

No. 1

MINISTRY OF LANDS AND SETTLEMENT
THE REPUBLIC OF KENYA

BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR CONSTRUCTION
OF
THE KENYA INSTITUTE OF SURVEYING AND MAPPING
IN
THE REPUBLIC OF KENYA


(ADDITIONAL)

DECEMBER, 1995

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JAPAN INTERNATIONAL COOPERATION AGENCY
YAMASHITA SEKKEI INC.

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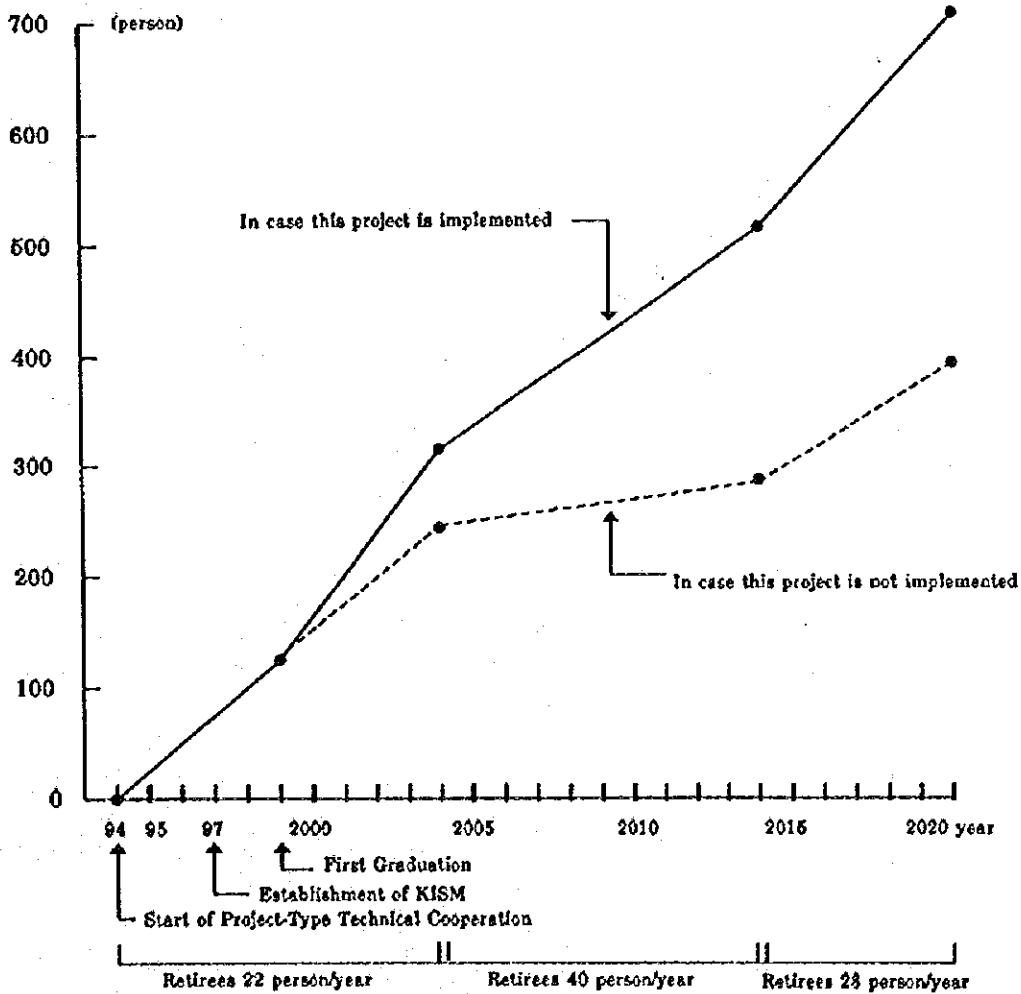
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CHAPTER 1 CONTENTS OF THE PROJECT

CHAPTER 1 CONTENTS OF THE PROJECT

1-1 Objectives of the Project

The direct objective of the Project is to improve the Survey of Kenya's facilities and equipment for use in training of its technical staff members through the construction of "The Kenya Institute of Surveying and Mapping." The final goal of the Project is to train the Survey of Kenya's pre-service and in-service staff members to increase the number of its technical staff members as well as to improve their skill, in parallel with the Government of Japan's project-type technical cooperation program, which will eventually contribute to the production of various kinds of maps in Kenya.



Staff Increase Plan

1-2 Basic Concept of the Project

1-2-1 Training Plan

The institute's training plans are divided broadly into those for the Survey of Kenya's pre-service staff members and those for its in-service technical staff members. Both types of training plans are to be carried out within the framework of the Government of Japan's project-type technical cooperation, which started in fiscal 1994. The outline of the training plans drawn up under the project-type technical cooperation program is as shown below.

Outline of the Training Programs

Course	Department	Training Period (year)	No. of Class (class/grade)	Full number (person/class)	Total training time (hour)	
Diploma Course (Pre-service Course)	Land Survey	3	2	24	2,970	
	Cartography	3	1	25	2,970	
	Photogrammetry · Remote Sensing	3	1	15	2,970	
	Map Reproduction	3	1	15	2,970	
Higher Diploma Course (In-service Course)	Land Survey	2.5	1	10	1,430	
	Cartography	2.5	1	15	undecided	
	Photogrammetry · Remote Sensing	2.5	1	5	undecided	
Short-term Training Course	(undecided)					
(Note) Total registered trainees:		Diploma Course			309	} Total 399
		Higher Diploma Course			90	

(1) Diploma Course

The diploma course consists of 4 departments for the Survey of Kenya's pre-service staff members, and is to be implemented under the following scale and curriculum.

Subjects in 4 Diploma Courses

Diploma Course: 4 department, 103 trainees/grade, 3 years (2,970 hours)									
Subject	Hours				Department				Remarks
	Lecture	Lab.	Field	Total	Land Survey (48)	Cartography (25)	Photogrammetry (15)	Map Reproduction (15)	
Social Studies	88	-	-	88	○	○	○	○	General
Entrepreneurship	124	-	30	154	○	○	○	○	
Communication	88	-	-	88	○	○	○	○	
Computer	48	30	10	88	○	○	○	○	
Mathematics	198	-	-	198	○	○	○	○	
Physics	77	77	-	154	○	○	○	○	
Geography	124	-	30	154	○	○	○	○	
CAM	40	26	-	66	○	○	○	○	
Management	88	-	-	88	○	○	○	○	
Photogrammetry	80	52	-	132	○	○	○	○	
Land Law	88	-	-	88	○	-	-	-	Land Survey
Survey Instrument	60	50	-	110	○	-	-	-	
Topo-Surveying	50	60	22	132	○	-	-	-	
Cadastral Survey	33	77	-	110	○	-	-	-	
Engineering Survey	66	88	-	154	○	-	-	-	
Survey Control	132	176	-	308	○	-	-	-	
Project	33	33	-	66	○	-	-	-	Cartography
Cartography	62	70	-	132	○	-	○	-	
Land Survey	62	70	-	132	-	○	○	-	
Applied Cartography	138	170	-	308	-	○	-	-	
Cartographic Reproduction	60	66	6	132	-	○	-	-	Photogrammetry
Cadastral Cartography	170	280	12	462	-	○	-	-	
Project	33	33	-	66	-	○	-	-	Map Reproduction
Remote Sensing	128	190	12	330	-	-	○	-	
Photogrammetry	240	310	18	638	-	-	○	-	
(not available)				1,232	-	-	-	○	
Industrial Attachment				660	○	○	○	○	

(2) Higher Diploma Course and Short-term Training Course

Higher Diploma Course and Short-term Training Course will be available to in-service staff members of Survey of Kenya. The higher diploma course consists of 3 departments which subjects are to be determined under the project-type technical cooperation programme. Subjects shown in the following table are those for the department of Land Survey.

Subjects in Higher Diploma Course

Higher Diploma Course: 3 department, 30 person/grad, 2.5 years (1,215 hours)								
Subject	Hour				Department			Remarks
	Lecture	Lab.	Field	Total	Land Survey (10)	Cartography (15)	Photogrammetry and Remote Sensing (5)	
Mathematics	198	-	-	198	○			
Physics	77	77		154	○			
Cartography	186	66	8	260	○			
Programming	30	36	6	72	○			
Plane Surveying	60	70	8	138	○	undecided	undecided	
Photogrammetry	280	110	13	403	○			
Field Astronomy	60	12	-	72	○			
Land Law	72	-	-	72	○			
Related Studies	72	-	-	72	○			
Total	809	371	35	1,215				

1-2-2 Operation Plan

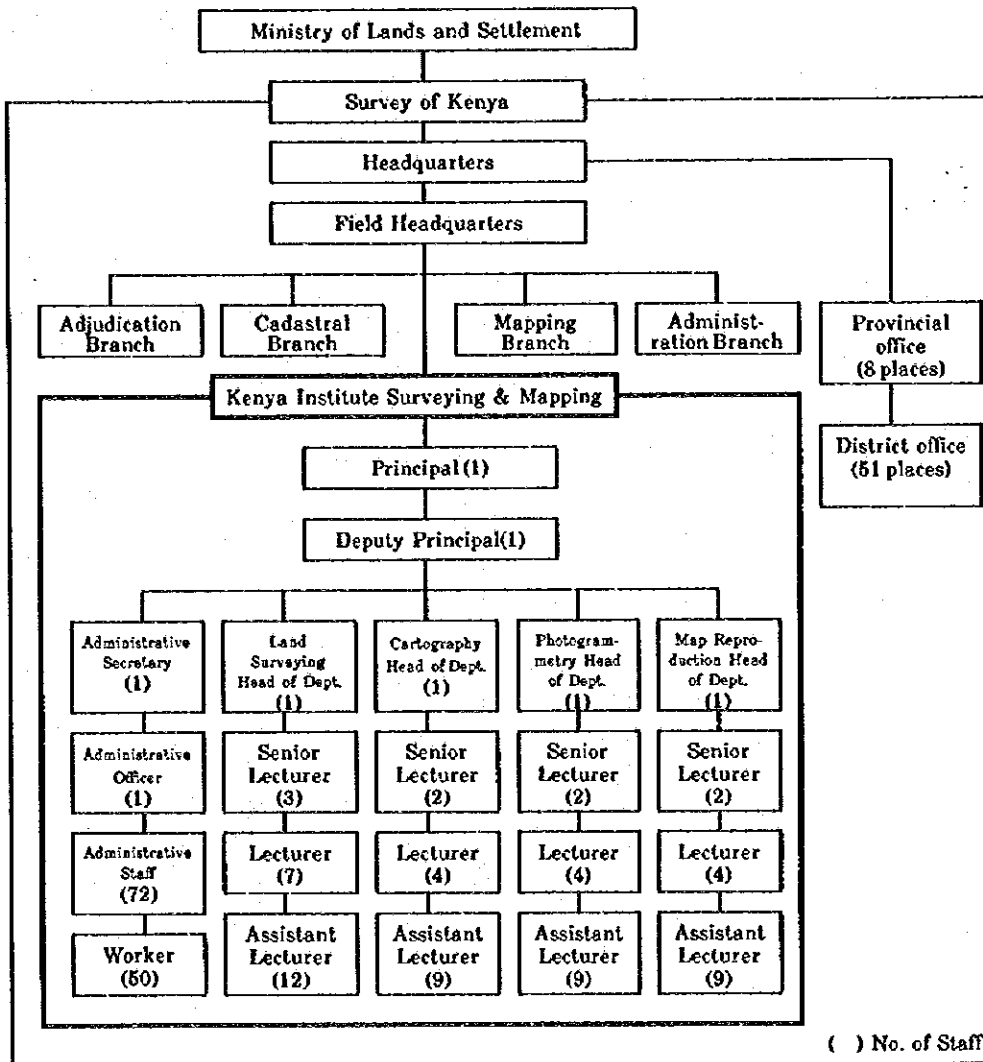
(1) Project Implementation Agency

The project implementation agency of the Project is;

Ministry of Lands and Settlement.

(2) Operational Structure

The Kenya Institute of Surveying and Mapping will be established expanding the function of the Training Branch of Survey of Kenya. The institute's operational organization and its position within Survey of Kenya are as illustrated below.



Operational Organization

(3) Staff Assignment

The staff assignment by job type and position for the institute is as shown in the following table.

Staff Assignment Plan

Position	Rank	No. of person	Remarks
Principal	P	1	
Deputy Principal	N	1	
Administrative Secretary	N	1	
Head of Department	N	4	to appoint one person each for four departments
Senior Lecturers	M	9	to appoint from technical staff of SOK
Lecturers	K/L, J	19	
Assistant Lecturers	J, H/J/K	39	
Administrative Officer	K/L~M	1	
Administrative Staff	L~E	72	including librarian, nurse and telephone operator
Drivers	D~G	10	
Watchmen	A~D	10	
Common Worker	A~D	30	including janitors and cooks
Total		197	All of the staff will be appointed among SOK staff

1-2-3 Building Plan

(1) Required Facilities

The following facilities are required to implement the training plan set forth under the project-type technical cooperation.

Required Facilities

Block	Required Facilities
Training Block	<ul style="list-style-type: none"> ● Classroom : Classroom (for 25, for 15) Lecturer's rm, Library, Expert's rm ● Laboratory : <ul style="list-style-type: none"> ⊙ Land Survey Lab ⊙ Cartography Lab ⊙ Photogrammetry/Remote Sensing Lab ⊙ Map Reproduction Lab
Hostel Block	<ul style="list-style-type: none"> ● Hostel : Bedroom (for Male, Female), Toilet, Shower ● Canteen : Canteen, Kitchen, Office, Storage
Administration Block	<ul style="list-style-type: none"> ● Administration : Office, Principal's rm, Adviser's rm, Clinic ● Others : Electric rm, Pump rm, LPG storage

(2) Rationales for Decision of Room Number and Scale

The number and scale of each major room is decided on the basis of the contents of the training plan and the staff assignment.

Rationale for Deciding Size of Room Scale

Room	Rationale for Deciding Size	Criterion
Laboratories	The size of each laboratory will be decided on the basis of the number of trainees and the equipment layout plan.	Equipment layout plan
Classrooms	Classrooms will be divided into those for classes of 25 and those of 15. The total number of classrooms was calculated on the assumption that they will be shared by trainees taking different courses. According to the training programs, the ratio of lecture hours to the total number of training hours is 80 percent for all the courses and grades, except that the ratio for the diploma courses in the second and third grades is 30 percent. The result of the calculation was: (Number of classrooms for classes of 25 5 Number of classrooms for classes of 15 7	$\text{No. of classrooms} = \frac{\text{(No. of lecture hours)}}{\text{(possible annual school hours)} \times \text{(room utilization rate)}}$ $= \frac{h}{1,200\text{hours} \times 0.6}$
Library	The total number of chairs is 30~40, namely 10 percent of the total number of trainees. The total number of books will be 20,000, including the existing 10,000 volumes.	
Hostel	Each room, which is to accommodate 4 trainees, will be equipped with double-decked beds, chairs, desks and lockers. Since the diploma courses are to be offered to 300 trainees from provincial areas, the hostel will accommodate up to 80% of trainees, total 240, including 36 female trainees.	
Canteen	The total number of persons to take meals at the canteen at a time is estimated at 150, which is one-third of the total number of trainees and lecturers, and the space for each person at 1.0 m ² . So the canteen's total floor space is 150m ² . The floor space of the kitchen is estimated at one-third of the canteen's total floor space. Since canteen will be the largest room in the Institute, it will be used for trainees assembly with 300 seats capacity.	
Instructors' rooms	The instructors' room is one-room type, the floor space for each of the 50 instructors is 4.0m ² .	
Office room	The office room to accommodate a clerical staff of 20 will be one-room type, the floor space for each clerical staff member being 4.0m ² .	

1-2-4 Equipment Plan

Equipment required for the conduction of the training plan is to be procured under the project-type technical cooperation program, as well as under the grant-aid program. For this reason, in developing the equipment plan, it is necessary to determine the types and items of equipment to be procured, by clearly dividing them into those to be procured under the Project and those to be procured under the project-type technical cooperation program. Judging from the contents of the training plan the following equipment should be procured under the Project.

Equipment Plan

Category	Equipment
1. General use equipment	Tables and chairs for classrooms, laboratories and clinic; Dining tables and chairs, bunk bed, desks and chairs, locker for hostel
2. Land survey equipment	Theodolite, EDM equipment, Level, Calibration system, Equipment for physics lab.
3. Cartographic equipment	CAC equipment, Light table
4. Photogrammetric and remote sensing equipment	Analytical plotter, Mirror stereoscope, Software for image analysis, Maintenance parts
5. Map reproduction equipment	(Photo processing equipment) Colour scanner, Contact printing frame, Film processor (Plate making and printing equipment) Proofing press, Printing press, Plate processor
6. Library equipment	Reading tables and chairs, Map filing cabinet, Unit shelves
7. Computer laboratory equipment	Desktop type computer, Printer, UPS
8. Vehicle for field training	4WD wagon, Mini-bus

1-3 Basic Design

1-3-1 Building

(1) Scale of Each Room

The following table shows the necessary rooms and their scales to be provided under the Project.

Floor Plan

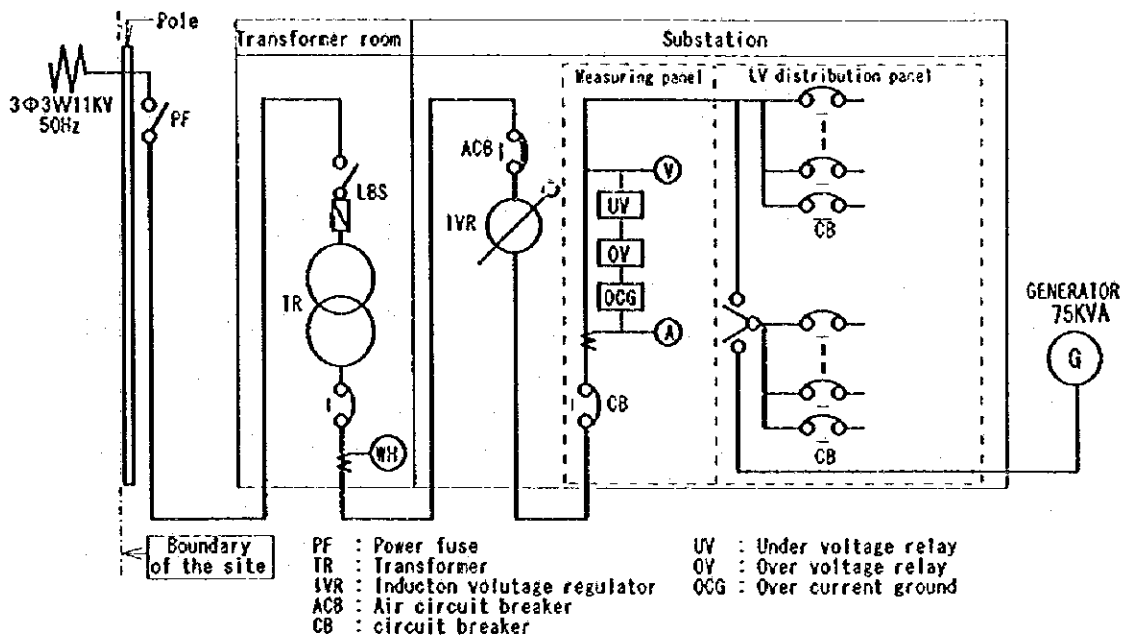
Room name	No. of rooms	Floor area	Remarks
TRAINING BLOCK		total 2,140 m²	
Classroom bldg.			
Classroom (for 15 trainees)	6	30 m ² /room	for the Photogrammetry-Remote Sensing and Map Reproduction diploma courses and the HD courses.
Classroom (for 25 trainees)	6	42 m ² /room	for the Land Surveying and Cartography diploma courses.
Lecturers' room	1	168 m ²	for about 50 lecturers.
Meeting room	1	42 m ²	for lecturers' meetings term seminars.
Experts' room	1	84 m ²	for 8 Japanese experts
Store	1	15 m ²	
Laboratory bldg.			
Land Surveying laboratory	1	72 m ²	for training of 24 trainees enrolled at Land Surveying
Storage	1	36 m ²	for storing land surveying instruments.
Map Reproduction laboratory	1	108 m ²	for training of 15 trainees enrolled at the Map Reproduction
Photography laboratory	1	126 m ²	for training of 15 trainees enrolled at Map Reproduction.
Cartography laboratory	1	90 m ²	for training of 25 trainees enrolled at Cartography
Drawing room	1	72 m ²	for training of 25 trainees in drawing and tracing.
Computer laboratory	1	72 m ²	for training in computer mapping.
Photogrammetry/Remote Sensing laboratory	1	90 m ²	for training of 15 trainees enrolled at the Photogrammetry and Remote Sensing
Preparation room	1	18 m ²	to be used as a preparatory room for two laboratories.
Store	1	20 m ²	
Library			
Reading room	1	36 m ²	A total of 30 chairs
Stacks	1	36 m ²	No. of books: 20,000 to 40,000
Librarians' room	1	9 m ²	To be used for delivery of books and check of the users' entry into and departure from the library.
Store	1	12 m ²	for book storage
Others		602 m²	Corridor, Toilet, etc.
Total		2,140 m²	

Room name	No. of rooms	Floor area	Remarks
ADMINISTRATION BLOCK		Total 640 m²	
Administration building			
Entrance hall	1	21 m ²	
Office room	1	88 m ²	A large room to accommodate 20 clerical workers
Principal's room	1	27 m ²	The principal's room and the team leader's room will be private rooms and both rooms will have the same floor space.
Team leader's room	1	27 m ²	
Secretary's room	1	18 m ²	A room for two secretaries to the principal and to the deputy principal
Deputy principal's room	1	18 m ²	A private room
Administrative Secretary room	1	24 m ²	for the administrative secretary who ranked as a deputy principal
Coordinators' room	1	18 m ²	A room for coordinators
Meeting room 1	1	24 m ²	meeting rooms for the senior managers and experts
Meeting room 2	1	24 m ²	
Pantry	1	12 m ²	for supply of hot water and tea
Clinic	1	36 m ²	The planned institute, which is an educational institution, is required by law to have a clinic.
Store	1	12 m ²	
Security room	1	12 m ²	
Outdoor facilities			
Guard house	1	12 m ²	Used for check of visitors' entry and departure
Pump room	1	15 m ²	
Electric room	1	50 m ²	
Others		202 m ²	Corridor, Toilet, etc.
Total		640 m²	
HOSTEL BLOCK		Total 2,300 m²	
Male trainees' hostel			
Bed room	50	18 m ² /room	Two bunk beds will be installed in a room (4 trainees/room)
Shower room	5	18 m ² /room	
Toilets	5	18 m ² /room	
Female trainees' hostel			
Bed room	9	18 m ² /room	Two bunk beds will be installed in a room (4 trainees/room)
Shower room	1	18 m ²	
Toilets	1	18 m ²	
Superintendent room	1	18 m ²	
Canteen bldg.			
Canteen	1	153 m ²	A canteen to accommodate 150 persons (150persons×1.0m ² /person)
Kitchen	1	66 m ²	Its floor space will be one-third of the canteen.
Office room	1	6 m ²	For the use of the clerical worker in charge
Storage	1	12 m ²	To be used to store seasonings and the like.
Kiosks	1	6 m ²	to sale commodities
Locker room	1	3 m ²	for kitchen staff
Others		870 m ²	Corridor, Toilet, etc.
Total		2,300 m²	
Grand total floor area:		5,080 m²	

(2) Building Facility Plan

1) Electric System

- Receiving Power : 3Ø 3W 11kV
- Low-voltage Power : 3Ø 4W 415V, 240V
- Transformer : 500kVA
- Generator : 75kVA
- Induction-type Automatic Voltage Regulator (IVR)



2) Telephone System

- In-take Line : 8 lines
- Extension Line : 27 lines
- Public Address System : (not installed)

3) Water Supply system

- In-take Main : 150Ø (6-inch)
- Receiving Tank : 68m³
- Elevated Water Tank : 7m³

4) Sewerage System

- Rain water : discharge directly
- Toilet : discharge through individual sewage pits
- Laboratories : discharge through neutralization tank
- Photo-lab : treat in evaporation tank

5) Air Conditioning System

Air-cooled split type air conditioners will be installed in the following laboratories where heat is to be generated in the course of operation of training equipment.

- Photograph lab
- Computer lab
- Photogrammetric/Remote Sensing lab

1-3-2 Equipment

The following list shows the outline of the equipment provided under the Project, grant-aid cooperation, in due consideration of the demarcation of equipment to be provided under the project-type technical cooperation and under the Project.

No.	Equipment	Q'ty
1. General Use equipment		
A-1	Classroom table (A)	225 units
A-2	Classroom chair (A)	225 units
A-3	Dining table (W900×D900×H700mm)	24 units
A-4	Dining chair	300 units
A-5	Bunk bed (W2,000×D900×H1,500mm, for 2 persons)	120 units
A-6	Dormitory desks (W900×D700×H750mm)	240 units
A-7	Dormitory chair (without arm rest)	240 units
A-8	Locker (W450×D450×H1,800mm)	240 units
A-9	Lecture desk	10 units
A-10	Lecture chair	10 units
A-11	Brack board (movable type)	6 units
A-12	Laboratory desk	8 units
A-13	Laboratory chair	80 units
A-14	Clinic bed	2 units

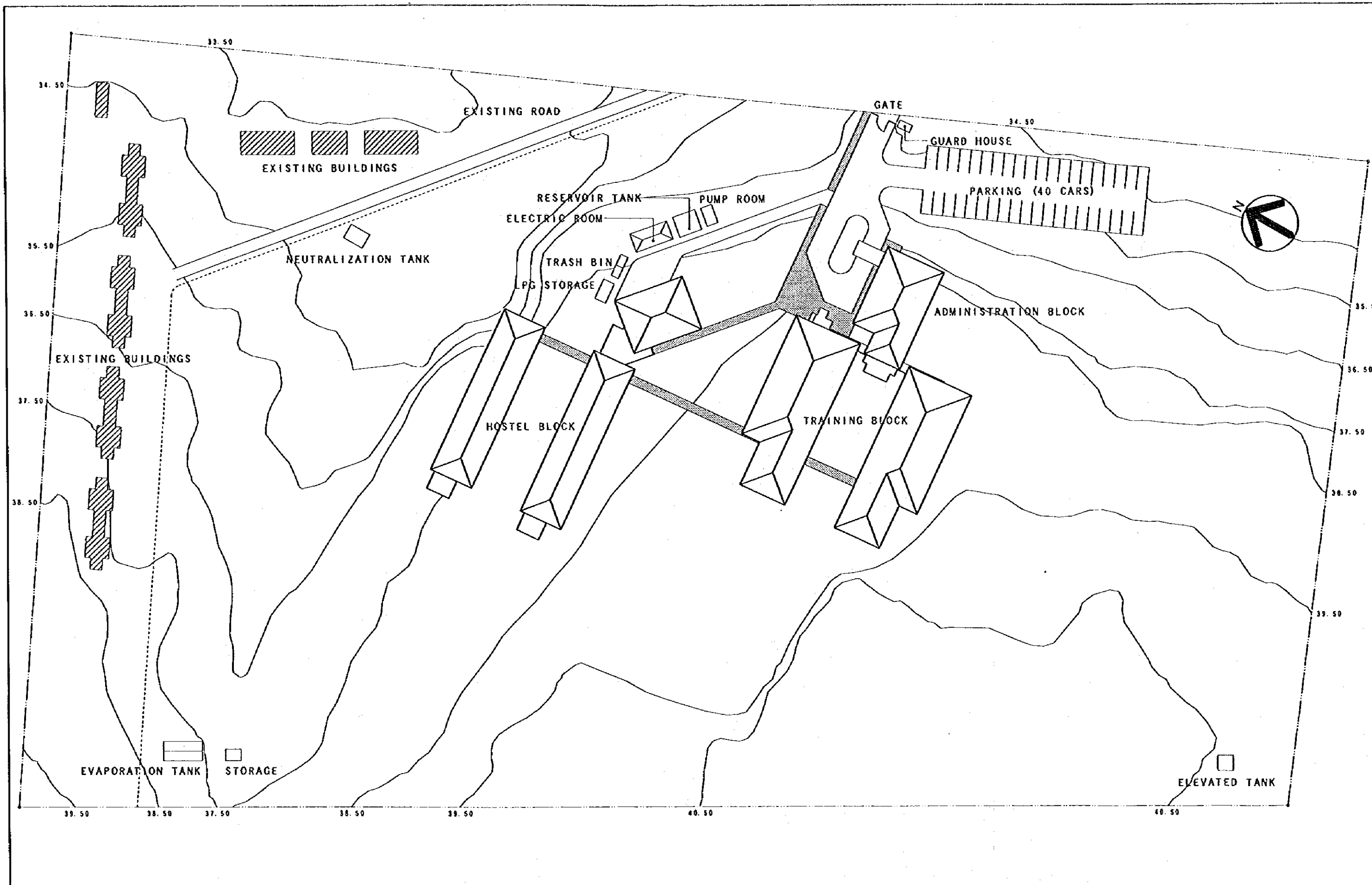
No.	Equipment	Q'ty
A-15	Medicine cabinet	1 unit
2. Land Survey equipment		
B-1	Theodolite (T2 equivalent, compatible to EDM)	4 units
B-2	EDM equipment	1 set
	• Middle range	(6)
	• Long range	(1)
B-3	Level	1 set
	• Precise automatic level	(2)
B-4	Calibration system (optical)	1 set
B-5	Equipment for physics laboratory (optical, electrical, electronic)	1 set
B-6	Maintenance parts for existing equipment	1 set
3. Cartographic equipment		
C-1	CAC equipment (for training purpose, with software, UPS, etc.)	1 set
	• Personal computer (desktop type)	(1)
	• GIS software	(1)
	• Digital image scanner	(1)
C-2	Light table with chair	15 units
C-3	Light table with scales	10 units
4. Photogrammetric and Remote Sensing equipment		
D-1	Analytical plotter (for training purpose)	1 units
D-2	Mirror stereoscope	4 sets
D-3	Software for image analysis	1 set
D-4	Maintenance parts for existing equipment	1 set
5. Map Reproduction equipment		
E-1	Proofing press (with UPS)	1 unit
E-2	Proofing equipment (cromaline)	1 set
E-3	Contact printing frame (for cromaline and presensitized plate)	2 sets
E-4	Printing inks testing machine	1 unit
E-5	Printing press (for A2 size, with UPS)	1 unit
E-6	Colour scanner	1 unit
E-7	Film processor (A2 size)	1 unit
E-8	Plate processor (for presensitized plate)	1 unit

No.	Equipment	Qty
6. Library equipment		
F-1	Reading table (for 6 persons)	10 units
F-2	Reading chair	30 units
F-3	Map filing cabinet	2 units
F-4	Unit shelves	45 units
7. Computer laboratory equipment		
G-1	Personal computer(desktop type with software)	25 units
G-2	Printer	7 units
G-3	UPS	10 units
8. Vehicle for field training		
H-1	4WD wagon (for 9 passengers, tropical standard)	5 units
H-2	Mini Bus (for 30 passengers)	1 unit

Note: The number in () shows breakdown quantity of each item.

1-3-3 Basic Design Drawings

1. Site Plan
2. Ground Floor Plan, Training Block
3. First Floor Plan, Training Block
4. Elevation, and Section Training Block
5. Ground Floor Plan, Hostel Block
6. First & Second Floor Plan, Hostel Block
7. Elevation and Section, Hostel Block

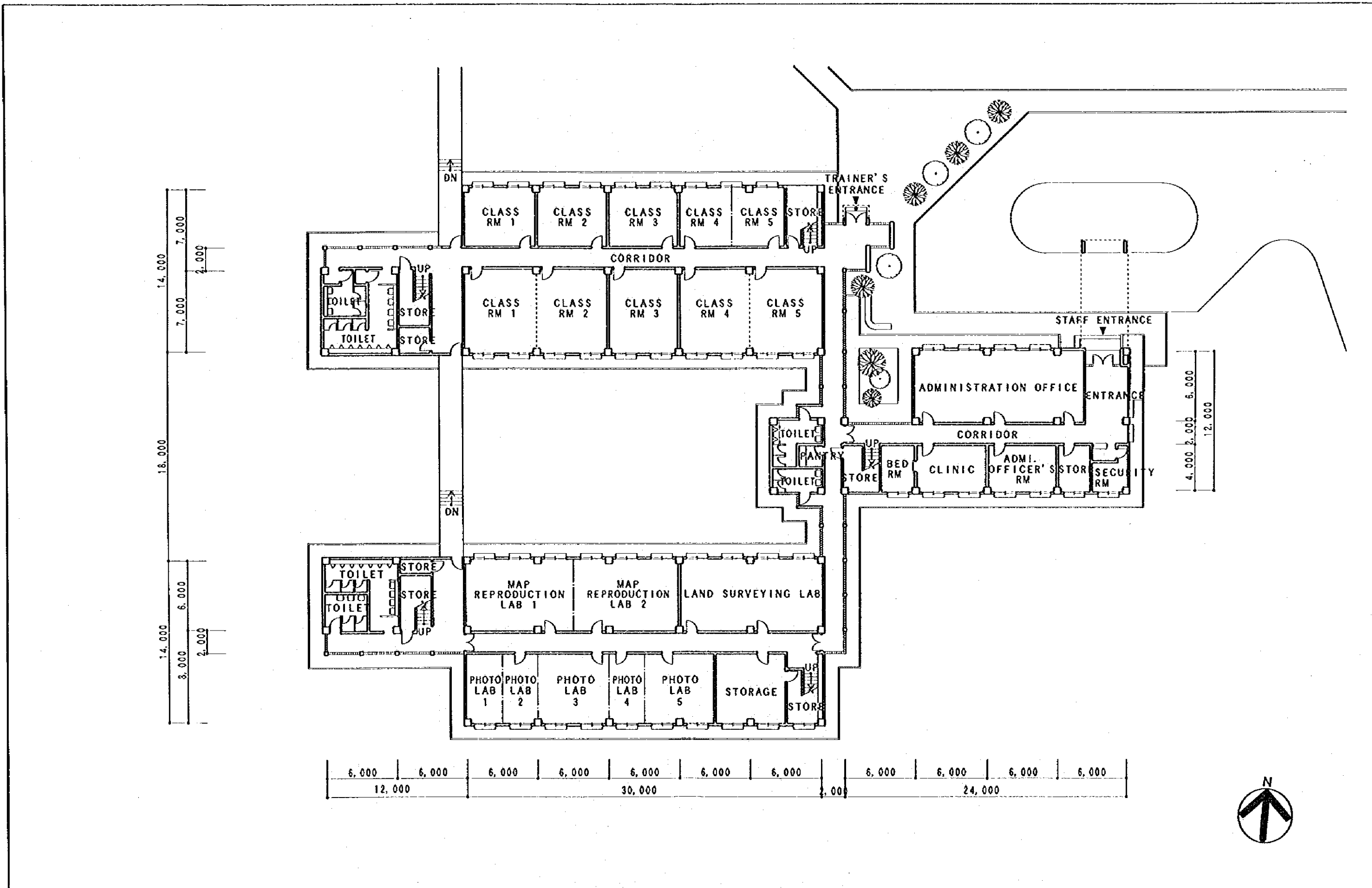


THE PROJECT FOR CONSTRUCTION OF
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SITE PLAN

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1



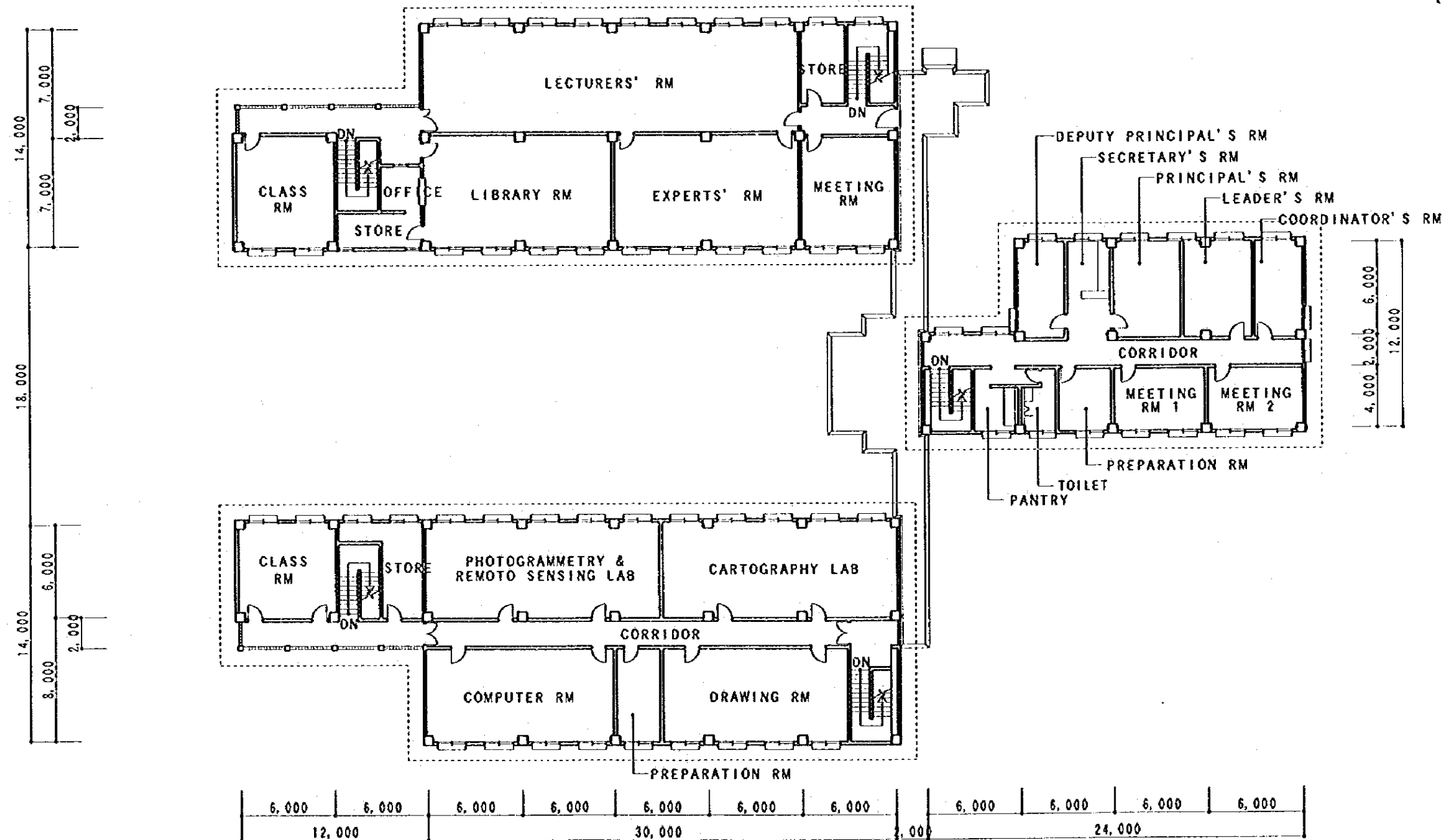
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TRAINING BLOCK

GROUND FLOOR PLAN

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2



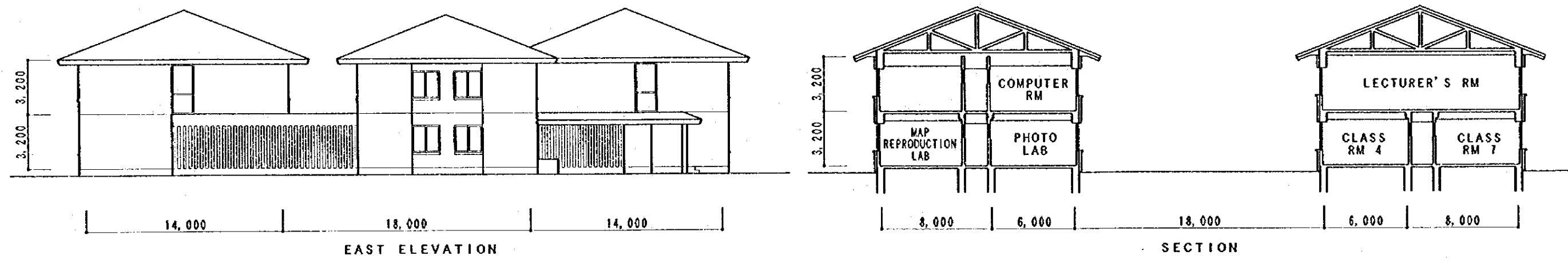
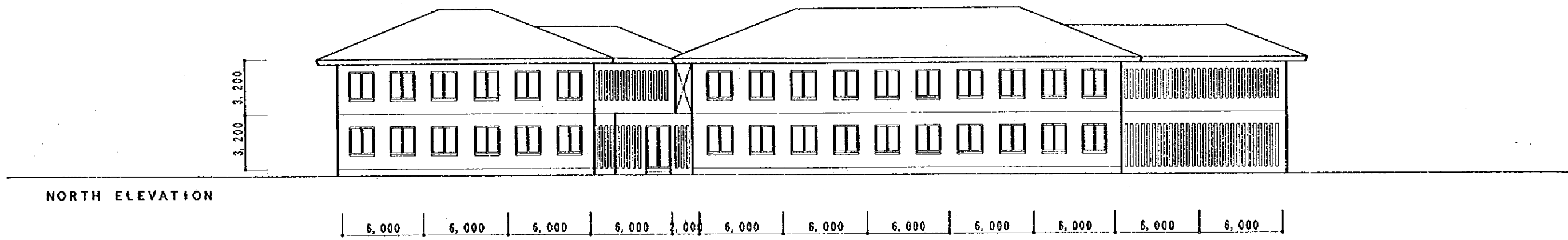
THE PROJECT FOR CONSTRUCTION OF
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TRAINING BLOCK

FIRST FLOOR PLAN

S=1:300

3

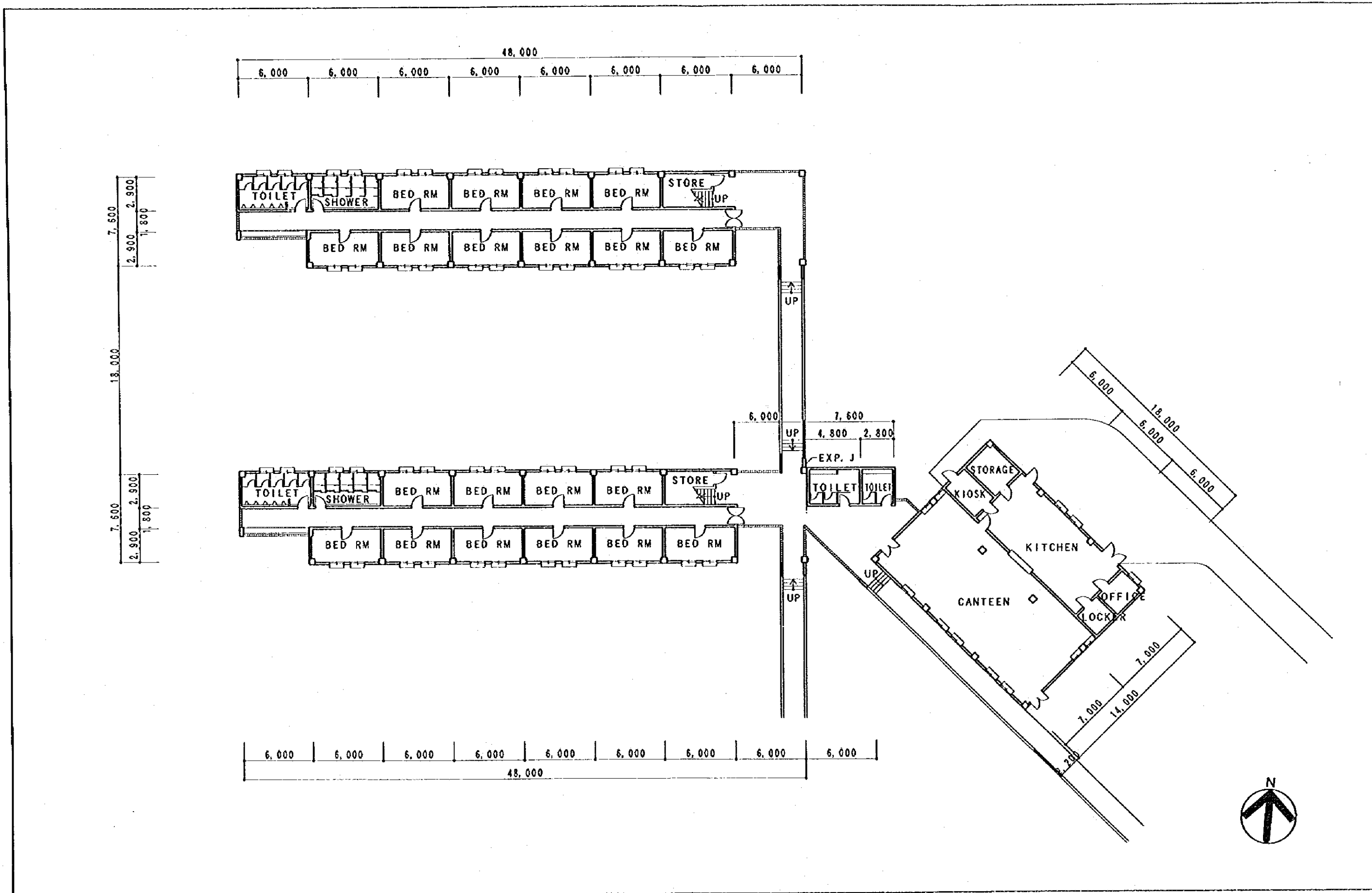


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TRAINING BLOCK

ELEVATION SECTION

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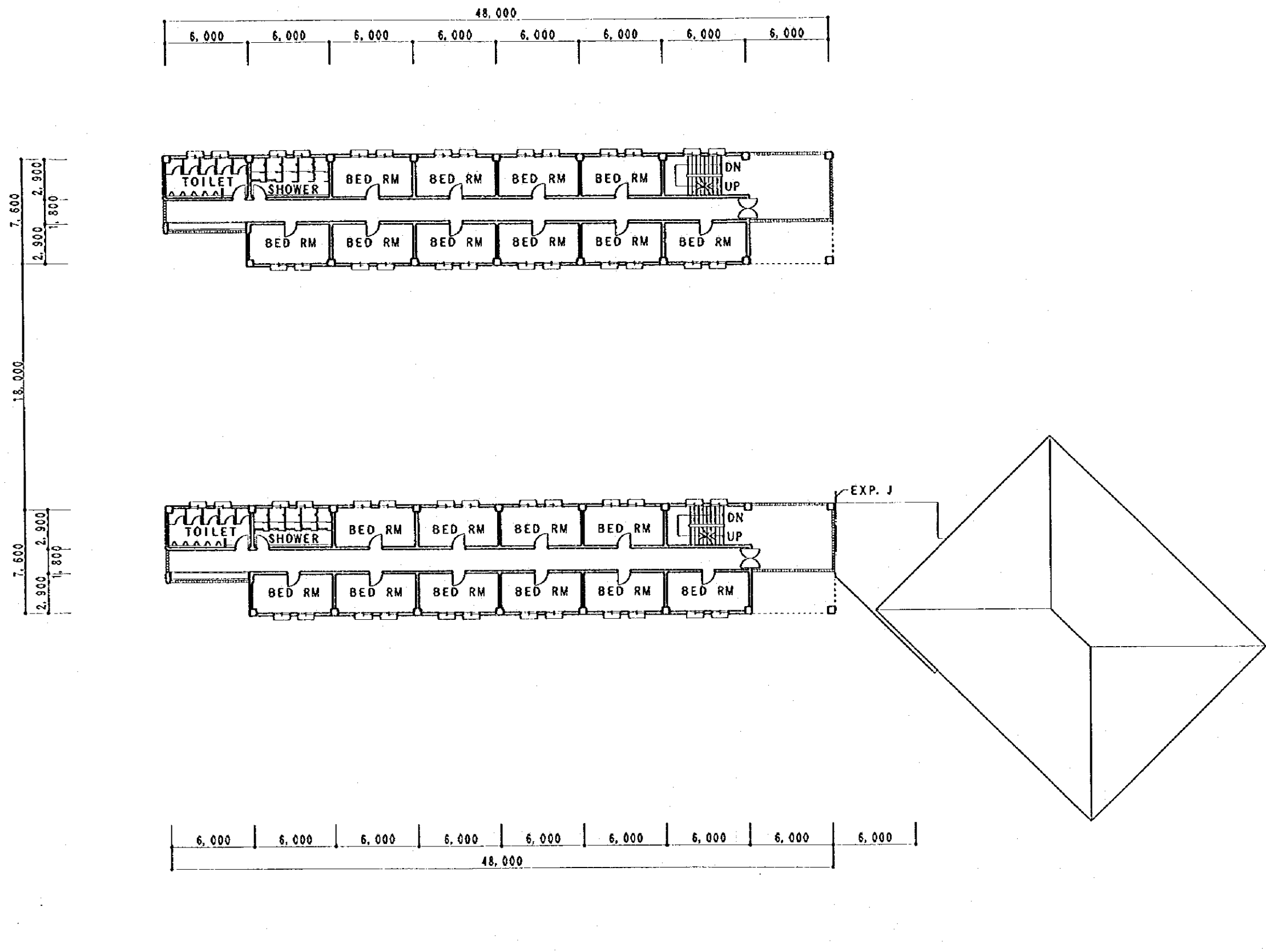
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HOSTEL BLOCK

GROUND FLOOR PLAN

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5



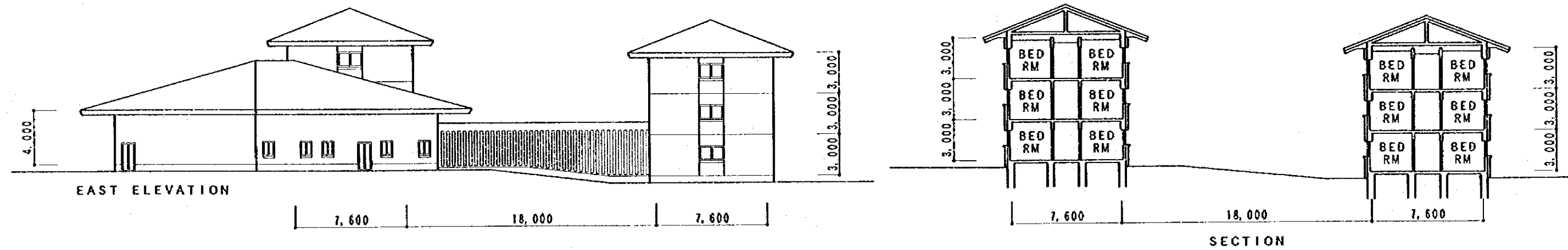
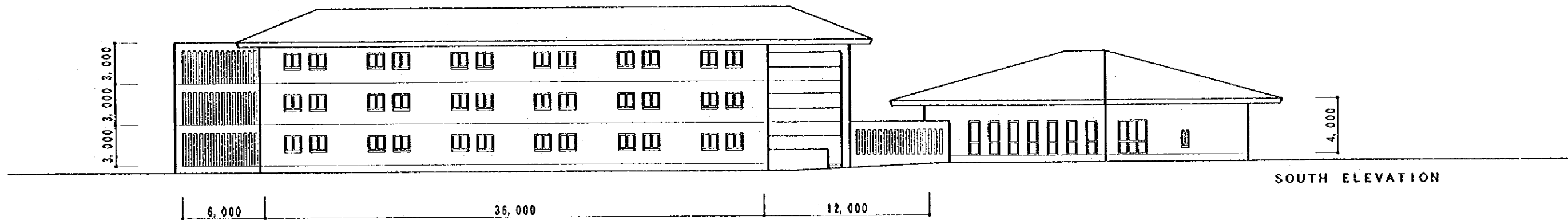
THE PROJECT FOR CONSTRUCTION OF
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HOSTEL BLOCK

FIRST AND SECOND FLOOR PLAN

S=1:300

6



THE PROJECT FOR CONSTRUCTION OF
THE KENYA INSTITUTE OF SURVEYING AND MAPPING

HOSTEL BLOCK

ELEVATION • SECTION

S=1:300

CHAPTER 2 IMPLEMENTATION OF THE PROJECT

CHAPTER 2 IMPLEMENTATION OF THE PROJECT

2-1 Implementation Plan

2-1-1 Implementation Concept

The Project is to be implemented under the Government of Japan's grant-aid cooperation. The basic matters in the project implementation are described as below.

(1) Exchange of Notes

Two (2) Notes will be exchanged by the both governments for the implementation of the Project.

An "Exchange of Notes" will be signed for the consultant services only for the preparation of detail drawings and tender documents. Consecutively, for the consultant's supervisory services, construction works and equipment works, the other Exchange of Notes will be signed, which covers the Japan's budget for two (2) fiscal years.

(2) Project Implementation Period

The Project covers the consultant services, the construction works and the equipment works. In consideration of contents and scale of each work, local construction conditions and the budgetary system of both governments, the implementation period for the Project is concluded to be 20 months, 8 months for the preparation of detail drawings and tender procedure, and 12 months for the construction works and the equipment works.

(3) Organizations concerned in the Kenyan Side.

- The Ministry of Lands and Settlement is the project implementation agency of the Government of Kenya. The Permanent Secretary of the Ministry of Lands and Settlement will be a party representing the

Kenyan side to the consultant agreement, the construction contracts, the banking arrangement and other arrangements concerning the implementation of the Project.

- Survey of Kenya under the Ministry of Lands and Settlement will be an agency to support the Ministry in technical matters and in office procedures for the implementation of the Project. Survey of Kenya will also operate and maintain the facilities provided under the Project.
- The External Resources Department of the Ministry of Finance will be the Kenyan organization to take charge of office procedures concerning to grant aid cooperation and will be responsible for examining the consultant agreements and construction/equipment contracts on the budgetary matters.
- The Ministry of Public Works and Housing will be the advisory organization for the Ministry of Lands and Settlement, regarding technical matters such as tendering method and construction work, in accordance with the official notification by the Office of President.
- Attorney General will examine contents of the consultant agreement and construction/equipment contract from the points of legal matters and will approve the Ministry of Lands and Settlement to sign on them.

(4) Execution System

1) Consultant

Immediately after the conclusion of the Exchange of Notes the Ministry of Lands and Settlement will be required to conclude a consultant agreement for the preparation of detail drawings with a Japanese consultant firm. Consecutively, the Ministry of Lands and Settlement

will conclude the other consultant agreement for construction supervisory services with the same consultant under the Exchange of Note in Japan's next fiscal year.

2) Contractors

The contractors for construction work and equipment work will be selected from qualified Japanese firms through an open tender in Japan respectively. The Ministry of Lands and Settlement, in principle, will conclude a construction contract and an equipment contract with the lowest tenderer for each work.

2-1-2 Project Supervisory Plan

In accordance with the procures of Japan's grant aid program, the Japanese consultant firm will conclude a consultant agreement with the implementing organization of the Government of Kenya. After concluding the agreement, the consultant will develop detailed design documents and will supervise the construction work in compliance with the provisions of the consultant agreement. Construction supervision is aimed at ensuring that the construction work will be carried out in accordance with the design documents, and at providing direction, technical advise and coordination throughout the term of services from a fair point of view for the proper implementation and quality control of the construction work. The construction supervision service includes the followings.

1. Assistance in tendering
2. Assistance in concluding the construction contract and the equipment contract.
3. Examination and approval of shop drawings and manufacturing drawings submitted by the contractors

4. Confirmation and approval of building materials and training equipment
5. Reporting on progress of the works
6. Inspection and test operations
7. Training in operation of the equipment

Judging from the scale of the Project, it is advisable that, in carrying out the aforementioned tasks, the consultant shall dispatch an architect/engineer to Kenya throughout the term of works. The consultant shall also dispatch necessary engineers to the site at relevant occasions for inspection, direction and coordination, and at the same time shall establish a communication and backup system to assign necessary engineers in Japan. The consultant shall report the progress of the works, payment procedures, completion of the construction of the facilities and installation of the equipment, and any other relevant matters to the competent agencies of the Japanese Government.

2-1-3 Scope of Work

The Project is to be implemented through close cooperation between the Government of Japan and the Government of Kenya within the framework of grant aid from the Government of Japan. It is reasonable for the Governments of the two countries to undertake scope of works as shown follows.

(1) The work to be covered by Japan's Grant Aid

1. Facilities

- Construction of the buildings described in this basic design study report (supplement)
- Electrical, mechanical and sanitary installations

2. Equipment

- Equipment procurement work
- Equipment installation work

3. Infrastructure

- Substation
- Water supply and drainage work within the premises
- Telephone exchange system

4. Outdoor structures

- Roads and parking lots within the premises
- Septic tanks
- Outdoor lighting

5. Other work related to the above work

- Transportation of equipment and materials to Kenya
- Inland transportation of imported equipment and materials from ports of disembarkation to the project site

(2) The work to be done by the Government of Kenya

1. Site and outdoor structures

- Securing the site for the project
- Removing existing structures, trees and so on from the project site and reclamation of site
- Construction of access roads to the project site
- Construction of exterior structures including fence, gate and a regulatory pond etc.
- Exterior works such as planting

2. Infrastructure

- Supply of electricity up to the site
- Installation of telephone line up to the MDF

- Water supply up to the reservoir of the proposed building and connection of the sewerage line to the main at the building

3. Preparatory work

- Provision of sites for temporary construction site office, workshops and material storage places
- Installation of temporary electricity supply and telephone lines

4. Fixtures and furniture

- Fixtures, curtains, furniture, etc. other than those supplied under Japan's grant-aid

5. Procedural work and its expenses borne by the Kenyan side

- Banking arrangement expenses
- Tax exemption procedure expenses
- Prompt action related to customs clearance and inland transportation
- Necessary measures for exempting the Japanese nationals engaged in the implementation of the Project from customs duties, domestic taxes and other fiscal levies in accordance with the verified agreement
- Arrangement to expedite the acquisition of visas, customs clearance, and any other formalities that may be necessary for the entry of Japanese nationals engaged in the implementation of the project
- Maintenance and management expenses for ensuring that the facilities constructed and the equipment installed are operated properly and effectively
- Expenses for the construction-related procedures

2-1-4 Implementation Schedule

When the Exchange of Notes is concluded between the Government of Japan and the Government of Kenya, the Project will be implemented with the following procedures.

1. Detail design

The consultant shall prepare the detail design documents based on the contents of the basic design study report after the conclusion of the consultant agreement. The time required for preparation of the documents is estimated at five (5) months.

2. Tendering

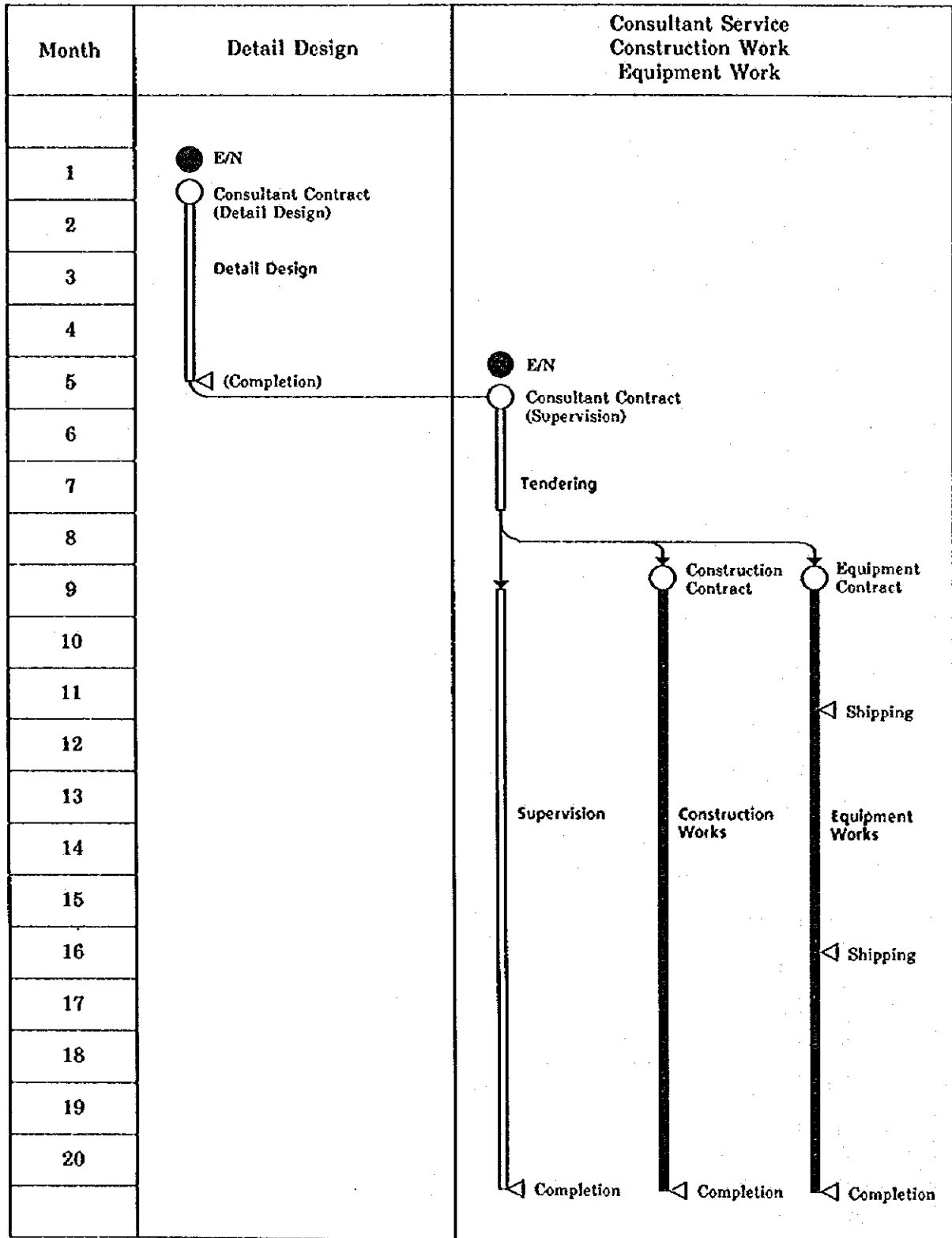
The contractors for the construction work and the equipment work will be selected separately by tender. The tender work includes tender announcement, prequalification, acceptance of tenders, evaluation of the tenders and conclusion of the contracts. The time required for completing this procedure is estimated at about three (3) months.

3. Construction work and equipment work

Judging from the contents and scale of the work, it will take 12 months to complete the entire project, including the equipment work.

The overall implementation schedule from the conclusion of the Exchange of Notes to the completion of the Project is as shown in the following table.

PROJECT IMPLEMENTATION SCHEDULE



2-2 Budgetary Plan for the Government of Kenya

2-2-1 Project Implementation Budget

The project cost to be borne by the Government of Kenya for the implementation of the Project is to be estimated as follows.

1. Electric power supply	400,000 Kshs
(installation of power line with 2 poles)	
2. Telephone trunk line	50,000 Kshs
(branch fee at hand-hole)	
3. Water supply	950,000 Kshs
(change of water supply line to 150Ø, 100m length)	
4. Sewerage	2,650,000 Kshs
(connect 250Ø pipe to 400Ø main, 200m length, with deposit to Nairobi City Council))	
5. Removal of existing trees and site reclamation ...	1,200,000 Kshs
6. Purchase of Equipment	15,000,000 Kshs
(not specified, but reserved in the budget of 95/96~97/98)	
7. Fittings and furniture	1,800,000 Kshs
(desks & chairs, 80 sets)	
8. Curtain	750,000 Kshs
(200 windows)	
9. Construction of Access Road	1,500,000 Kshs
(from THIKA road to the gate)	
10. Fencing & Planting	1,800,000 Kshs
(fencing 300m by planting and wire-net)	
11. Others	500,000 Kshs

Total	26,600,000 Kshs
	(¥45 million)

It will be necessary to include in the total costs the following as part of the expenses to cover fees and commission.

- Banking arrangement for each contract.
- Bank commission of each payment to the Consultant and Contractors

It is desirable that the Government of Kenya prepare the budget for the Project and conduct the construction with proper timing so that the entire project can be implemented smoothly.

2-2-2 Operation and Maintenance Expenses

The Survey of Kenya estimates the total cost of facility/equipment operation, excluding the personnel and training expenses, at about 3,506,500 Ksh (about ¥6.0 million). Judging from the size of the planned facilities, the estimated total sum of the operation and maintenance expenses will be as shown in the following table.

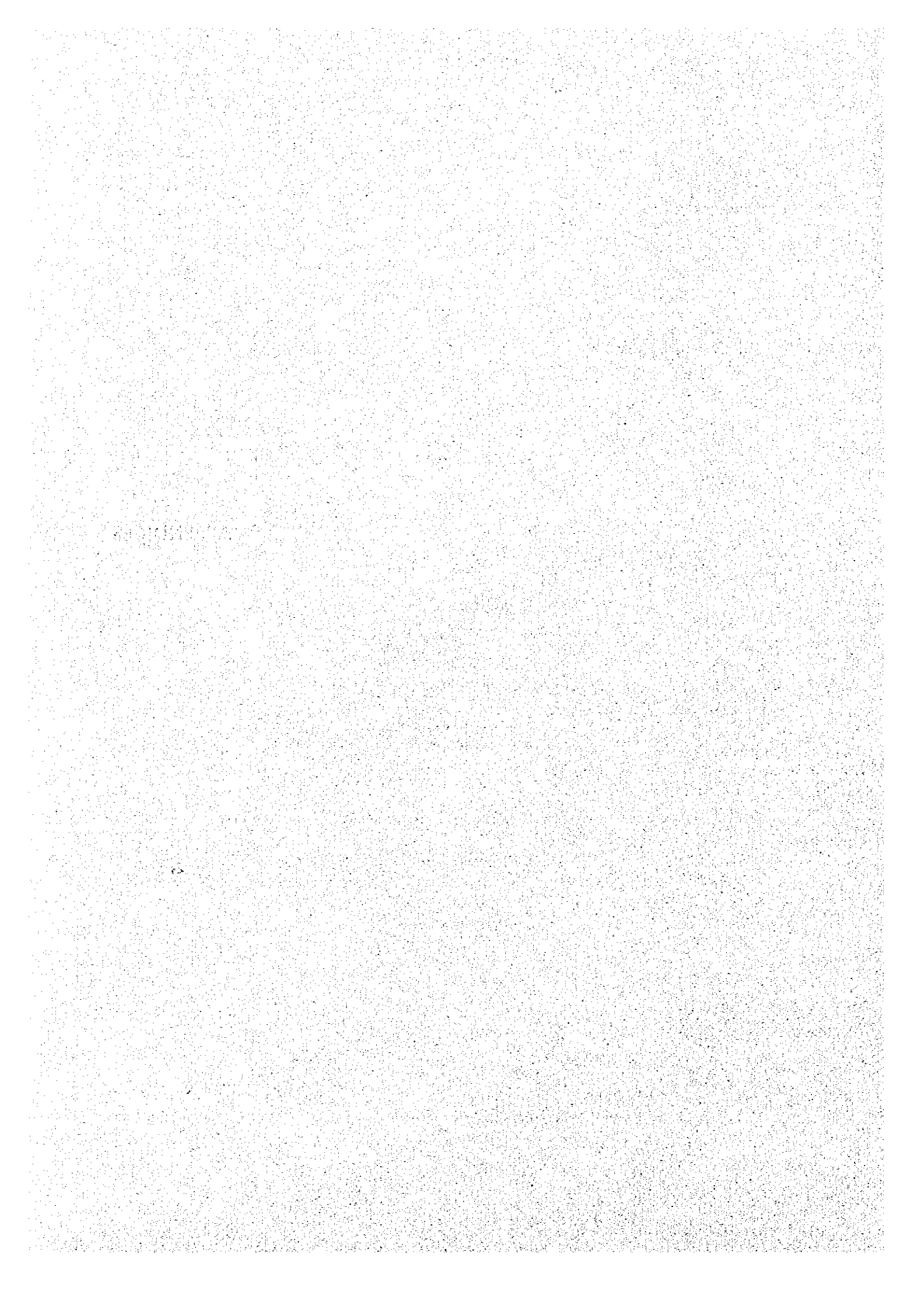
Operation and Maintenance Expenses

Item	Operating Cost	Planned by SOK
1. Facility Operating Expense		
① Electricity	824,000	300,000
② Telephone	50,000	360,000
③ Water	257,000	(not allocated)
④ Sewerage	62,000	(not allocated)
⑤ LP Gas	580,000	(not allocated)
⑥ Fuel	504,000	546,500
2. Facility Maintenance Expense		
① Building Maintenance Expense	302,000	300,000
② Material Cost	137,000	300,000
③ Equipment Maintenance	850,000	1,700,000
Total	3,566,000	3,506,500

(Unit: Kshs)

Inadequate budgetary appropriations for the operation and maintenance of the facilities and equipment procured under the Project may destroy their durability and impair the efficiency of operations carried out at the facilities. In order to attain the objective of the Project it is necessary to make well-planned budgetary appropriations for the operation and maintenance of the facilities and equipment.

APPENDICES



MINUTES OF DISCUSSIONS
ON
DRAFT BASIC DESIGN (SUPPLEMENT)
ON
THE PROJECT FOR CONSTRUCTION
OF
THE KENYA INSTITUTE OF SURVEYING AND MAPPING
IN
THE REPUBLIC OF KENYA

(CONSULTATION OF DRAFT BASIC DESIGN)

In October 1994, Japan International Cooperation Agency (JICA) dispatched the Basic Design Study Team on "The Project for Construction of the Kenya Institute of Surveying and Mapping in the Republic of Kenya" (hereinafter referred to as "the Project") to Kenya. Then, a mission was sent to Kenya in order to discuss a draft report, and as this result, the basic design study report was submitted. However, JICA found necessity to modify the contents of the report, and has prepared the Draft Basic Design (Supplement) of the Project.

In order to explain about and to consult the Kenyan side on the components of the Draft Basic Design (Supplement), JICA dispatched to Kenya an explanation team (hereinafter referred to as "the Team"), headed by Ms. Fujiko YOSHIDA, Assistant Director, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, and is scheduled to stay in the country from 25th to 29th of November, 1995.

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

Nairobi, 29th November 1995

吉田 藤子

Ms. Fujiko YOSHIDA
Leader,
The Explanation Team of
Draft Basic Design, JICA

J. K. Sang

for Mr. J. K. SANG
Permanent Secretary,
Ministry of Lands and Settlement,
The Republic of Kenya

J. K. Kinyua

Mr. J. K. KINYUA
Financial Secretary,
Ministry of Finance,
The Republic of Kenya

ATTACHMENT

1. Components of Draft Basic Design

The Government of Kenya has agreed and accepted in principle the components of the Draft Basic Design explained by the Team as follows:

(1) Construction of Facilities

- Training Block : classroom building, laboratory building
- Administration block : administration building, outdoor facilities
- Hostel block : trainees' hostel, canteen

(2) Procurement of Equipment and Vehicles

General Use equipment, Land Survey equipment, Cartographic equipment, Photogrammetric and Remote Sensing equipment, Map Reproduction equipment, Vehicles for field training

2. Project Site

Location of the Project Site is shown in ANNEX-1.

3. Characteristics of the Japan's Grant Aid Programme

The Kenyan side has understood the system and characteristics of Japan's Grant Aid Programme explained by the explanation team for draft basic design study report dispatched in February, 1995.

4. Necessary Measures to be taken by the Kenyan side

The Team explained the necessary measures to be taken by the Government of Kenya described in ANNEX-2 for smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

As for the tax exemptions shown in clause 10 of ANNEX-2, the Kenyan side strongly requested to frame the contents as described below so as to comply with Kenyan Law governing tax exemptions, and the Team agreed to convey the request to the Government of Japan.

Contents of clause 10 (Tax Exemption) proposed by the Kenyan side

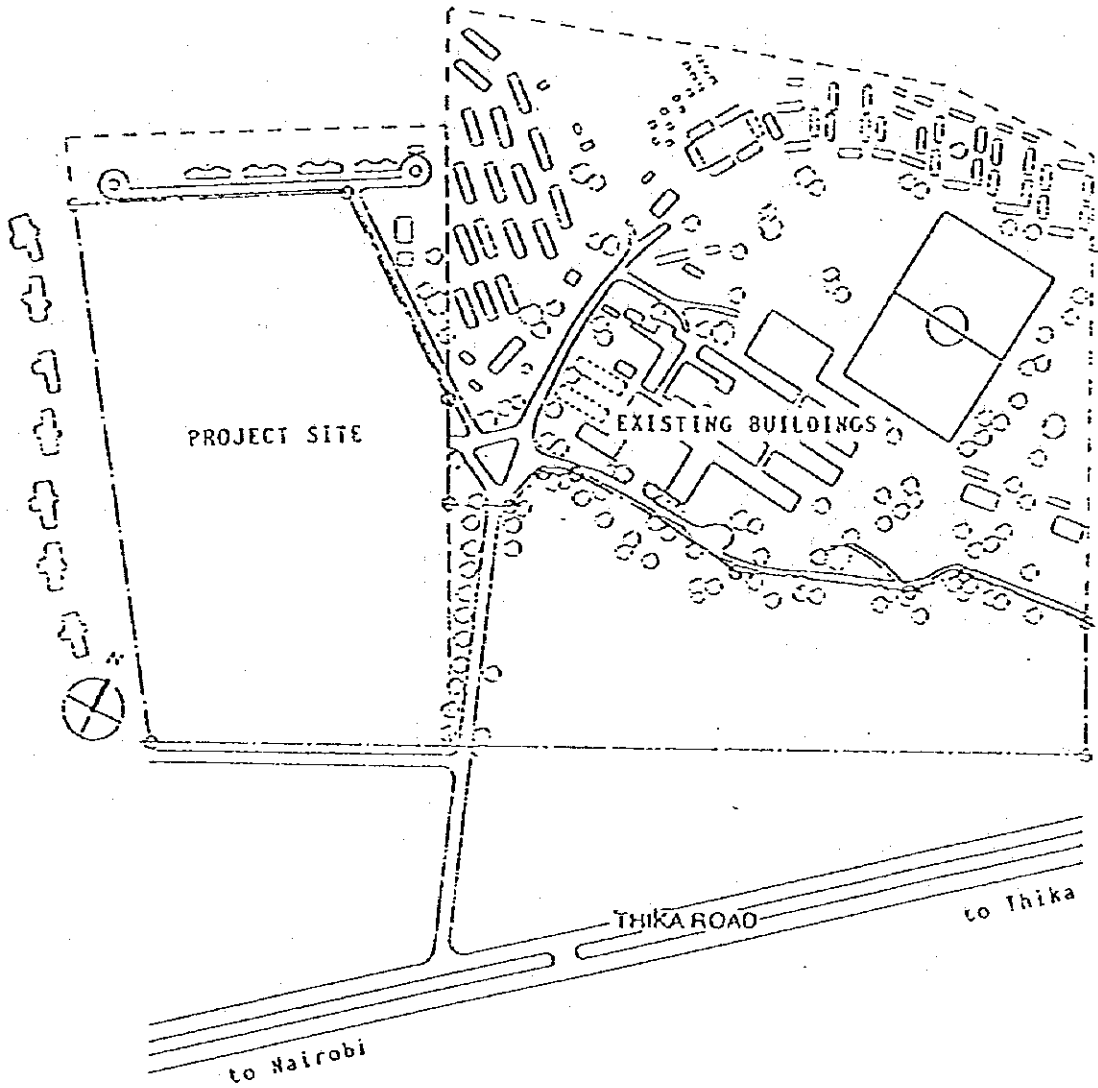
10. (a) To exempt products imported or purchased solely for project use under the Grant Aid, from customs duties, value added tax and any other fiscal charges provided the products are imported or purchased prior to clearance through customs;
- (b) To exempt the non-resident contractors and subcontractors and their non-resident personnel solely in Kenya for the purpose of the project, from income tax and value added tax in respect of their earnings and services respectively, rendered under the project;
- (c) To exempt the non-resident Japanese nationals solely in Kenya for the purpose of working under the project, from income tax and value added tax in respect of their earnings and services respectively, rendered under the project;
- (d) To exempt personal and household effects of the non-resident Japanese nationals solely in Kenya for the purpose of working under the project, from customs duties and value added tax, provided the said effects are imported or purchased within the first three months of first arrival in the country;

(FB)

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ANNEX-1 LOCATION OF THE SITE

The Project Site is located in the premises of Survey of Kenya Field Headquarters, Ruaraka, Nairobi.



(15)

1

ANNEX-2 NECESSARY MEASURES TO BE TAKEN BY THE KENYAN SIDE

The following necessary measures shall be taken by the Government of the Republic of Kenya on the condition that the Grant Aid by the Government of Japan is extended to the Project.

1. To provide data and information necessary for the Project;
2. To secure a land for the Project;
3. To clear, level and reclaim the site for the Project prior to the Project implementation;
4. To provide proper access road to the Project area;
5. To construct a temporary training building not later than December, 1995;
6. To undertake gardening, fencing, exterior lighting, and other incidental outdoor works in and around the Project site;
7. To provide the following incidental facilities to the Project;
 - (1) Electricity distributing line to the site,
 - (2) City water distribution main to the site,
 - (3) Sewerage main to the site,
 - (4) Telephone trunk line to the site,
 - (5) General furniture such as carpet, curtain and others, and
 - (6) Other incidental facilities necessary for the Project realization;
8. To bear commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission;
9. To ensure prompt unloading, tax exemption, customs clearance at the port of disembarkation in Kenya and prompt internal transportation therein of the materials and equipment for the Project purchased under the Grant Aid;
10. To exempt Japanese juridical and physical nationals involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Kenya with respect to the supply of the products and services under the verified contracts. The customs duties, internal taxes and other fiscal levies mentioned in this clause include but not limited to the following;
 - (1) Import Duties (on goods imported solely for the Project use)
 - (2) Value Added Tax
 - (3) Training Levy
 - (4) Corporation Tax
 - (5) Income Tax

(13)

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11. To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contract such facilities as may be necessary for their entry into Kenya and stay therein for the performance of their work;
12. To provide necessary permissions, licenses and other authorizations for implementing the Project, if necessary;
13. To maintain and use properly and effectively the facilities constructed and the equipment provided under the Project; and
14. To bear all the expenses other than those to be borne by the Japan's Grant Aid within the scope of the Project.

(P)

JICA

AND MINISTRY OF THE REPUBLIC OF KENYA (ADDITIONAL)