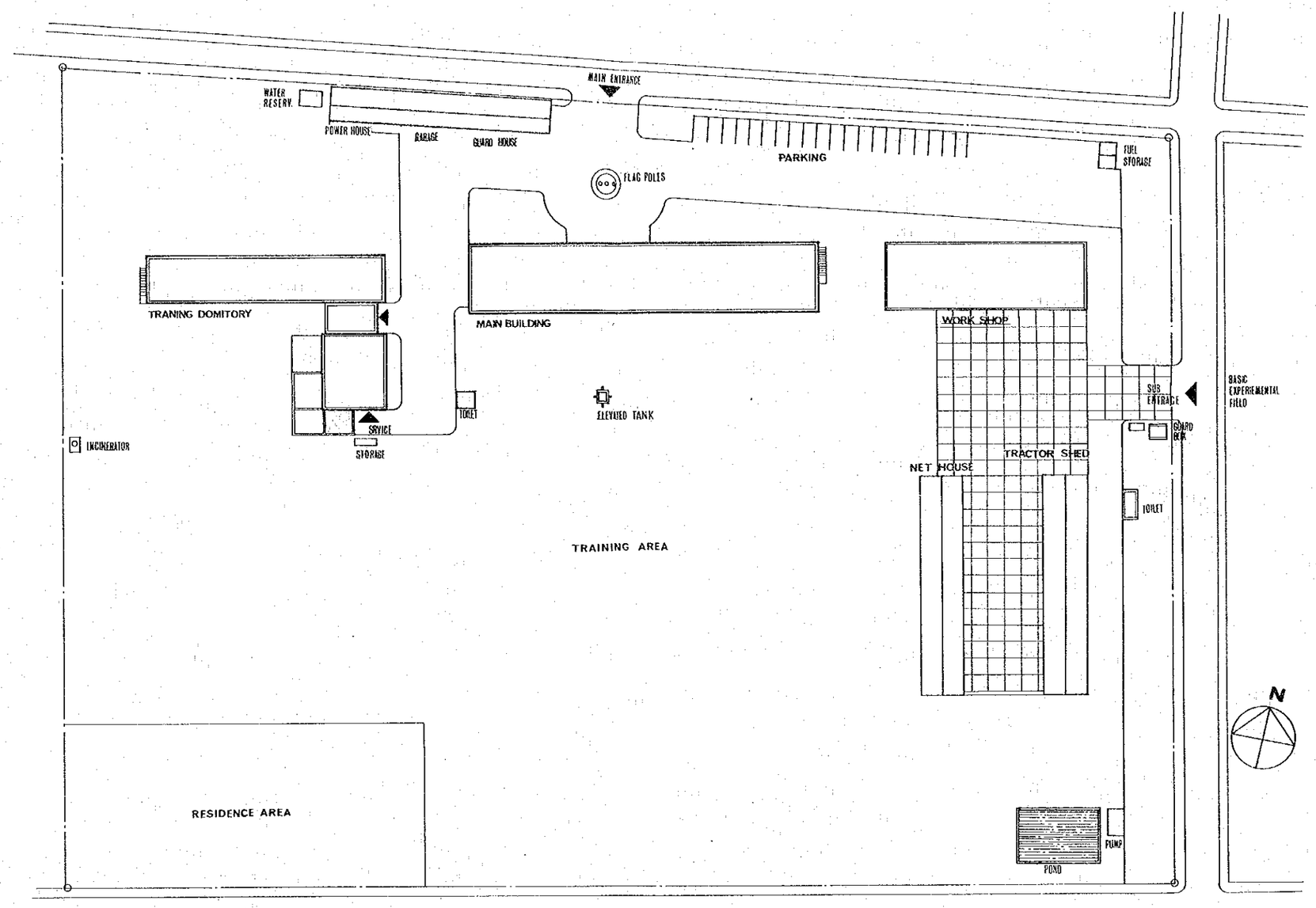
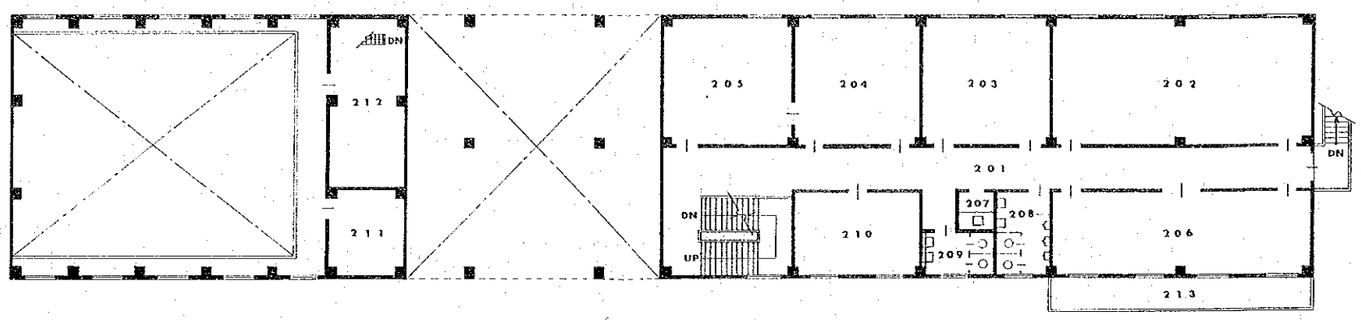
5—3 BASIC DESIGN DRAWINGS



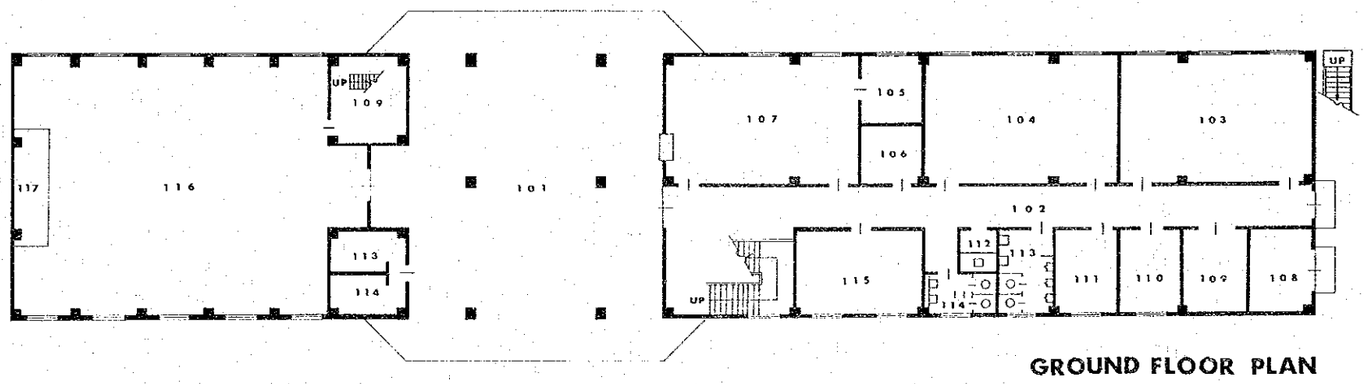
BUILDING NAME	FLOOR AREA
MAIN BUILDING	1,330 m^2
TRAINING DORMITORY	932 m^2
WORK SHOP	442 m^2
NET HOUSE	360 m^2
TRACTOR SHED	360 m^2
GARAGE & POWER HOUSE	193.5 m^2
TOTAL	3,617.5 m^2

SITE PLAN

0 5 10 20 40 M



1ST FLOOR PLAN



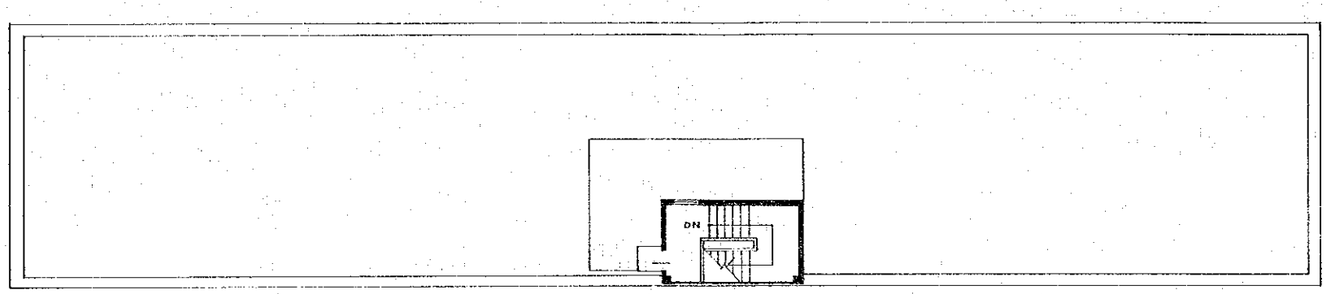
GROUND FLOOR PLAN

101	ENTRANCE LOBBY
102	CORRIDOR
103	FARM MANAGEMENT
104	LECTURE
105	TELEPHONE EXCH
106	MEDICAL CARE
107	ADMINSTRATION
108	SEED STORE
109	STORAGE
110	DARK ROOM
111	PRINTING ROOM
112	KETTLE
113	TOILET (MEN)
114	TOILET (WOMEN)
115	LIBRARY
116	AUDITORIUM
117	STAGE
201	CORRIDOR
202	MECHANIZATION & CULTIVATION
203	PLANNING & EVALUATION
204	CONFERENCE
205	DIRECTOR'S ROOM
206	LABORATORY
207	KETTLE
208	TOILET (MEN)
209	TOILET (WOMEN)
210	MEETING ROOM
211	STORAGE
212	PROJECTION BOOTH
213	BALCONY

N

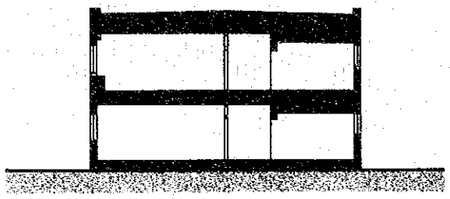
0 1 2 5 10 20 M

MAIN BUILDING



ROOF PLAN

0 1 2 5 10 20 M



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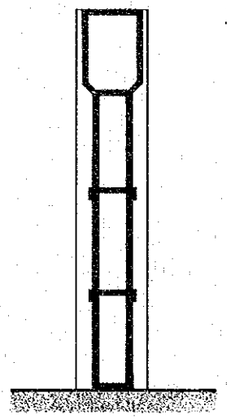

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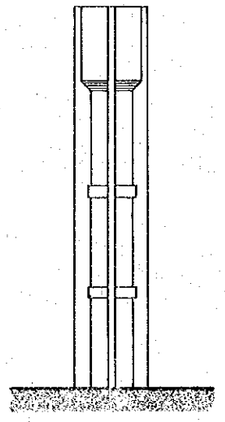
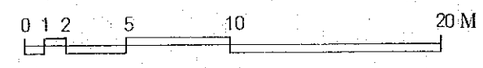
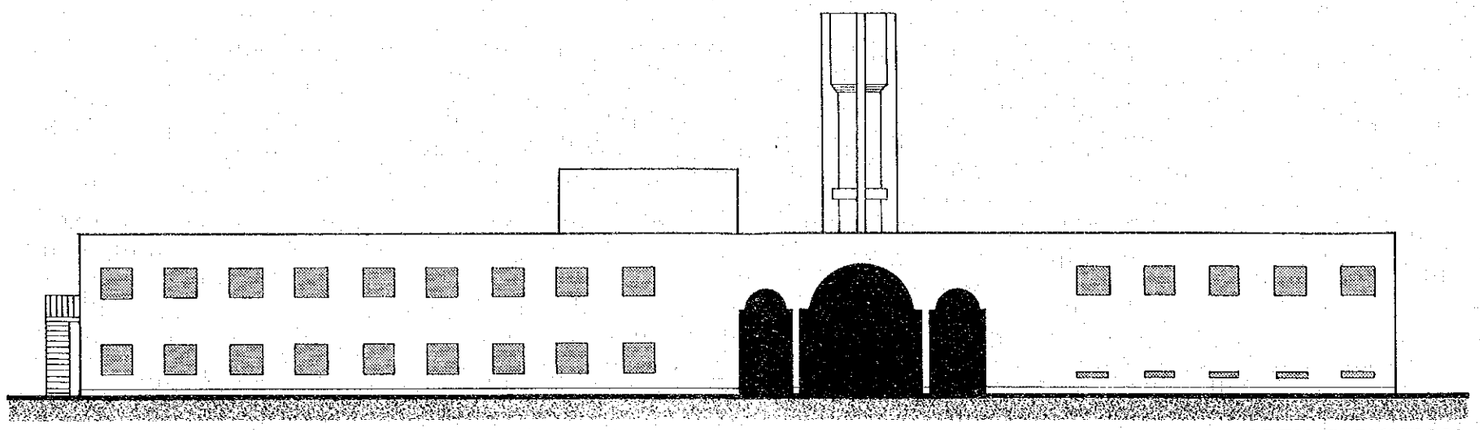


ELEVATION

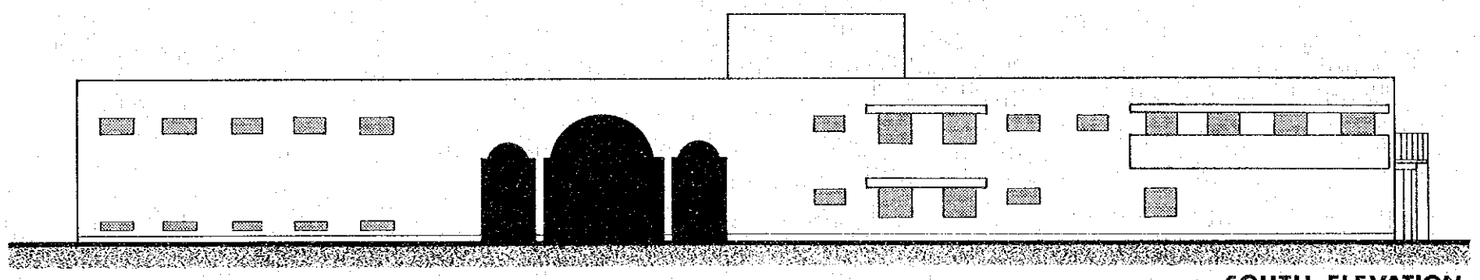
PLAN(TANK)

PLAN



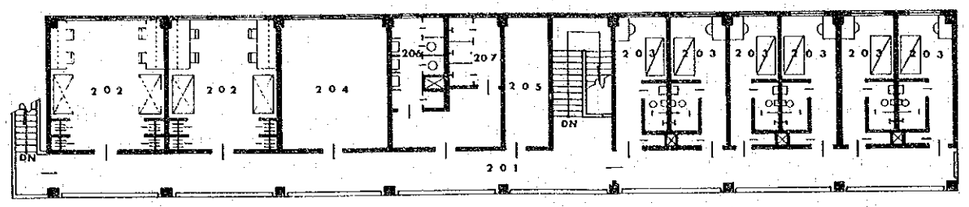


NORTH ELEVATION

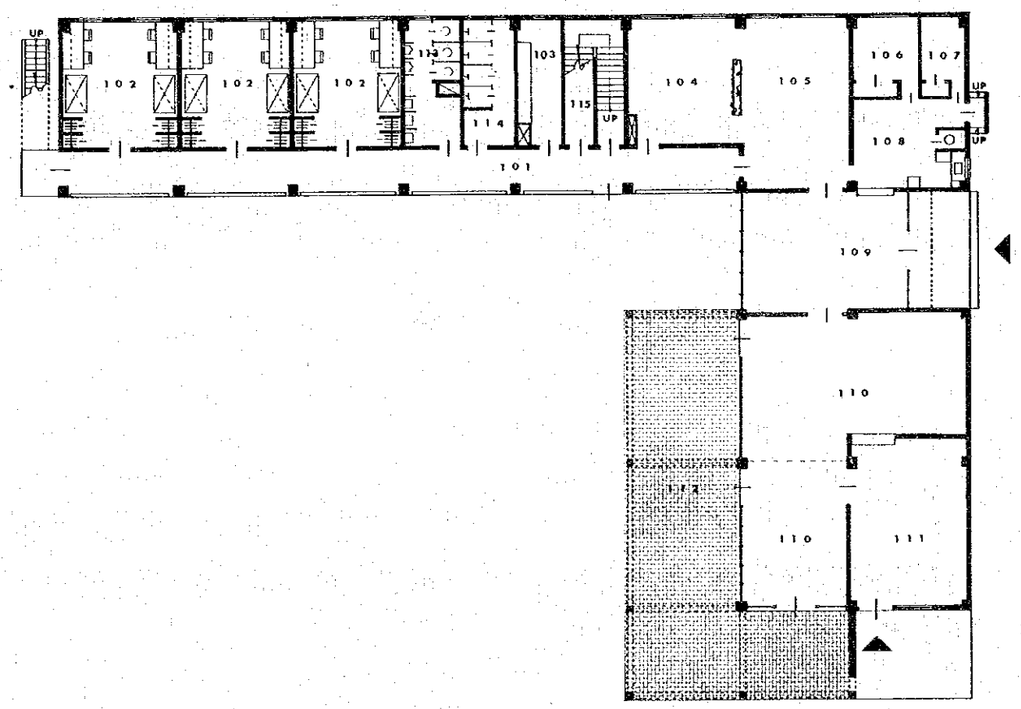


SOUTH ELEVATION

0 1 2 5 10 20 M



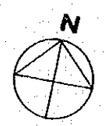
1ST FLOOR PLAN

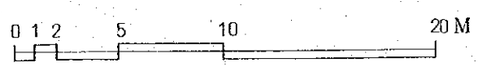


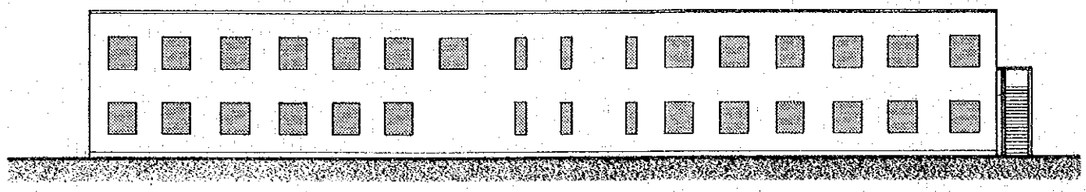
GROUND FLOOR PLAN

101	OPENED CORRIDOR
102	BED ROOM (4 MEN)
103	WASHING ROOM
104	LOUNGE
105	LOBBY
106	MAIN BED ROOM
107	CHILD BED ROOM
108	LIVING DINING KITCHEN
109	FNTRANCE HALL
110	DINING ROOM
111	KITCHEN
112	TERRACE
113	TOILET (MEN)
114	SHOWER ROOM
115	STORAGE
201	OPENED CORRIDOR
202	BED ROOM (4 MEN)
203	BED ROOM (1 MEN)
204	LOUNGE
205	STORAGE
206	TOILET (MEN)
207	SHOWER ROOM

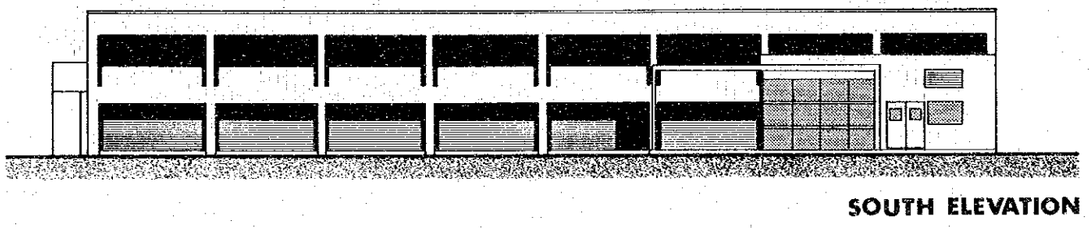
TRANING DOMITORY



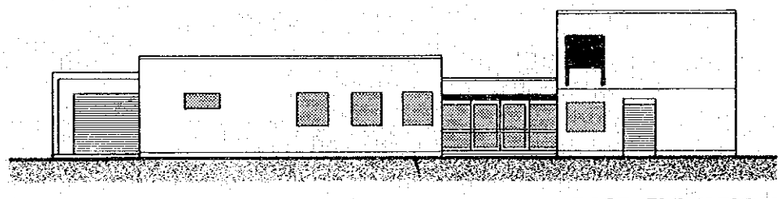




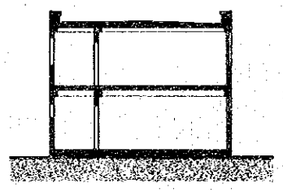
NORTH ELEVATION



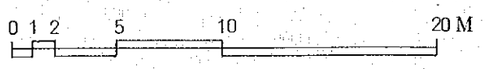
SOUTH ELEVATION

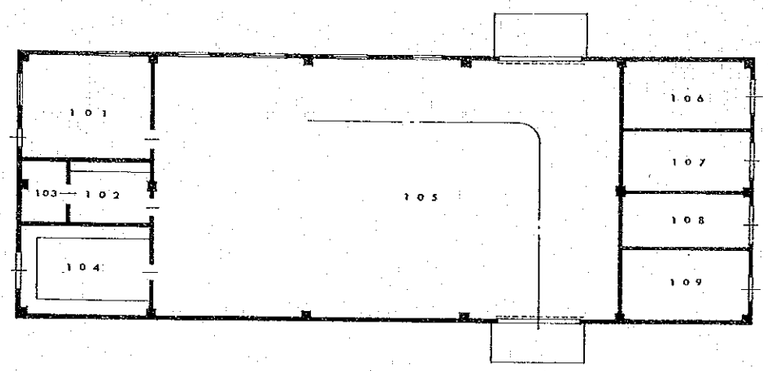


EAST ELEVATION

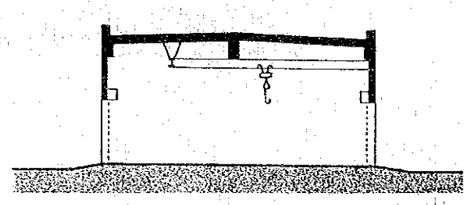


SECTION





PLAN



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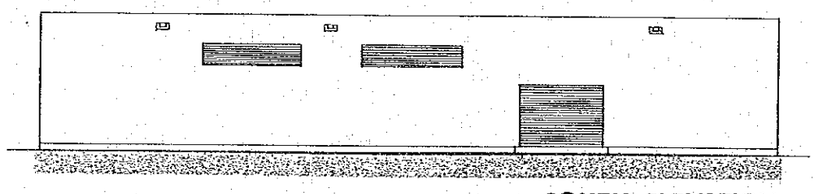
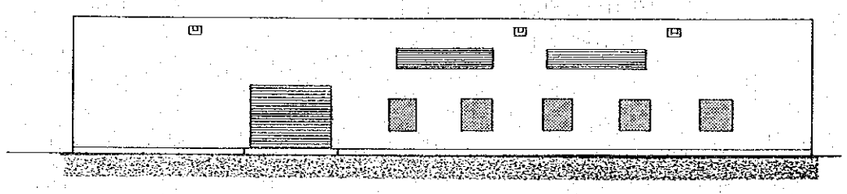


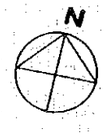
SOUTH ELEVATION

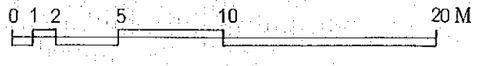


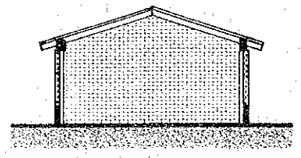
NORTH ELEVATION

101	OFFICE
102	LOCKER ROOM
103	TOILET & SHOWER
104	STORAGE
105	REPAIR SHOP
106	FERTILIZER STORE
107	STORE
108	CHEMICAL STORE
109	NURSERY BOX STORE

WORK SHOP







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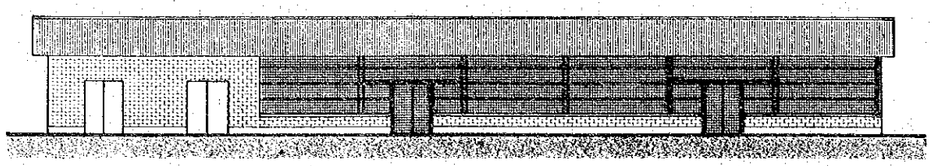
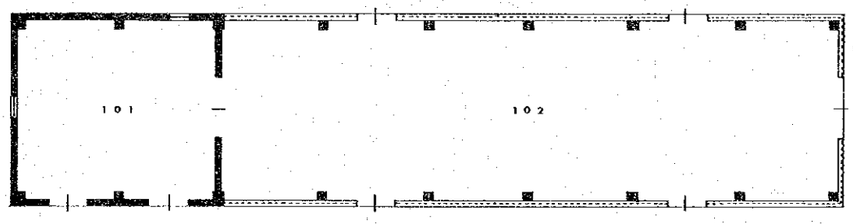


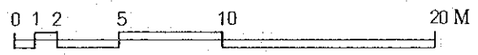
EAST ELEVATION

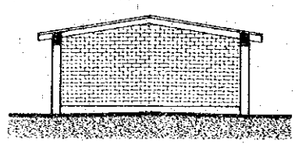


PLAN

101	STORAGE
102	NET HOUSE

NET HOUSE





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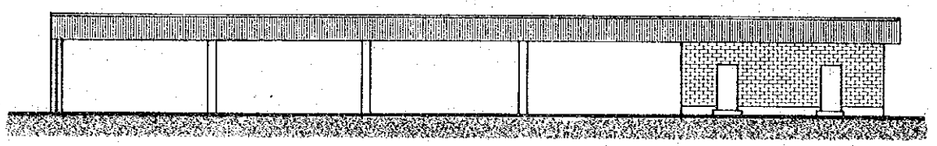
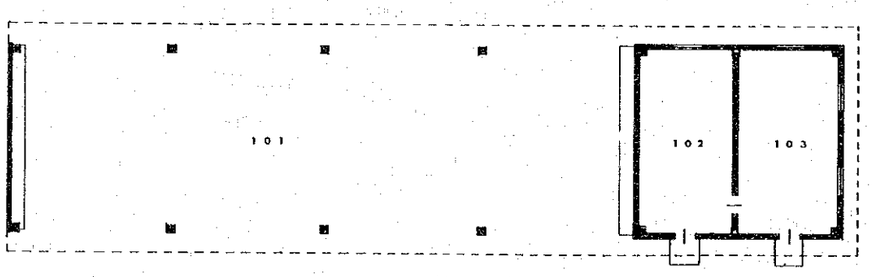


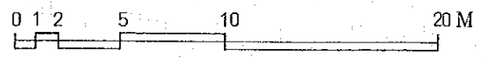
WEST ELEVATION

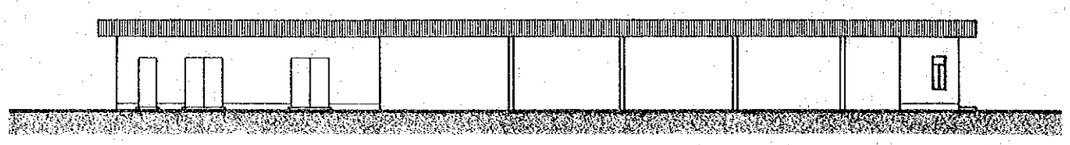


PLAN

101	TRACTOR SHED
102	RESEARCH ROOM
103	FIELD ADMINISTRATION

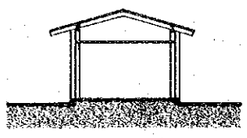
TRACTOR SHED





SOUTH ELEVATION

EAST ELEVATION



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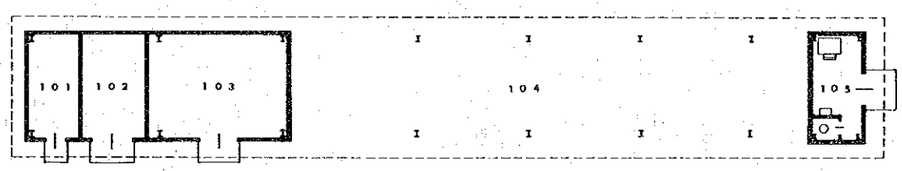
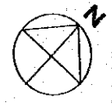
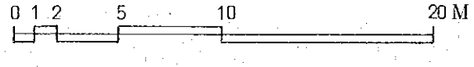


PLAN

101	PUMP ROOM
102	STAND-BY GENERATOR ROOM
103	DISTRIBUTION ROOM
104	GARAGE
105	GUARD ROOM

POWER HOUSE GARAGE GUARD HOUSE



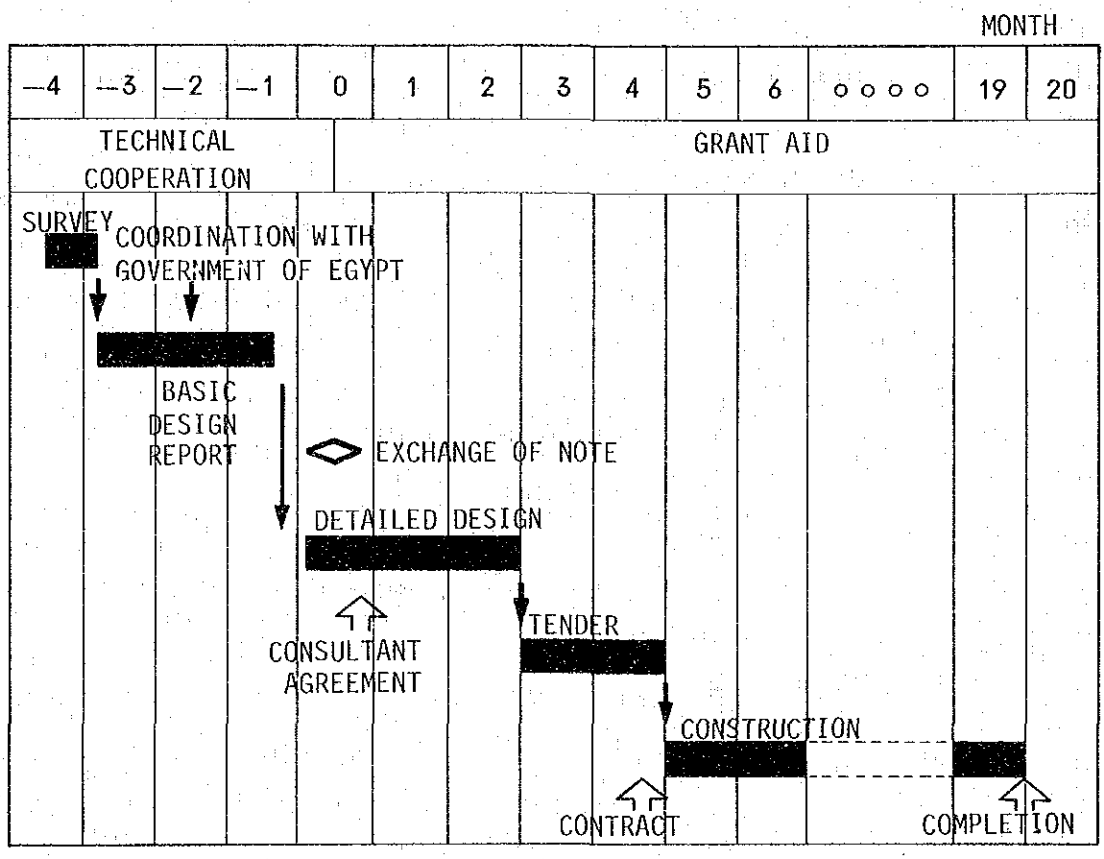


5-4 Project Implementation

5-4-1 Implementation Schedule

The project schedule comprises (1) the technical cooperation component of the basic design study, and (2) the grant basis which includes detailed design, construction works and supervision. Detailed design will commence after the completion of the basic design study, including preparation of all the required drawings, specifications and contract documents for tender and contract.

The site preparation works which are the responsibility of the Eqyptian Government will have to be completed before the start of the construction works.



5-4-2 Scope of Work

The scope of work for the proposed rice mechanization center was discussed and finalized by the representative of the Government of Egypt and the basic design study team during the two visits to Egypt. The responsibilities of the respective Governments are stipulated as follows;

(1) Japan

1) To offer consulting services on detailed design and supervision of construction works

2) To undertake construction work for the buildings and related facilities and to provide machinery, other equipment, instruments and materials. (See Sections 5-2 and 5-3)

(2) Egypt

1) General responsibilities:

a) To ensure prompt unloading and customs clearance of imported materials and equipment for the project.

b) To exempt materials and services related to the project from internal taxes and other fiscal levies.

c) To exempt Japanese nationals who participate in the project from customs duties and other levies and to give other necessary conveniences in order to facilitate their entry to, stay in and exit from Egypt under the temporary exemption systems.

d) To provide and accord necessary permissions, licences and other authorization required for carrying out the proposed project.

e) To allocate sufficient annual budgets for the operation and maintenance after the completion of the project.

2) Site surveys

a) Site measurement

b) Boring survey (See for further reference)

c) Topographic survey and preparation of the report on the findings

3) Site preparation

a) Removal or transfer of surface or underground obstacles

b) Land preparation including mounding

4) Related utility works

a) Electricity: installation of temporary distribution lines.

b) Telephone: installation of temporary telephone lines for the duration of construction works, and of permanent telephone lines reaching M.D.F.

c) Water supply: installation of temporary supply pipelines for the duration of the construction works, and construction of the main pipeline (4 inches in diameter) connecting to the source of water supply

d) Sewage and drainage: installation of temporary sewage and drainage and its discharge to the sewage treatment facilities

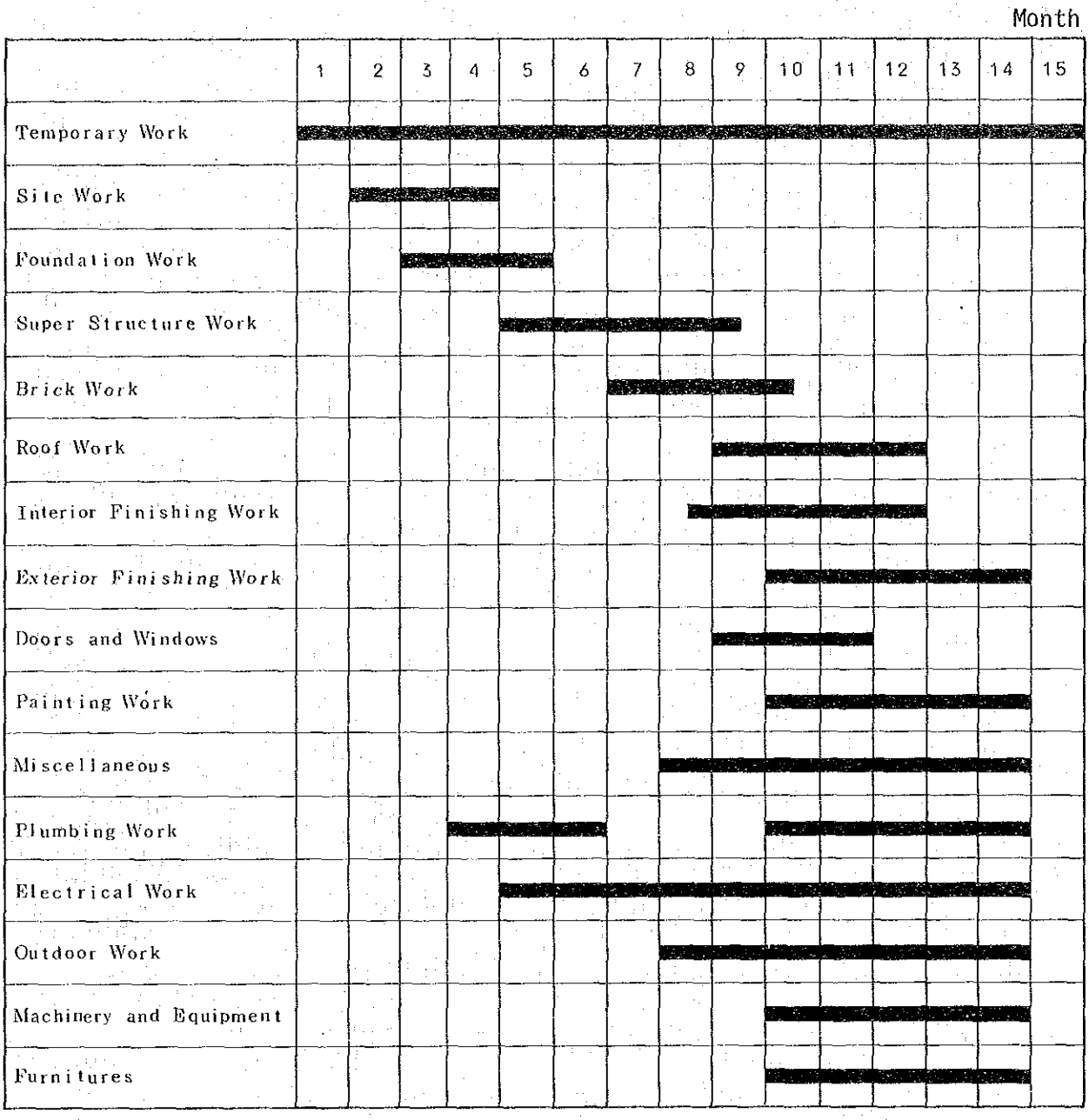
5) Related site works

Installation of fences, gates, lamp posts, etc., construction of the internal passage ways and landscaping

6) Furnitures

Provision of general furniture, appliances and office supplies

5-4-3 Construction Schedule



5-5 Maintenance and Operation of the Center

Director of Agricultural Mechanization Projects, MOA, is responsible for management of the RMP. The project manager will be in charge of operation of the Center.

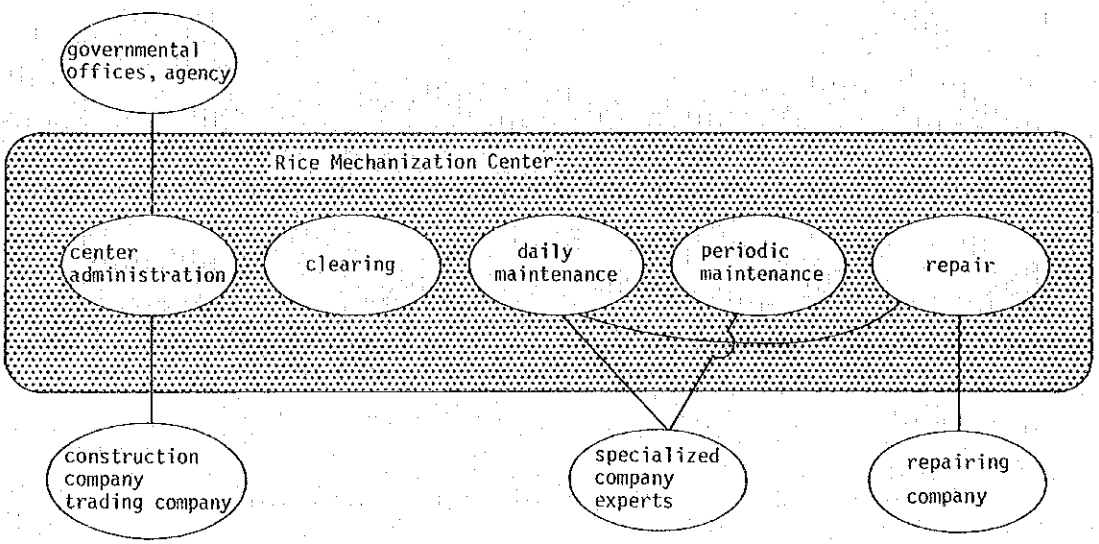
The Government of Egypt will finance, budget required for maintenance and operation of the experimental field, buildings and other facilities. The objectives of maintenance and operation of the Center are (1) to maintain the Center's functions (efficiency in working conditions, a good living environment), (2) to maintain a good appearance (3) decreasing the cost of repairs, (4) prevention of disasters and to provide for emergencies. Appropriate maintenance and operation will prevent from the deterioration of buildings and enable facilities to last longer.

5-5-1 Management Structure

(1) Buildings

Rules and procedures for the operation and maintenance of the buildings are required. It will be necessary for these to be on a regular daily basis and periodic basis for maintenance. In any case, there should be well-trained personnel to manage the operations. If such personnel are not available locally, cooperation or assistance from outside is necessary.

The following diagram shows the organizational structure for the maintenance of the Center.



The general administrator in the Administration Division will be in control of all the personnel in charge as the followings.

General administrator	fire prevention personnel	daily checking, extinguishers recording.
	maintenance personnel	janitors, inspection, repairs.
	safety control personnel	guards, disaster prevention
	electrical maintenance personnel	daily operations, recording, checking codes periodically.
	mechanical maintenance personnel	ditto

(2) Machinery, equipment and experimental fields.

It is prefered that each division be responsible for operation and maintenance.

General administrator in control	Research div.	experimental equipment
	General affair div.	machinery equipment
	General affair div.	experimental fields

5-5-2 Estimated Cost for operation and maintenance

The required costs for the operation of the Center can be met through the revenue of (1) income from sales of harvested rice and (2) the budget from the Government of Egypt.

The annual operating costs for the Rice Mechanization Center is as follows.

Maintenance and operating cost	100,000 LE
(1) Salaries and Wages	64,300 LE
(2) Operation	35,700 LE

(1)	Salaries and Wages		64,300 LE
	1)	Director and staffs (31 persons)	33,518 LE
	2)	Caretaker and cooks	2,381 LE
	3)	Temporary manual workers (40 persons)	9,522 LE
	4)	Advanced course trainees (40 persons)	18,885 LE
(2)	Operational Costs		
	1)	Personnel management	3,000 LE
	2)	Travel	4,800 LE
	3)	Fuel	3,712 LE
	4)	Water	2,952 LE
	5)	Electricity	8,568 LE
	6)	Office supplies	4,200 LE
	7)	Chemicals	4,200 LE
	8)	Repairs	1,800 LE
	9)	Miscellaneous	2,500 LE

The basis for the calculation is the followings;

1) Salary scale employed by the Egyptian MOA during the basic design study (Feb., 1982)
   Rise in the pay roll is estimated to be 15% per year.

2) Excluding cost of housing for the staff, office furnitures and new acquisitions of machinery.

3) Excluding expenses for fertilizer to be used on the fields.

(3)	Income		100,000 LE
	1)	Income from 1st cropping:	8,037 LE
		Income from 2nd cropping:	2,679 LE
	2)	Government budget:	89,300 LE

See reference materials for the calculation in APPENDIX IV.

Chapter 6 : PROJECT EVALUATION

Chapter 6 : PROJECT EVALUATION

The promotion of mechanized rice farming is one of the essential factors in boosting the long-stagnant agricultural production in Egypt and thereby to provide a significant impetus for the upturn of the country's economic activities and social welfare. For this reason the Japanese Government has already extended technical cooperation to the pilot project according to the Record of Discussion exchanged.

The evaluation for this project can be seen mainly from two view points.

(1) The effect on rice production by promoting the mechanization of rice farming.

(2) Two ways for economic evaluation in the establishment of the Rice Mechanization Center in Meet El Dyba were considered.

  1) Cost/benefit ratio of the establishment of the Center.

  2) Least-cost method to overcome the difficulty in calculating benefit.

In 2), neither a) nor b) are appropriate to apply for project evaluation considering the objectives, composition and size of the Center.

Therefore, the discussion would be limited only to the effect of rice mechanization.

The major impact of the introduction of rice mechanization on the stagnant level of rice production in Egypt will be (1) labor saving, (2) increasing of production and (3) better quality of the harvest.

(1) Labor saving

In view of the continuing out-migration from village to urban centers and or to neighboring Arab countries and consequent rise in agricultural wage rate in contemporary Egypt, it is possible to justify the mechanization of rice farming.

A systematic and controlled use of all agricultural machinery in one continuous operation for plowing, land preparation, securing irrigation water, transplanting, weeding and harvesting, will optimize efficiency of each machinery. Each division of operation of rice farming will be timely.

In addition, an increased production of rice and at the same time, saving labor can be expected.

(2) Increasing of production

Rice cropping in Egypt is based on mostly small-and medium sized farm (94.5% of the total farming was under 2.1 ha by the statistics in year 1968). The recent trend shows that the direction toward the seed sowing method of rice farming is increasing, because of the continuing out-migration of farmers from the villages. As a result, general condition of farm management is driven to unsatisfactory state at present. In addition, lower yield per unit of area and decreasing total production are not avoidable.
By introduction of machinery to overcome various problems related to transplanting method of rice farming, increased production of rice will be expected.

(3) Better quality of the harvest rice

The mechanized harvesting by a combine for instance, will largely eliminate the loss due to lodging, prevent admixture of gravel and other foreign matter and reduce the proportion of broken grains. As a whole, quality of production of rice will be much improved by the mechanized harvesting.

Standardization and systematic development of farming operations through mechanization will contribute in the long run to the development of the industrial sector by creating an increase in the demand for agricultural implements and machinery.
Another effect of mechanization is an increase in leisure time through labor-saving and to free adolescent and the aged from long-hard work. To achieve these benefits, it is necessary to test and establish rice mechanization systems in Egypt at the Center. The investment for the establishment of the Center is well justified.

Chapter 7 : CONCLUSIONS AND RECOMMENDATIONS

Chapter 7 : CONCLUSIONS AND RECOMMENDATIONS

7-1 Conclusions

The Government of Egypt has a long-term plan to establish similar rice mechanization centers in other parts of the rice producing areas. In order to expedite the diffusion of rice mechanization systems in all rice-producing areas, it will be vital for the graduates to serve as instructors in new rice mechanization centers. Appropriate application of mechanization systems will substantially raise the level of land productivity and increase the farmers' income. A more productive and more comfortable rural livelihood will help dampen the continuing rural-to-urban migration in the long run and make a great contribution to the growth and equity in the Egyptian economy and society.

Application of least-cost construction techniques and use of the available local material as much as possible, the planned construction of the Center will utilized optimum resources. In addition, the size of the Center is planned to be the minimum. The implementation of construction is planned in consideration of the contents of the program for the Center and the conditions of the site, climate, environment and construction period. The Government of Egypt is allocating the necessary budget for the operation of the Center. Appropriate steps for financing on a grant basis should be taken urgently, following the technical cooperation which has already started.

7-2 Recommendations

After the completion of the Center, it will be desirable for the Government of Egypt to take the following measures in order to ensure its successful performance.

(1) To assign a suitable number of Egyptian engineers, agronomist and other technicians to man the center as counterparts to Japanese experts.

(2) To allocate a sufficient annual budget for the operation and maintenance of the Center, and

(3) To give certificates of instructor, assistant instructor and demonstrator of the courses after appropriate evaluation of their performance.

Persons, completed	Certificate
1) advanced course	Instructor in rice mechanization and rice production in agriculture.
2) basic course	Assistant instructor in machinery and agronomy.
3) short course	Demonstrator of machinery.

(4) To accomodate facilities near the Center for 300 students coming to the lecture.

APPENDIX

I Basic Design Study Team

MINUTES OF DISCUSSIONS
O N
THE RICE MECHANIZATION PILOT PROJECT
IN THE ARAB REPUBLIC OF EGYPT

In response to the request made by the Arab Republic of Egypt for the basic design study on the construction project of the rice mechanization pilot project in the Arab Republic of Egypt (hereinafter referred to as "the Project"), the Government of Japan has dispatched, through Japan International Cooperation Agency (hereinafter referred to as "JICA"), a survey team headed by Mr. Katsuhiko Biyajima, Deputy Head, Technical Cooperation Div. Agricultural Development Cooperation Dept., JICA, to carry out the basic design study from January 24, 1982.

The team has conducted the field survey and held a series of discussions and exchanged views with the Egyptian authorities concerned as to the project.

As a result of the survey and discussions, the Japanese Survey Team and the Egyptian authorities agreed to recommend to their respective governments to examine the results of the discussions attached herewith toward the realization of the project.

February 1, 1982
Cairo, Egypt

Dr. Ali El Hossary
Ministry of Agriculture,
The Arab Republic of Egypt

Mr. Katsuhiko Biyajima
Leader of the Japanese
Basic Design Study Team
on the Construction Project
of the Rice Mechanization
Pilot Project

Attachments

1. The purpose of the Project is to construct buildings and install facilities as well as equipment and machines in Meet El Dyba.

2. The Centre will undertake its activities based on the following objectives ;
   (1) Verifying experiment on the mechanized rice farming.
   (2) Economic Study on the mechanized rice farming.
   (3) Establishment of the mechanized rice farming system.
   (4) Advice and Guidance on training for operation and maintenance of agricultural machinery.
   (5) Advice and Guidance for the demonstration of mechanized rice farming.

3. The proposed site of the Centre is the land acquired by the Egypt Government at Meet El Dyba. (Attached Map)

4. The Japanese Survey Team will convey the desire of the Government of Egypt to the Government of Japan that the latter will provide the buildings and other items as listed in Annex I within the scope of Japanese economic cooperation in grant form.

5. The Government of Egypt will take necessary measures on condition that the grant assistance by the Government of Japan is extended to the Project;

   1) to provide data and information necessary for the design and the construction
   2) to secure land necessary for the construction
   3) to clear, fill and level the Project Site as needed before the start of the construction
   4) to construct and prepare the access road to the Project Site, as needed
   5) to provide other items listed in Annex II

(17)

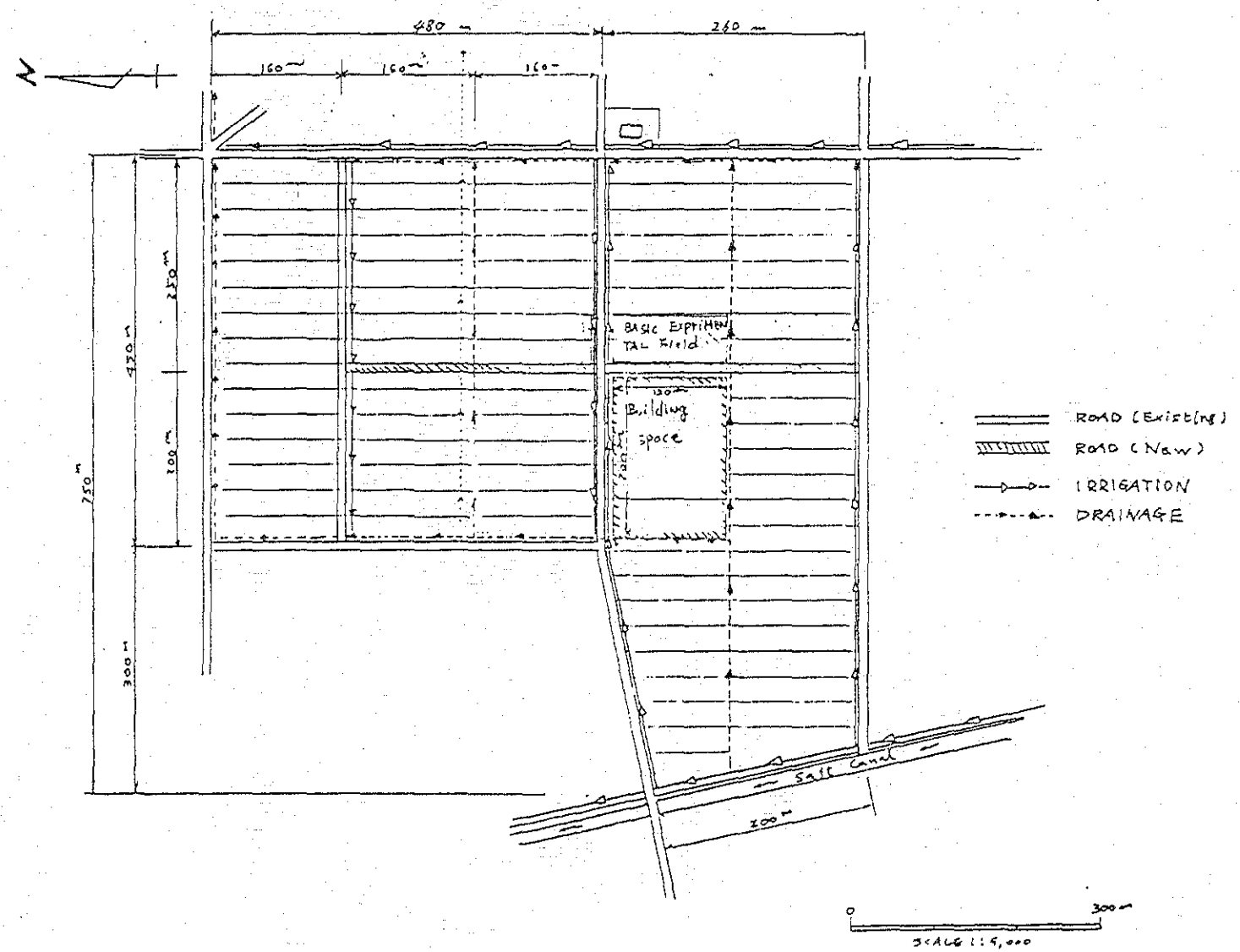
- to be cont'd -

6) to ensure prompt unloading and customs clearance in Egypt of imported materials and equipment for the construction and also to facilitate the internal transportation for them.

7) to exempt Japanese nationals concerned from customs duties, internal taxes and other fiscal levies which may be imposed in Egypt on the occasion of the supply of materials and services for construction.(temporary importation)

8) to provide and accord necessary permissions, licences and other authorization required for carrying out the Project.

PROPOSED LAYOUT PLAN FOR MEET EL DYBA EXPERIMENTAL FARM (Revised)



A N N E X I

1. Consultant services

   Detail design and supervision

2. Buildings
   1) Main building
   2) Auditorium
   3) Workshop
   4) Warehouse
   5) Garage
   6) Fuel Storage
   7) Trainer's Dormitory
   8) Dining Room
   9) Residence
   10) Guard House
   11) Net House

3. Agriculture Machinery

4. Others
   1) Grain drying concrete bed
   2) Pond
   3) Other necessary facilities and equipment

A N N E X II

Items whose costs will be borne by the Government of Egypt

1. Water supply mains to the Centre Building.
2. External drainage from the Centre Building and sewage treatment facilities.
3. Electric power main line to the Centre Building.
4. Telephone lines and equipment,
5. Exterior Facilities and Landscaping,
6. Provision of space necessary for such construction as temporary office, working area, stock yards and others,
7. ~~Furniture, carpet, curtains and other furnishings as~~ necessary, Furniture
8. Maintenance and Operation cost and expenses.

I-2 Progress Report

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
P.O. BOX 216 MITSUI BLDG
2-1, NISHI-SHINJUKU, SHINJUKU-KU TOKYO
160 JAPAN

Feb. 8, 1982

Dr. Ali El Hossary
Under Secretary of Engineering
Affairs, M. O. A.
The Arab Republic of Egypt

Dear Dr. Hossary,

The Basic design study for the construction project of the RICE MECHANIZATION Centre have done their basic study works during the period of 15 days from Jan. 25 to Feb. 8, 1982, according to the inception report.

Please find the attached sheets in which we have summarized our works at Meet El Dyba. Each contents described in the report shall be scrutinized further in Japan immediately after our returning to Tokyo. The final draft report , as our team leader mentioned at our first meeting, shall be edited by the end of March 1982.

May I emphasize that the attached sheets are a tentative report for your infromation.

Sincerely yours

K Takagi

Kiyotugu Takagi
For Mr. Katuhiko Biyajima
Leader of the Japanese
Basic Design Study Team
for the Rice Mechanization
Pilot Project

c/c
Mr. YAGI, First Secretary,
Embassy of Japan
Mr. GOTOH, Director,
JICA Cairo Office
Dr. TOMITA, Team Leader,
RNP

2. Record of Study

	SITE	WORK
24 Jan. Sun.	Tokyo SR 187 TW 840	
25 Jan. Mon.	Athene - Cairo	Arrival at Cairo
26 Jan. Tues.	Cairo	JICA office, Embassy of Japan. Meeting at Ministry of Agriculture
28 Jan. Thurs.	Cairo-Kafr El Sheikh-Tanta (Meet El dyba)	Meeting with MOA staff Meet El dyba, Study at site.
29 Jan. Fri.	Tanta- Alex.-Tanta (leader, Tanta-Cairo	Visit to Testing & Research Station for Agricultural Machinery
30 Jan. Sat.	Tanta-Meet El Dyba-Tanta (leader, Cairo)	Study at site Discussion with MOA staff
31 Jan. Sun.	Tanta-Kafr El Sheikh-Cairo (leader, Cairo)	Drafting of minutes
1 Feb. Mon.	Cairo	Discussion of minutes & Exchange Minutes, MOA
2 Feb. Tues.	Cairo (leader, Cairo-Tokyo)	Study in Cairo
3 Feb. Wed.	Cairo-Kafr El Sheikh-Tanta	Study at site
4 Feb. Thurs.	Tanta-Kafr El Sheikh-Tanta	Ditto
	Tanta- Alex.- Tanta	Study of Transportation situation
5 Feb. Fri.	Tanta - Cairo	
6 Feb. Sat.	Cairo	Study in Cairo
7 Feb. Sun.	Cairo	Meeting at JICA & Embassy of Japan
8 Feb. Mon.	Cairo	Final Meeting at MOA
9 Feb. Tues.	Cairo TW 841 JL 472	Leaving from Cairo
10 Feb. Wed.	Tokyo	

3. Egyptian and Japanese officials

1) Experts Engineer of Japanese Government.

Dr. Toyoo Tomita

Mr. Yasuhiro KIMURA

2) Egyptian Government

Dr. Ali El Hossary	Under-secretary for Engineering Affairs, Ministry of Agriculture (MOA)
Mr. Osama Mohamed Kamel	Agricultural Mechanization Management (MOA)
Mr. Mohsen Mohamed Sadek	Ministry of Economic Cooperation
Mr. Alaa El Deen El Sonbaty	Under-secretary of Agriculture Kafr El Sheikh, (MOA)
Mr. Abd El Monem El Nhass	Director of Agriculture (MOA) Kafr El Sheikh
Mr. Mostafa Saleh Abbas	Agricultural Mechanization Engineer (MOA)
Mr. Abd El Magied Mohamed Romeh	Mechanical Engineer Kallin Experimental Farm
Dr. Abd El Azier Mohamed Doma	Director, Kallin Experimental Farm
Mr. Naguib Girgis	Civil Engineer, Assistant Manager Construction Dept., Kafr El Sheikh Governorate
Dr. Mohamed Ahmed El Nagar	Director. Testing & Research station for Agricultural Machinery, Alexandria
Mrs. Layla Mohamed Fahmy	Agricultural Engineer
Mr. Mausa Mohamed Saliman	Mechanical Engineer
Mr. Mohamed Nagib Skarry	Agricultural Engineer
Mr. Rushdy Ali Nagid	Agricultural Mechanization (MOA)

4. Contents of study and meeting

1) Meeting with Japanese Experts and Technical Cooperation Team.

2) Confirmation of Request from Government of Egypt.

3) Basic Design Survey at project site.
   1. Confirmation of project site.
   2. Project site survey.
   3. Study on electricity, fresh water, gas and telephone etc.
   4. Analysis of water.

4) Study of agriculture situation

5) Study of construction situation

6) Study visit to Agricultural centre (Testing & Research station for Agricultural Machinery, Alexandria)

7) Study on unloading port

8) Study of transportation, in land

5. CONCEPT PLAN OF THE RICE MECHANIZATION CENTRE AT MEET EL DYBA

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1) Function, organization, experiment and training plan of center.

Attached Sheet 1

2) Layout plan for Meet El Dyba experimental farm.

Attached Sheet 2

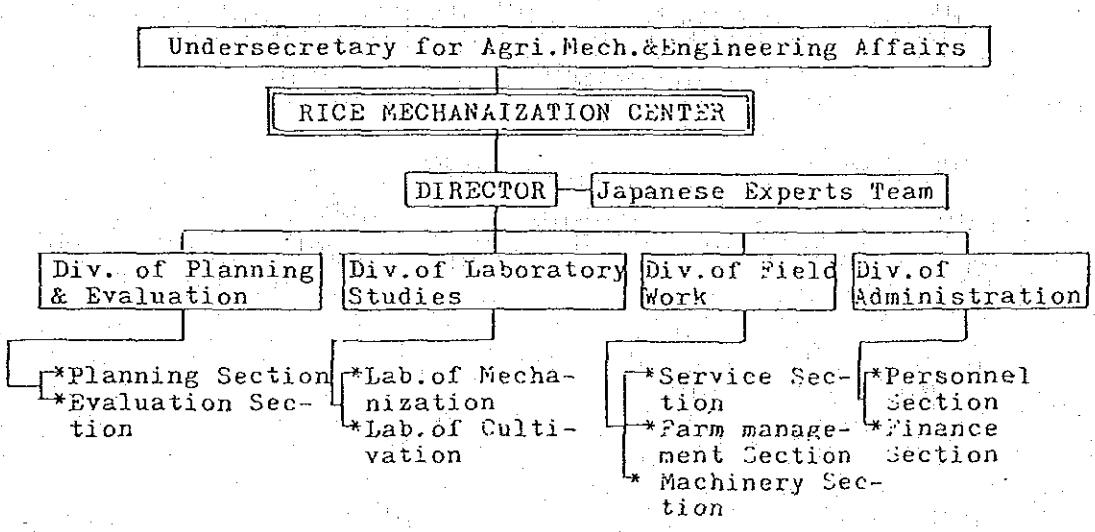
3) Plot plan of Building (Facility complex)

Attached Sheet 3

Attached Sheet 1-1

Basic Design on the Facility Complex for
RICE MECHANIZATION CENTER at Meet El Dyba,
Kafr El Sheikh Governorate

1) Name: RICE MECHNIZATION CENTER, Arab Republic of Egypt
2) Organizational Position: Directly attached to the Undersecretary for Agricultural Mechanization and Engineering Affairs, MOA.
3) Location: Meet El Dyba, Kafr Sheik Governorate
4) Contents of Function:
   (i) Verifying experiment on mechanized rice farming
   (ii) Economic study on mechanized rice farming
   (iii) Establishment of mechanized rice farming system
   (iv) Advice and guidance on training for operation and maintenance of agricultural machinary
   (v) Practical guidance on mechanized rice cultivation
   (vi) Advice and guidance for demonstration activities of mechanized rice farming
5) Organization of RICE MECHANIZATION CENTER



6) Number of Working Stuff;

(i) Senior Officer : 5(Director: 1, Division Chief: 4)

(ii) Officer: 14(Researcher: 7,Others; 7)

(iii) General Service: 12

(iv) Part Time Laborer: 30-40 man/day

7) Budget: Personnel saralies,study expence,and running cost such as electricity and fuel supposed to be coverd by MOA. Agricultural products yielded at the Center should be accepted by MOA.

8) Others: Various results obtained at the Center can be benefited to those related institutes and organizations under the umbrella of Egyptian Food Security Plan.

- to be continued-

Attached Sheet 1-2

Training Program at the Rice Mechanization Center, A.A. E.

1) Purpose: Rice Mechanization Center('the Center' hereinafter) shall be established to undertake such function as training for (i) experienced engineers and agronomist, (ii) junior engineers and junior agronomists who need some polishing in their career, and extension workers, (iii) key-farmers who deal with rice-growing farmers; (iv) demonstration of mechanized rice cultivation technology, towards farmers and concerned people, and (v) various activities to promote farmers' organization.

2) Contents of Training at the Center ; As indicated in the following table;

Category	Purpose	Objective	Subject	Duration (week/session)	Number of Trainee
I, Advanced Course in Mechanized Rice Cultivation	To bring up instructors both in Rice-Machinery & Rice-agronomy	Senior agri. engineers & agronomists, or experienced stuff	Principles in mechanized rice cultivation and its applications	3 in winter & mid-summer	20/session
II. Basic Course in Mechanized Rice Cultivation	To educate those who assist instructors in machinery & agronomy	Junior agri. engineers & agronomists, or extension workers	Practice in Nursing, Machinery operation, Taking care of rice plants etc.	2 several times during season	20
III. Brief Course in Mechanized Rice Cultivation	To let key-farmers see How to work in Mechanized Rice Cultivation	Leading key-farmers nominated by governors	Demonstration of mechanized rice cultivation and social program for village organization	1 week or 5 days	300

(3) Contents of Training Session: Training session will be opened basically in the following two seasons, but some extra sessions may be held at needed time.

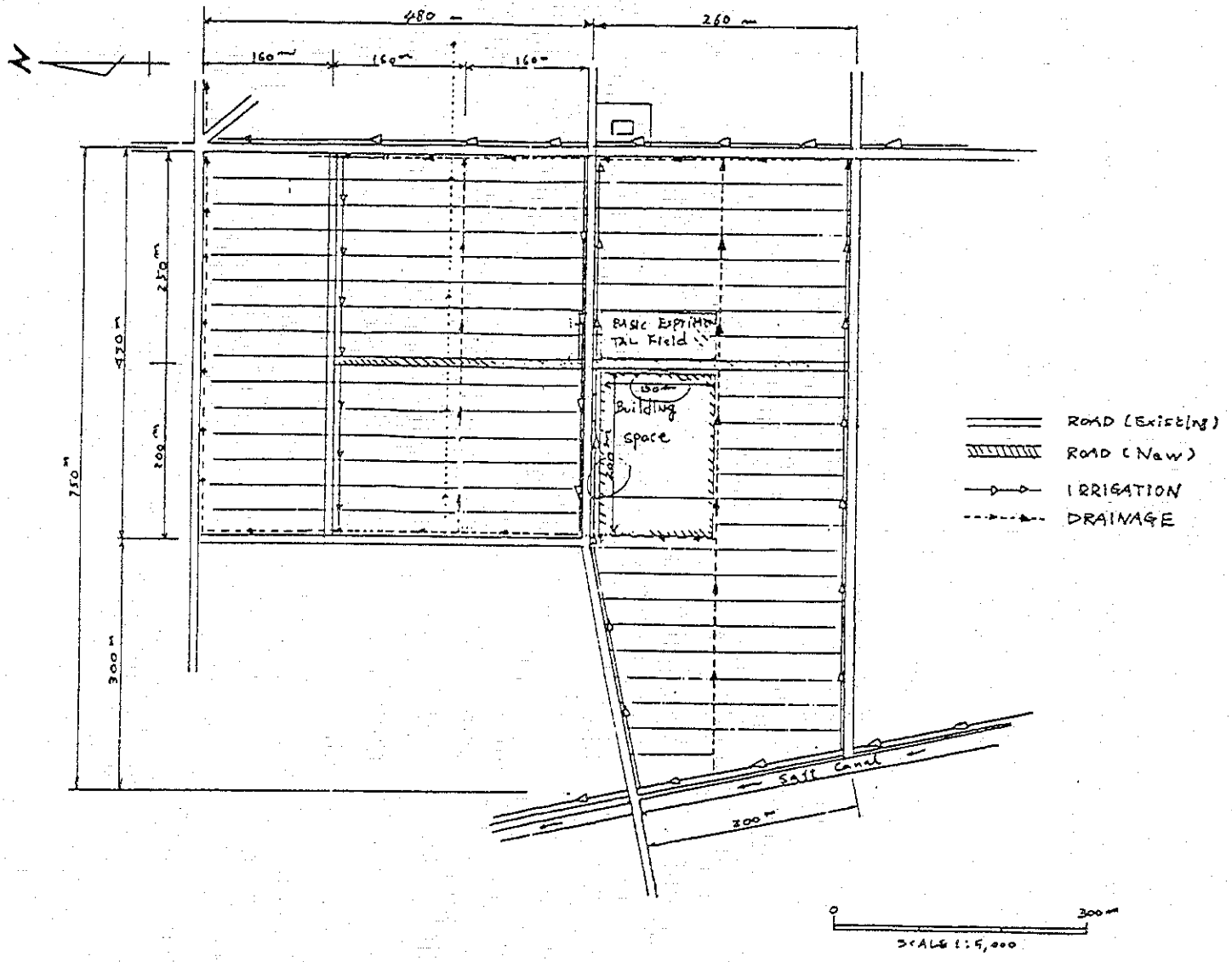
(i) Off-season, i.e. winter months from December to March

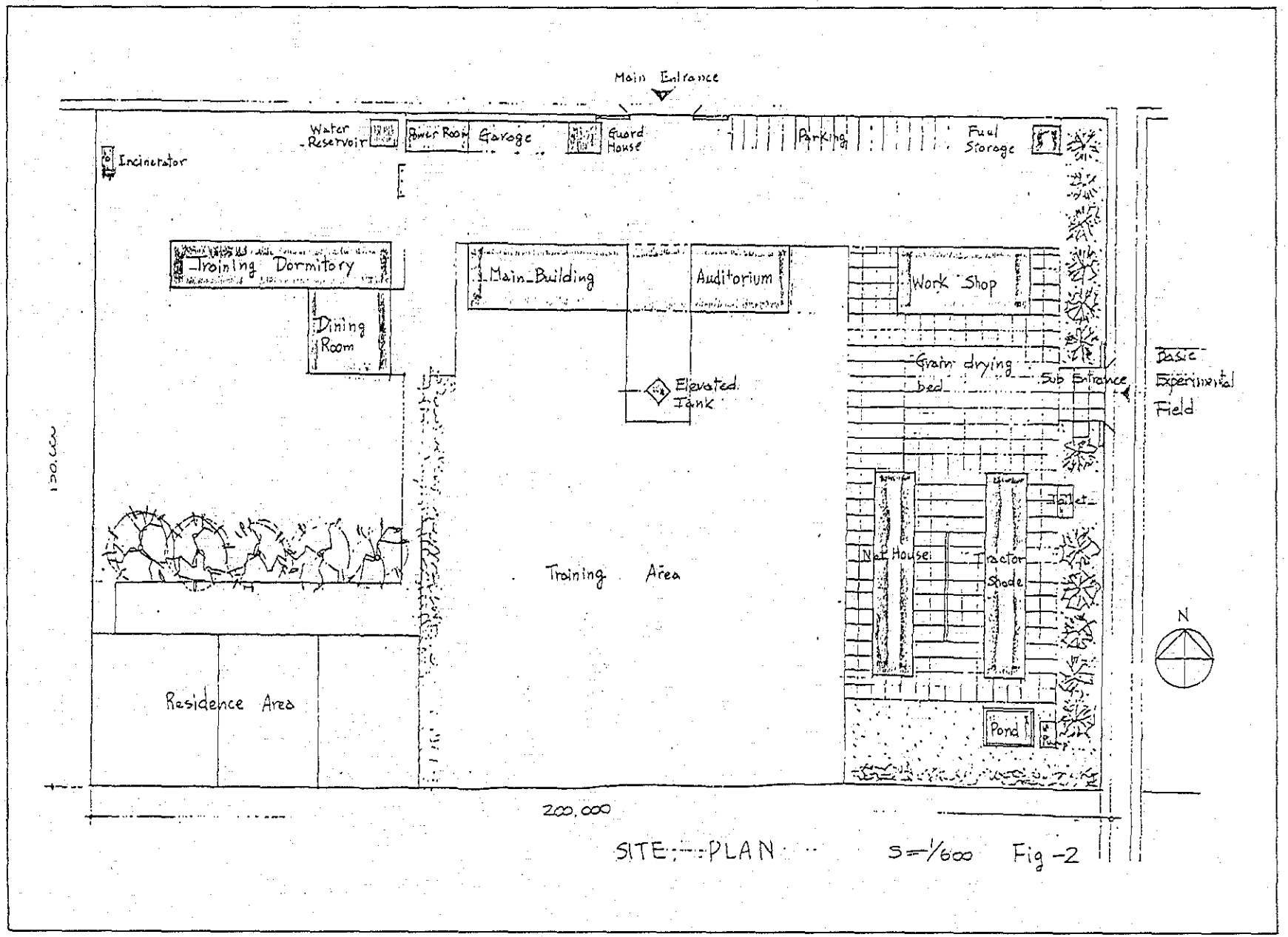
(ii) Mid-summer after Transplanting and before Harvesting

(4) Lecturers: Mainly those instructors who were trained in Category I mentioned above, but Japanese experts shall give lectures and lessons in the first stage. Any outside lecturer is welcome, if needed.

(5) Merits: Those who completed the above mentioned training courses may be given reasonable merits by MOA so that they can be encouraged, and other able canditates can be dispatched to the Center. The raison d'etre of the Center shall be raised up through its practical and beneficial work.

PROPOSED LAYOUT PLAN FOR MEET EL DYBA EXPERIMENTAL FARM (Revised)





SITE PLAN S=1/600 Fig-2

I-3 Members of the Team

Katsuhiko Biyajima	Leader Deputy head, Technical Cooperation Div., Agricultural Development Cooperation Dept., JICA.
Kiyotsugu Takagi	Mechanization Planning Assistant Director, Equipment & Facilities Div., Agriculture, Forestry & Fisheries Research Council, Ministry of Agriculture, Forestry and Fisheries.
Senichi Kimura	Project Coordinator Basic Design Div., Grant Aid Dept., JICA.
Tokio Oda	Architect AZUSA SEKKEI CO., LTD.
Masaru Hino	Mechanical & Electrical Engineer AZUSA SEKKEI CO., LTD.
Tomohiko Yoshida	Equipment Engineer AZUSA SEKKEI CO., LTD.

Jan.	24	° Departure from Tokyo by SR 187
	25	° Arrived in Athens
		° Departure from Athens by TW 840
		° Arrived in Cairo
	26	° Courtesy call and briefing at the Embassy of Japan.
		° Courtesy call and briefing at the Ministry of Agriculture, regarding to purpose and schedule of the study team.
	27	° Meeting with Technical Cooperation Team at the Ministry of Agriculture.
	28	° Meeting with the official member of the Ministry of Agriculture, Technical Cooperation Team and staff member of the project at the site.
	29	° A visit to Testing & Research Station for Agricultural Machinery.
	30	° Site study at Meet el Dyba
		Meeting with MOA Staff.
	31	° Preparing Minute of Discussion
Feb.	1	° Confirmation of the contents of the Minutes.
		Signed and exchanged the Minutes of Discussion at the MOA
	2	° Survey of general condition of the city at Cairo
	3	° Site survey
	4	° Continued site survey
		° Study on transportation condition
	5	° Meeting of the members
		Making concept plan and report at Cairo
	6	° Survey on construction cost
		Making concept plan and report
	7	° Reporting the outcome of the study at the Embassy of Japan.

Feb. 8 ° Final meeting with MOA staff

Presenting the Progressive Report

9 ° Departure from Cairo Airport by TW 841

° Arrival in Athens Airport

Departure from Athens Airport

10 ° Arrival in Tokyo

I-5 List of interviewers

(1) Japanese expert

Dr. Toyoo Tomita

Mr. Yasuhiro Kimura

(2) Egyptian Government Officials

Dr. Ali El Hossary	Under Secretary of Engineering Affairs, Ministry of Agriculture (MOA)
Mr. Osama Mohamed Kamel	Agricultural Mechanization Management, MOA
Mr. Mohsem Mohamed Sadek	Ministry of Economic & Cooperation
Dr. Alaa Eldeen El Sonbaty	Under Secretary of Agriculture (MOA) Kafr El Sheik
Mr. Ahdel Monem El Nhass	Director of Agriculture (MOA) Kafr El Sheik
Mr. Mostafa Saleh Abbas	Agricultural Mechanization Engineer,MOA
Mr. Abdel Magied Mohamed Romeh	Mechanical Engineer Kallin Experimental Farm
Dr. Abdel Azier Mohamed Doma	Director, Kallin Experimental Farm
Mr. Naguib Girgis	Civil Engineer; Assistant Manager Construction Dept., Kafr El Sheik Governorate
Dr. Mohamed Ahmed El Nagar	Director, Testing & Research Station for Agricultural Machinery, Alexandria
Mrs. Layla Mohamed Fahmy	Agricultural Engineer, station as above
Mr. Mausa Mohamed Saliman	Mechanical Engineer, station as above
Mr. Mohamed Nagih Skarry	Agricultural Engineer
Mr. Rushdy Ali Magid	Agricultural Mechanization, MOA

II Confirmation Team

MINUTES OF DISCUSSIONS ON THE DRAFT REPORT OF THE BASIC DESIGN STUDY ON THE RICE MECHANIZATION PILOT PROJECT IN THE ARAB REPUBLIC OF EGYPT

The Government of Japan has sent, through Japan International Cooperation Agency(JICA), a Basic Design Study Team to Egypt from 3rd to 11th, April, 1982 for the purpose of presenting and explaining the Draft Final Report of the Basic Design Study(the Report) on the Rice Mechanization Pilot Project in the Arab Republic of Egypt(the Project).

The team held meetings with the staffs concerned of Agricultural Mechanization and Engineering Affairs, Ministry of Agriculture to explain and to discuss on the Report. As a result of the discussions, both parties have agreed as follows:

1. The Report principally satisfied the Egyptian side and appropriate alterations in design agreed during the discussions will be incorporated in the Final Report.
2. The Final Report(10 copies in English) on the Project will be submitted to the Egyptian Government by the end of May 1982.
3. The Basic Design Study Team and the Government of Egypt understood and confirmed the measures to be taken by the Government of Egypt in the attached ANNEX.

April 7 1982
Cairo Egypt

A. F. El Sahrigi

Dr. Ahmad Farid El Sahrigi
Director ,
Agricultural Mechanization Projects
Ministry of Agriculture

Mr Takeshi Imazu
Leader of Japanese Survey Team on the Rice Mechanization Project

ANNEX

Measures to be taken by the Government of Egypt:

1. General

a) To ensure prompt unloading, customs clearance and procedure for exemption from taxation of imported materials and equipment for the proposed Rice Mechanization Pilot Project Center and also to facilitate their internal transportation in the Arab Republic of Egypt.

b) To exempt materials and services related to the project from internal taxes and other fiscal levies.

c) To exempt Japanese nationals who participate in the project from customs duties and other levies and to give other necessary conveniences in order to facilitate their entry to, stay in and exit from Egypt under the temporary exemption systems.

d) To provide and accord necessary permissions, licenses and other authorization required for carrying out the proposed project.

e) To allocate sufficient annual budgets for the operation and maintenance after the completion of the project

2. Specific responsibilities

a) Geo-technical investigation for the project site.
Site measurement
Boring survey
Topographic survey and preparation of the report on the findings.

b) Civil works(site preparation)
Evaluation of surface and underground obstacles,
Land preparation including mounding(+300 mm from existing ground by laterite).

c) Utility service
Electrical Power Supply:
Installation of temporary distribution lines during the period of construction and main high-voltage

distribution lines and transformers to the electric receiving panel in the power station.

Telephone:

Installation of temporary telephone lines of the site during the period of construction and permanent telephone lines reaching M.D.F., wirings and equipments.

Water Supply :

Installation of temporary supply pipelines for the duration of the construction works, and construction of the main pipeline(4 inches in diameter) connecting to the source of water supply.

Sewage and Drainage:

Installation of temporary sewage and drainage and its discharge to the sewage treatment facilities

3) Related Construction works

Installation of fences, gates, lamp posts, etc.,construction of the internal passage ways and landscaping

4) Furnitures:

Provision of general furnitures, appliance and office supplies.

II-2 Members of the Team

Takeshi Imazu	Leader Deputy head, basic design division, Grant Aid Department, JICA.
Tokio Oda	Team member, architect AZUSA SEKKEI CO., LTD.

II-3 Daily Report

April	3	° Departure from Tokyo by KL 864
	4	° Arrived in Athens
		° Departure from Athens by ML 750
		° Arrived in Cairo
	5	° A visit to JICA office in Cairo
		° Meeting at the Ministry of Agriculture regarding schedule of the study team.
	7	° Meeting with counterparts at JICA experts office in Cairo
		° Meeting with the Director of Agricultural Mechanization Projects.
		° Submitting the contents of Minutes and obtaining agreement to be final.
		° Signed and exchanged the Minutes.
	8	° A visit to the JICA office, reporting the outcome
		° A visit to the Embassy of Japan
	9	° Departure from Cairo by LH 623
		° Arrival on Frankfurt
	10	° Departure from Frankfurt by LH 650
	11	° Arrival in Tokyo

II-4 List of interviewers

(1) Japanese Government expert

Dr. Toyoo Tomita

Mr. Teruhisa Nanba

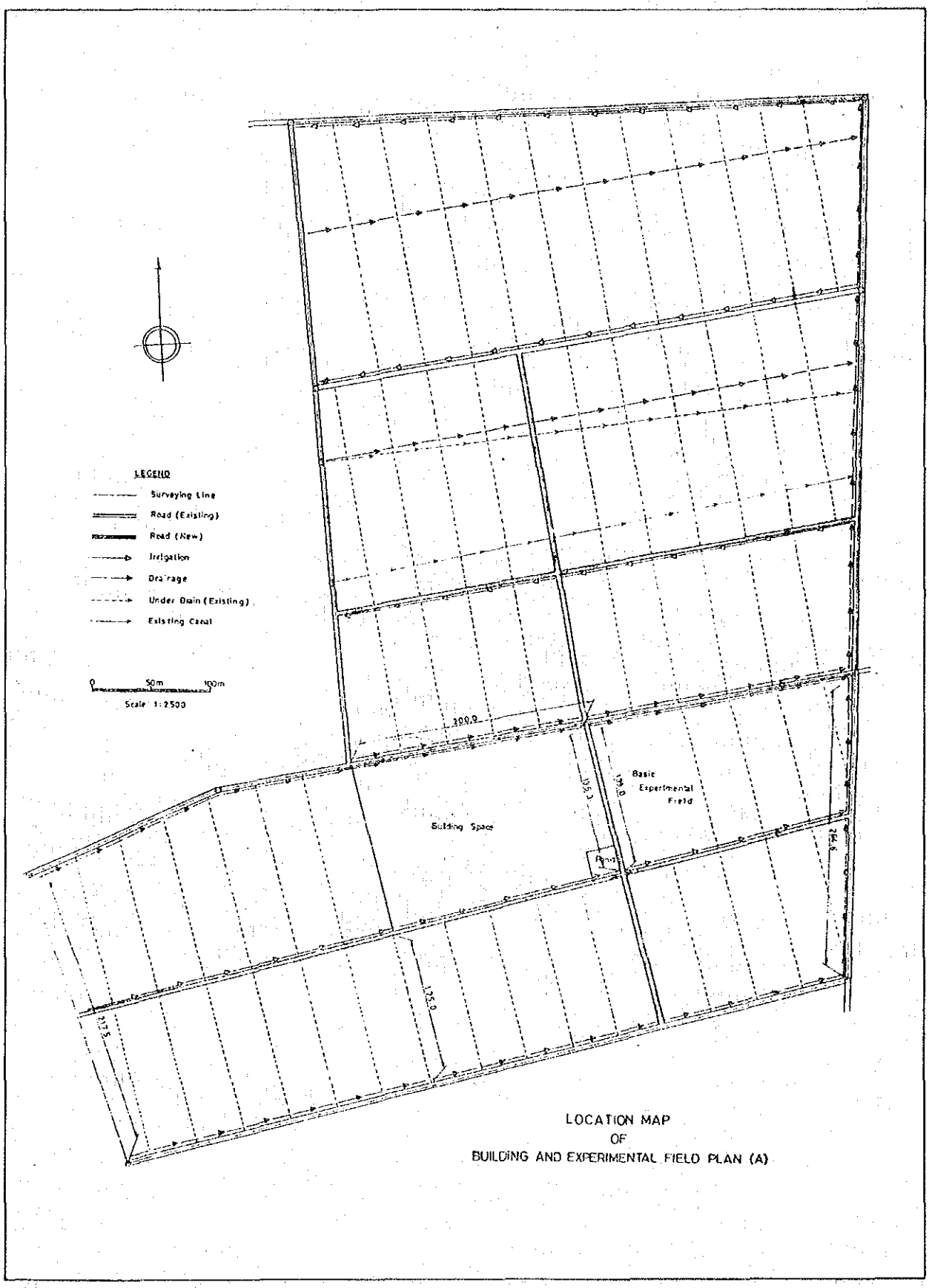
Mr. Yasuhiro Kimura

Mr. Takeshi Naruse

(2) Egyptian Representative

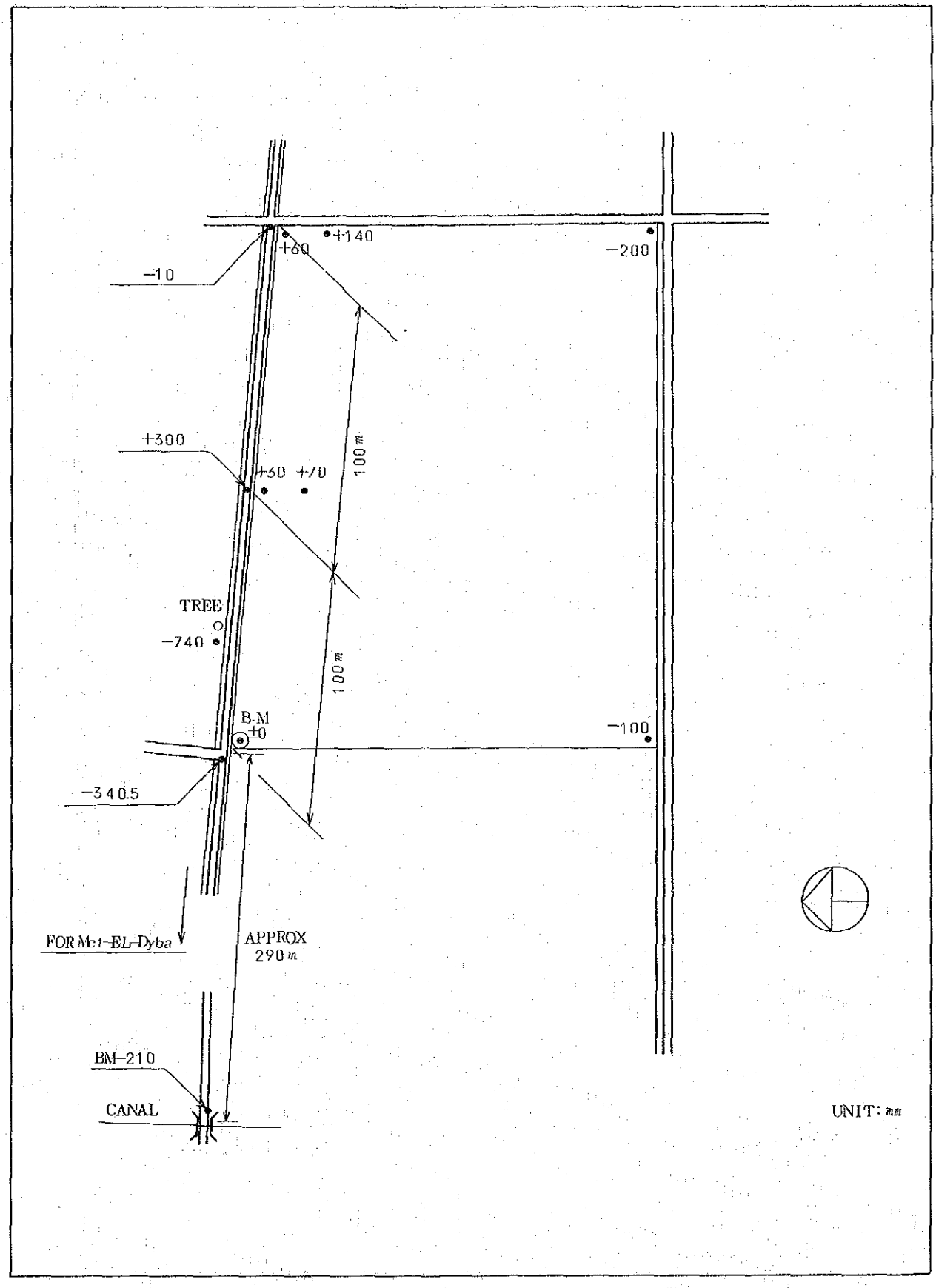
Dr. Ahmed Farid El Sahrigi	Director of Agricultural Mechanization Project (M.O.A.)
Dr. Zakrya El Hdad	Deputy Director of Agricultural Mechanization Projects (M.O.A.)
Eng. Alla El Din El Sonbaty	Under Secretary of Agriculture (M.O.A.)
Eng. Ayad A. Boutros	Civil Engineer (M.O.A.)
Eng. Osama Kamel	Mechanical Engineer (M.O.A.)

III Site Surveys

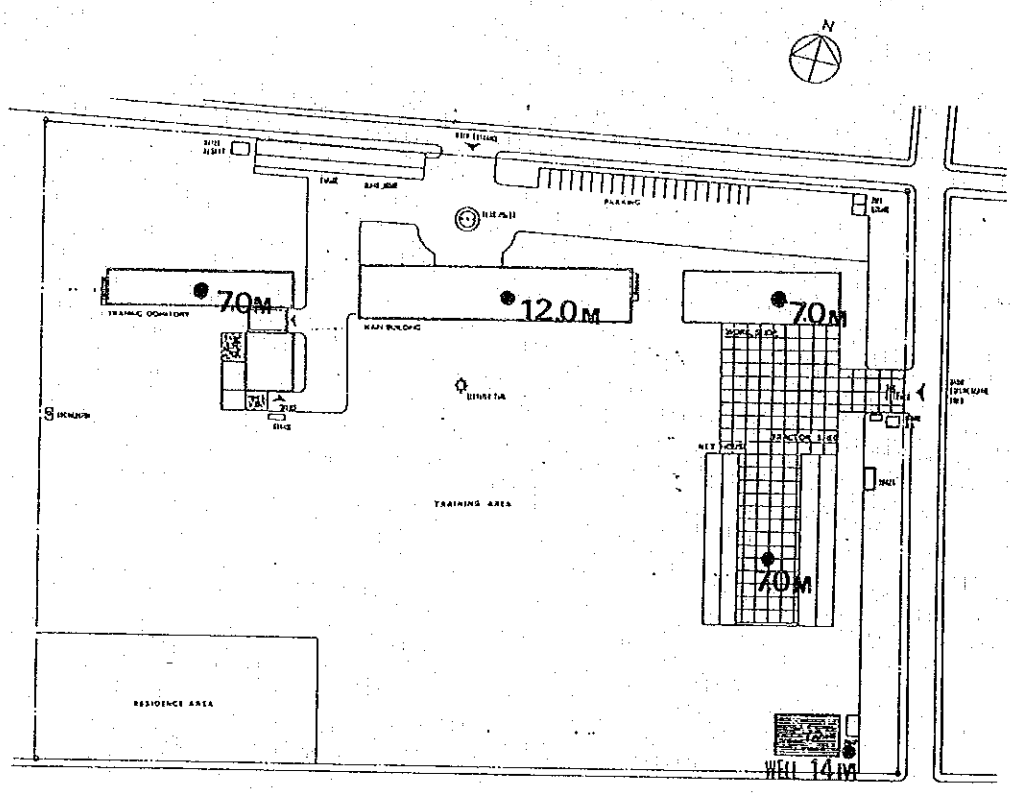


LOCATION MAP
OF
BUILDING AND EXPERIMENTAL FIELD PLAN (A)

III-2 Topographic Survey



III-3 Boring Survey



Ⅳ Reference Materials for Operation and Maintenance Costs

IV Reference Materials for Operation and Maintenance Costs

I Estimated Revenue

1-1 Government budget 89.300 LE/year

1-2 Sales of harvested rice (taken from the JICA Report of the Implementation Survey Team for Rice Mechanization Project in Egypt, Sept,1981).

Farm size	: 95 feddans		
Yield/feddan	: 3 tons		
Planted area	: 1st cropping	95 feddans	
	2nd cropping	1/3 of 95 feddans	
Output	: 20% increase in yield due to mechanization		
Production costs (1 feddan)	: Rearing of seedlings	40 LE	
	Transplanting through marketing(except rental fee 40 LE)	152 LE	
			192 LE
Sales (1 feddan)	: to Government:1.5 ton x 75 LE/ton = 112.5 LE		
	to market: 1.5 ton x 100 LE/ton = 150.0 LE		
			262.5 LE
	Net income: 262.5 - 192 = 70.5 LE		
Income from 1st cropping	: 70.5 LE/fdn x 95 fdn x 1.2		= 8.037 LE
Income from 2nd cropping	: 70.5 LE/fdn x 95 fdn x 1/3 x 1.2		= 2.679 LE
			10.716 LE
			≒ 10.700 LE

2 Estimated Expenditure

2-1 Salaries and wages

* based on the monthly rates given by MOA
* 15% annual rise in salary and wage
* placement allowance amounting to 20% of the salary
* estimation for the initial year after the completion of the Meet el Dyba Experimental Farm

Director	120 LE/month x 1.15 x 1.15 x 1.2 x 12 month	= 2.285 LE
Division Chiefs	100 LE/month x 1.15 x 1.15 x 1.2 x 12 month x 4 person	= 7.618 LE
Research Staff	60 LE/month x 1.15 x 1.15 x 1.2 x 12 month x 14 person	= 15.997 LE
Clerical Workers (no placement allowance)	40 LE/month x 1.15 x 1.15 x 12 month x 12 person	= 7.618 LE
Temporary laborers (no placement allowance)	30 LE/month x 1.15 x 1.15 x 6 month x 40 person	= 9.522 LE
Caretaker	50 LE/month x 1.15 x 1.15 x 12 month	= 794 LE
Cooks	50 LE/month x 1.15 x 1.15 x 12 month x 2 person	= 1.587 LE

Advanced-course trainees

Subsidy	3 LE/month x 1.15 x 1.15 x 21 days/times x 6 month x 20 person	= 9.998 LE
Costs of travel & food	2 LE/month x 1.15 x 1.15 x 14 days/times x 12 month x 20 person	= 8.887 LE
	Total	= 64.306 LE

2-2 Operational costs

Personal management 250 LE/month x 12 month = 3.000 LE
(overalls, shoes, welfare facilities)

Travels 400 LE/month x 12 month = 4.800 LE

Fuels

Kerosene	0.03 LE/l x 1.2 x 1.2 x 75.000 L/year	= 3.240 LE
Butane gas	0.082 LE/kg x 1.2 x 1.2 x 4.000 kg/year	= 472 LE
	sub total	= 3.712 LE

Water 0.25 LE/m^3 x 1.2 x 8.200 m^3/year = 2.952 LE

Electric Power 0.035 LE/KWH x 1.2 x 17.000 KWH/month x 12 month
= 8.568 LE

Office supplies 350 LE/month x 12 month = 4.200 LE

Chemicals 350 LE/month x 12 month = 4.200 LE

Repairs 150 LE/month x 12 month = 1.800 LE

Miscellaneous about 7% of accounts

(1) Annual Water Consumption

1) Staff 31 persons x 0.25 m^3/day x 25 day/month x 12 month
= 2.325 m^3

2) Advanced courses
20 persons x 0.25 m^3/day x 21 day/month x 6 month
= 630 m^3

3) Introductory courses
20 persons x 0.25 m^3/day x 14 day/month x 12 month
= 840 m^3

4) Temporary manual workers

40 persons x 0.05 m^3/day x 25 day/month x 6 month

= 300 m^3

5) Demonstration courses

300 persons x 0.05 m^3/day x 6 day/time x 2 time/month x 6 month = 1.080 m^3

Total = 8.175 m^3/year

(2) Annual Butane Gas Consumption

1) Kitchen (0.1 kg/times use gas)

a) Staff 31 persons x 1 time/day x 25 day/month x 12 month = 9.300

b) Advanced courses

20 persons x 3 times/day x 21 day/month x 6 month = 7.560

c) Introductory courses

20 persons x 3 times/day x 14 day/month x 12 month = 10.080

d) Others 7 persons x 3 times/day x 30 day/month x 12 month = 7.560

Total = 34.500 times/year

34.500 x 0.1 kg/times ≒ 3,400 kg/year

2) Water Boiler and Portable Cooking Stove

6 station x 8 kg/month x 12 month = 576 kg/year

1) + 2) Total = 3.976 kg/year

3) Annual Diesel Oil Consumption

Transportation vehicles (buses & trucks)

300 L/day x 150 days/year = 45.000 L

Tractors + other agricultural machinery

300 L/day x 100 days/year = 30.000 L

Total = 75.000 L

Electrical Power (KWH)
(average)

Main building	25.9 KW x 10 H x 30 day	= 7.770 KWH
Dormitory	21.0 KW x 10 H x 25 day	= 5.250 KWH
Workshop (tractor shed, net house)	4.4 KW x 10 H x 30 day	= 1.320 KWH
other facilities		= 2.660 KWH
Total		= 17.000 KWH/month