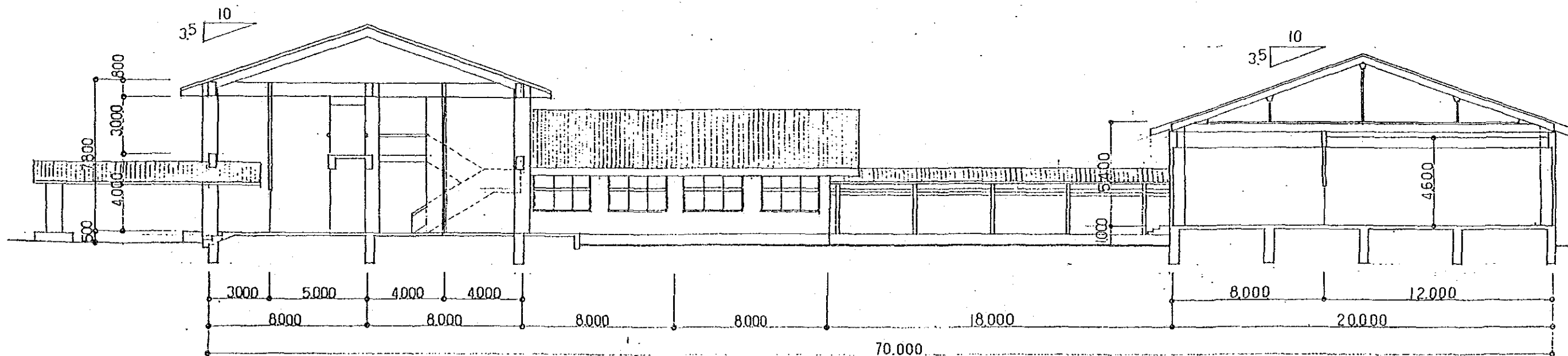


SOUTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING Quezon City	
Seed Quality Control Service / Seed Storage (2/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

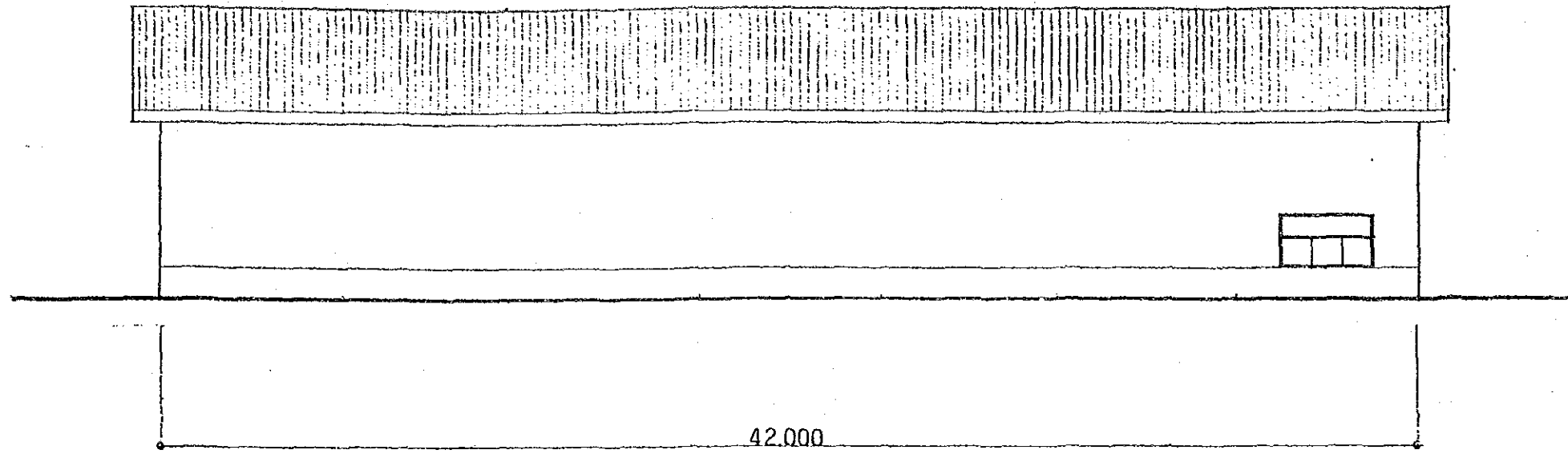


A-A SECTION

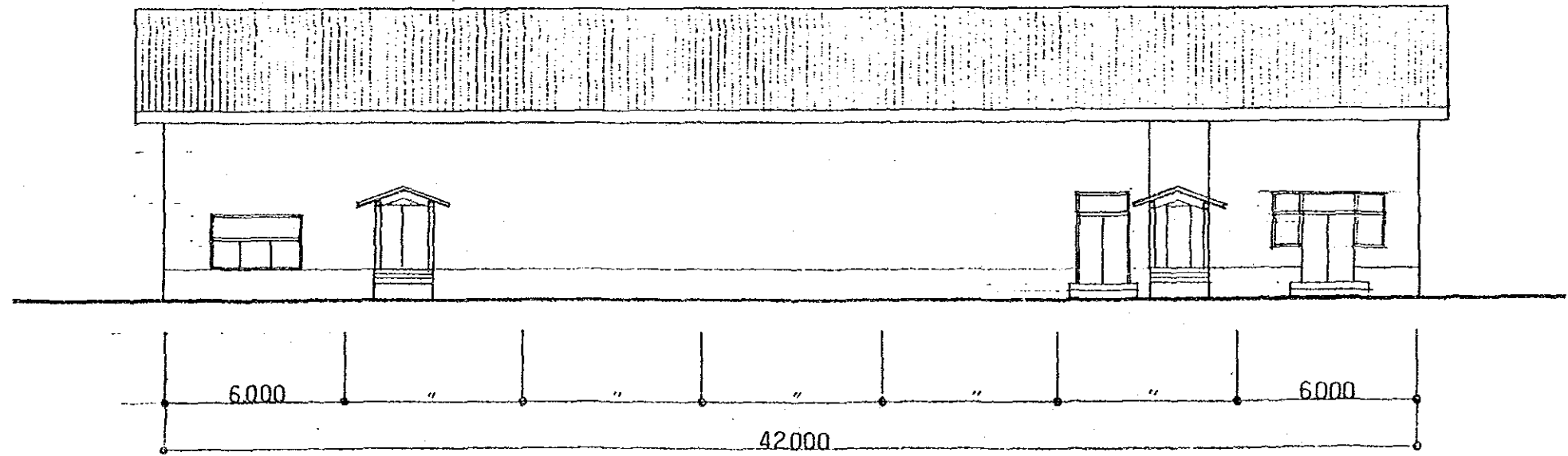


B-B SECTION

THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Quezon City		
Seed Quality Control Service / Seed Storage (3/4)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		

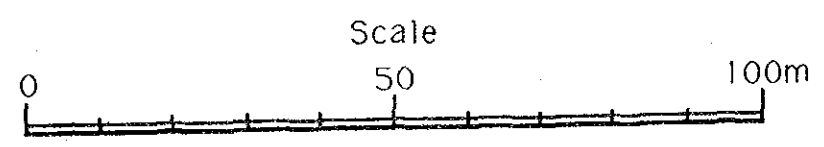
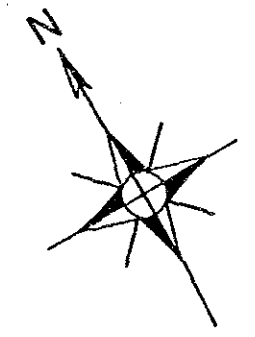
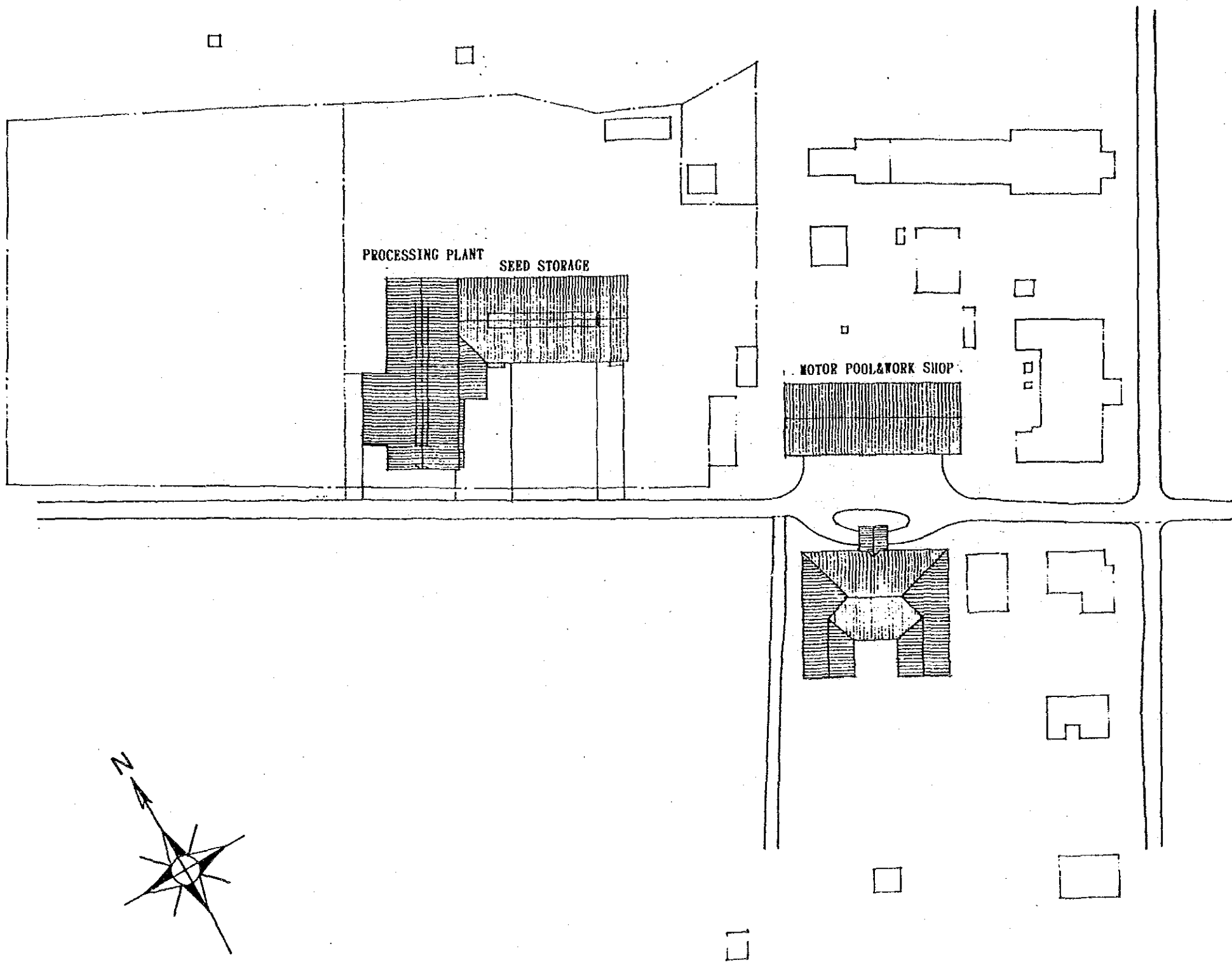


EAST ELEVATION



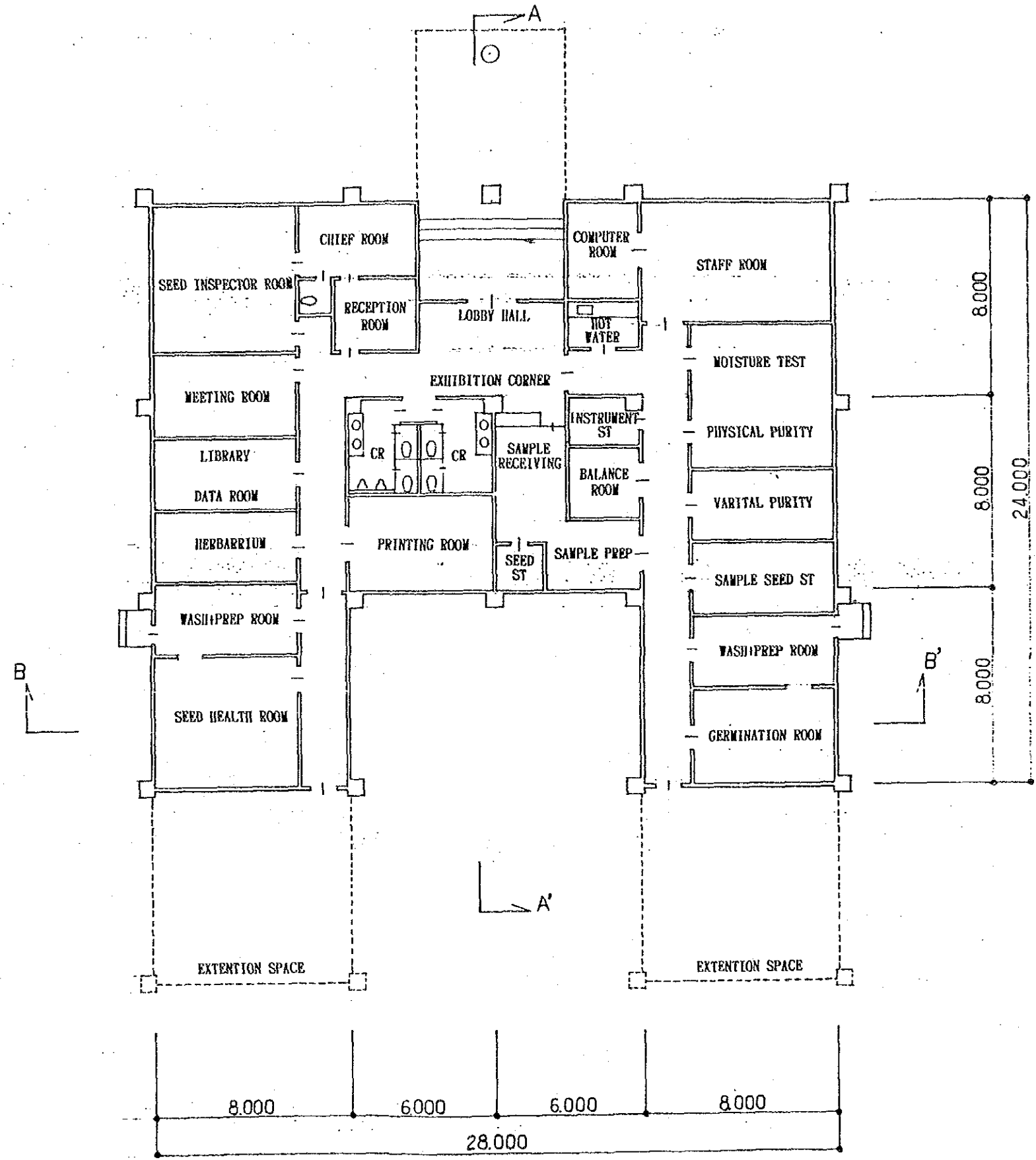
WEST ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Quezon City	
Seed Quality Control Service / Seed Storage (4/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

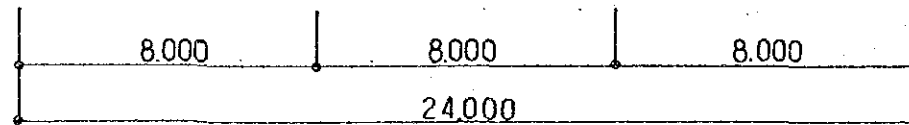
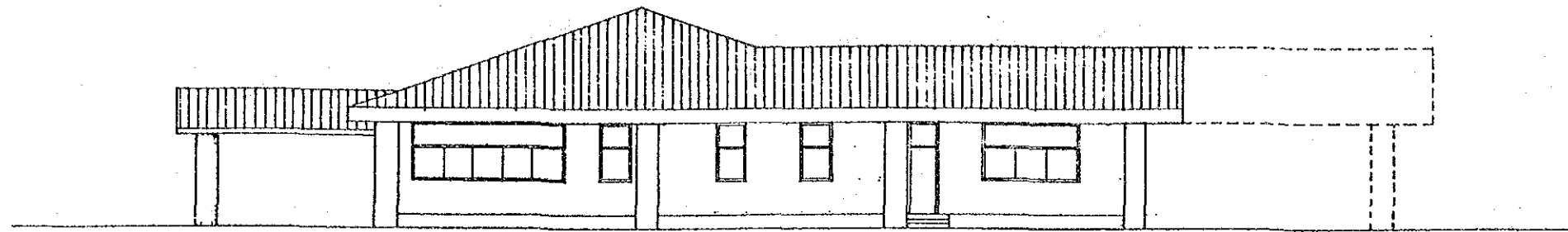


THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
General Plan	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

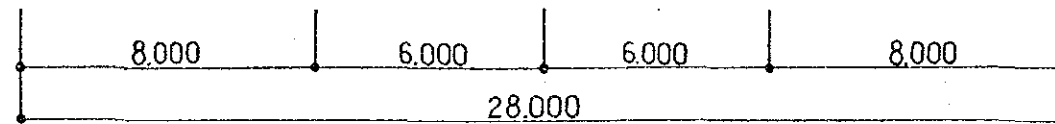
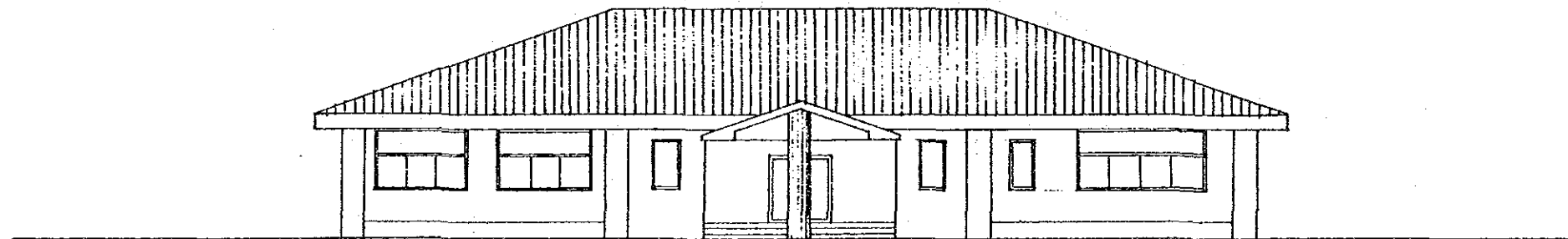




THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Testing Laboratory (1/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

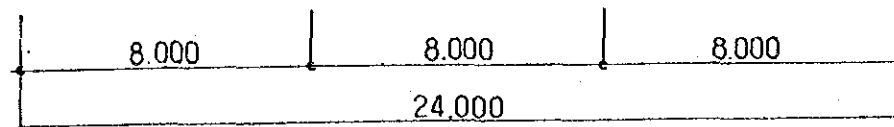
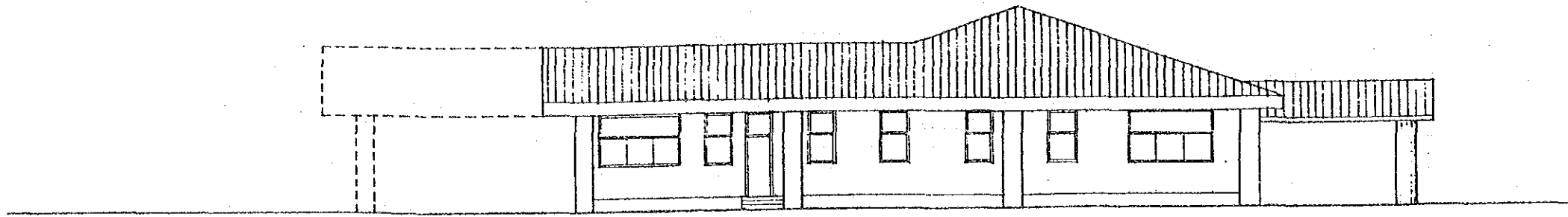


WEST ELEVATION

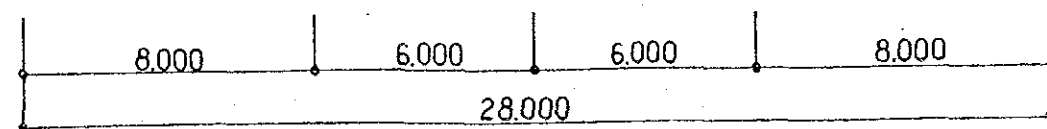
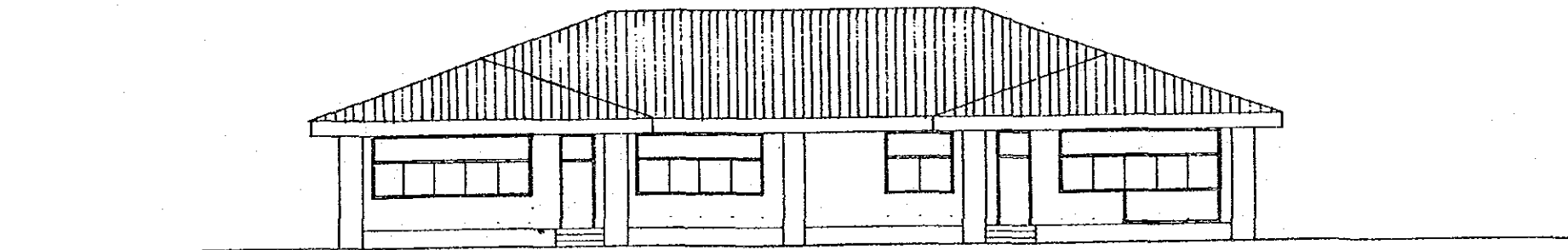


NORTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Testing Laboratory (2/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

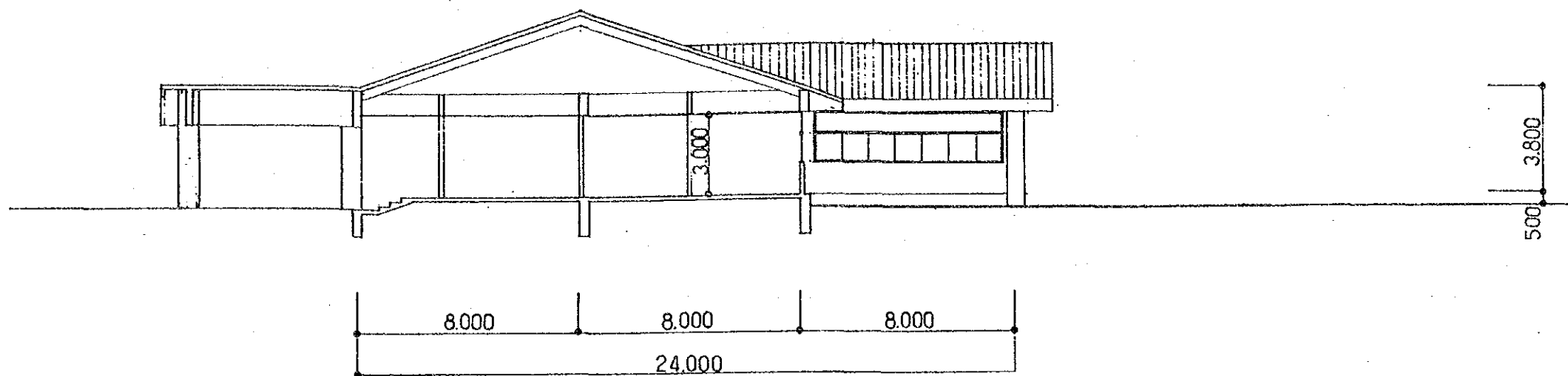


EAST ELEVATION

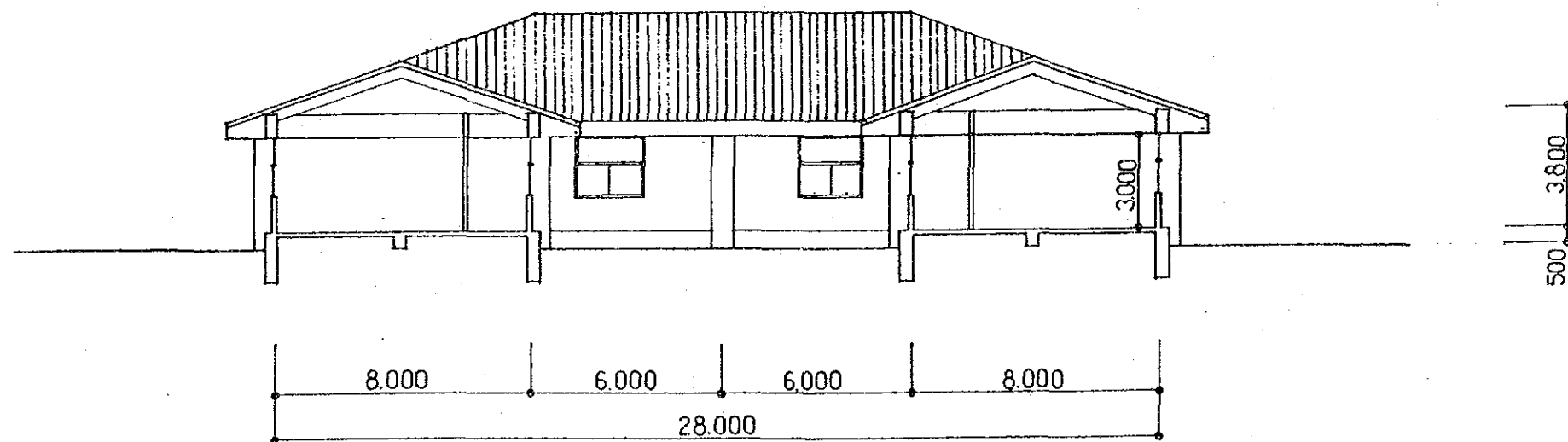


SOUTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Western Visayas Integrated Agricultural Research Center		
Seed Testing Laboratory (3/4)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		

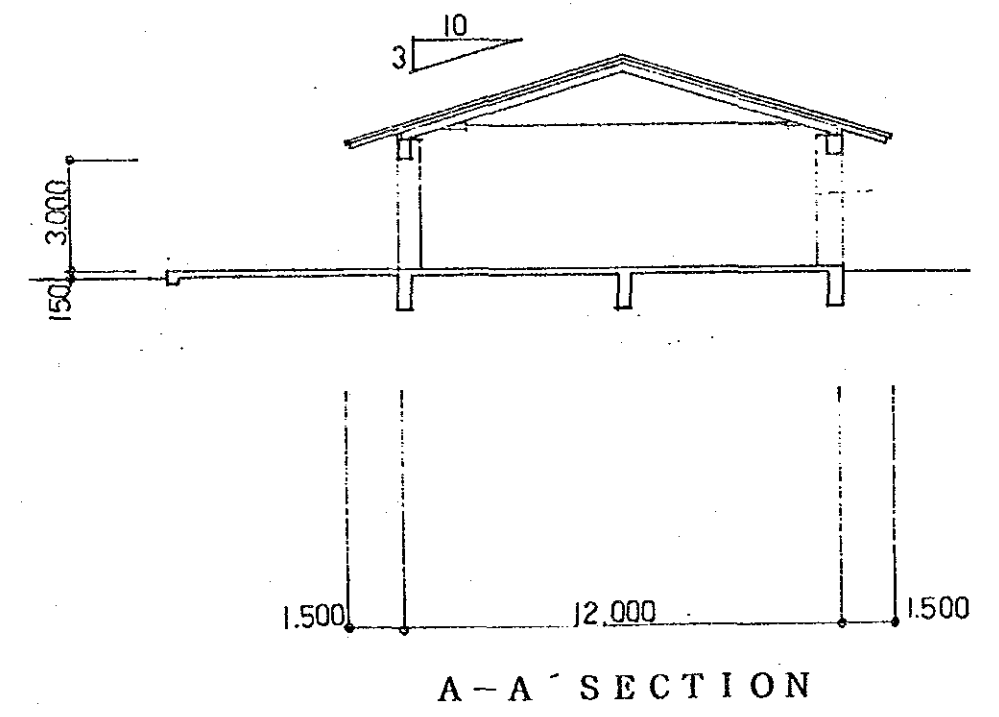
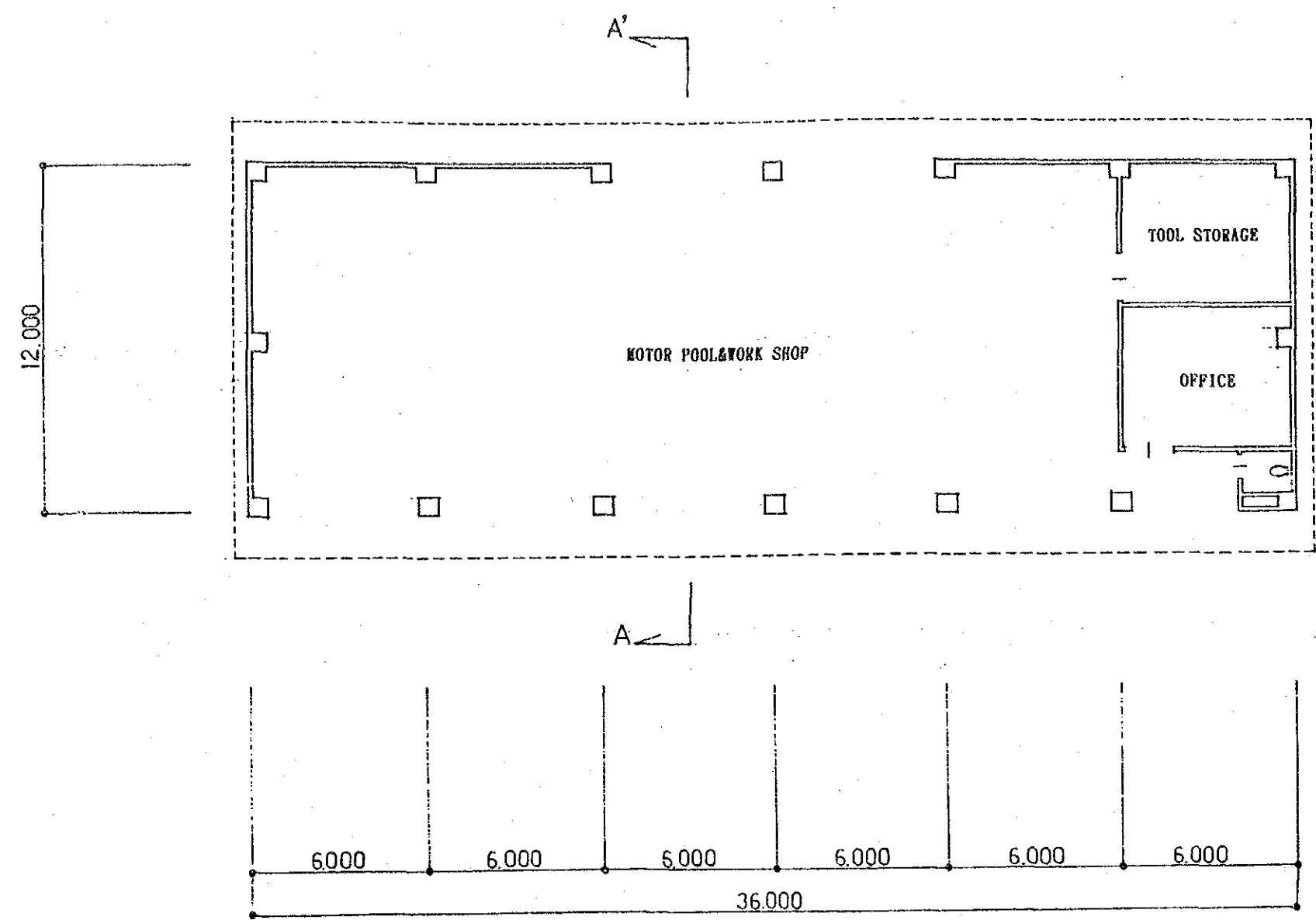


A-A SECTION

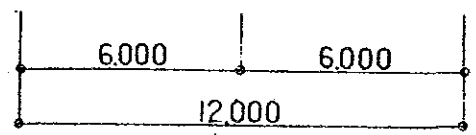
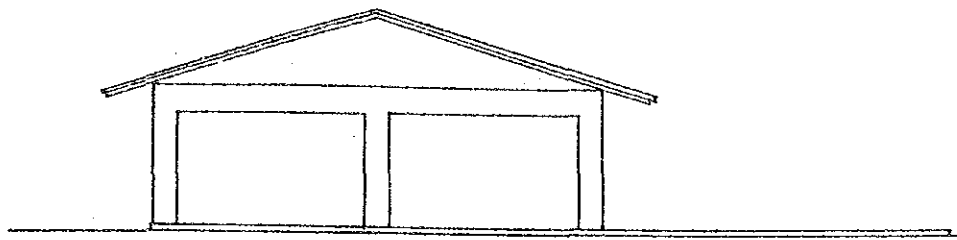


B-B SECTION

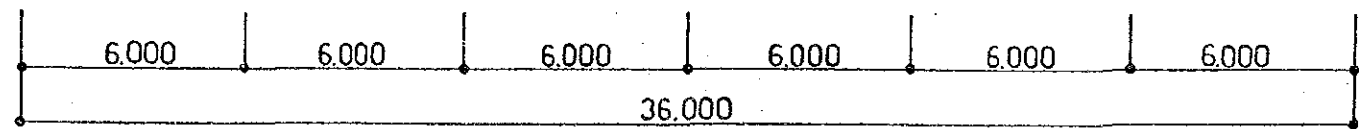
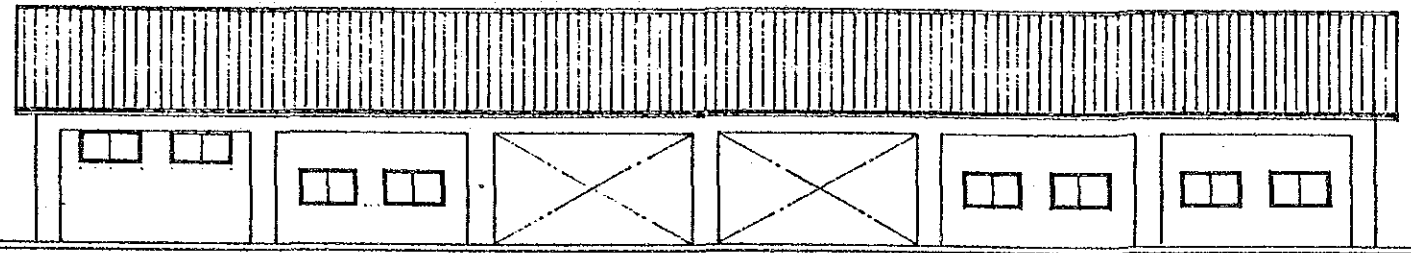
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center Seed Testing Laboratory (4/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



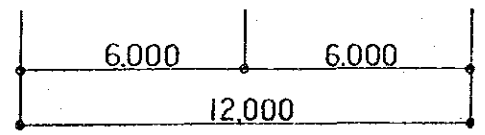
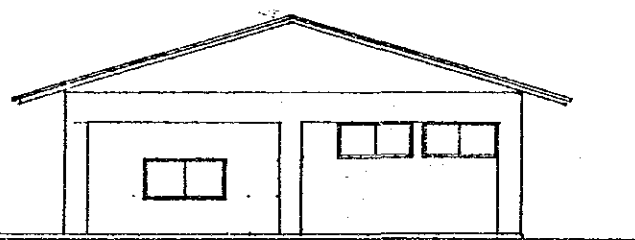
THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Western Visayas Integrated Agricultural Research Center		
Motor Pool / Work Shop (1/2)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		



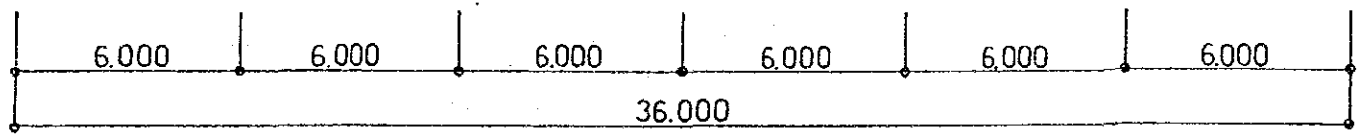
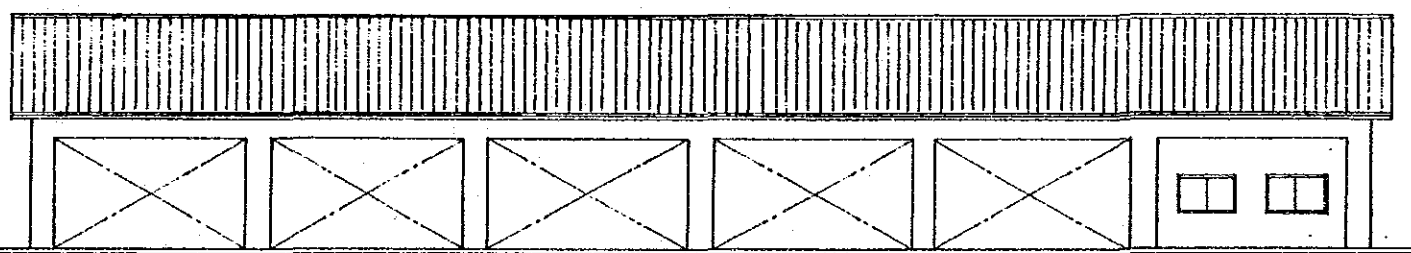
WEST ELEVATION



NORTH ELEVATION

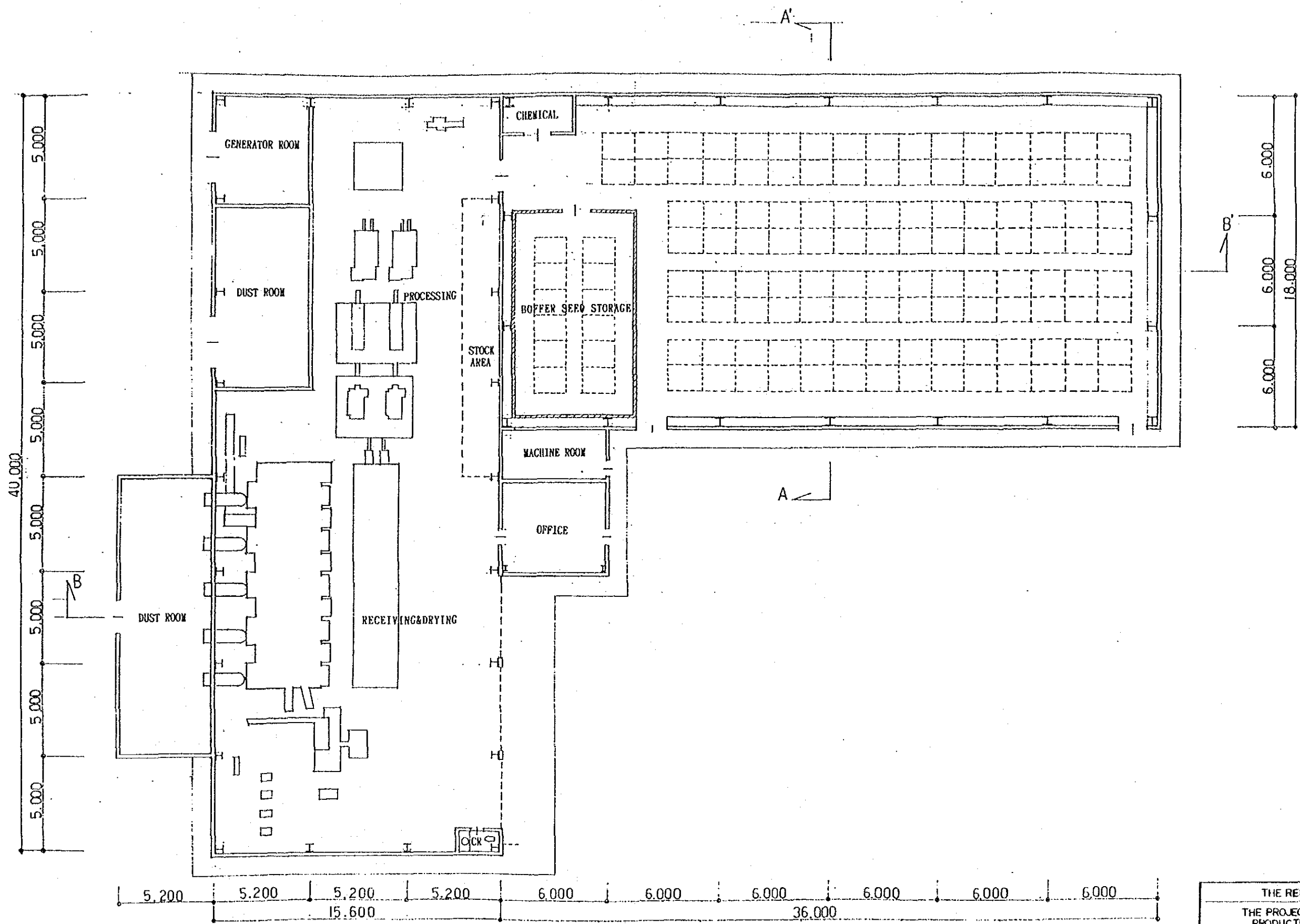


EAST ELEVATION

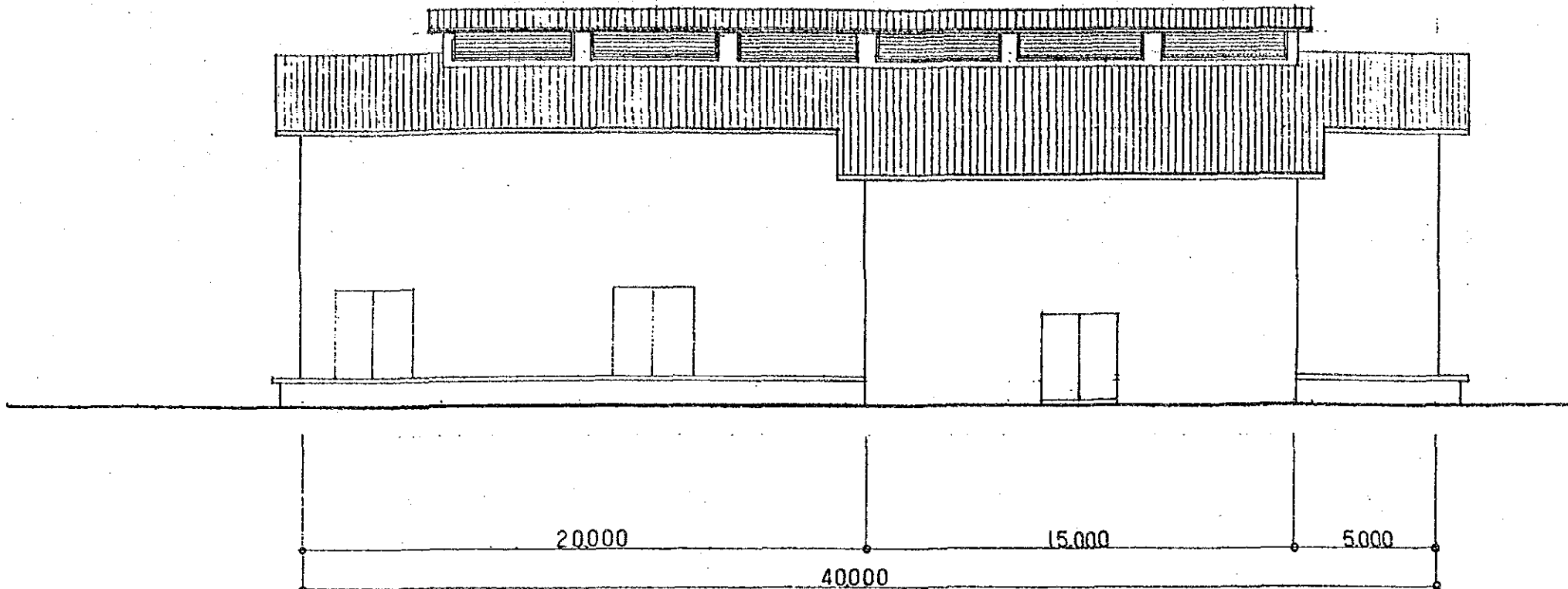


SOUTH ELEVATION

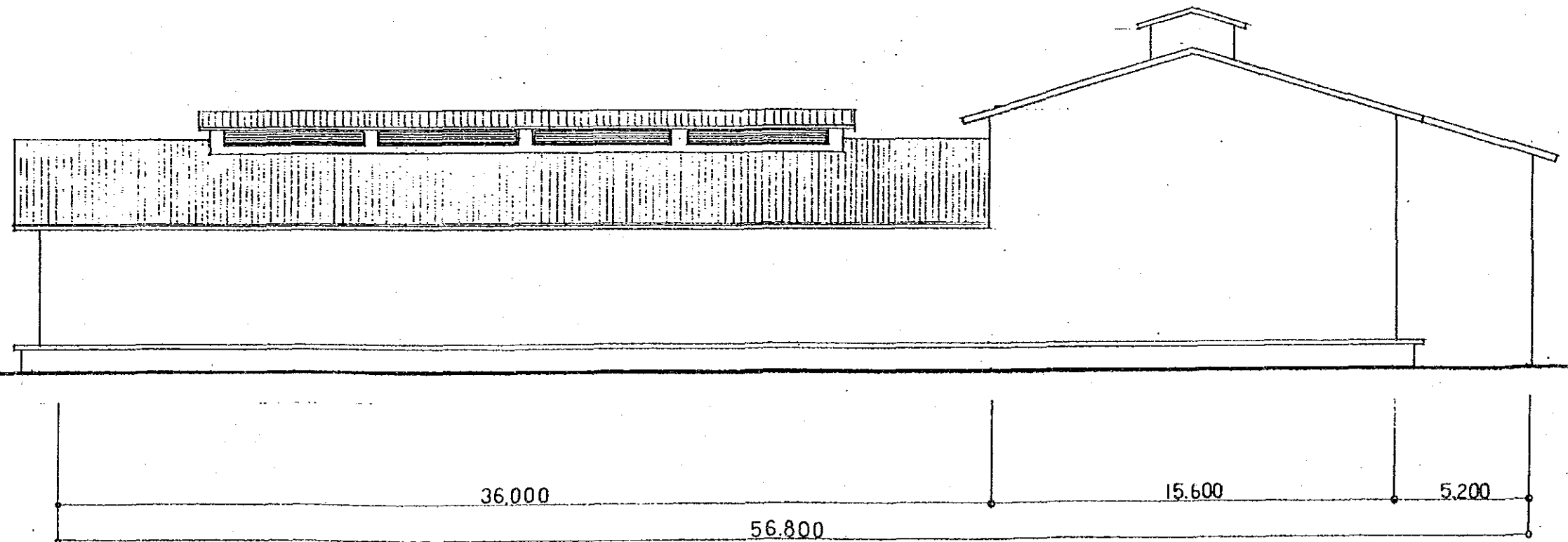
THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Western Visayas Integrated Agricultural Research Center		
Motor Pool / Work Shop (2/2)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		



THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Storage (1/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



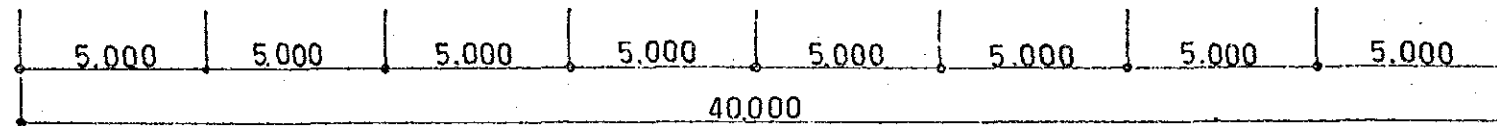
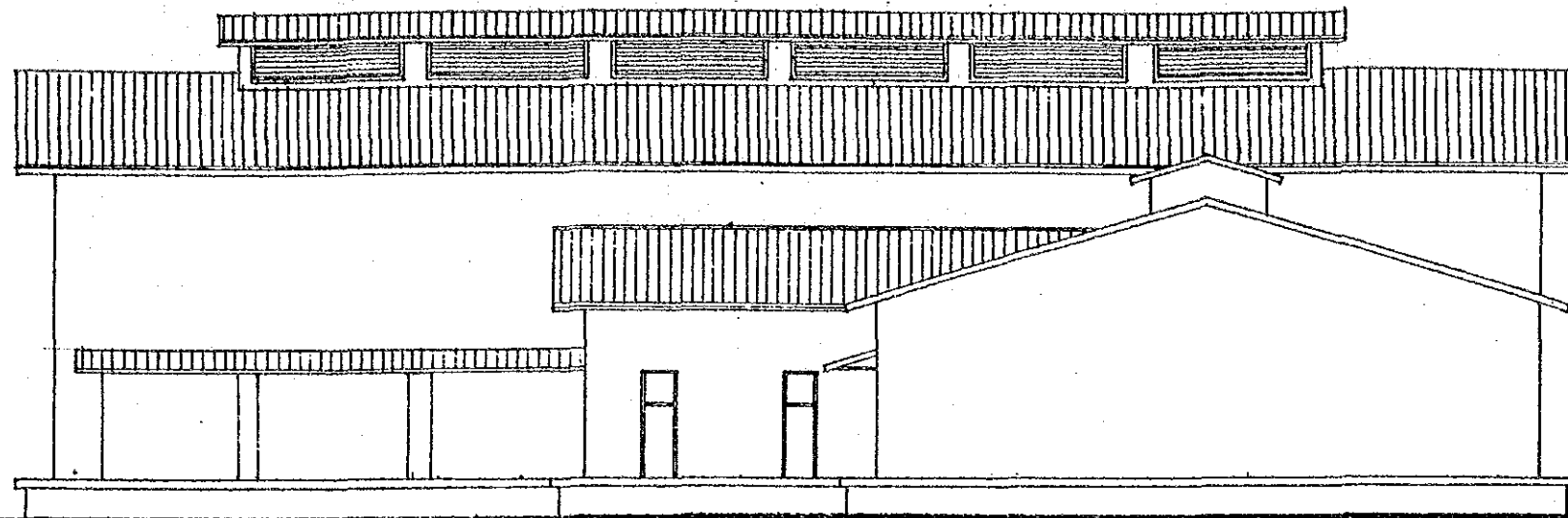
WEST ELEVATION



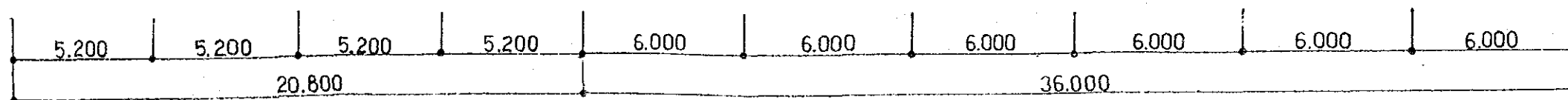
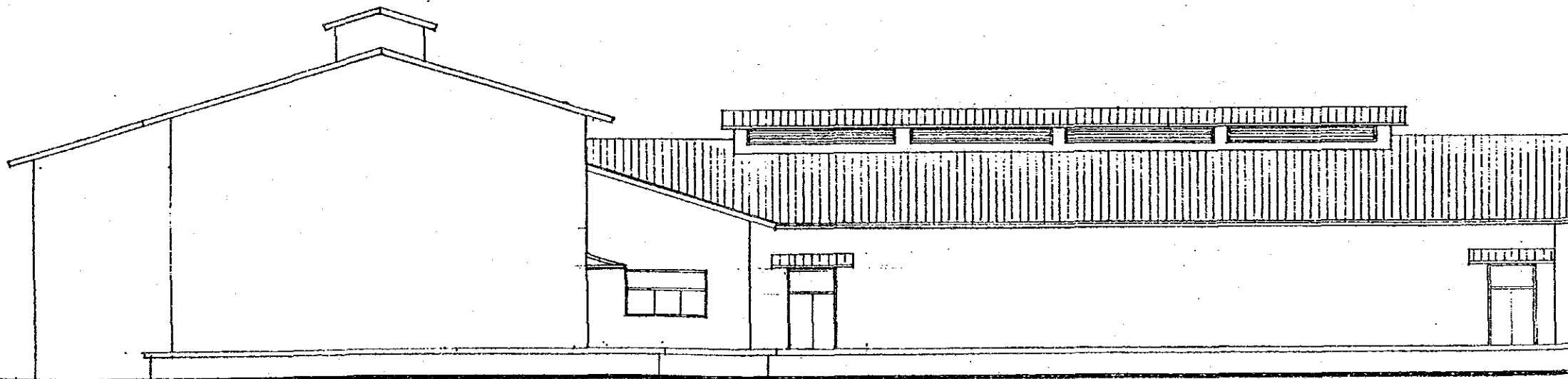
NORTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Storage (2/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



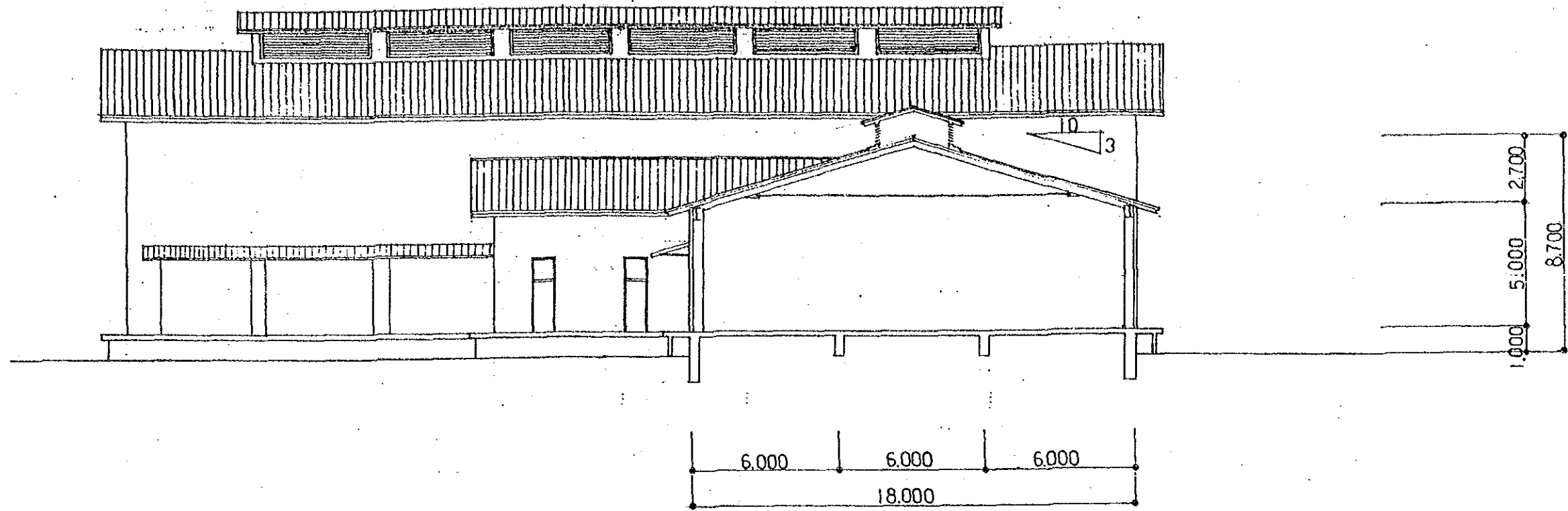


EAST ELEVATION

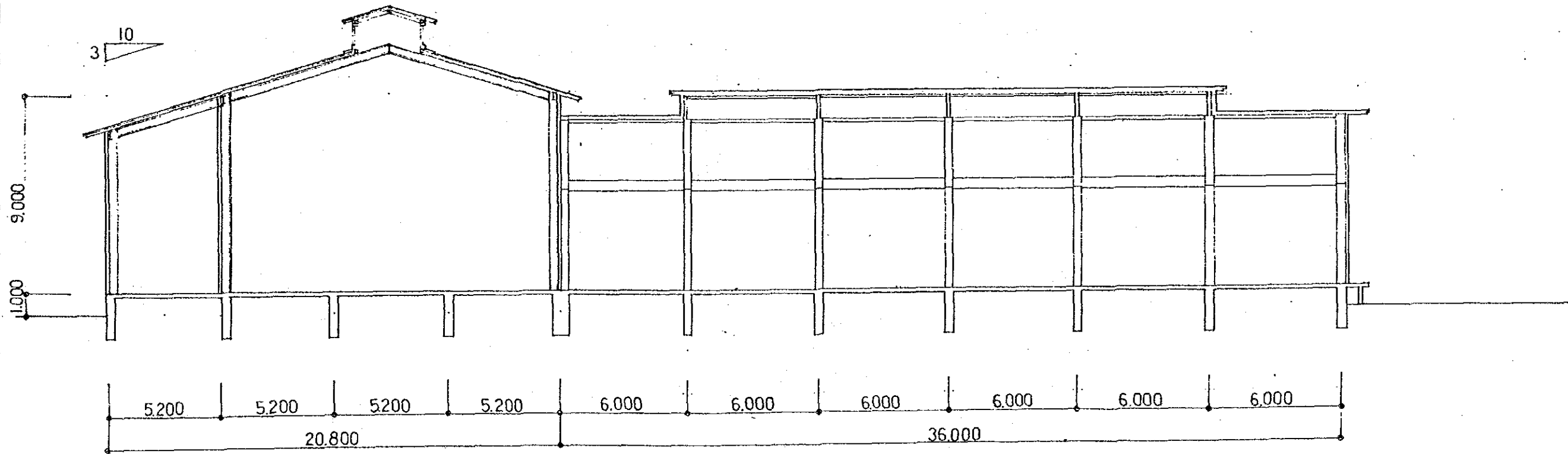


SOUTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Storage (3/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

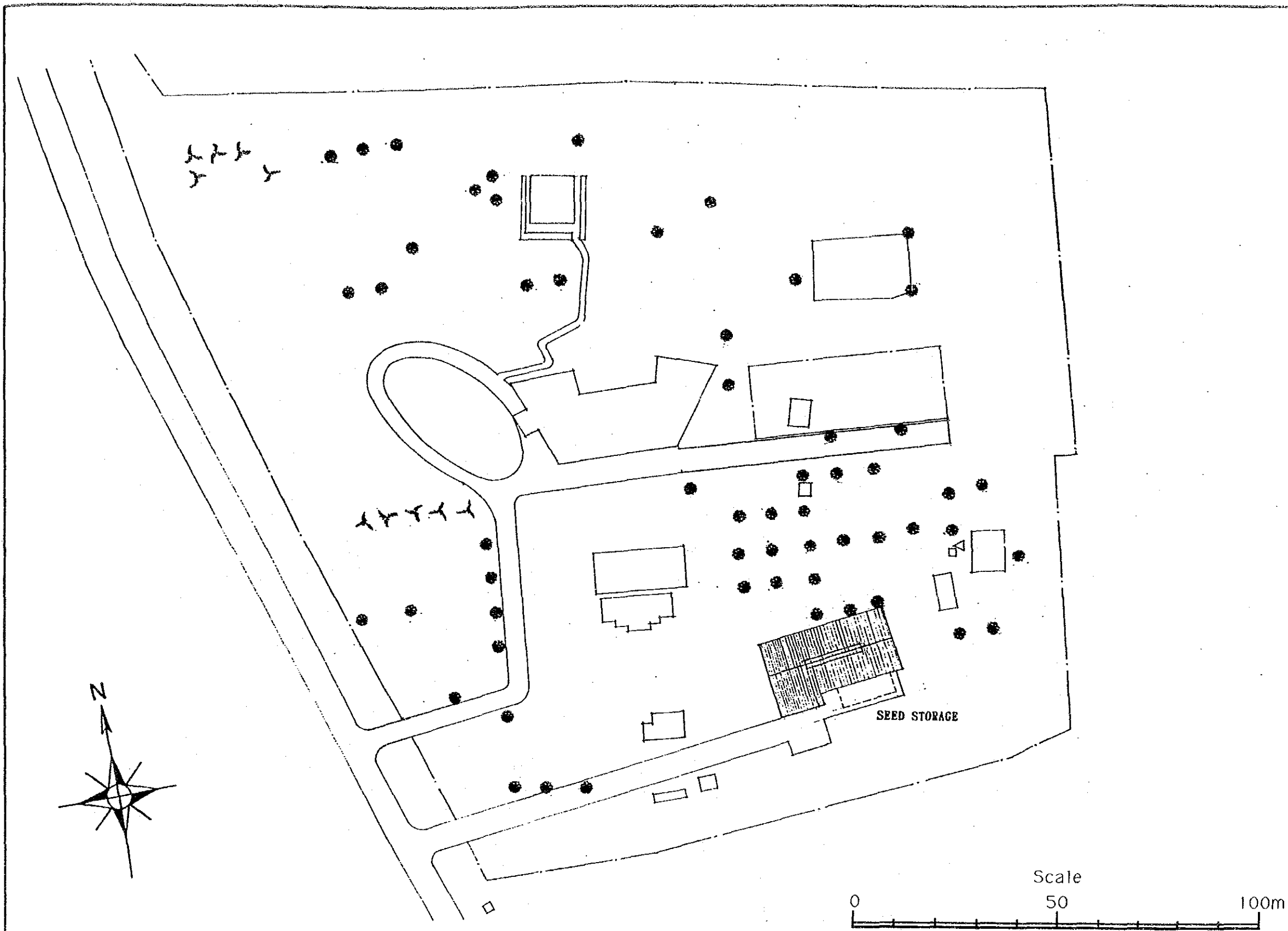


A-A SECTION

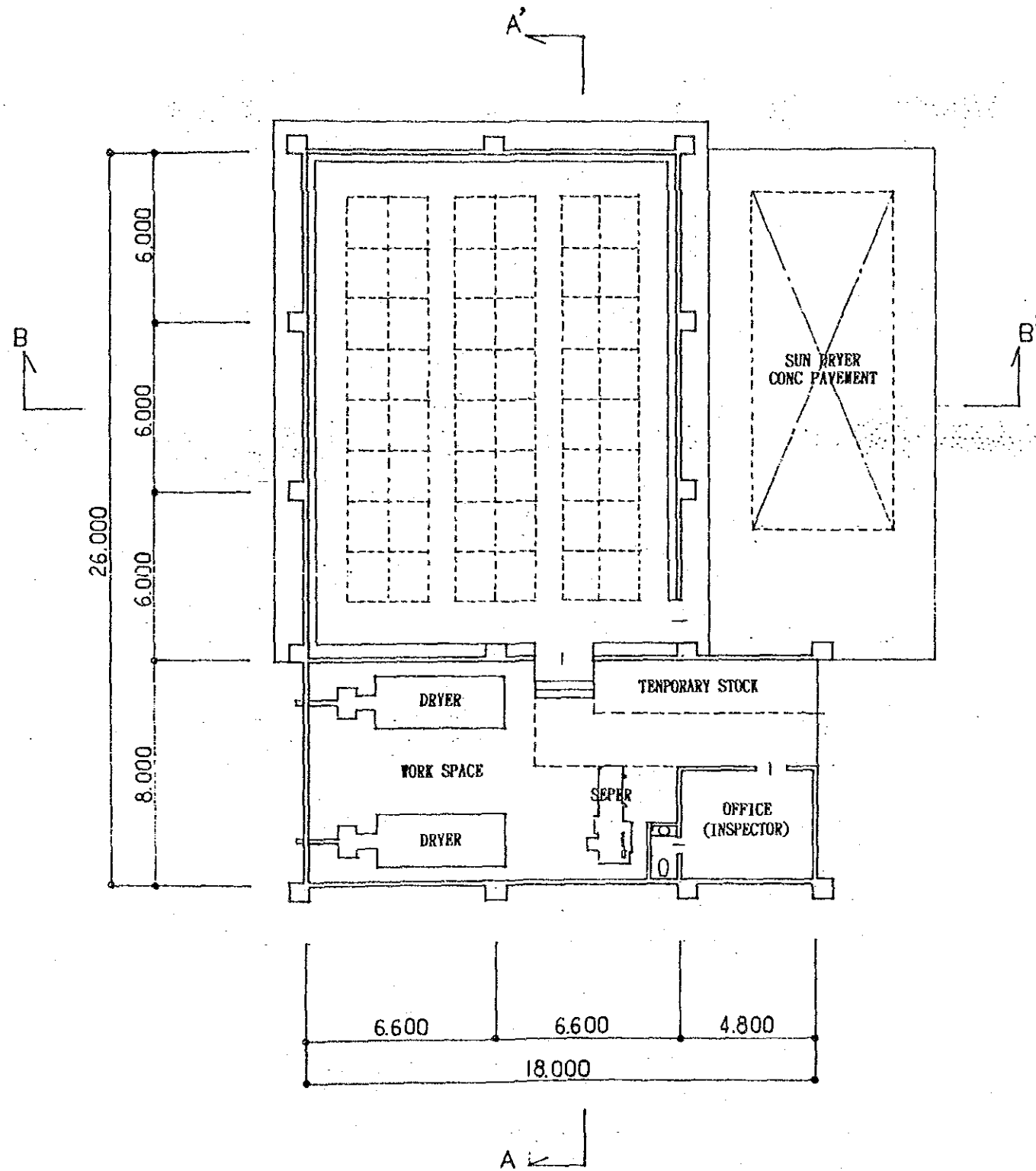


B-B SECTION

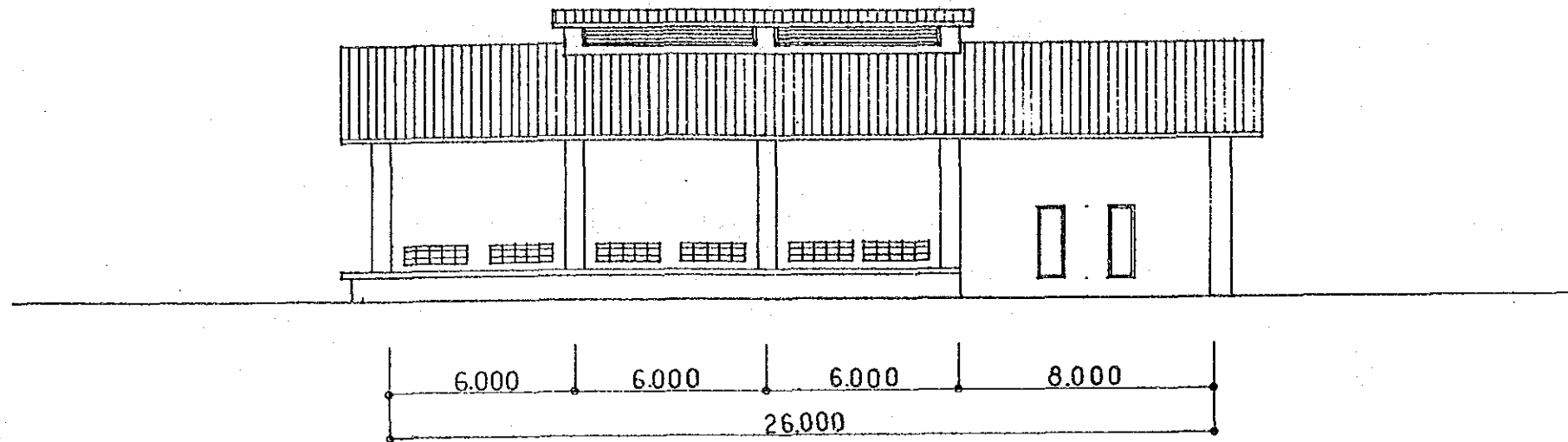
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Western Visayas Integrated Agricultural Research Center	
Seed Storage (4/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



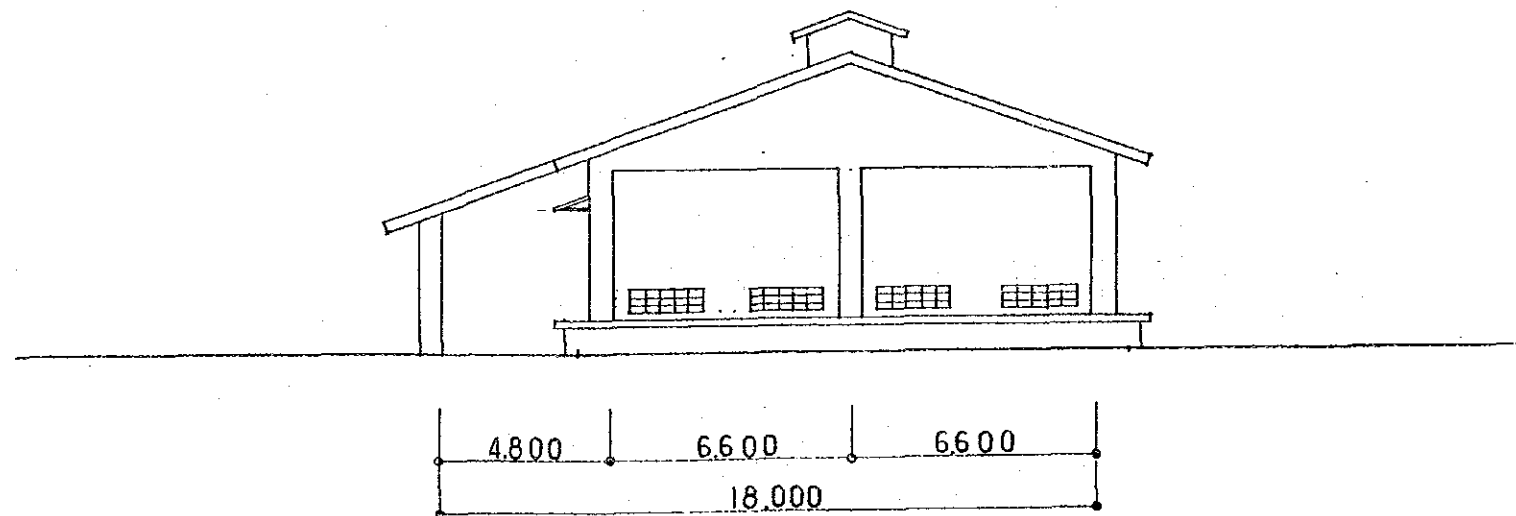
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Capiz Province (Roxas)	
General Plan	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Capiz Province (Roxas)	
Seed Storage (1/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

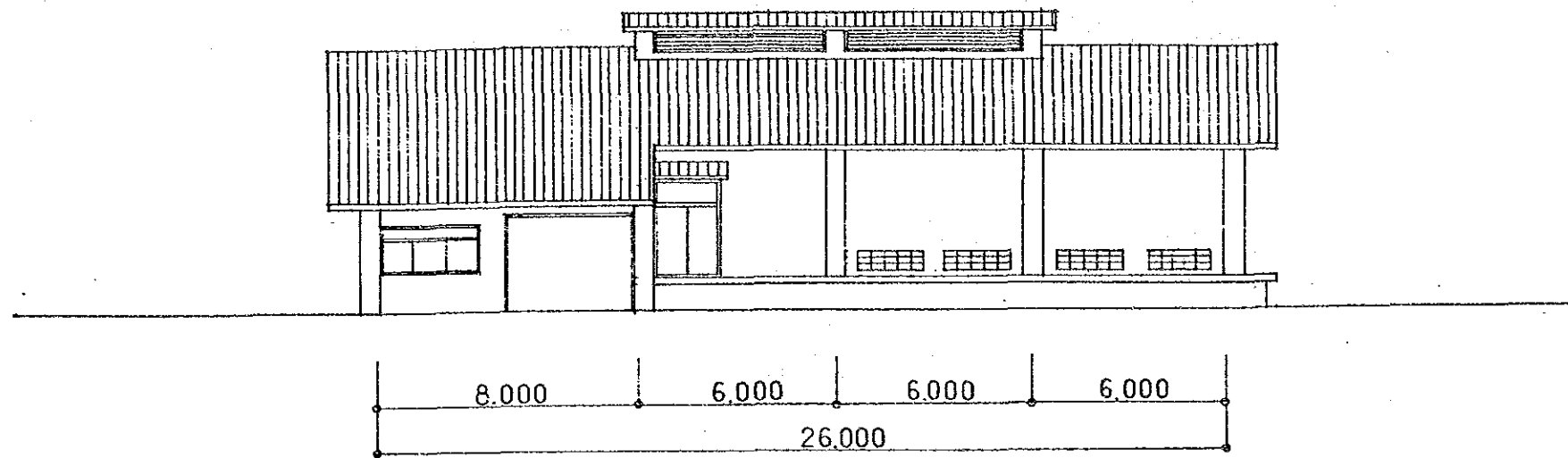


WEST ELEVATION

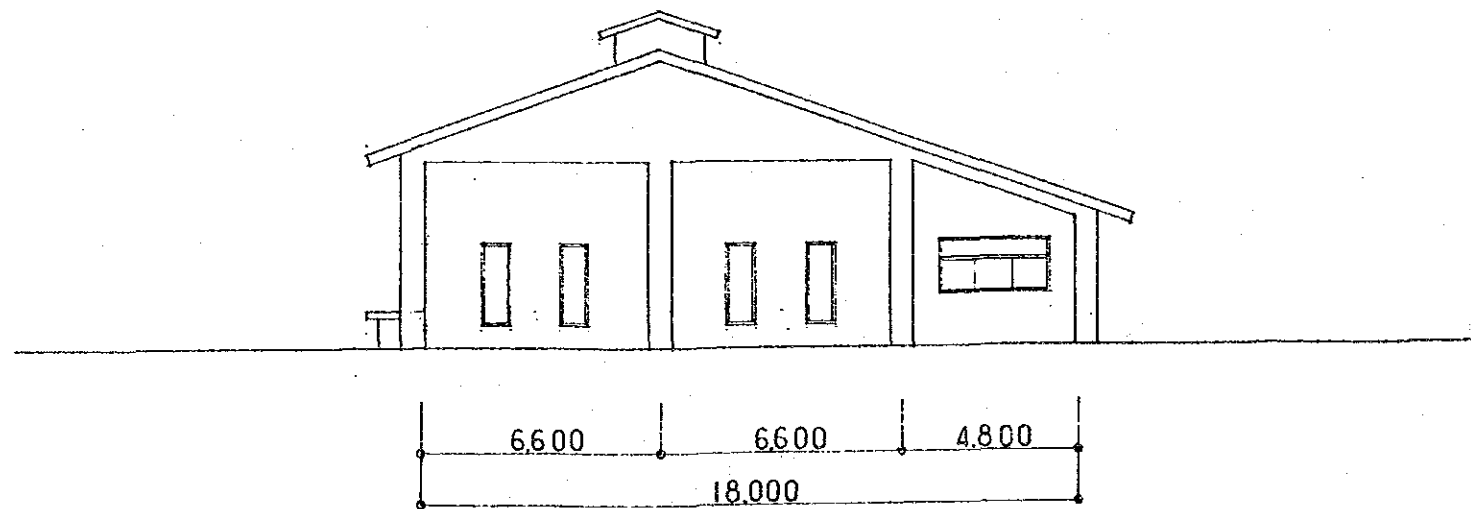


NORTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Capiz Province (Roxas)	
Seed Storage (2/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

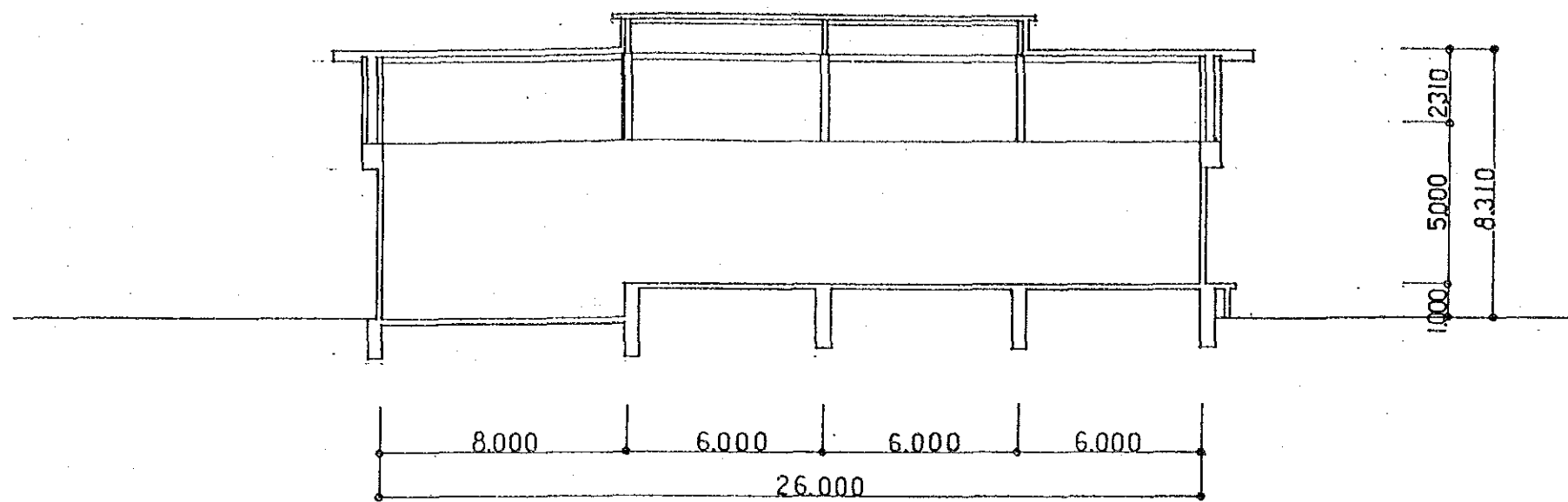


EAST ELEVATION

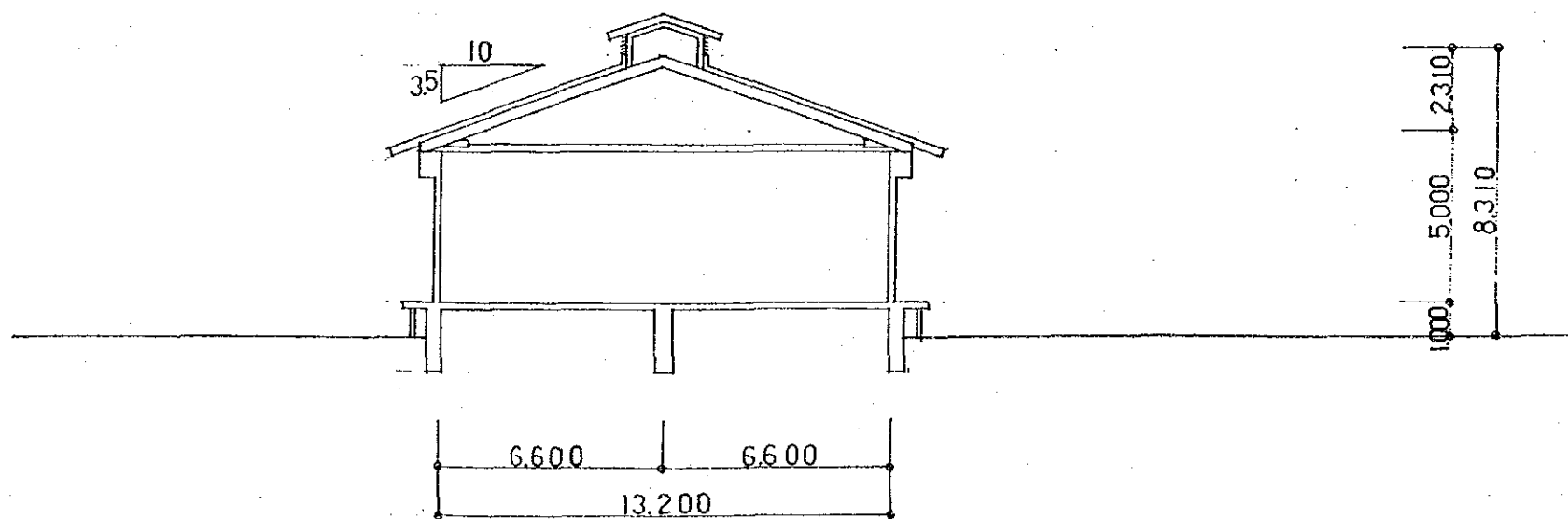


SOUTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Capiz Province (Roxas)		
Seed Storage (3/4)		
Date	Drawing No.	
JAPAN INTERNATIONAL COOPERATION AGENCY		

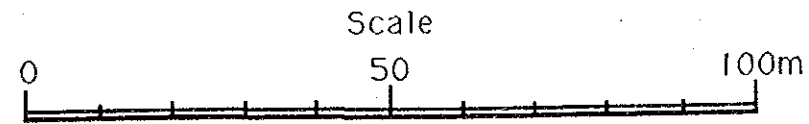
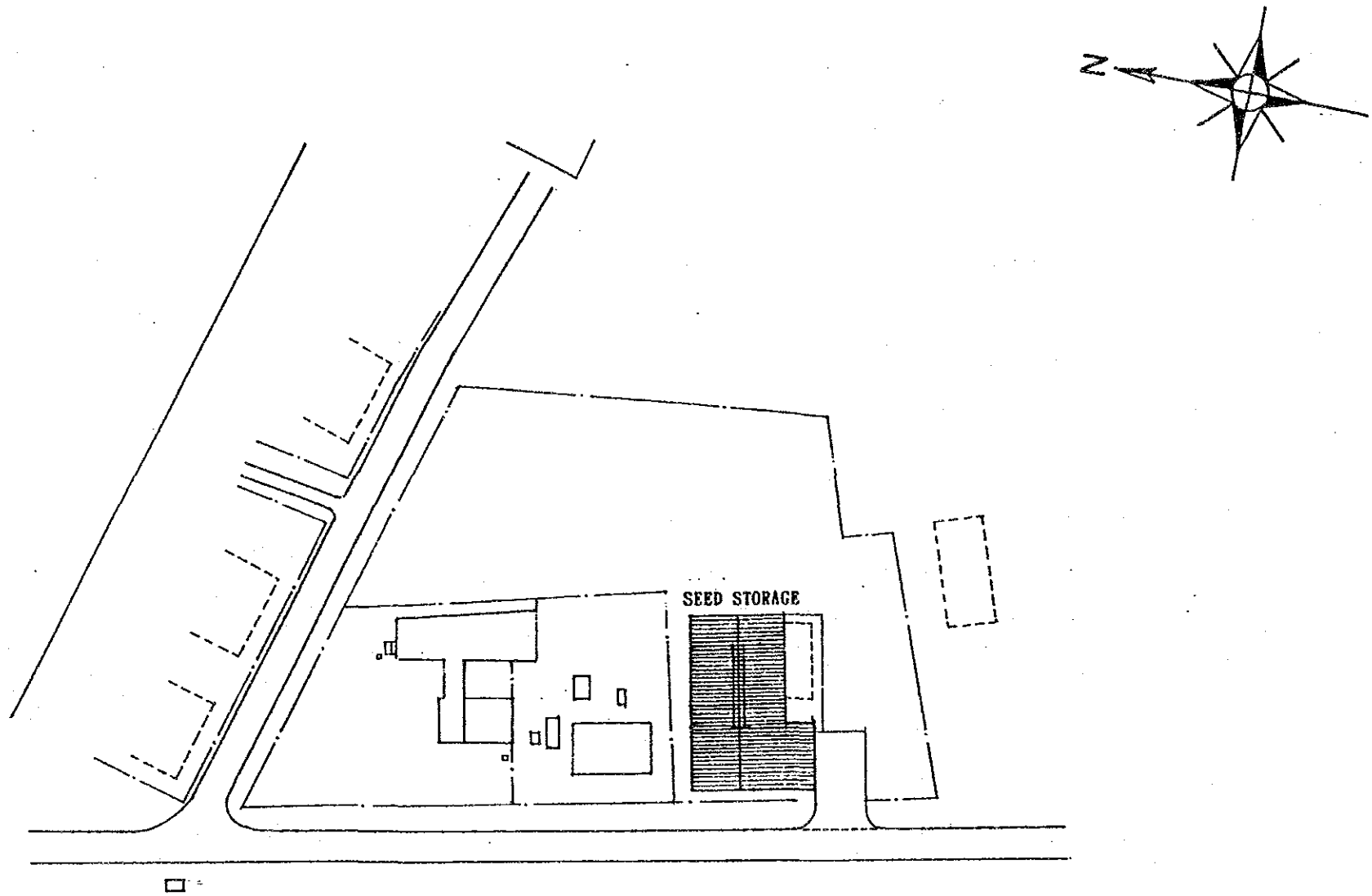


A-A SECTION



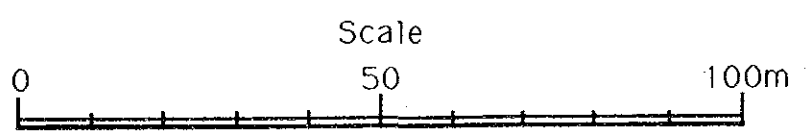
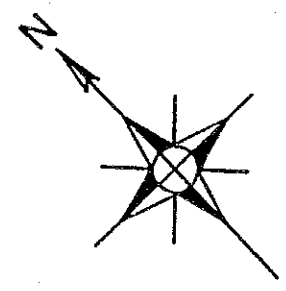
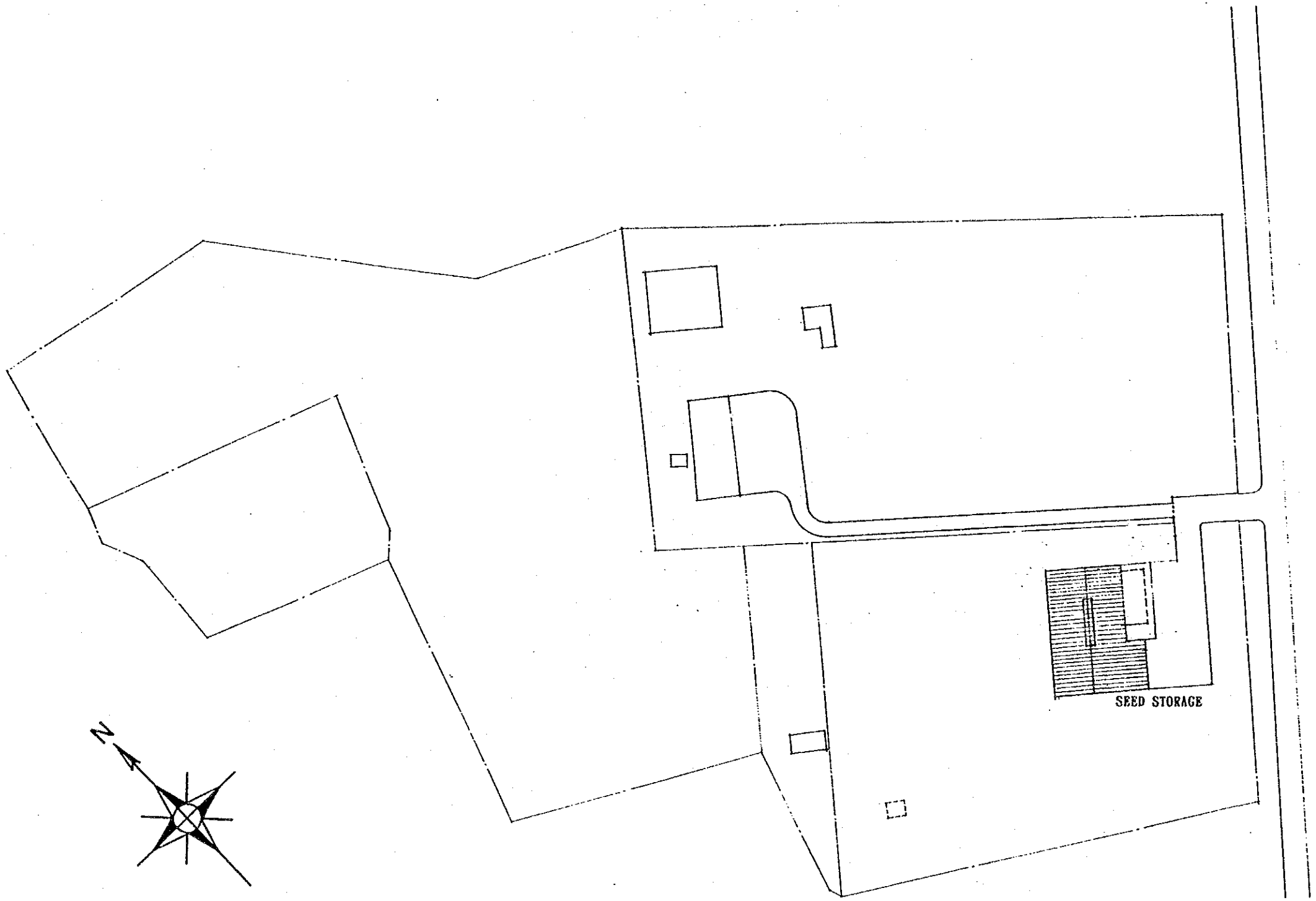
B-B SECTION

THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Capiz Province (Roxas)		
Seed Storage (4/4)		
Date		Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY		

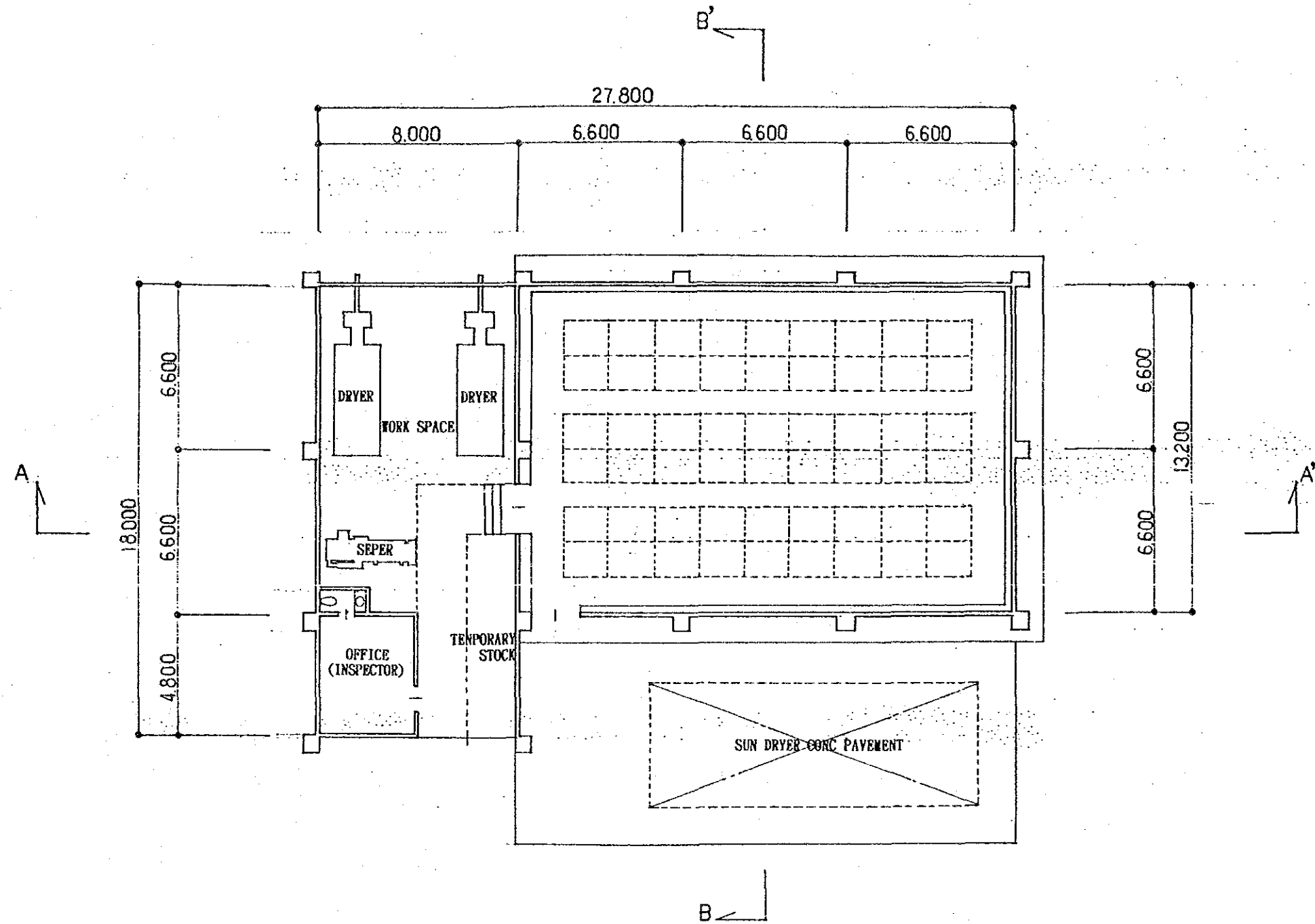


THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Aklan Province (Makato)	
General Plan	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

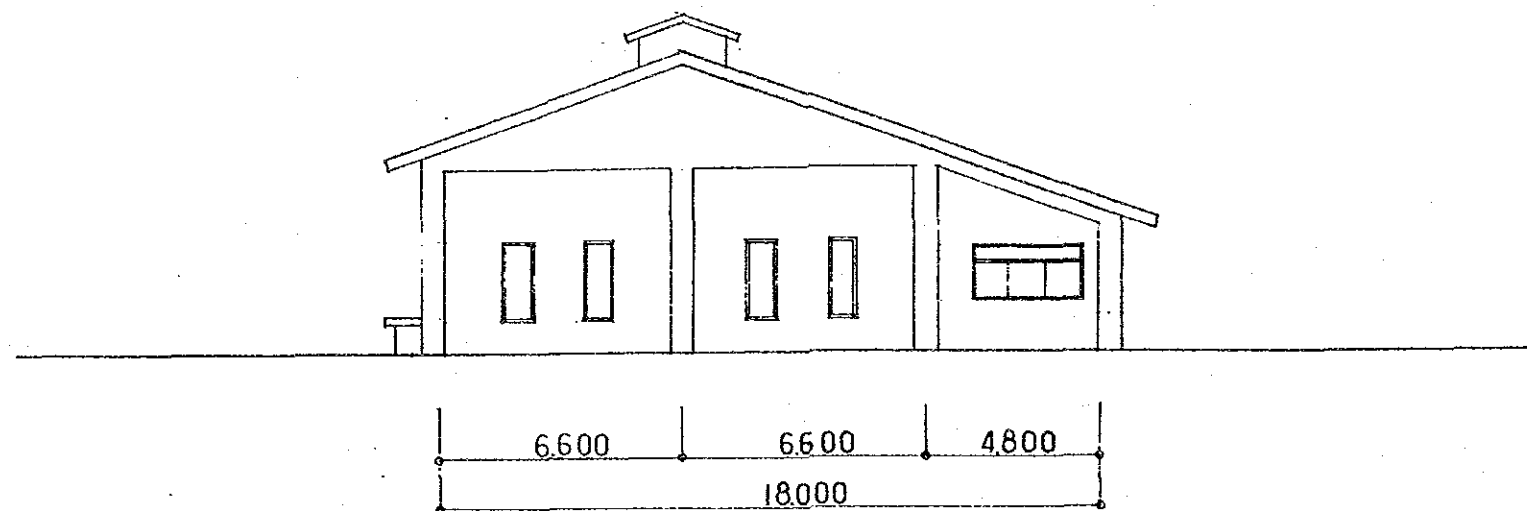




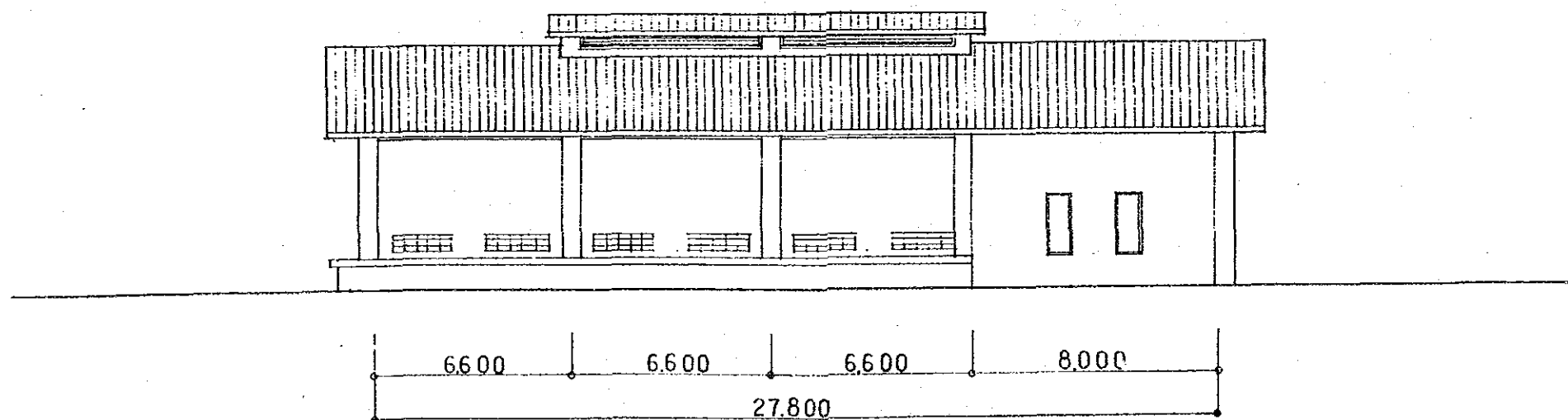
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Antique Province (Patnongon)	
General Plan	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Antique Province (Patnongon)	
Seed Storage (1/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

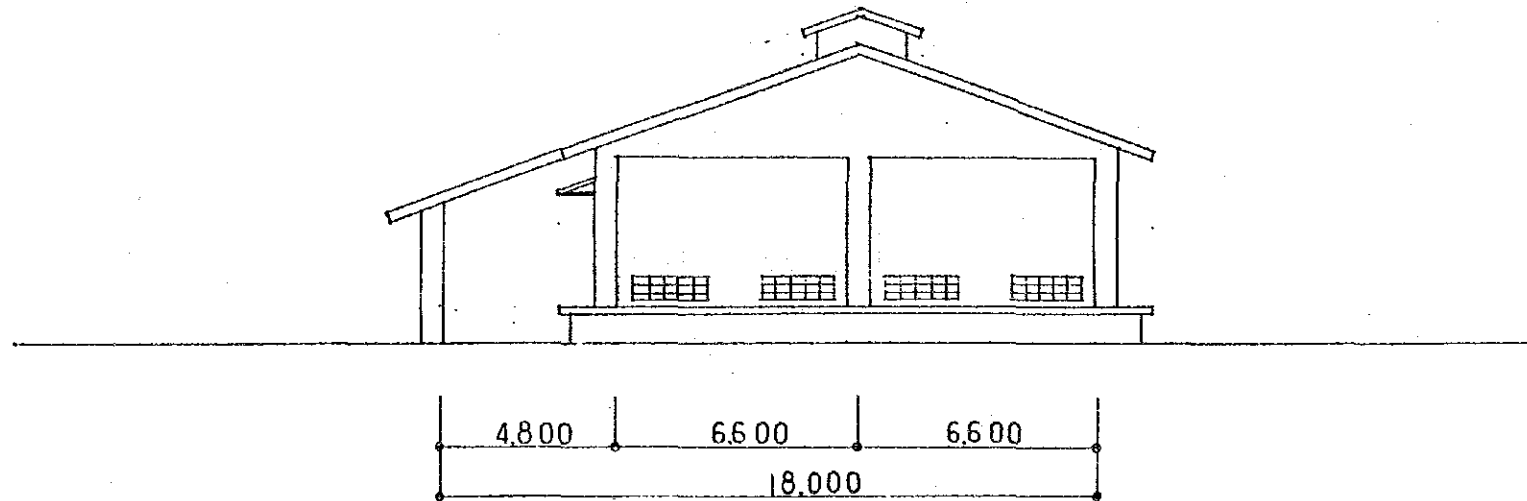


WEST ELEVATION

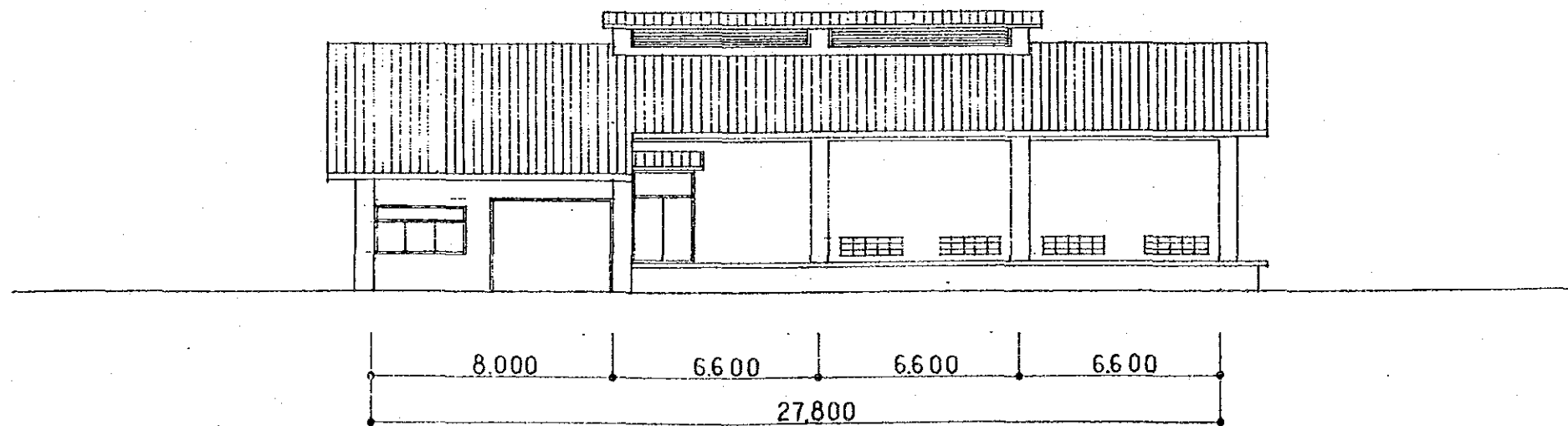


NORTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING Antique Province (Patnongan)	
Seed Storage (2/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

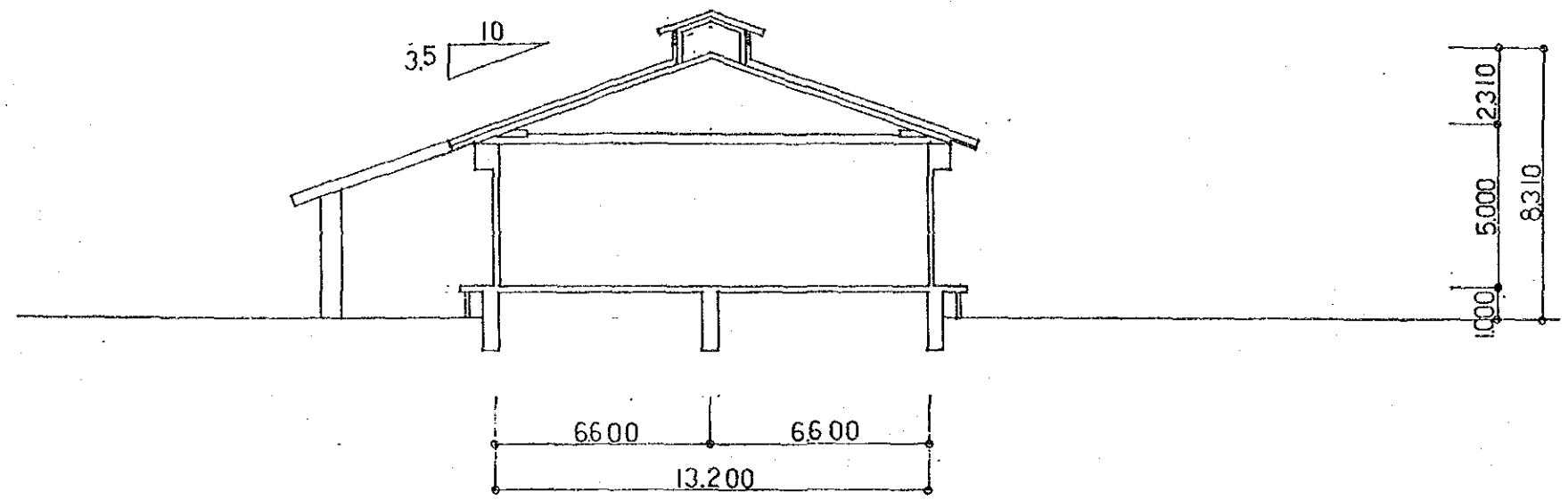


EAST ELEVATION

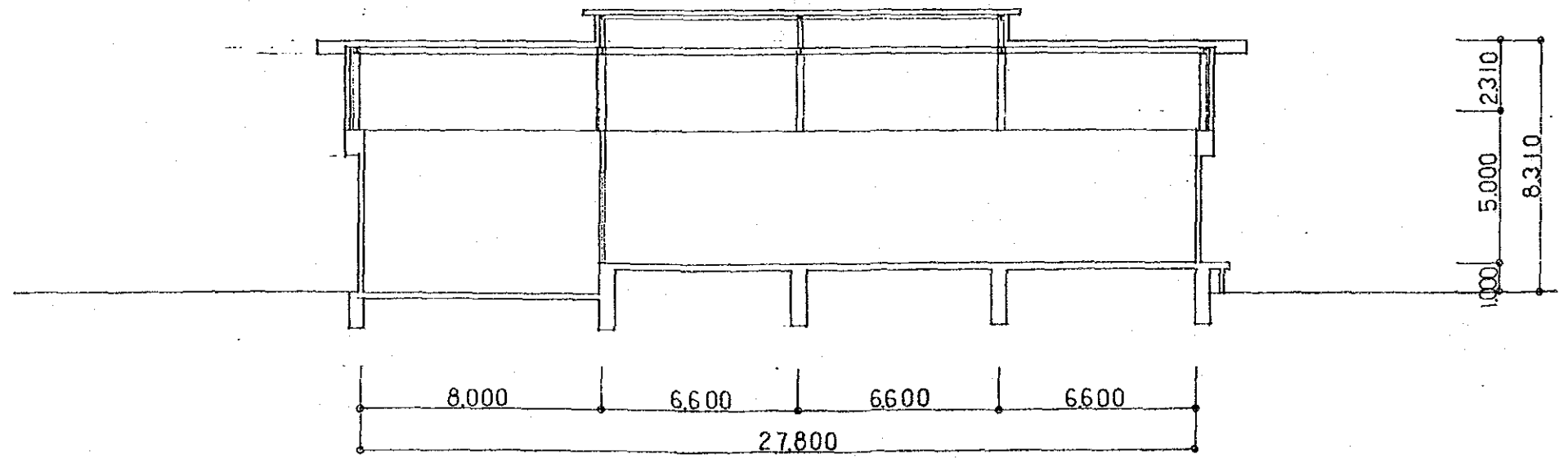


SOUTH ELEVATION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Antique Province (Patnongon)	
Seed Storage (3/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



B-B SECTION

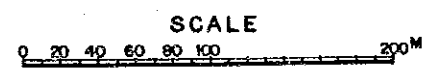
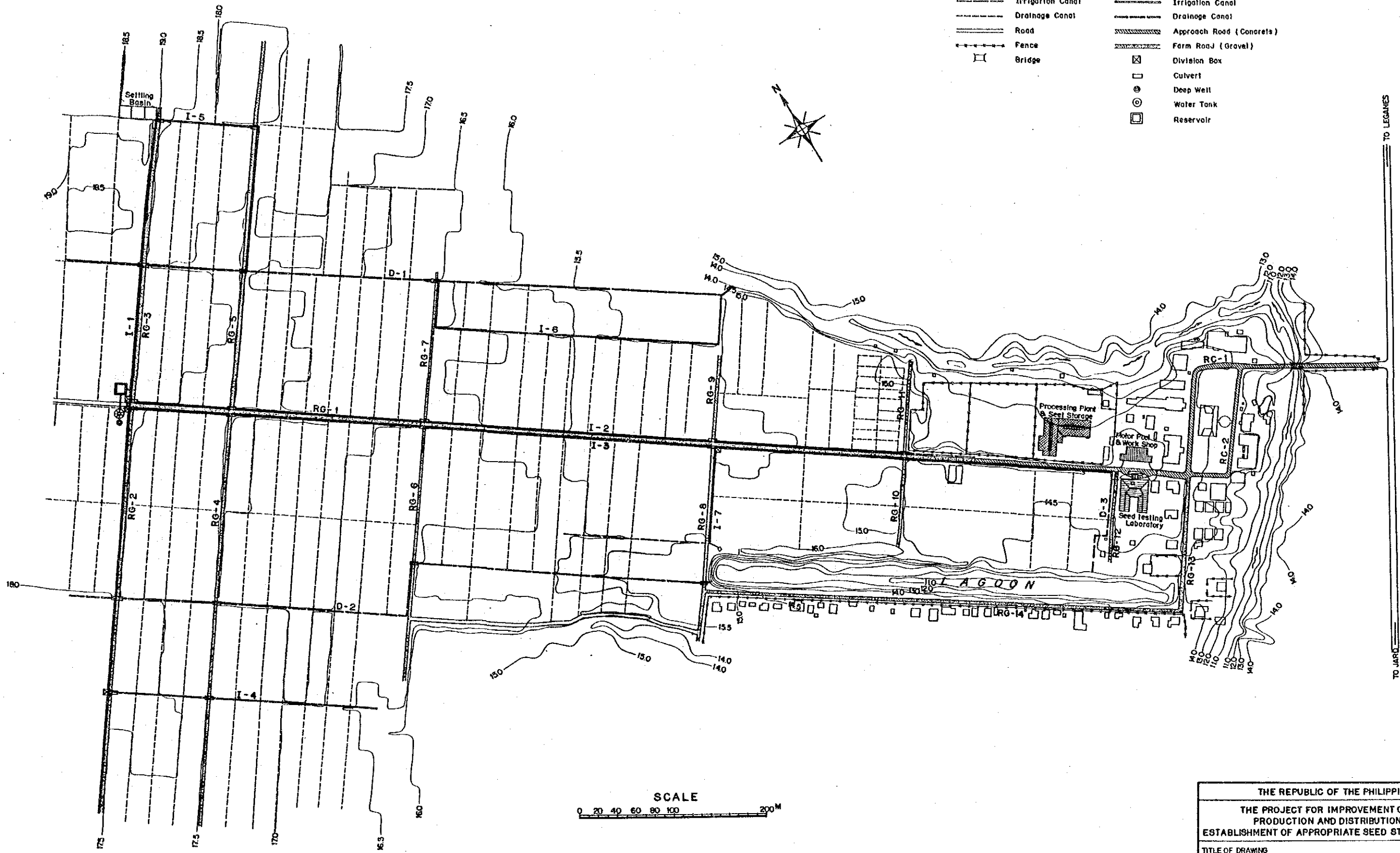


A-A SECTION

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Antique Province (Patnongan)	
Seed Storage (4/4)	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

LEGEND

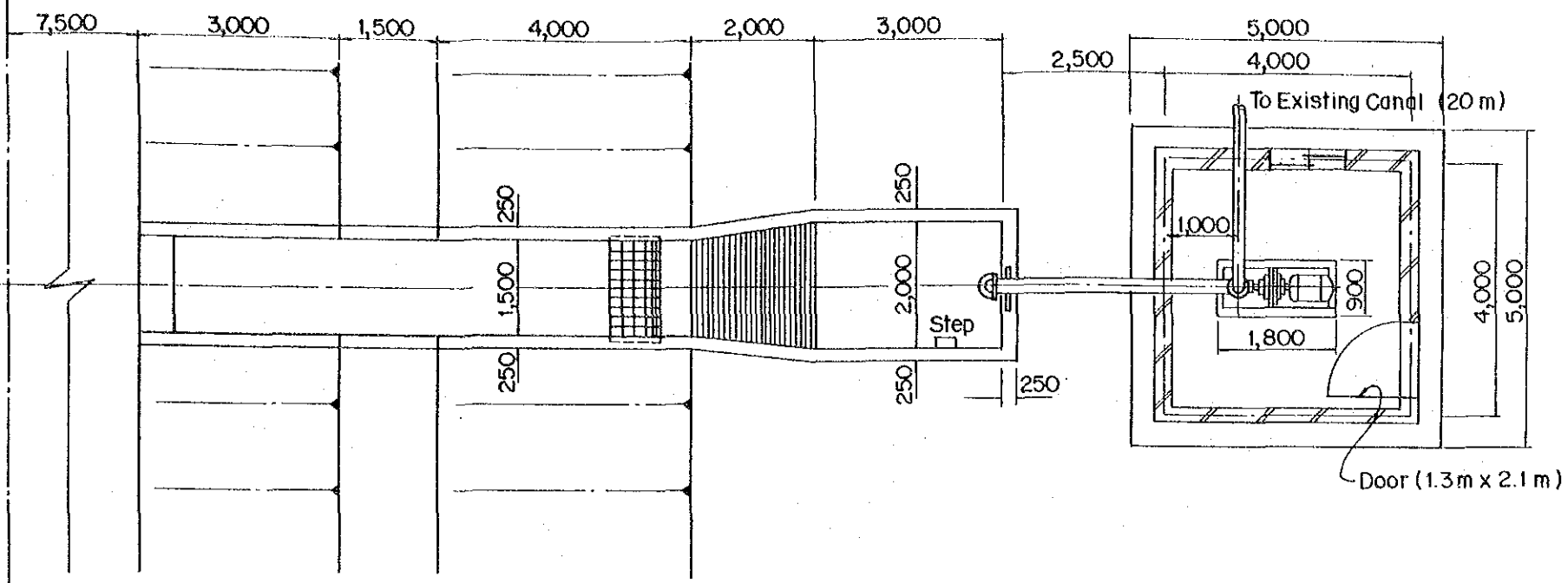
EXISTING	PLAN
Irrigation Canal	Irrigation Canal
Drainage Canal	Drainage Canal
Road	Approach Road (Concrete)
Fence	Farm Road (Gravel)
Bridge	Division Box
	Culvert
	Deep Well
	Water Tank
	Reservoir



THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING Irrigation & Drainage General Layout	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

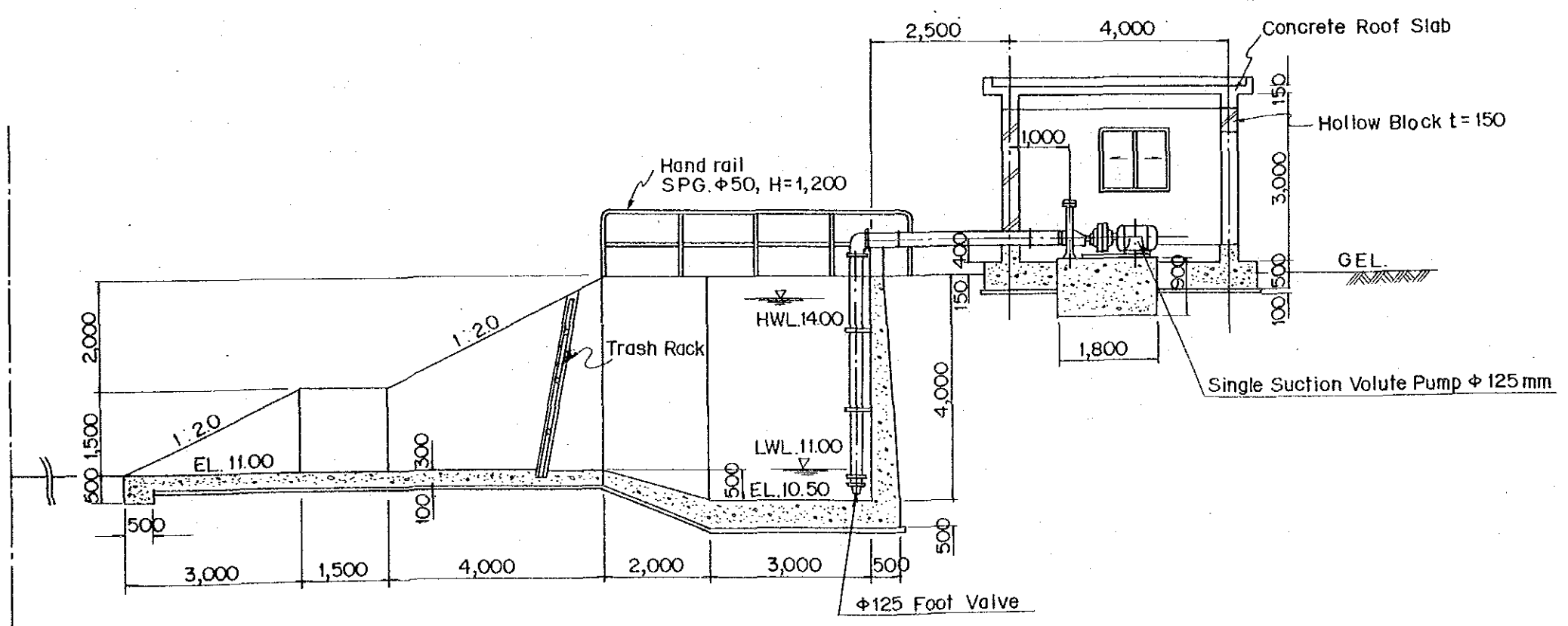
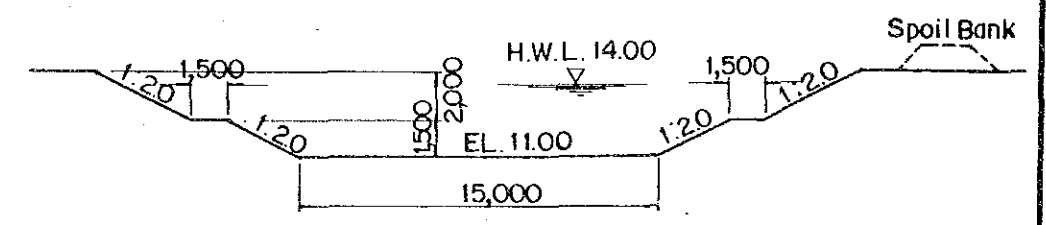
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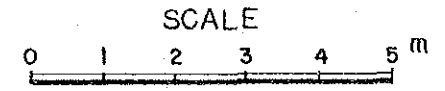
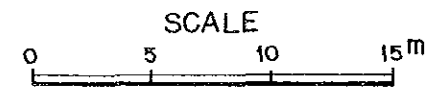


PLAN

TYPICAL CROSS SECTION OF LAGOON

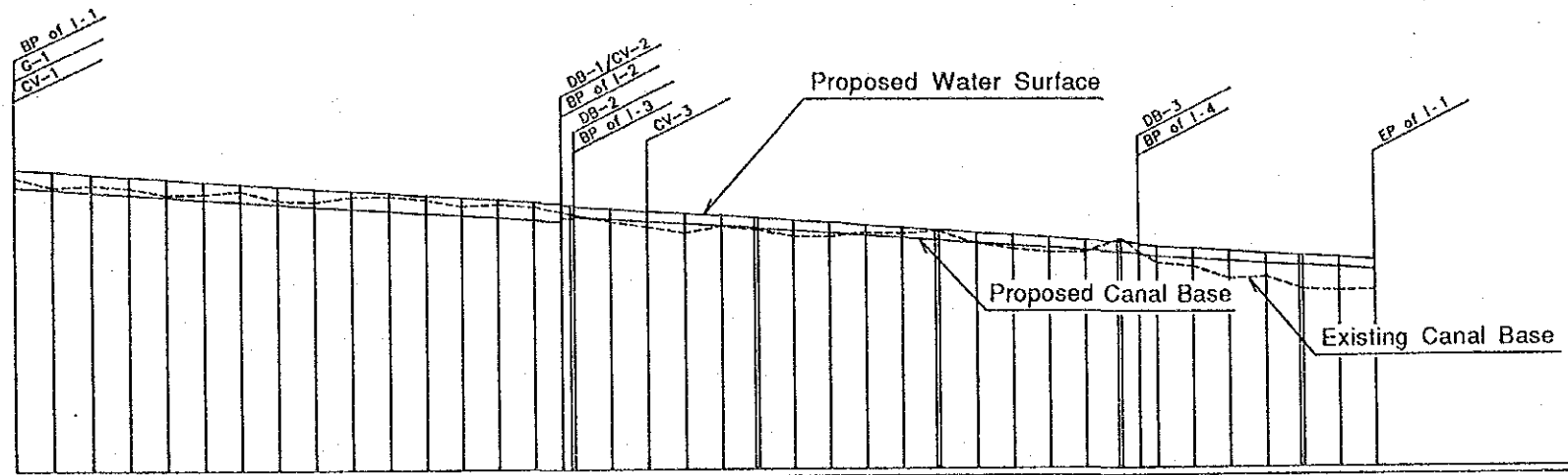
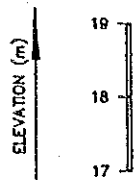


PROFILE

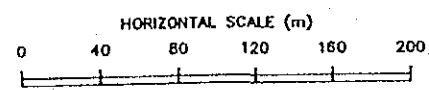


THE REPUBLIC OF THE PHILIPPINES		
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM		
TITLE OF DRAWING		
Irrigation & Drainage		
Lagoon / Pump Station		
Date		Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY		

I - 1



CANAL TYPE	Q=0.062m <sup>3</sup> /s , I=1/600 B=0.4m , h=0.25m , V=0.63m/s			Q=0.042m <sup>3</sup> /s , I=1/600 B=0.4m , h=0.18m , V=0.51m/s			Q=0.020m <sup>3</sup> /s , I=1/600 B=0.3m , h=0.14m , V=0.45m/s																			
	WATER SURFACE ELEVATION	18.25	18.33	18.40	18.48	18.55	18.62	18.70	18.77	18.84	18.92	19.00	19.08	19.16	19.24	19.32	19.40	19.48	19.56	19.64	19.72	19.80	19.88	19.96		
CANAL BASE ELEVATION	18.20	18.28	18.35	18.43	18.51	18.59	18.67	18.75	18.83	18.91	18.99	19.07	19.15	19.23	19.31	19.39	19.47	19.55	19.63	19.71	19.79	19.87	19.95	20.03		
EXISTING CANAL BASE ELEVATION	18.51	18.66	18.77	18.87	18.97	19.07	19.17	19.27	19.37	19.47	19.57	19.67	19.77	19.87	19.97	20.07	20.17	20.27	20.37	20.47	20.57	20.67	20.77	20.87		
REDUCED DISTANCE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	320.00	340.00	360.00	380.00	400.00	420.00	440.00	460.00		
DISTANCE	0.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00		
STATION NO.	+20.00	+40.00	+60.00	+80.00	+100.00	+120.00	+140.00	+160.00	+180.00	+200.00	+220.00	+240.00	+260.00	+280.00	+300.00	+320.00	+340.00	+360.00	+380.00	+400.00	+420.00	+440.00	+460.00			
CURVE	-----																									



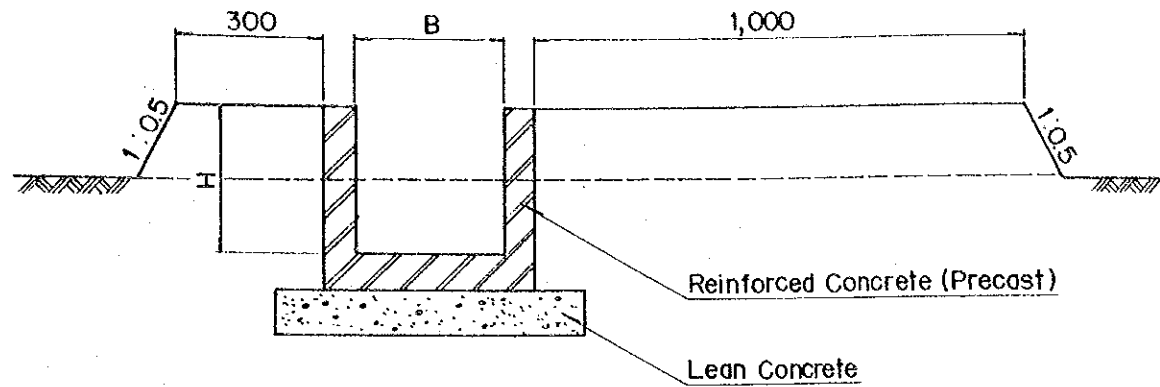
THE REPUBLIC OF THE PHILIPPINES  
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM

TITLE OF DRAWING  
Irrigation & Drainage  
Irrigation Canal Profile (I - 1)

Date \_\_\_\_\_ Drawing No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

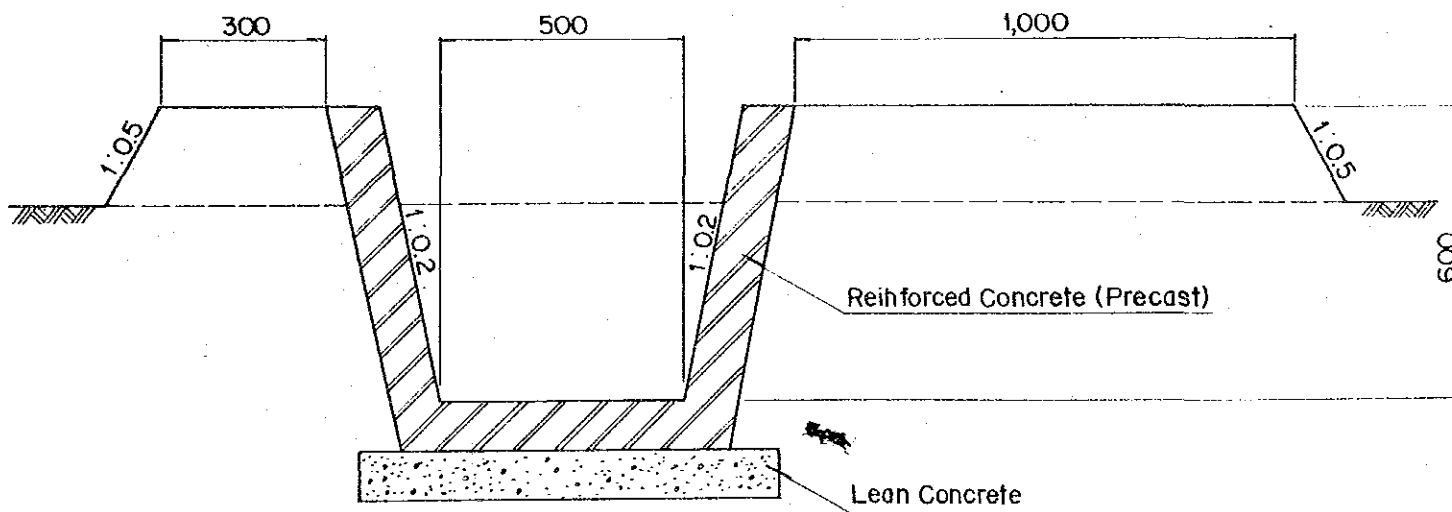




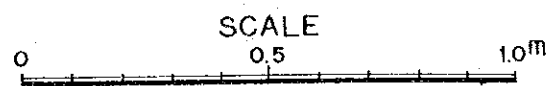
Canal Type	L (m)
I-1 A	440.0
B	302.0
I-2 A	830.5
I-3 A	1,053.5
I-4 A	290.4
I-5 A	266.0
I-6 A	410.0
I-7 A	100.0
<b>Total</b>	<b>3,692.4</b>

CROSS SECTION OF IRRIGATION CANAL

Type	B	H
A	300	300
B	400	400

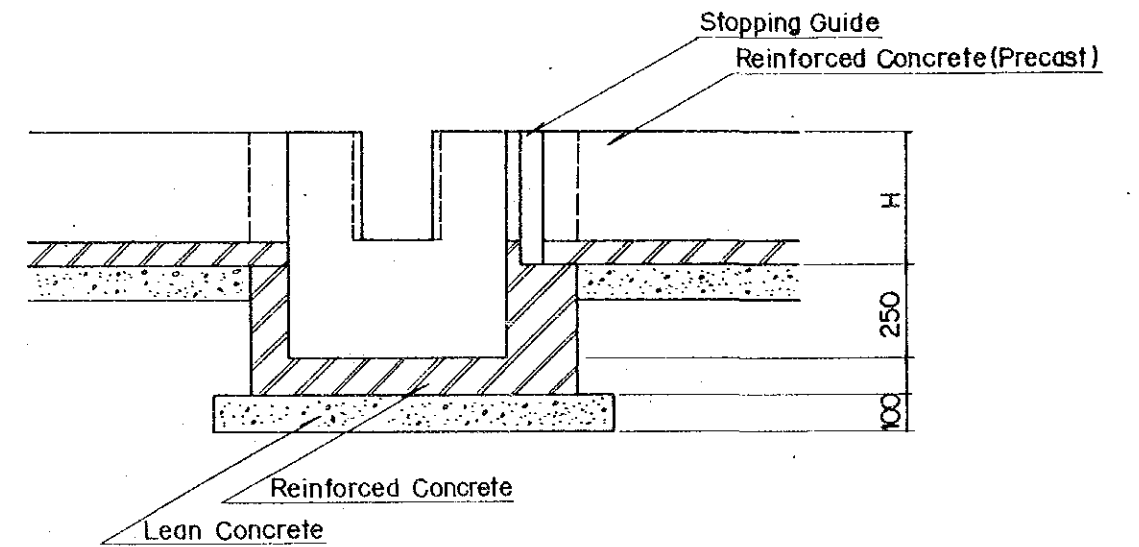
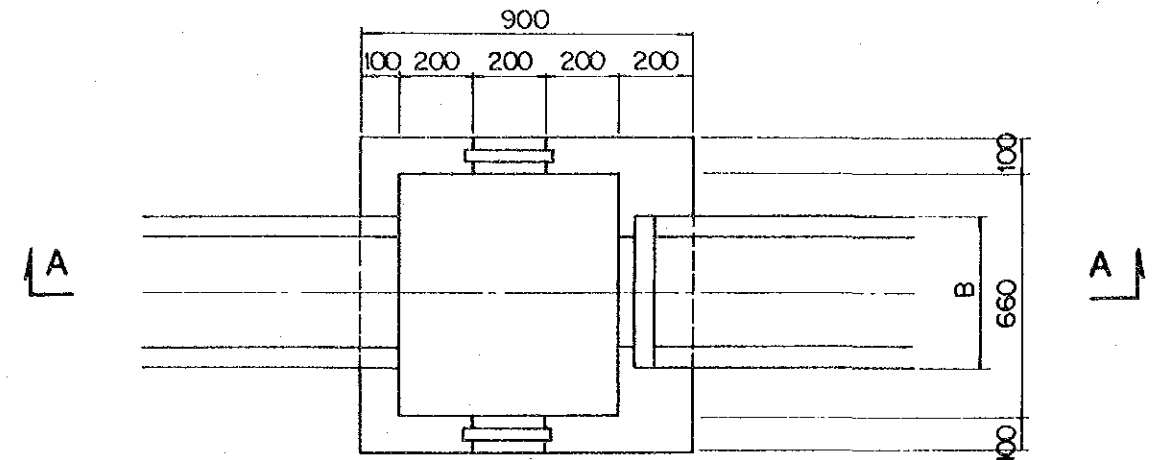


CROSS SECTION OF DRAIN

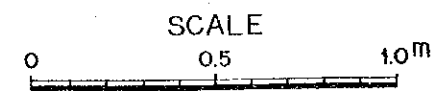


Drainage Canal	L (m)
D-1	705.0
D-2	730.0
<b>Total</b>	<b>1,435.0</b>

FIELD OUTLET



SECTION A-A

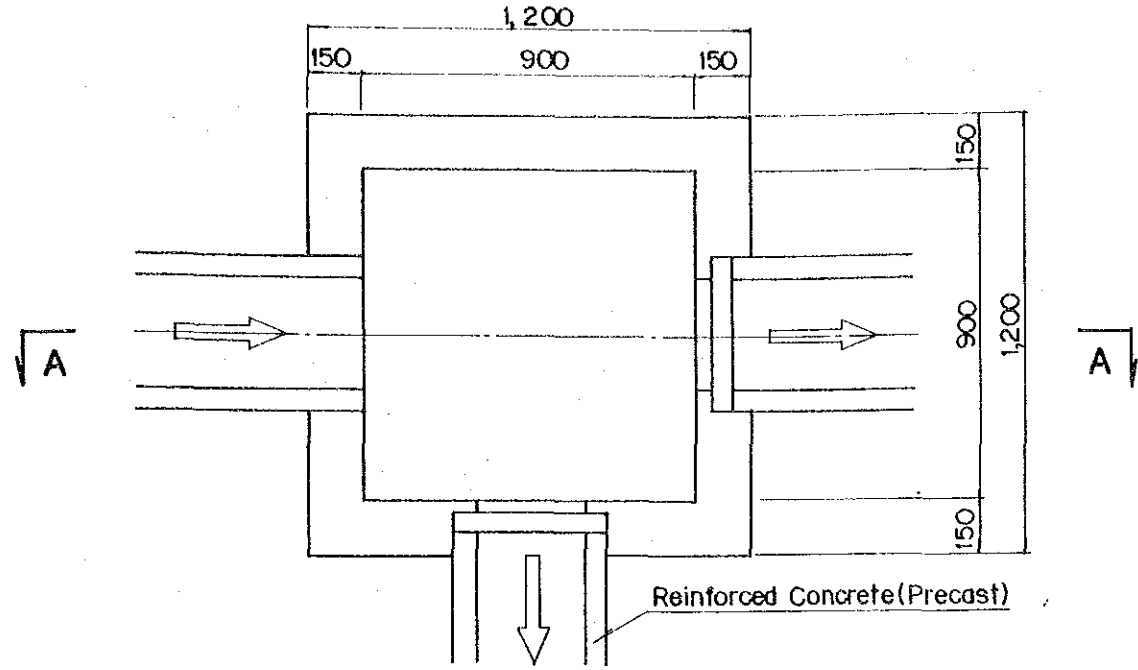


Type	B	H
A	420	370
B	520	470

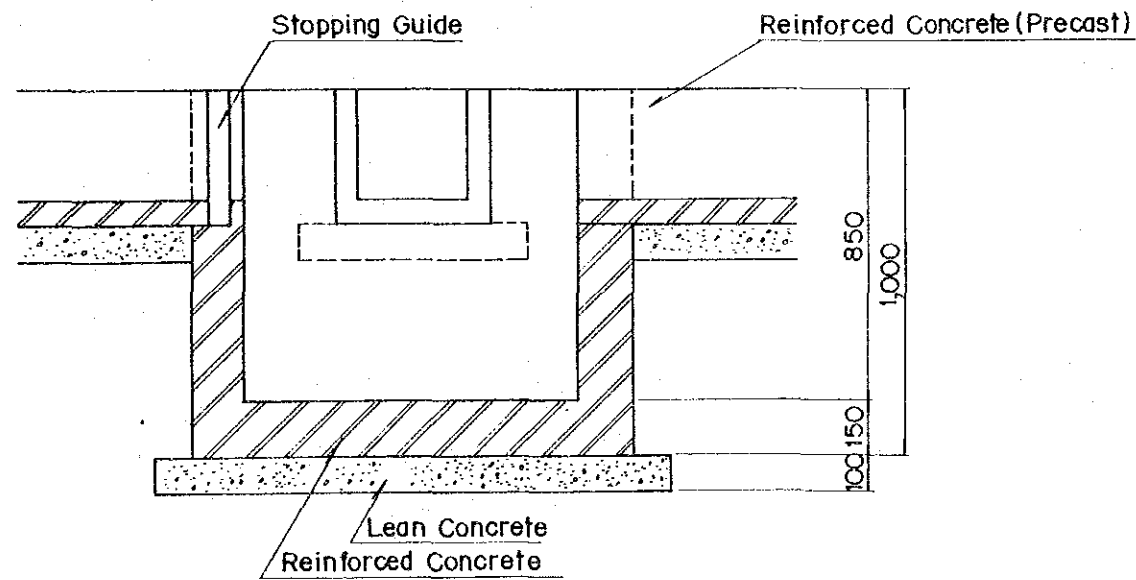
Canal Type	Field Outlet (No)
I-1 A	5
B	1
I-2 A	24
I-3 A	28
I-4 A	11
I-5 A	5
I-6 A	9
<b>Total</b>	<b>83</b>

THE REPUBLIC OF THE PHILIPPINES  
 THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM  
 TITLE OF DRAWING  
 Irrigation & Drainage  
 Typical Section / Field Outlet  
 Date \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY

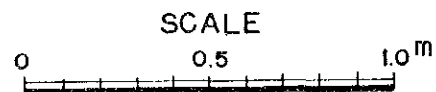
### DIVISION BOX, TYPE - A



Reinforced Concrete (Precast)

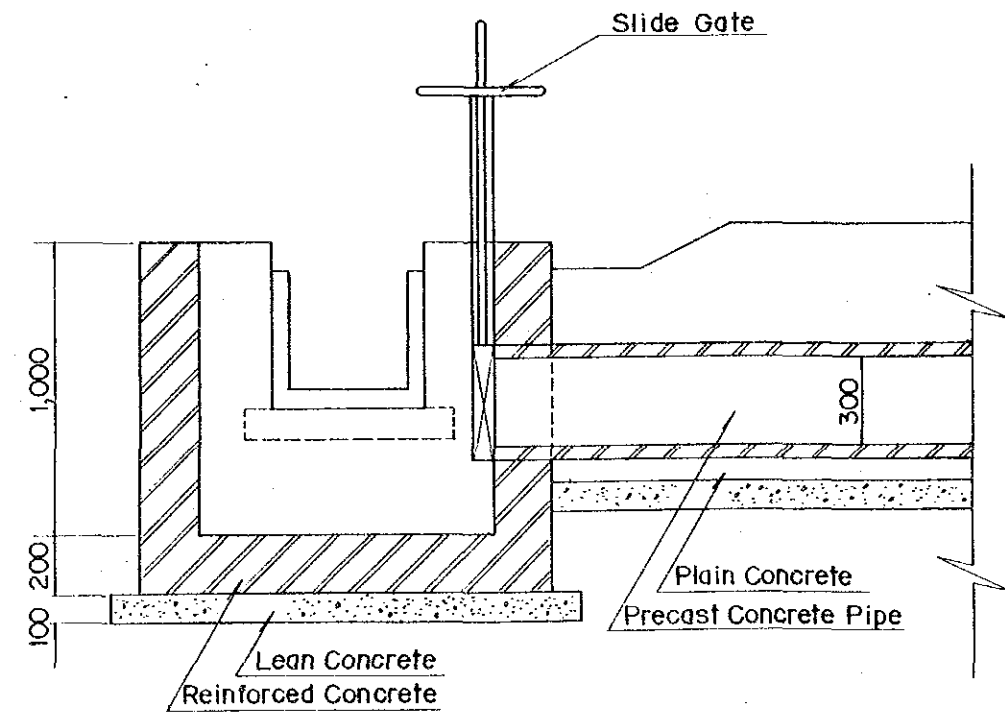
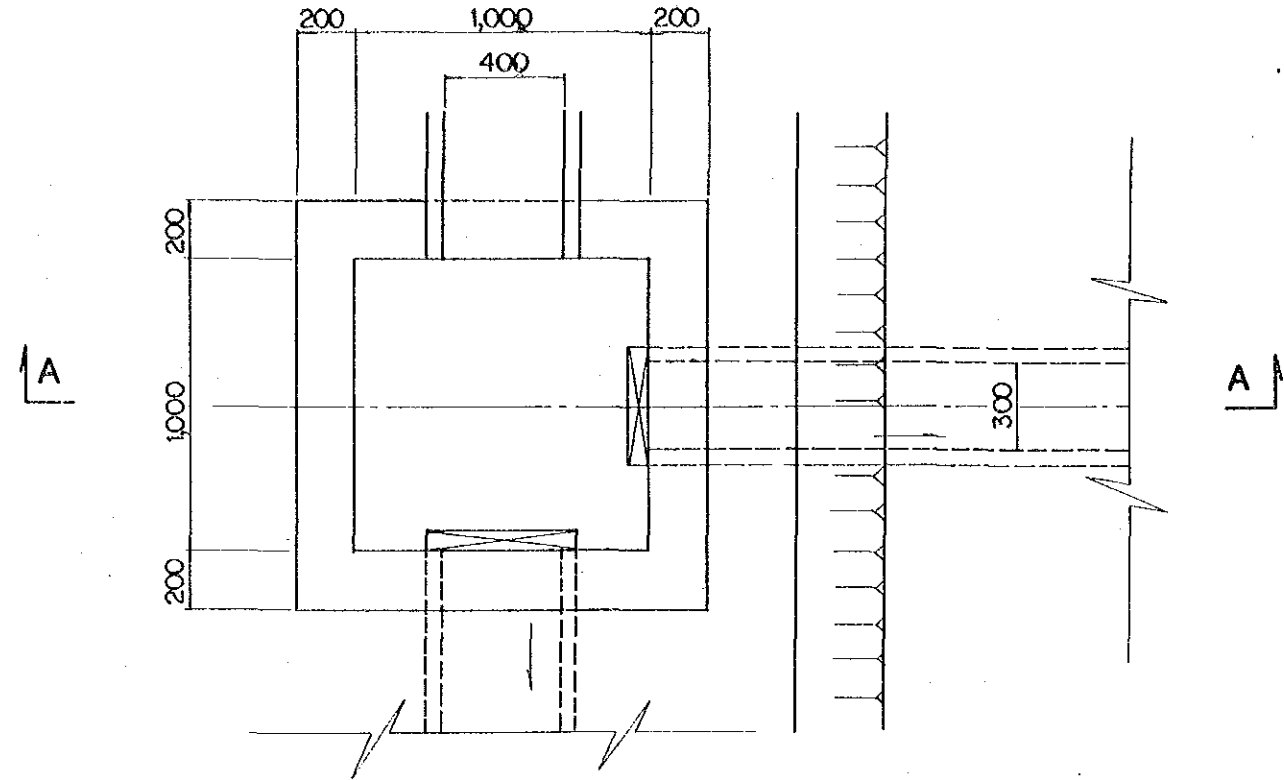


SECTION A - A

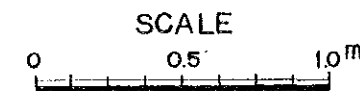


Canal	Type	Division Box (No)
I-1	A	2
	B	1
I-3	A	1
Total		4

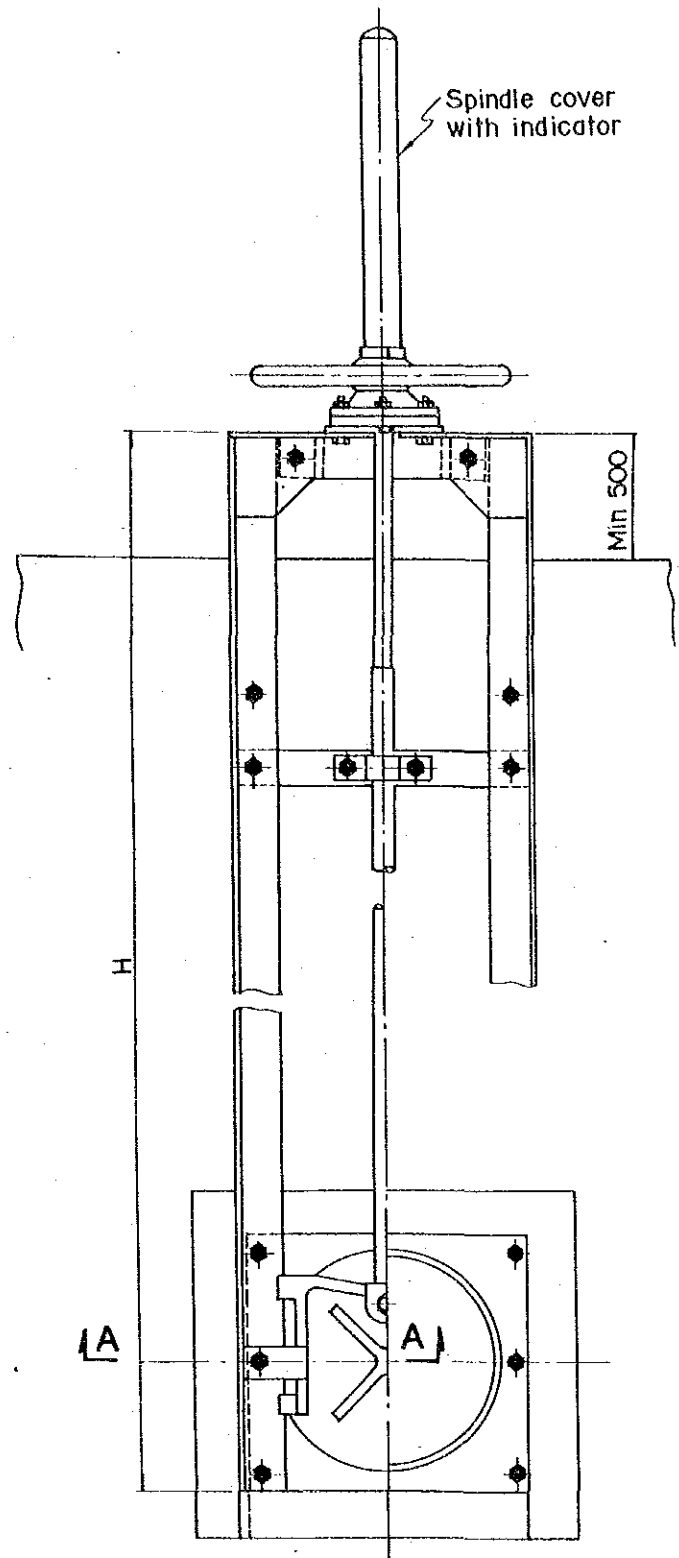
### DIVISION BOX, TYPE - B



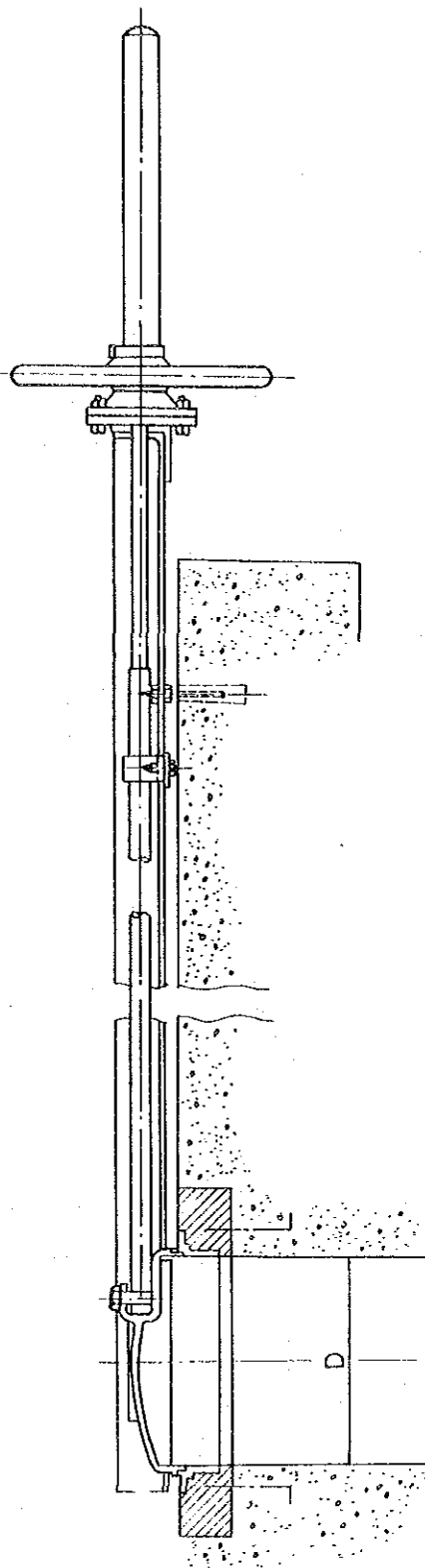
SECTION A - A



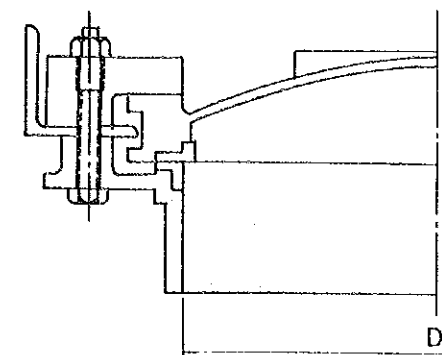
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Irrigation & Drainage	
Division Box	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



FRONT VIEW



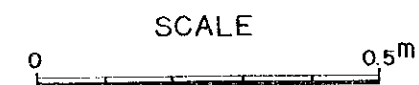
SECTION



SECTION A - A

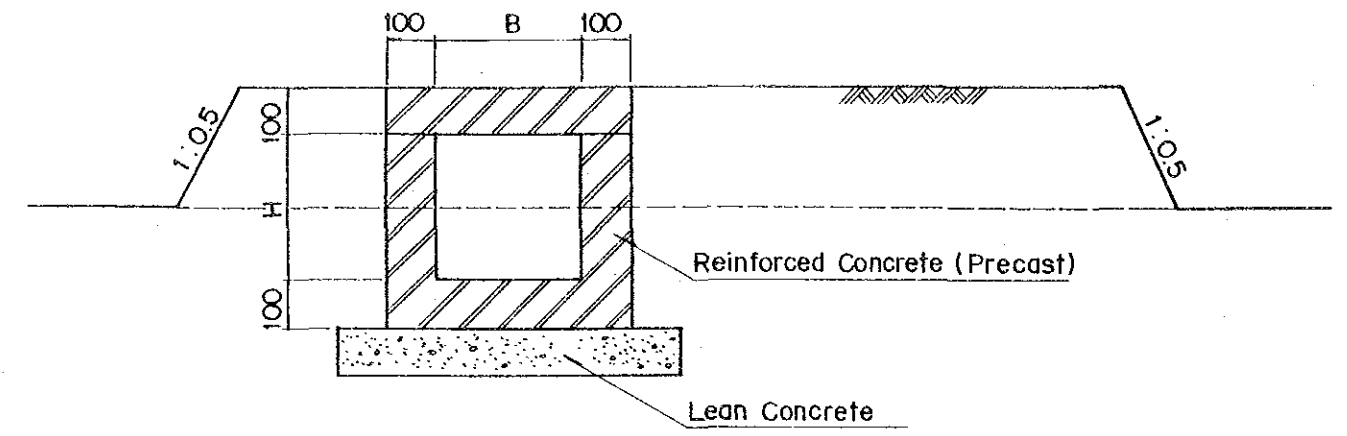
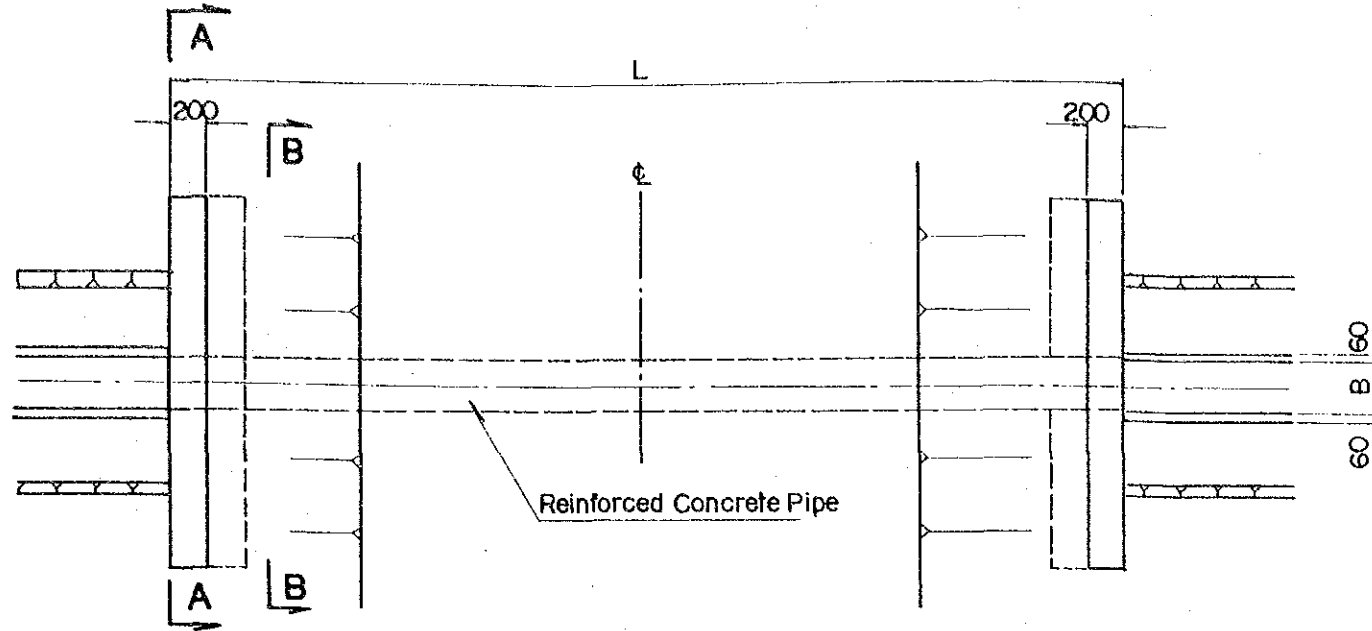
DIMENSION TABLE

Name of Canal	Name of STR.	D (m)	H (m)	Nos. of Gate
	Regulating Pond	0.45	2.0	1
I - 1	Settling Basin	0.45	1.8	1
	DB - 1	0.45	1.2	1
		0.45	1.2	1
I - 5	Settling Basin	0.45	1.8	1



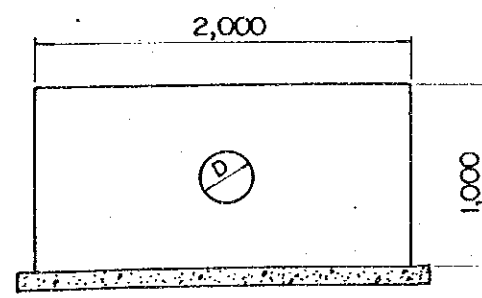
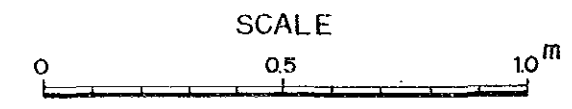
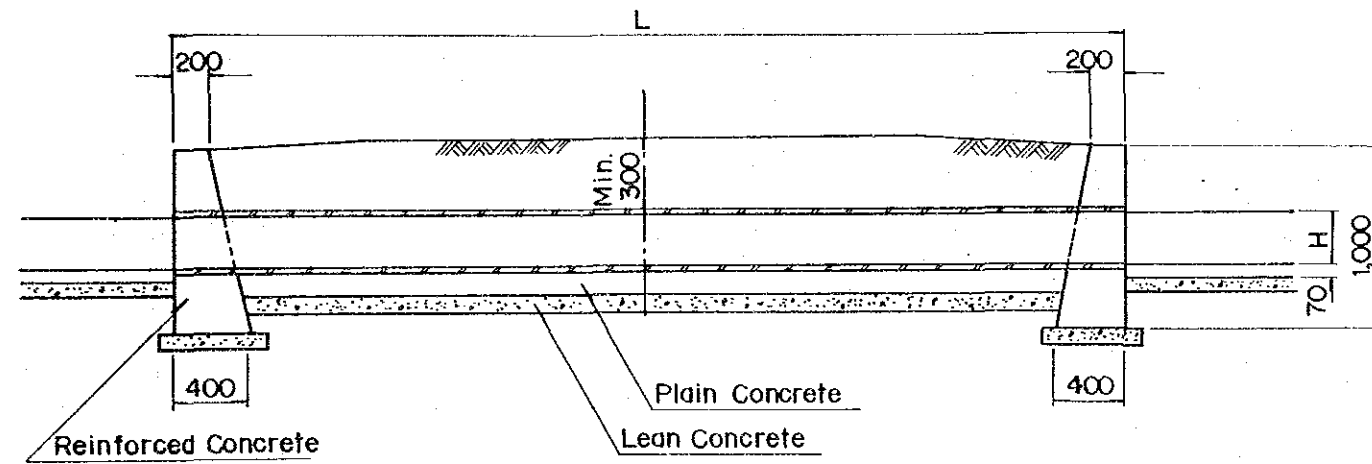
THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Irrigation & Drainage	
Gate on Division Box	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

CULVERT

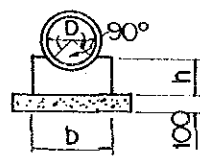


CROSS SECTION OF TRCTOR PASS

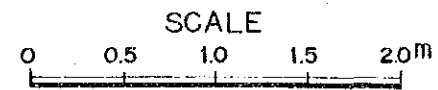
Type	B	H
A	300	300
B	400	400



SECTION A-A



SECTION B-B



(m)				
D	h	B	H	b
450	250	400	400	550

Canal	Culvert (No)
I-1	2
I-2	5
I-3	5
I-4	2
I-5	2
Total	16

THE REPUBLIC OF THE PHILIPPINES

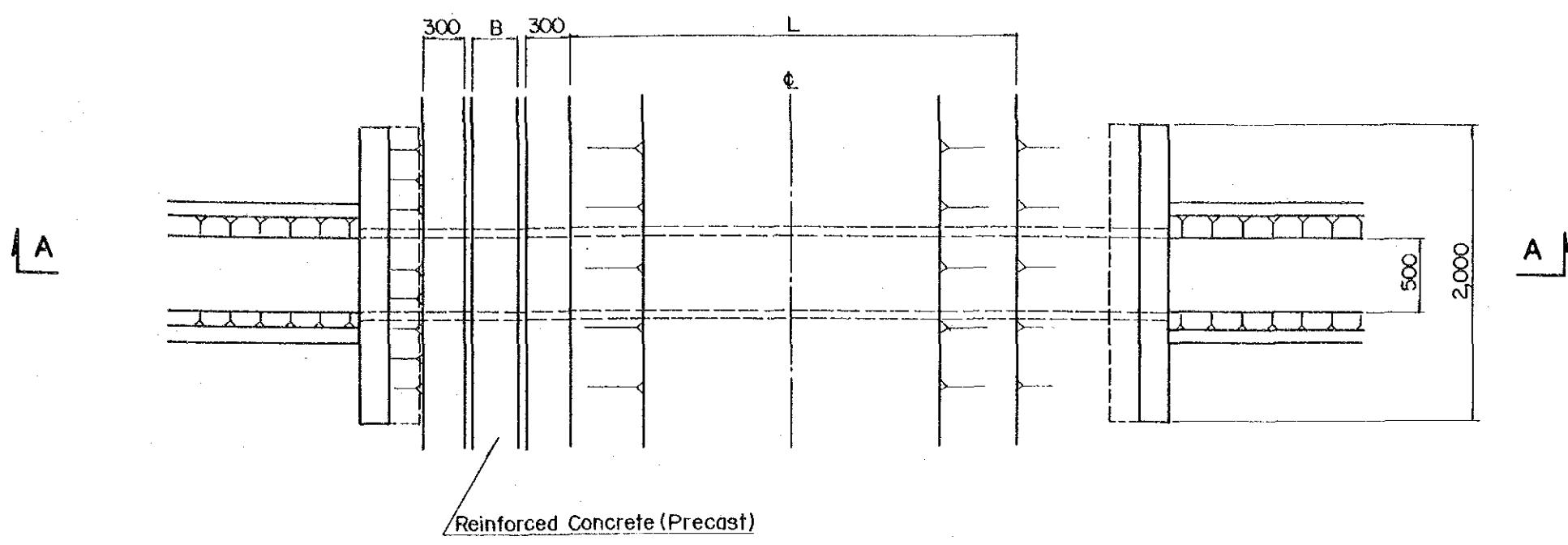
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM

TITLE OF DRAWING  
Irrigation & Drainage  
**Culvert / Tractor Pass**

Date \_\_\_\_\_ Drawing No. \_\_\_\_\_

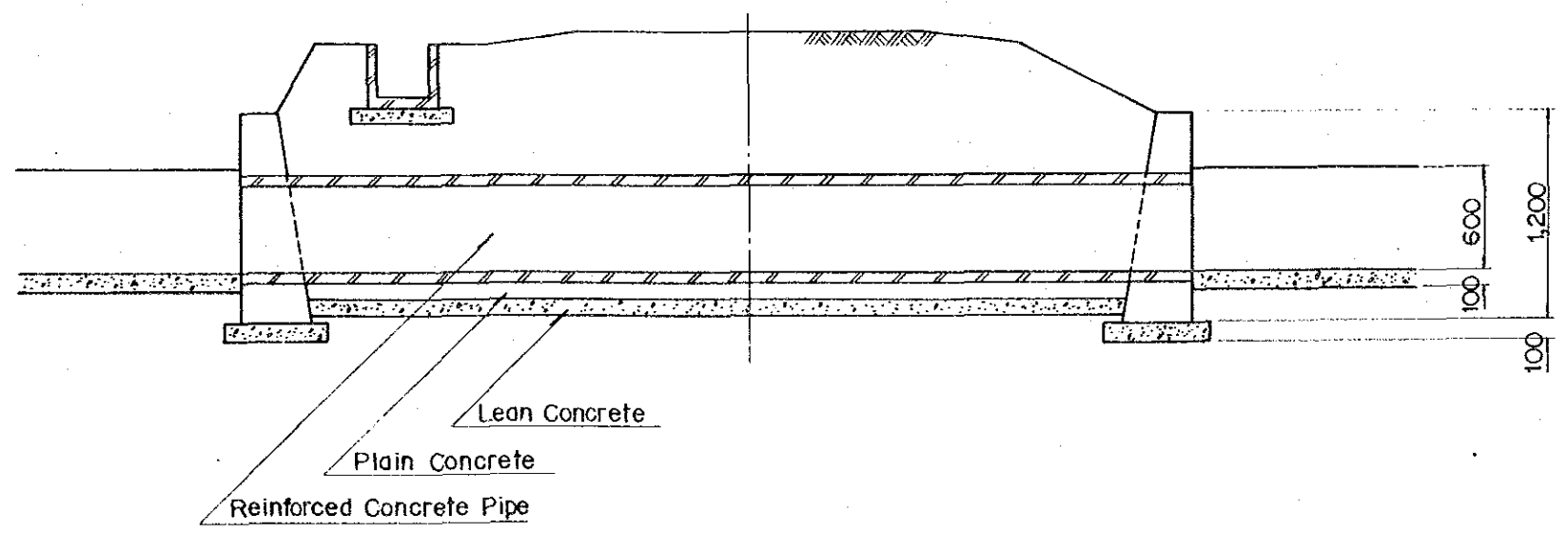
JAPAN INTERNATIONAL COOPERATION AGENCY

# DRAINAGE CULVERT

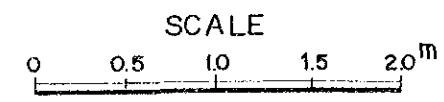
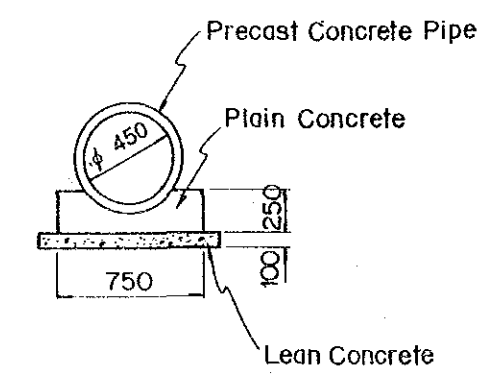


PLAN

	(nos.)
Drainage Canal Drainage Culvert	
D - 1	3
D - 2	4
Total	7

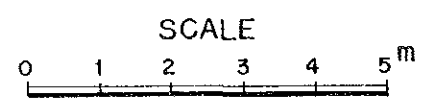
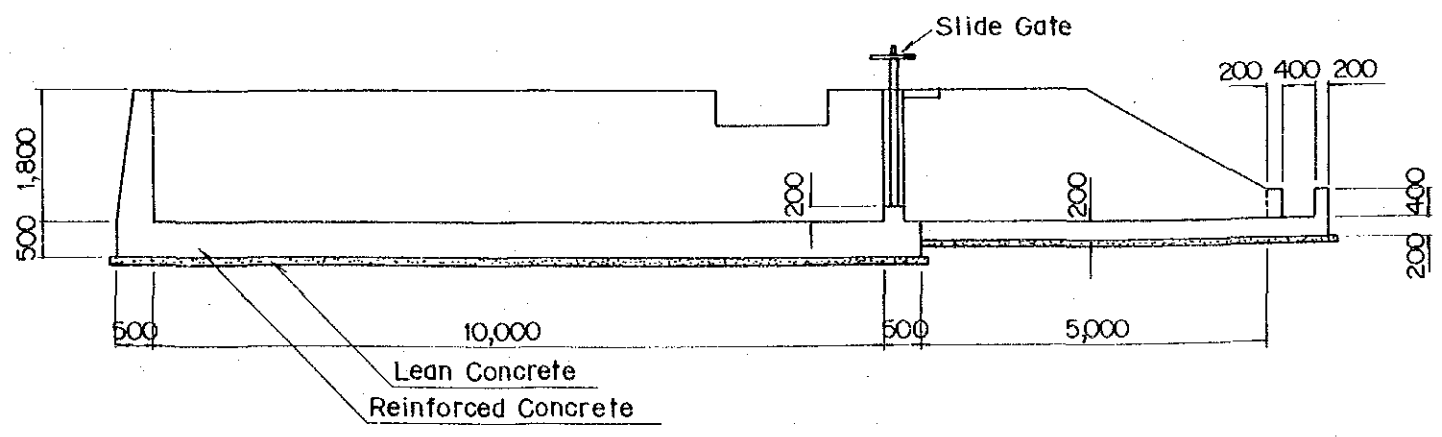
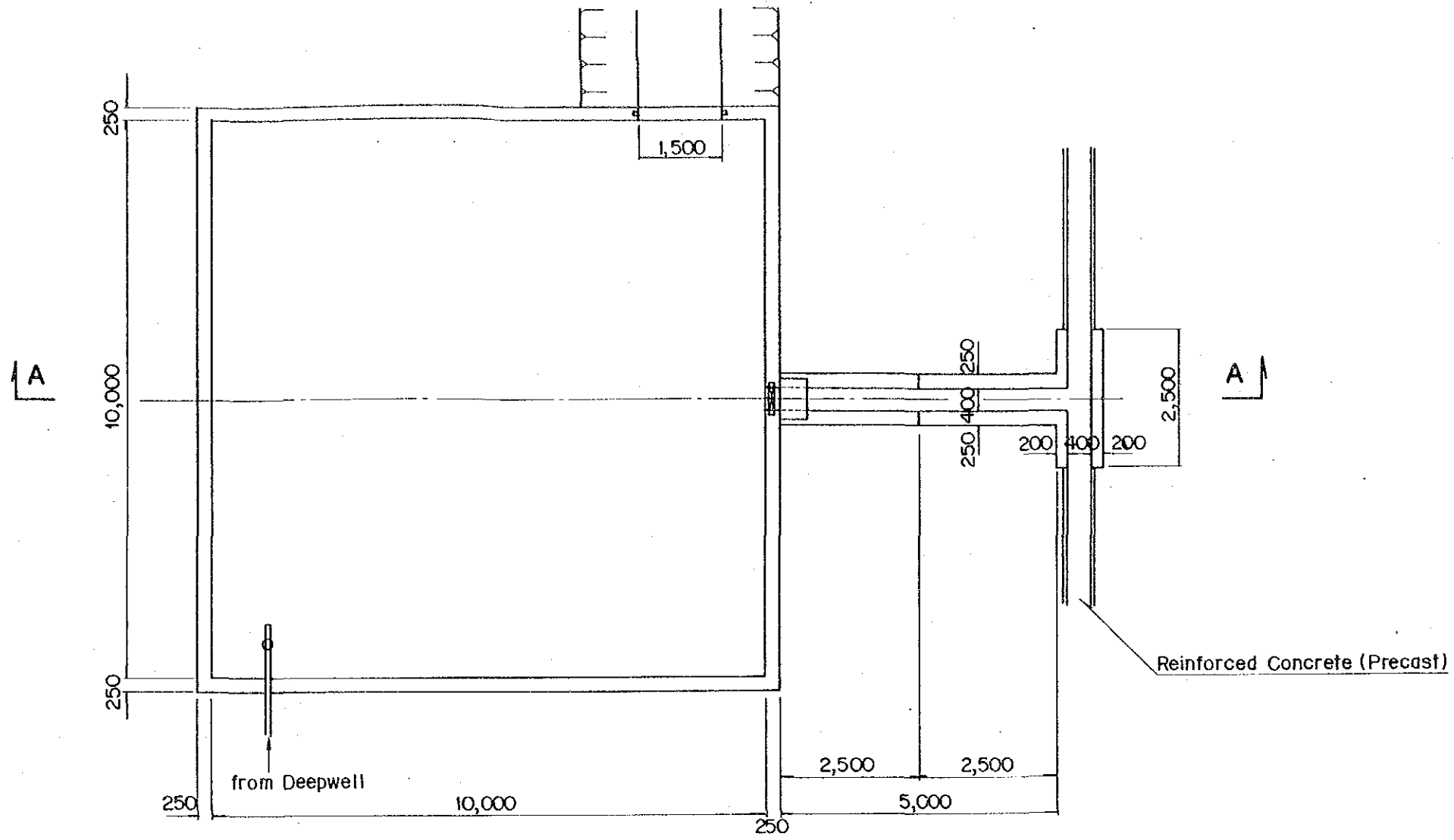


SECTION A - A



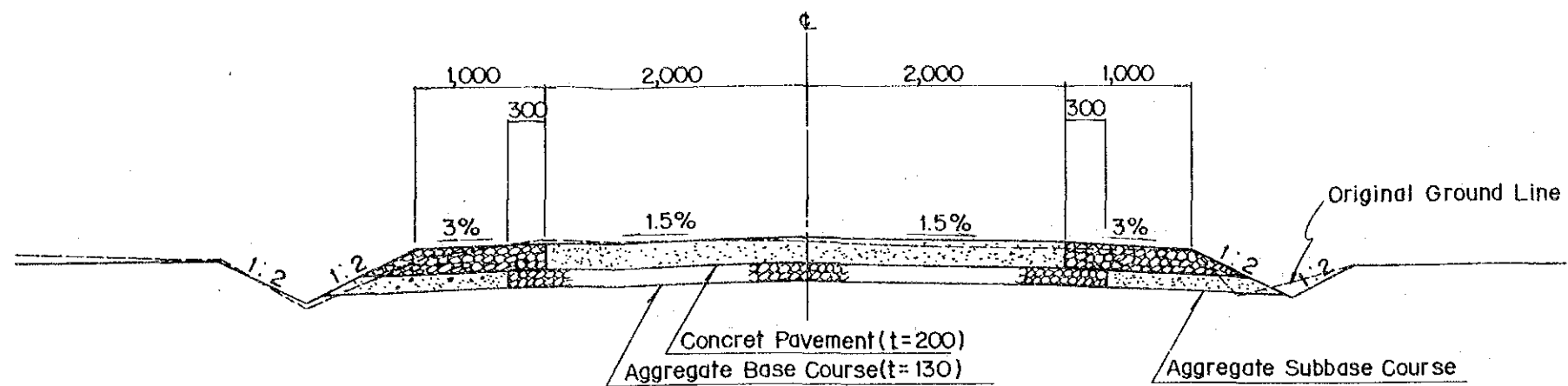
THE REPUBLIC OF THE PHILIPPINES  
 THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM  
 TITLE OF DRAWING  
 Irrigation & Drainage  
**Drainage Culvert**  
 Date \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY

REGULATING POND

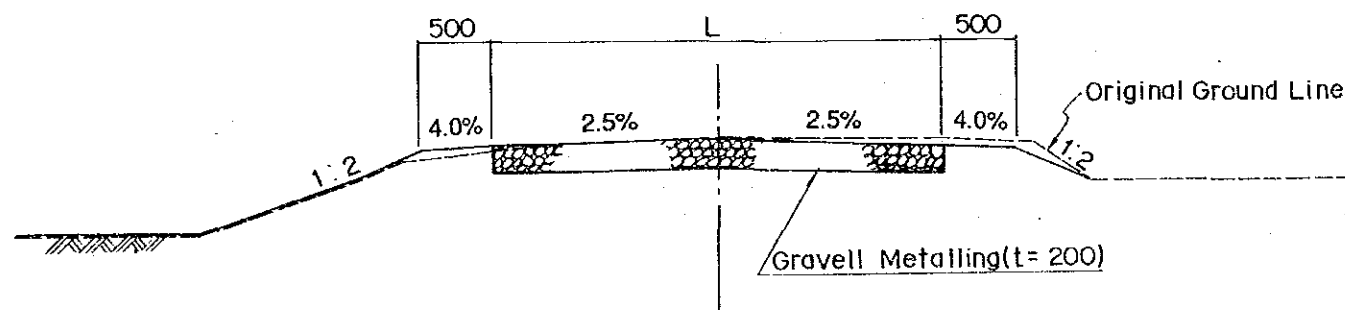


SECTION A-A

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Irrigation & Drainage	
Regulating Pond	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

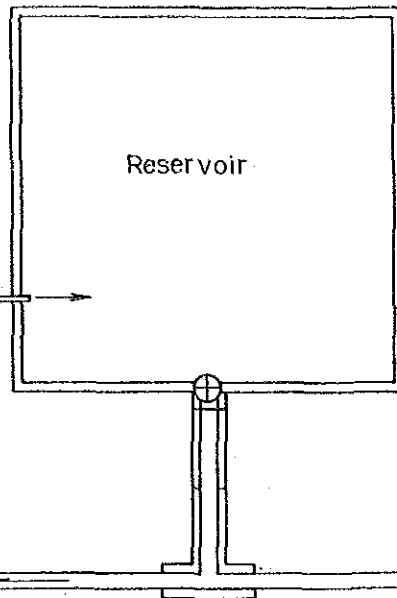
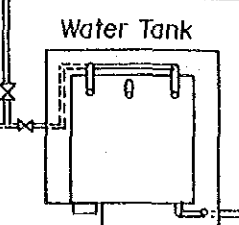
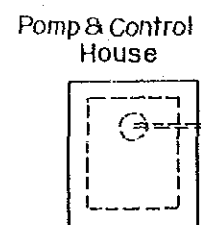
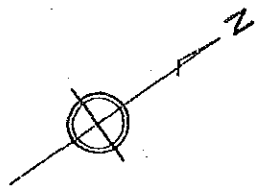


CROSS SECTION OF APPROACH ROAD



CROSS SECTION OF FARM ROAD

THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Road	
Typical Cross Section	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



Drain

Irrigation Canal I - 1

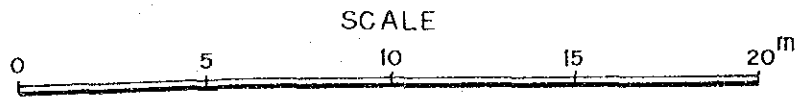
Farm Road RG-2

Farm Road RG-3

Irrigation Canal I - 3

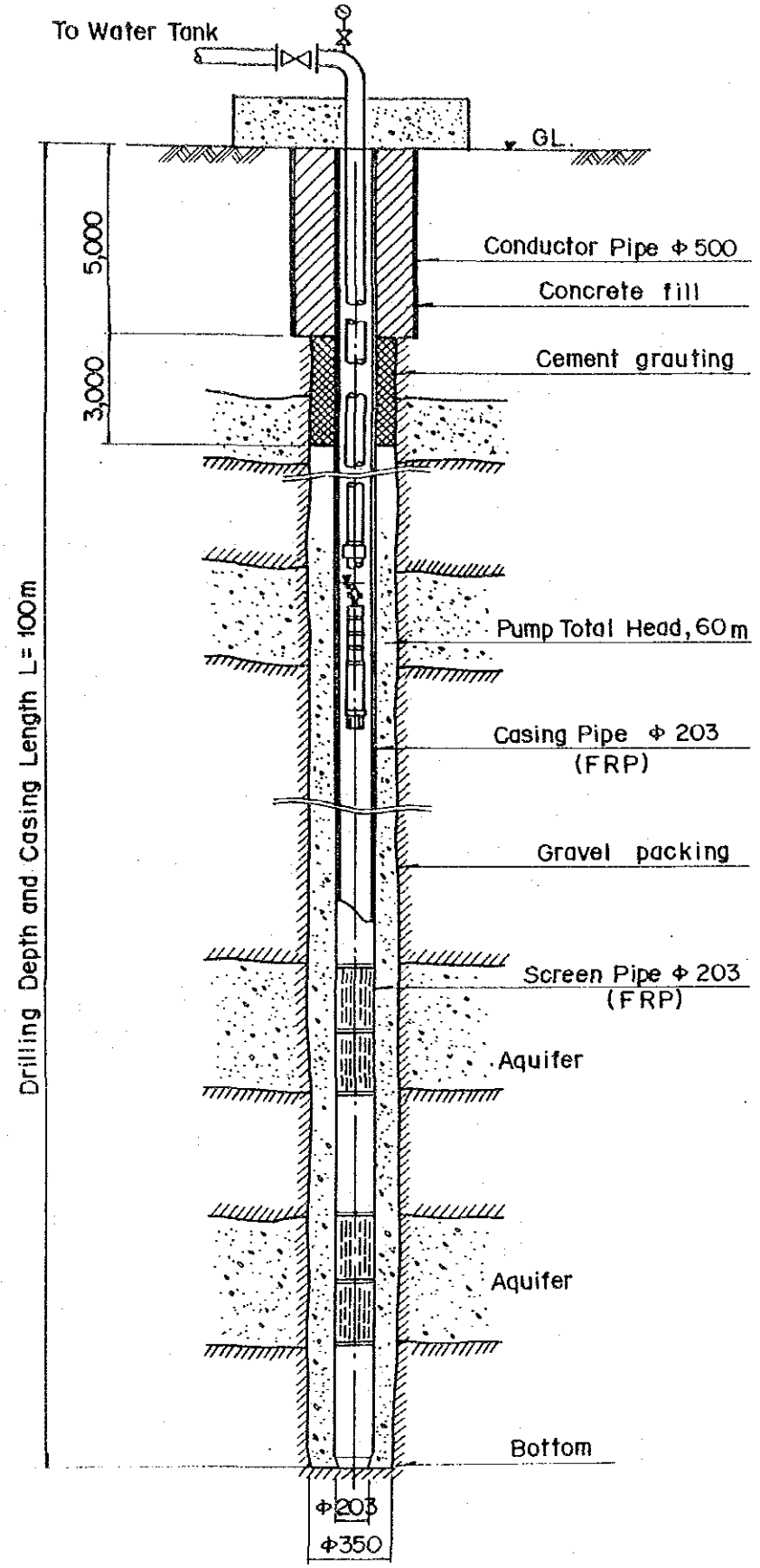
Farm Road RG-1

Irrigation Canal I - 2

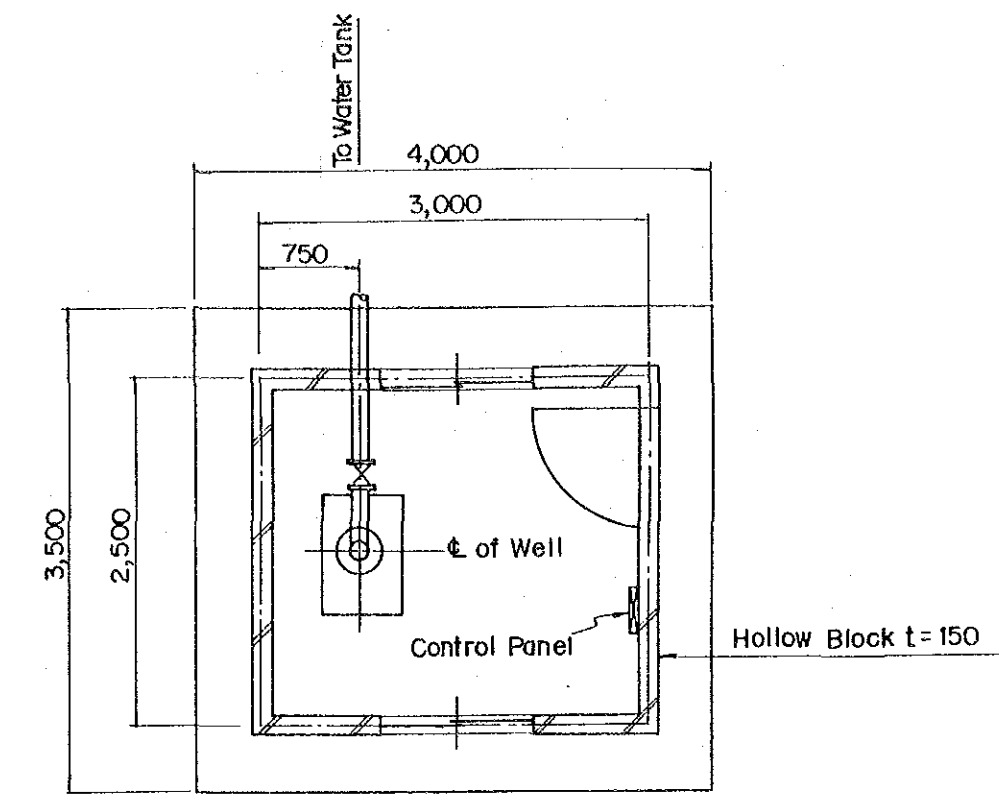


THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Water Supply System	
Layout of Water Supply Station	
Date	Drawing No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

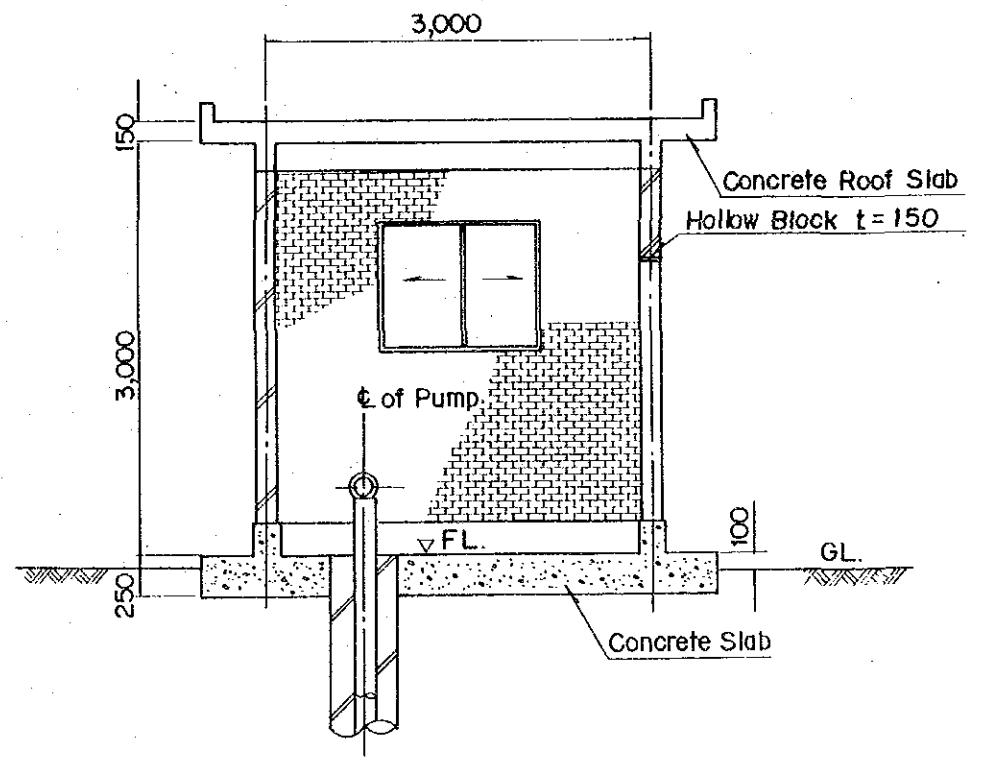




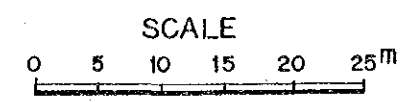
TYPICAL PROFILE OF TUBEWELL  
NOT TO SCALE



PLAN



SECTION



THE REPUBLIC OF THE PHILIPPINES	
THE PROJECT FOR IMPROVEMENT OF SEED PRODUCTION AND DISTRIBUTION AND ESTABLISHMENT OF APPROPRIATE SEED STORAGE SYSTEM	
TITLE OF DRAWING	
Water Supply System	
Tubewell / Pump House	
Date	Drawling No.
JAPAN INTERNATIONAL COOPERATION AGENCY	