

4-3-2 Machinery and Equipment Plan

The machinery and equipment will be selected in the machinery and equipment plan, taking the following factors into consideration.

- (1) Machinery and equipment that will fully satisfy the functions of the facilities, equipment and machinery, as well as the scale set conditions mentioned above, shall be selected.
- (2) Machinery and equipment suiting the economic and technical situations of Egypt and capable of maintaining and managing the facility functions shall be selected.
- (3) The specifications of the machinery and equipment to be used at the project sites shall be unified as much as possible to provide compatibility among the machinery and equipment components and to obtain common technical information on operation, maintenance, checks and other matters.

The machinery and equipment for this project are listed as follows:

The equipment list and inspection equipment list for this project are as follows:

Equipment List

(Quantity listed for one site)

No.	Equipment	Quantity	Specification
A. Receiving • Cleaning			
A-1.	Intake Hopper	2	steel construction capacity: 12ton/hopper equipment with manual discharge gate
A-2.	Paddy Cleaner	2	steel construction totally enclosed for dust free operation capacity: 24ton/hour
A-3.	Destoner	6	steel construction totally enclosed for dust free operation capacity: 4ton/hour/unit
A-4.	Belt Conveyor	2 sets	capacity: (1) 12~24ton/hour, adjustable (2) 24ton/hour
A-5.	Bucket Elevator	2	steel construction self standing centrifugal discharge type capacity: 24ton/hour
A-6.	Buffer Tank & Others	2 sets	steel construction, hopper bottom type
A-7.	Shute	1 set	steel construction
B. Drying			
B-1.	Paddy Dryer	1	steel construction vertical, continuous flow type capacity: 24ton/hour
B-2.	Air Heater	1	for paddy drying, light oil, burner type capacity: 690,000kcal
B-3.	Indused Fun	1	for paddy drying, limited load fan capacity: 1,100 m ³ /minute
B-4.	Bucket Elevator	3 sets	steel construction, centrifugal discharge type capacity: 24ton/hour/set
B-5.	Chain Conveyor	1 set	steel construction totally enclosed for dust free operation capacity: 24ton/hour/set
B-6.	Belt Conveyor	1 set	capacity: 24ton/hour/set
B-7.	Buffer Tank	4	corrugated galvanized steel, hopper bottom type bolt assembly type capacity: 86ton/tank
B-8.	Oil Storage Tank	1	steel construction, horizontal cylinder type capacity: 10k ℓ
B-9.	Oil Pump	1	for transferring oil day tank
B-10.	Day Tank	1	for burner of dryer capacity: 490 ℓ
B-11.	Pipings	1 set	steel pipings, valves, connectors etc.
B-12.	Stand, Cat Walk & Others	1 set	steel construction
B-13.	Shute	1 set	steel construction

No.	Equipment	Quantity	Specification
C. Scale • Storage			
C-1.	Hopper Scale	2	mechanical type, equipped with buffer tanks capacity: 24ton/hour/unit
C-2.	Paddy Storage Silo	10	flat bottom cylindrical, bolt assemble type & corrugated steel plate construction capacity: 1,000ton/unit
C-3.	Screw Conveyor	10sets	at silo bin bottom, self rotate screw type capacity: 24ton/hour/unit
C-4.	Screw Conveyor	10sets	discharging from silo capacity: 24ton/hour/unit
C-5.	Airation Fan	20	for silo, with perforated floor capacity: 180 m ³ /min.
C-6.	Chain Conveyor	3 sets	steel construction totally enclosed for dust free operation capacity: 24ton/hour/set
C-7.	Bucket Elevator	4 sets	steel construction, self standing centrifugal discharge type capacity: 24ton/hour/set
C-8.	Belt Conveyor	2 sets	capacity: 24ton/hour/set
C-9.	Ladder, Cat Walk & Others	1 set	steel construction
C-10.	Shute	1 set	steel construction
D. Shipping			
D-1.	Shipping Tank	1	steel construction, hopper bottom type capacity: 12tons
D-2.	Bucket Elevator	2 sets	steel construction, centrifugal discharge type capacity: 24ton/hour/set
D-3.	Chain Conveyor	1 set	steel construction totally enclosed for dust free operation capacity: 24ton/hour/set
D-4.	Belt Conveyor	1 set	capacity: 24ton/hour/set
D-5.	Stand, Ladder	1 set	steel construction
D-6.	Shute	1 set	steel construction
E. Dust collection			
E-1.	Dust Suction Fan	7 sets	plate fan for dust collection
E-2.	Dust Cyclone	4 sets	steel plate construction
E-3.	Duct	1 set	galvanized steel construction, spiral type

No.	Equipment	Quantity	Specification
F. Electrical			
F-1.	Main Control Panel	1 set	steel construction, self standing, enclosed type
F-2.	Sub-Control Panel	1 set	steel construction, Wall hanging type
F-3.	Wiring Material (secondary)	1 set	cable, wire pipe, joint etc.
F-4.	Paddy Temperature Monitoring System	1 set	remote reading type, grain temperature reading cable with portable reader
G. Ancillary Equipment			
G-1.	Air Compressor	1	with air tank capacity: 620N ℓ /min.
G-2.	Piping Material for air line	1 set	steel pipe, valve, joint etc.
G-3.	Two way Valve	6	electric type, for indoor 3, for outdoor 3 capacity: 24ton/hour/valve
G-4.	Magnet Separator	2	permanent magnet type
H. Truck & Truck scale			
H-1.	Grain Bulk Truck	4	for bulk paddy, diesel engine capacity: 12.5ton/truck
H-2.	30ton Truck Scale		steel construction, mechanical type platform 3m \times 10m capacity: 30tons
H-3.	80ton Truck Scale		steel construction, mechanical type platform 3m \times 18m capacity: 80tons * truck scale for each project site Shabsheer : 80ton scale \times 1 El Nasr : 30ton scale \times 1 Fuwa El Hadish: 30 & 80ton scale 1 each Zagazig : 30 & 80ton scale 1 each
I. Spare parts - Maintenance tools			
I-1.	Spare Parts	1 set	
I-2.	Maintenance Tools	1 set	

Inspection Equipment

(Quantity for one site)

No.	Equipment	Quantity	Specification
J. Sampling • Preparation			
J-1.	Grain Trier	5	length 300mm, with leather case
J-2.	Winnower	2	hand-operated, with 3 outlets
J-3.	Divider	3	hand-operated, hopper capacity 3kg
K. Measuring			
K-1.	Moisture Meter	2	infra-red type, measuring 0 ~100%, minimum detection 0.10%
K-2.	Moisture Meter	5	portable, battery type electrical resistance type, measuring 10~40
K-3.	Grain Counter	4	for short grain, plastic made, for 100 grain
K-4.	Grain Counter	4	for long grain, plastic made, for 500 grain
K-5.	Grain Shape Tester	4	measuring 0~20mg, minimum detection 0.01mm
K-6.	Weight per liter Tester	2	capacity: 1 kg
K-7.	Grain Crack Inspector	1	hand operated, for 50 grain
L. Paddy Rice Inspection			
L-1.	Testing Paddy, Husker	2	electrical, continuous, rubber roll type
L-2.	Balance	1	double beam type, for 200g, minimum: 100mg
L-3.	Balance	1	double beam type, for 1,000g, minimum: 0.5g
L-4.	Sieve(round hole)	2	steel net, 5 types with cover & pan
L-5.	Sieve(rectangular hole)	2	steel net, 8 types with cover & pan
M. Milled Rice Inspection			
M-1.	Testing Mill	2	electric, batch type, grind type capacity: 200g/1 time

4-3-3 Civil Engineering and Architectural Plan

(1) Civil engineering

The Egyptian side shall made a geological survey and analysis in accordance with design conditions for all civil engineering work such as land grading, pavement, architectural and machine foundations and pit works. The design and work execution shall be performed based on the survey and analysis.

(2) Architectural

The Egyptian side shall design and execute architectural work such as the machine building and dust collector room based on the design conditions, taking weather, climate, construction materials and other factors into consideration.

(3) Electrical

The Egyptian side shall decide the incoming power and transformer capacities based on the indicated loads and shall undertake leading-in work to the incoming panel, connection from the incoming panel to the machinery and equipment via panelboards, meters, safety devices, plug sockets and other auxiliary work.

The specification of the electric power to be supplied to the machinery and equipment shall be AC 380V/220V \pm 10%, 50Hz \pm 5%, 3 phases and 4 wires.

4-3-4 Basic Design Drawing

The basic design drawings for the project sites are shown in Appendix 6, "Basic Design Drawings".

4-4 Implementation Plan

4-4-1 Organization

(1) Implementation organization

The facilities will be constructed and operated by the Rice Mills Companies and will be controlled by the Holding Company for Rice Marketing & Rice Products under the Ministry of Supply & Home Trade.

(2) Consultant

In accordance with the rules and regulations of Japan's Grant Aids, a Japanese consulting corporation will undertake the following services in the implementation stage, based on a consultant contract with the Egyptian implementation organization:

1) Detailed design

- (a) Decision on layout of entire facilities and on design and specification of facilities
- (b) Preparation of design drawings needed for bids, such as execution drawings and specifications of machinery and equipment

2) Supervision

- (a) Cooperation on machinery and equipment contracts
- (b) Material and quality inspections of machinery and equipment

(3) Contractor

In accordance with the rules and regulations of Japan's Grant Aids, a Japanese contractor company to be selected by an open bid

will procure machinery and equipment. The contractor should understand the mechanism of Japan's Grant Aids well, should maintain close contact with the implementing organization and should keep the contracted delivery term.

(4) Project responsibility sharing

After having consulted the Egyptian side, the responsibility scopes of works for the execution of this project have been confirmed as shown in the following table.

Side Item	Egyptian side	Japanese side
1. Basic design	To submit designing condition	For all facilities (CSL)
2. Detailed design	For other than machinery and equipment	For planning of machinery and equipment (CSL)
3. Equipment	For machinery and equipment which are not procured	To procure planned machinery and equipment (CTR)
4. Civil engineering	Ground leveling, paving, foundation of building & machinery, civil work of pit	For submit design & implementation condition (CSL)
5. Construction	For machine room, warehouse, etc.	To submit design & implementation condition (CSL)
6. Electorical facility	Wiring from and to transformer, wiring to machinery, wiring to outlets	Procurement of connecting material for equipment (CTR)
7. Water supply	Connecting pipe to equipment	Procurement of connecting material for equipment (CTR)
8. Installation	To install equipment	To provide manuals for installation (CTR)
9. Shipping	Transportation within Egypt, from discharging port to the sites, handling procedure and responsible for any tax	Transportation from Japan to Egyptian port (CTR)
10. Adjustment - test run	To provide grain & oil for test run	To provide manuals for conditioning and test run(CTR)
11. Operation - maintenance, check	For all equipments	To provide manuals for operation, maintenance and check (CTR)

(CTR) : Contractor

(CSL) : Consultant

4-4-2 Work Supervision Plan

(1) Work plan

This project is a grant aid project for provision of materials, machinery and equipment and actual work will be undertaken entirely by the Egyptian side at its expense, as mentioned above.

The facilities of this project consist silos with a capacity for 10,000 tons. The construction procedures are different from those for ordinary structures. Construction companies which are accustomed to this type of work cannot be found in the areas, and engineers will have to be sent from Japan to guide installation and assembly work.

Engineers have been sent from Japan in similar aid projects executed in the past. On the first and second occasions, engineers were sent for a total of 355 and 313 man-days each. On the third occasion, engineers were sent for a total of 248 man-days, indicating that the local labor learnt their jobs and that the efficiency improved. It is estimated that 165 chief operator-days/site and 30 electrical engineer-days/site or a total of 195 engineer-days/site will have to be sent.

The implementation organization and contractor must decide the execution process for the following after making a sufficient survey and study before starting the works:

- * Natural conditions
- * Labor conditions and technical capability
- * Work responsibility scopes of Egypt and Japan
- * Details of procurement, local transportation and installation of machinery and equipment
- * Test run of machinery and equipment

(2) Supervision plan

- 1) The consultant is required to organize an integrated project execution team for detailed design and supervision based on the basic design, to coordinate views with the organizations concerned and to ensure the smooth implementation of the project in accordance with Japan's Grant Aid. In this project, Japan's Grant Aid will cover the provision and transportation of machinery and equipment to an Egyptian port. The machinery and equipment must be shipped in time and sufficient technical information must be supplied on inland transportation and installation work to be undertaken by Egypt.

2) Supervision

(a) Cooperation on machinery and equipment contracts

Decision on machinery and equipment procurement contract method, preparation of draft machinery and equipment contracts, survey of details of machinery and equipment and selection of machinery and equipment vendors. (Invitation to tender, bid, tender assessment, contract negotiations and contracting witnessing)

(b) Cooperation in examination and approval of the following documents submitted by machinery and equipment vendors

- * Instructions on work to be undertaken by Egypt, such as civil engineering, architectural, and electrical facilities
- * Instructions on installation of machinery and equipment to be supplied
- * Instructions on adjustment, test run and operation of machinery and equipment to be supplied

* Maintenance and check instructions

(c) Material and quality inspection of machinery and equipment on behalf of the purchaser

4-4-3 Procurement Plan

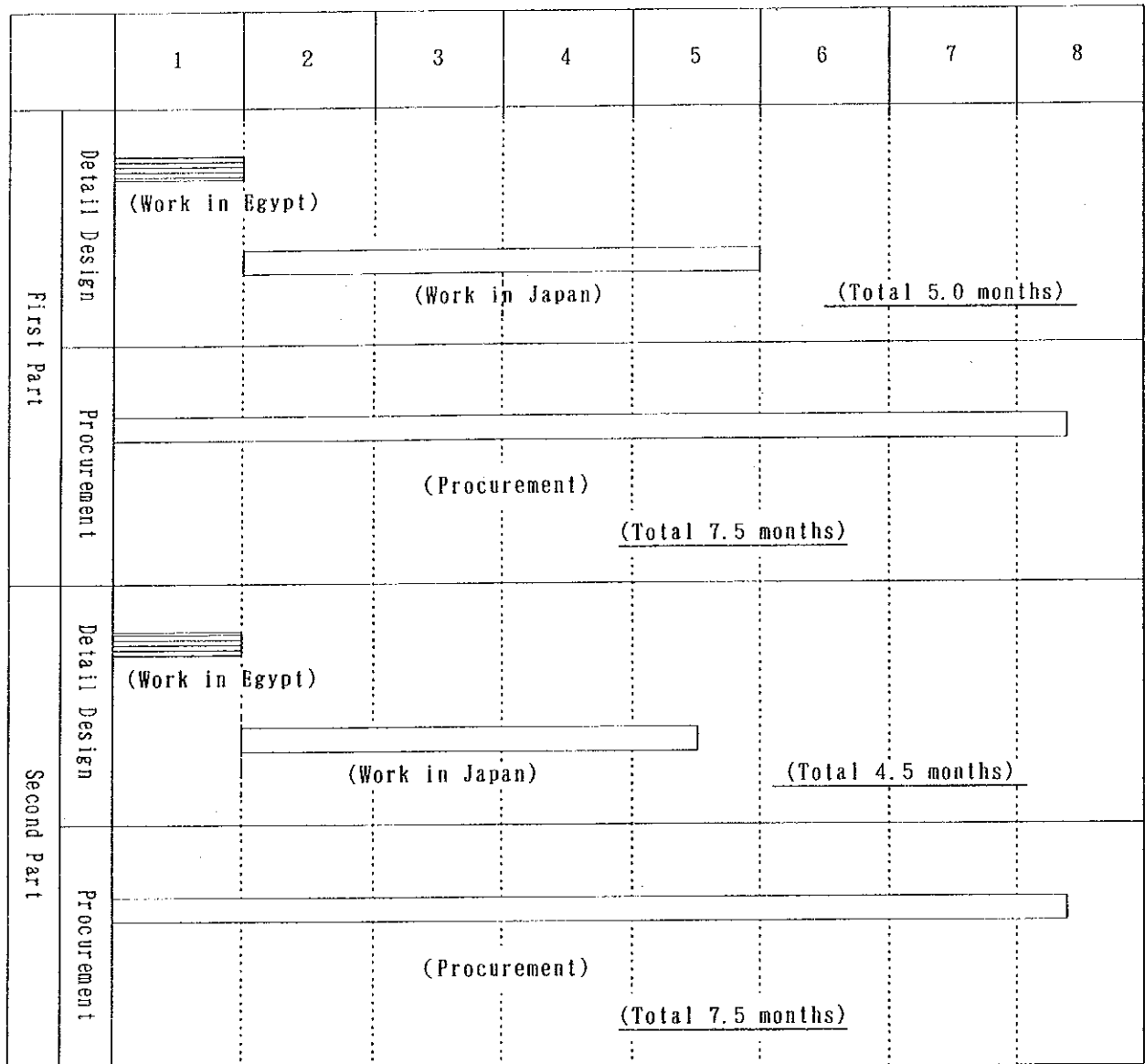
In principle, the machinery and equipment for the facilities are planned to be purchased in Japan. The procurement of some facilities and equipment such as frames, platform for checking, ladders, tanks, chutes, ducts and the like in Egypt, or exporting semi-finished components to Egypt for local processing, were studied. However, it was considered technically difficult to maintain the required precision for horizontal and flat processing to control the flow of powders and grains locally. The tank (shipping tank) was procured locally in the third project in the past, however, a long time was needed for its fabrication, and the idea of local procurement in this project was also abandoned due to time.

The transportation means from Japan to Egypt will be by ship and inside Egypt, vehicles. Sufficient care must be exercised in crating and shipping machinery and equipment vulnerable to shocks, dampness and high temperature. The machinery and equipment will have dustproof crating to meet transportation in high-temperature and dusty places in some areas of Egypt.

4-4-4 Implementation Schedule

If this project is undertaken by Japan's Grant Aid, 5.0 months will be required for the first phase for preparation of bid documents, bid machinery and equipment procurement contracts in accordance with the consultant contract. The second phase will similarly require 4.5 months. For the procurement of machinery and equipment, 7.5 months will be required for the first and the second phase. The implementation schedule chart for the first and second phases is shown in the following page.

Implementation Schedule



First Part { Shabsheer Rice Storage Center
 El Nasr Rice Storage Center

Second Part { Fuwa El Hadith Rice Storage Center
 Zagazig Rice Storage Center

CHAPTER 5

**PROJECT EVALUATION AND
CONCLUSION**

CHAPTER 5 PROJECT EVALUATION AND CONCLUSION

5-1 Effects of the Project

The paddy storage silos under this project will be constructed to safely store paddy and to stably and efficiently supply it to rice mills because of seasonal fluctuations in harvest and collection of paddy, instead of as a facility projected to use grain silos for commercial acts of collecting storage and handling fees as an ordinary warehousing service. The following points can be listed as the effects of constructing silos for the purposes mentioned above under this project.

- (1) To increase the supply quantity by reducing storage losses

In Egypt, paddy is generally bagged and is stored in open space. According to a report prepared by the RTTC, approximately 3% storage losses are incurred in open storage by scattering and by eating by pest insects and small animals. If stored in silos, quantitative losses can be said to be almost entirely eliminated.

On the other hand, the cleaner and destoner, as part of the silo facilities, will remove mud balls and small stones, which have been quality problems of Egyptian rice. By installing the dryer, the storage period of paddy with a high moisture content can be shortened and problems such as discolored rice can be prevented. Furthermore, by adjusting the aridity (water loss) index, cracked kernels can be prevented. The added value can be enhanced by improving paddy quality and market development of export rice, and transactions at high prices can be expected.

- (2) To improve inventory control

In open storage in the past, much labor and time have been needed to weigh and count bags, making inventory control very difficult. However, inventory control will become easy using the

weighing machine to be installed auxiliary to the silo facilities. This will enable appropriate operation and management of storage facilities.

- (3) To prevent reduction in farmland by effective utilization of land

Effective utilization of limited farmland has become very important in the delta area of the Nile River, parallel with the population increase. This problem has become a basic task. Conversion of farmland into other purposes is strictly limited by laws and is nearly impossible. For this reason, securing of land for open storage of paddy has become a great problem for the rice mills, parallel with increases in the volume of paddy handled.

The rice mills are coping with the situation by renting land or temporarily storing paddy on public roads. By building silos, the required area will be reduced to between 1/5 and 1/10 that of open storage, helping to eliminate the land problem.

- (4) Saving of material cost for open storage

Materials needed for open storage such as tarpaulin sheets for covering, pallets and jute bags will no longer be required. Furthermore, labor costs for loading, unloading and covering can be saved to lower the rice distribution cost. According to trial calculations, the cost reduction will amount to roughly 20 LE per ton of paddy, or 5% of the paddy price.

- (5) Improvement of fumigation effects and lessening environmental problem

Silos store paddy in bulk in semi-closed storage tanks and not only suppress breeding of stored grain insect pests, but also effectively fumigate pest insects to reduce the number of fumigation work operations and lessen problems of residual farm chemicals and environmental destruction problems.

(6) Promotion of harvest mechanization

Silos for paddy receiving, cleaning, drying and storage suiting mechanized harvesting can process a large volume of paddy and paddy with great moisture content fluctuations, to make the introduction of combined harvesters and threshers easy and harvesting work efficient. The use of combined harvesters and threshers promotes work at an optimal time and shortens the work period. As a result, intensive harvesting, namely, multiple cropping, is promoted to increase farmer earnings and agricultural production.

The foregoing and other effects can be summarized as follows:

Effects by Project Implementation and
Degree of Improvement of Present Status

Present Status and Problem	Countermeasures by This Project	Effects of Project, Degree of Improvement
Approx. 3% of paddy is lost quantitatively by pest insects, birds, rodents, etc. during open storage and keeping. Quality deteriorates due to rain and other phenomena.	Silos will be built to store paddy in silo bins to prevent eating by small animals and quality deterioration.	Quantitative and qualitative losses can be almost entirely eliminated.
Storage facilities are in short supply and paddy is stored temporarily on farmland or roads. Conversion of farmland for other purposes is strictly regulated.	One 10,000-ton silo will be built at each of four sites.	80,000 tons of paddy (two turns are estimated), or approx. 16% of the annual handling quantity of 510,000 tons by the four rice mill companies store 40,000 tons in open storage. 8,000m ² will be sufficient if silos are built, and the facilities will become models as pilot facilities.
Raw material paddy is poor in quality, with mud balls, small crushed stones and other dockage, as well as colored rice, mixed in milled rice to lower the quality of milled rice.	Cleaner, destoner and dryer will also be installed with storage facilities.	Mud balls and small crushed stones are removed and colored rice is prevented by appropriate artificial drying.
Efficient paddy receiving, moving, appropriate inventory control, storage cost reduction and other distribution rationalization are difficult with open storage of paddy in bags.	Silo-type paddy storage facilities with integrated mechanization will be built. Specifically, facilities with paddy receiving and moving facilities and meters, as well as with necessary capacity, will be planned.	Rationalize distribution and storage by shortening truck waiting time, quickly processing paddy receiving, saving materials through moving and storage of paddy in bulk and by real-time weighing.
Inspection equipment is not available and quality cannot be checked sufficiently. Standards cannot be applied.	Necessary inspection equipment will be furnished.	Inspection standards will be applied to enable transactions in accordance with quality.
Fumigation is required from time to time to exterminate stored grain insect pests.	If necessary, fumigation can be performed easily in the semi-closed storage tank of the silo.	Fumigation can be performed effectively and the number of fumigation operations can be reduced.
Paddy receiving facilities matching mechanization of harvesting work by introducing combined harvesters and threshers are lacking, causing paddy quality deterioration and mechanization constraints.	Appropriate paddy receiving capacity (24t/hr) and drying capacity (240t/day) will be planned as auxiliary functions of storage facilities.	A large volume of paddy with moisture content fluctuations can also be received.

5-2 Conclusions and Recommendations

The construction of silos to improve rice storage centers by this project will contribute to the stability of the people's livelihood by improving the food situation, which is a national policy of Egypt. At the present, nearly all food grains are stored in open storage and the storage practice is inevitably causing losses after harvest. On the other hand, imports of food are the largest factor suppressing the national finance of Egypt. Under the circumstances, paddy losses after harvesting must be reduced urgently.

Technical problems are not expected to arise in connection with implementing this project. Also, implementation problems are not expected with the operation and the budget of the rice storage centers, as judged in studies of this project. Based on the results of studies, it is judged appropriate to implement this project under Japan's Grant Aid.

The following recommendations are made to the Egyptian side to implement this project more smoothly:

- * To execute the appropriate budget in a timely manner for the work to be undertaken by Egypt (architectural, civil engineering, foundation and installation work).
- * A shorter work period for this project will quicken aid effects. Work should be executed parallel with the provision of machinery and equipment.
- * The consultant contract must be concluded promptly to start detailed redesign, after the Exchange of Notes, to safely and definitely execute the work within Japanese fiscal years. The various procedures must be completed promptly, such as ratifying the Exchange of Notes.

APPENDIX

APPENDIX 1

MEMBER LIST OF STUDY TEAM

APPENDIX 1

Member List of Study Team

Masashi FUJITA	Team Leader First Basic Design Study Division Grant Aid Study & Design Department Japan International Cooperation Agency
Masao FUJII	Agricultural Policy Coordinator Agricultural Production and Extension Division Hokuriku Regional Agricultural Administration Office Ministry of Agriculture, Forestry and Fisheries
Isamu YAMAZAKI	General Manager Consultants Department Overseas Merchandise Inspection Co., Ltd.
Yohei KIYOSE	Consultants Department Overseas Merchandise Inspection Co., Ltd.
Shunichi KOHARA	Consultants Department Overseas Merchandise Inspection Co., Ltd.

APPENDIX 2

STUDY SCHEDULE

APPENDIX 2

Study Schedules

No.	Date	Schedule	Study Items
1	Nov. 15 (Fri.)	Narita→Amsterdam	Departure of Consultants
2	16 (Sat.)	Amsterdam →Cairo	Arrival of Consultants
3	17 (Sun.)	Cairo	Meeting with JICA Meeting with Holding Company for Rice Marketing & Rice Products(HCRM)
4	18 (Mon.)	Cairo	Study and Discussion at HCRM
5	19 (Tue.)	Cairo Cairo →Alexandria	Obtaining Information at Government Book Store Study and Discussion at HCRM Arrival at Alexandria
6	20 (Wed.)	Alexandria→Fuwa	Site Survey at Fuwa (proposed site)
7	21 (Thu.)	Alexandria Alexandria→Abu Hommos Abu Hommos→Shabsheer Shabsheer →El Mansura	Visit to Rice Technology Training Center Site Survey at Abu Hommos (granted silo, construction scheduled) Site Survey at Shabsheer (proposed site) Arrival at El Mansura
8	22 (Fri.)	El Mansura El Mansura→El Zarka El Zarka→Alexandria	Site Survey at Behrant (granted silo under construction) Site Survey at El Zarka (granted silo in operation) Arrival at Alexandria
9	23 (Sat.)	Alexandria→Zagazig Zagazig →Cairo	Site Survey at Zagazig (proposed site) Arrival at Cairo
10	24 (Sun.)	Cairo	Meeting with JICA Study and Discussion at HCRM
11	25 (Mon.)	Cairo	Study and Discussion at HCRM Arrival of Mr. Fujita and Mr. Fujii
12	26 (Tue.)	Cairo	Meeting with JICA Courtesy Visit to Embassy of Japan Courtesy Visit to Ministry of International Cooperation (MOIC) Meeting with JICA
13	27 (Wed.)	Cairo	Discussion on Minutes Draft Meeting with JICA Study and Discussion at HCRM
14	28 (Thu.)	Cairo →Tanta Tanta →Disuq Disuq →Alexandria	Visit to Rice Mechanization Center Site Survey at El Nasr (proposed site) Arrival at Alexandria

No.	Date	Schedule	Study Items
15	29 (Fri.)	Alexandria Alexandria→Cairo	Visit to Rice Technology Training Center Site Survey at Hadissa (granted silo in operation) Arrival at Cairo
16	30 (Sat.)	Cairo	Study and Discussion at HCRM
17	Dec. 1 (Sun.)	Cairo	— " —
18	2 (Mon.)	Cairo	— " —
19	3 (Tue.)	Cairo	Signing of Minutes of Discussion at MOIC
20	4 (Wed.)	Cairo	Departure of Mr. Fujita and Mr. Fujii Study and Discussion at HCRM
21	5 (Thu.)	Cairo	— " —
22	6 (Fri.)	Cairo	— " —
23	7 (Sat.)	Cairo	— " —
24	8 (Sun.)	Cairo →Zurich	Departure of Consultants
25	9 (Mon.)	Zurich→Narita	Arrival of Consultants

APPENDIX 3

**MEMBER LIST OF OFFICIALS
CONCERNED IN EGYPT**

APPENDIX 3

Member List of officials concerned in Egypt

3 - 1 Egyptian Side (officials)

① Holding Company for Rice Marketing & Rice Products

Mr. Hassan M. Shabana : Chairman
Mr. Hassan A. Khidr : Vice Chairman
Mr. Ibrahim Kilada Gergius : Chief, Project Sector
Mr. Ahmed Amin El-Morsy : Head, Centre Sector
Mr. Hamdi M. Farag Salem : Head, Planning Sector

② Ministry of International Cooperation

Mr. Hamed Mostafa : Under Secretary
Mr. Mohasen Sadek : Director, Japan Department
Mr. Saniha Barakart : Economic Research

3 - 2 Egyptian Side (proposed site)

① Rosetta Rice Mills Co. (Fuwa El Hadith Rice Mill)

Mr. Eissa Radwan : Chairman
Mr. Nazmi Gobran : Technical Manager
Mr. Aly Fahmy : Production Manager
Mr. Amir Gobran : Technical Manager

② Gharbia Rice Mills Co. (El Nasr/Nour El Din Rice Mill ... Shabsheer)

Mr. Hamdi El Ghawaga : Vice Chairman
Mr. Mohamed Elazab : General Manager

③ Sharkia Rice Mills Co. (Zagazig Rice Mill)

Mr. Abdel Ghafar Salem : Chairman
Mr. Sarmir El-Sayed El Mossimy : Technical, Member of Board
Dr. Sayed Sadek : Head of Project Sector

④ Kafr El Sheikh Rice Mills Co. (El Nasr Rice Mill)

Mr. Rashad Wahba : Chairman
Mr. Sayad El Sorady : Chief, Technical Sector
Mr. Ahmed Abou Mandour : Manager, Engineer Department
Mr. Hassan Zanoun : Manager, Development Sector

3 - 3 Egyptian Side (granted project site)

① Damietta & Belkas Rice Mills Co. (El Zarka Rice Mill)

Mr. Omar El Said : Chief, Technical & Production Sector
Mr. Said El Hall : Rice Mill & Storage Center Manager

② Alexandria Rice Mills Co. (El Hadissa Rice Mill)

Mr. Mohamed Khalifa : Chairman
Mr. Reda Sadek : Technical Sector
Mr. Abdel Malek El Mahalay : Managing Director
Mr. Nagui Khalil : General Relation

③ Dakahlia Rice Mills Co. (Behrant Rice Mill)

Mr. Mohamed Abdel Maksoud : Chairman
Mr. Mohamed El Ashmawy : Head of Production & Technical Sector
Mr. Mohamed Moustafa : Production Sector

④ Beheira Rice Mills Co. (Abu Hommos Rice Mill)

Mr. Samir Hassan Mohamed : General Manager
Ms. El Saied Ibrahim Khalifa : Chief, Production & Technical Sector
Ms. Naeim Nawwar : Vice Manager

3 - 4 Egyptian side (other granted project)

① Rice Technology Training Center

Mr. Moustafa El Zouka : Administration Department
Mr. Mohamed Mahmoud Sorour : Administration Department
Mr. Nihad Ramzy : White Rice Laboratory
Mrs. Doaa A. Abdel Bary : Paddy Laboratory

3 - 5 Japanese side Embassy of Japan

① Embassy of Japan

Mr. Teruaki Nagasaka : First Secretary
Mr. Kouji Kobayashi : First Secretary

② JICA Cairo office

Mr. Kenji Iwaguchi : Resident Representative
Mr. Hiromasa Kawasoe : Deputy Resident Representative
Mr. Shigeru Okamoto : Deputy Resident Representative
Mr. Mohamed Diaa El-Din : Head, Public Relations
Mr. Mostafa Hussein Mostafa : Public Relations

③ Rice Mechanization Center

Mr. Takao Edagawa : Coordinator/Liaison Officer
Mr. Kimura : Liaison Officer

APPENDIX 4

MINUTES OF DISCUSSIONS

MINUTES OF DISCUSSIONS
THE BASIC DESIGN STUDY ON THE PROJECT
FOR THE IMPROVEMENT OF RICE STORAGE CENTER
IN ARAB REPUBLIC OF EGYPT

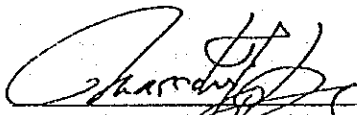
In response to a request made by the Government of Arab Republic of Egypt, the Government of Japan decided to conduct a Basic Design Study on the Project for the Improvement of Rice Storage Center (hereinafter referred to as "the Project"), and entrusted the study to the Japan International Cooperation Agency (JICA).

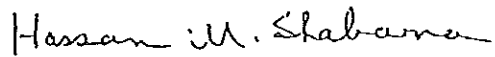
The JICA sent to Egypt a study team, which is headed by Mr. Masashi Fujita, First Basic Design Study Division, Grant Aid Study & Design Department, JICA, and is scheduled to stay in the country from November 16 to December 6, 1991.

The team held discussions with the officials concerned of the Government of Arab Republic of Egypt and conducted a field survey at the study area.

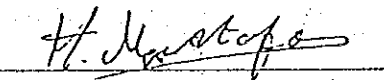
In the course of the discussions and field survey, both parties have agreed to recommend to their respective governments the main items described on the attached sheets. The team will proceed further works and prepare the Basic Design Study Report.

Cairo, December 3, 1991


Mr. Masashi Fujita
Leader
Basic Design Study Team
J I C A


Mr. Hassan M. Shabana
Chairman, Holding Company
for Rice Marketing &
Rice Products

Witnessed by:


Mr. Hamed Moustafa
Undersecretary

Ministry of International Cooperation

ATTACHMENT

1. Objective

The objective of the Project is to decrease the losses and to preserve the quality of paddy so as to contribute to the national target of increasing food production through provision of machinery and equipment for improving Rice Storage Centers.

2. Project Sites

The project sites that are requested by the Egyptian side, of which the location map is shown in Annex I, are on the premises of the following rice mills of four Rice Mills Companies.

- (1) Fuwa El Hadith Rice Mill in Fuwa, of Rosetta Rice Mills Company
- (2) El Nasr/Nour El Din Rice Mills in El Mahalla El Kubra (Shabsheer), of Gharbia Rice Mills Company
- (3) Zagazig Rice Mill in Zagazig, of Sharkia Rice Mills Company
- (4) El Nasr Rice Mill in Desuq, of Kafr El Sheikh Rice Mills Company

3. Responsible and Executing Agency

Ministry of Supply and Home Trade (Holding Company for Rice Marketing & Rice Products) bears overall responsibilities for the administration and execution of the Project. The Organization chart of the project is shown in Annex II.

4. The Items Requested by Ministry of Supply and Home Trade (Holding Company for Rice Marketing & Rice Products)

After discussions with the Team, the items which are listed in Annex III are finally requested by the Egyptian side. However, the final items will be decided after further studies.

5. Internal Transportation and Installation of the Machinery and Equipment

Both parties have confirmed that the Egyptian side shall bear all expenses for internal transportation and installation of the machinery and equipment purchased



H. SH

under the Grant Aid, in case that the Grant Aid Assistance by the Government of Japan is extended to the Project.

6. Japan's Grant Aid System

- (1) Ministry of Supply and Home Trade (Holding Company for Rice Marketing & Rice Products) has acknowledged the system of Japanese Grant Aid explained by the Team.
- (2) The Government of Arab Republic of Egypt will take the necessary measures, described in Annex IV for smooth implementation of the Project, in case that the Grant Aid Assistance by the Government of Japan is extended to the Project.

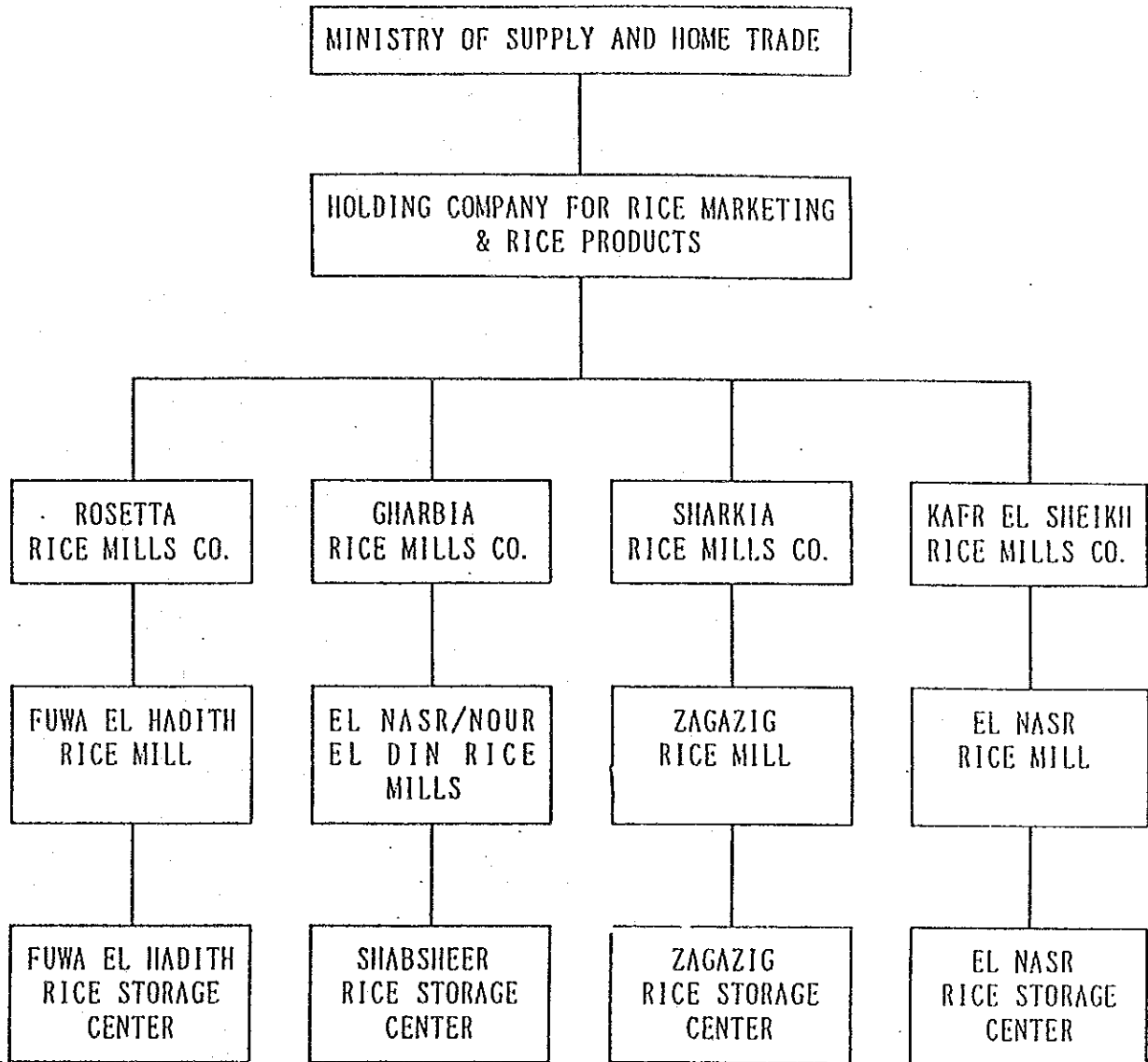
7. Schedule of the Study

- (1) The Consultants will proceed to further studies in Egypt until December 6, 1991.
- (2) Based upon the Minutes of Discussions and technical examination of the study results, JICA will complete the final report and send it to the Government of Arab Republic of Egypt in April, 1992.



H. SH

ANNEX II : ORGANIZATION CHART OF THE PROJECT



Handwritten signature

H. SH

ANNEX III : ITEMS REQUESTED BY THE EGYPTIAN SIDE

Provision of machinery and equipment for one Rice Storage Center will consist of the following items.

Item	Description	Estimated Quantity
1	Paddy Storage Silo 1,000mt/each	10 sets
2	Aeration Fan for the silo	20 sets
3	Intake Hopper 12mt/each	2 sets
4	Paddy Cleaner 12mt/hr/each	2 sets
5	Destoner 4mt/hr/each	6 sets
6	Dryer with 4 buffer tanks	1 set
7	Hopper Scale 24mt/hr/each	2 sets
8	Belt Conveyors	1 lot
9	Chain Conveyors	1 lot
10	Bucket Elevators	1 lot
11	Dust Suction Fan with dust collecting facilities	1 lot
12	Control Panel	1 lot
13	Ancillary Equipments	1 lot
14	Shipping Tank for paddy discharging	1 set
15	Grain Inspection Equipment	1 lot
16	Truck Scale	1 set
17	Grain Bulk Truck 12.5mt/each	4 sets
18	Spare Parts for the above	1 lot



H. SH

ANNEX IV : Recommendation for undertaking by the Government of Arab Republic of Egypt in case that Japan's Grant is executed

1. To secure the land for the Project and to clear the sites as needed.
2. To provide facilities for distribution of electricity and other incidental facilities to the Project sites.
3. To ensure prompt unloading, customs clearance of the goods for the Project at the port of disembarkation in Arab Republic of Egypt and prompt internal transportation therein of the products purchased under the Grant Aid.
4. To secure, with respect to the supply of the products and services under the verified contracts, that Japanese nationals shall not be subject to any customs duties, internal taxes and other fiscal levies which may be imposed in Arab Republic of Egypt.
5. To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such facilities as may be necessary for their entry into Egypt and stay therein for the performance of their work in accordance with the relevant laws and regulations of Arab Republic of Egypt.
6. To maintain and use properly and effectively the machinery and equipment purchased under the Grant Aid.
7. To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the execution of the Project.



Hassan M. Shabane

APPENDIX 5

**LETTER REGARDING SITE
PRIORITY**

HOLDING COMPANY
FOR
RICE & RICE PRODUCTS MARKETING

الشركة القابضة
لتسويق الأرز ومنتجاته

Cairo, December 4, 1991

REF: 125
4/12

MESSRS,
JICA STUDY TEAM.,
FOR RICE STORAGE CENTER.

Dear Sirs,

Refer to discussion, surveys and studies held between your esteem Mission and our Holding Company for Rice Marketing and Rice Products, delegates concerning the project of Improvement Rice Storage Centers proposed for the New Grant AID.

You requested to arrange our sites priority according to statistics and calculations for capacities and storage facilities and paddy moisture content which effects sites suitability for implementing the proposed projects.

We have the pleasure to submit our proposal according to your ideas and calculations for the priorities as follows:-

- 1- Shabsheer Rice Storage Center.
- 2- El Nasr Rice Storage Center.
- 3- Fuwa El Hadith Rice Storage Center.
- 4- Zagazig Rice Storage Center.

Thanking You.

Sincerely Yours,

Vice Chairman

H. A. Khedr

Eng. Hassan A.L.Khedr

APPENDIX 6

BASIC DESIGN DRAWINGS

APPENDIX 6 BASIC DESIGN DRAWINGS

A. SHABSHEER RICE STORAGE CENTER

1. Site Layout
2. Plan
3. Elevation - 1
4. Elevation - 2
5. Flow Diagram

B. EL NASR RICE STORAGE CENTER

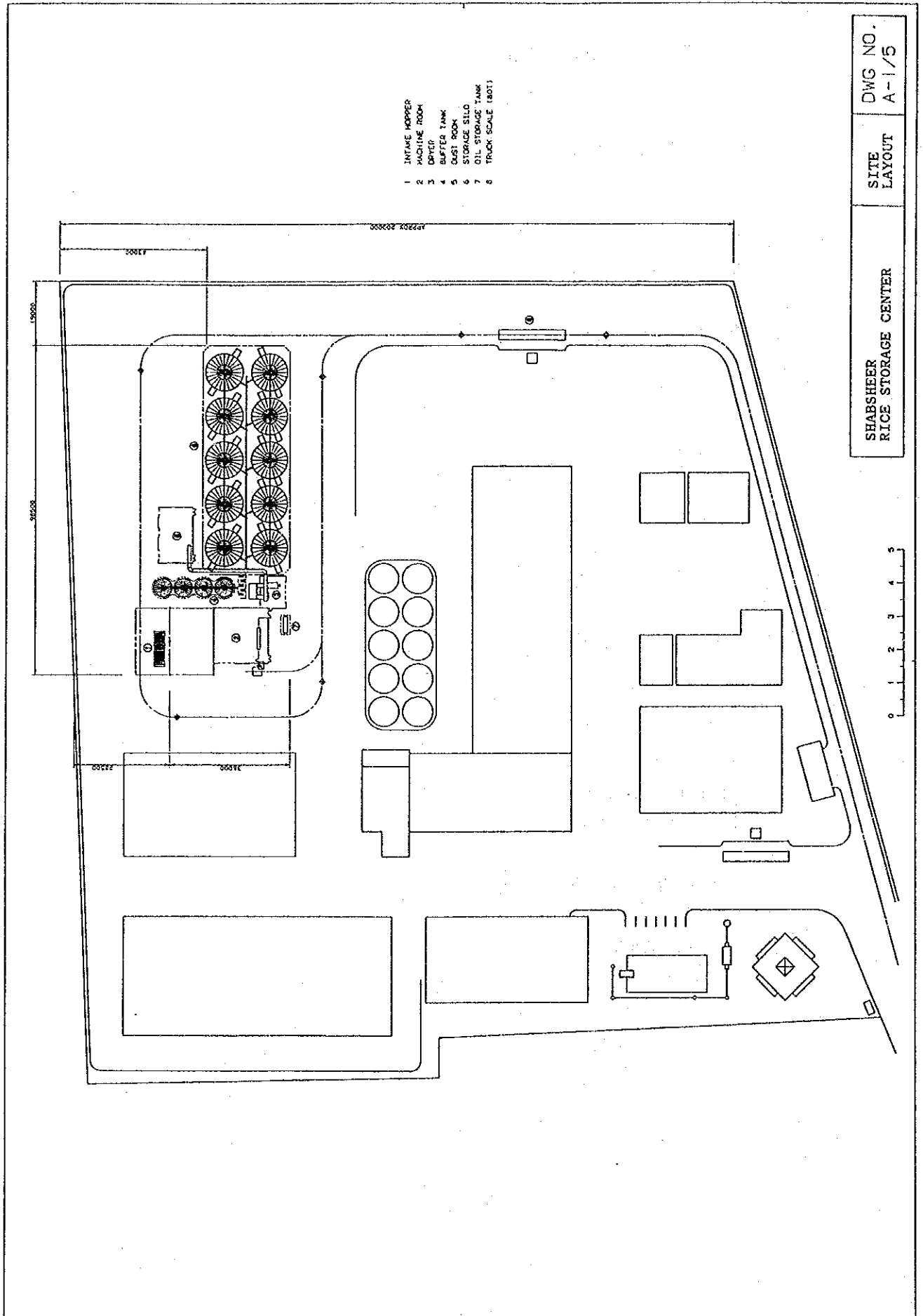
1. Site Layout
2. Plan
3. Elevation - 1
4. Elevation - 2
5. Flow Diagram

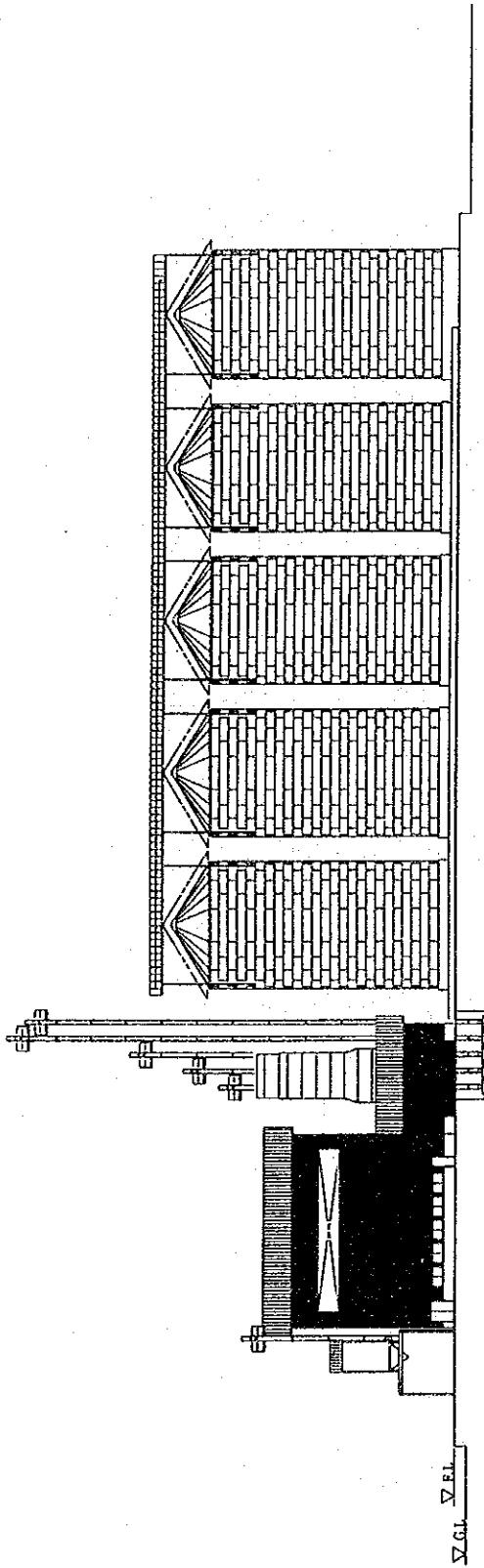
C. FUWA EL HADITH RICE STORAGE CENTER

1. Site Layout
2. Plan
3. Elevation - 1
4. Elevation - 2
5. Flow Diagram

D. ZAGAZIG RICE STORAGE CENTER

1. Site Layout
2. Plan
3. Elevation - 1
4. Elevation - 2
5. Flow Diagram



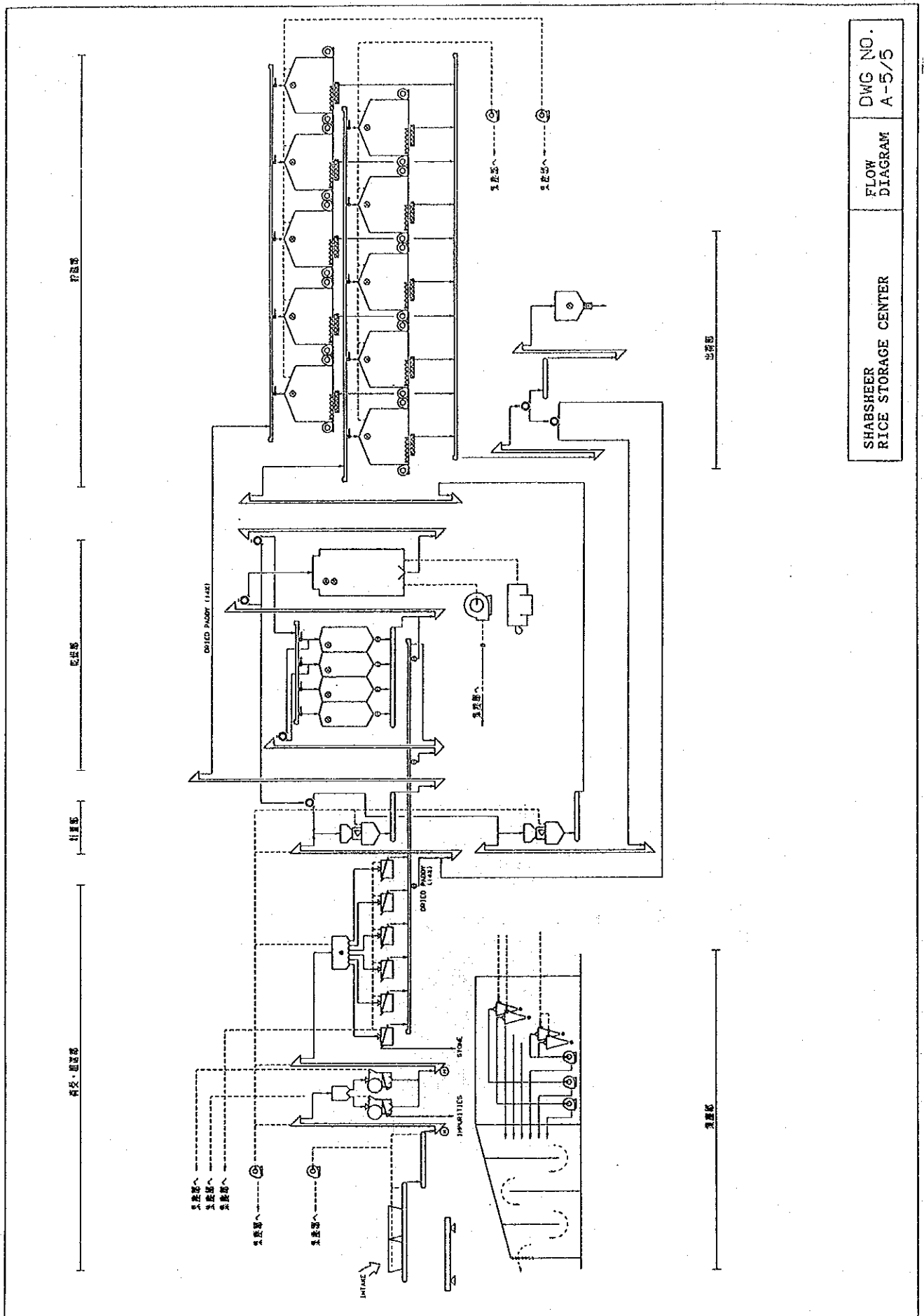


▽ G.L. ▽ F.L.

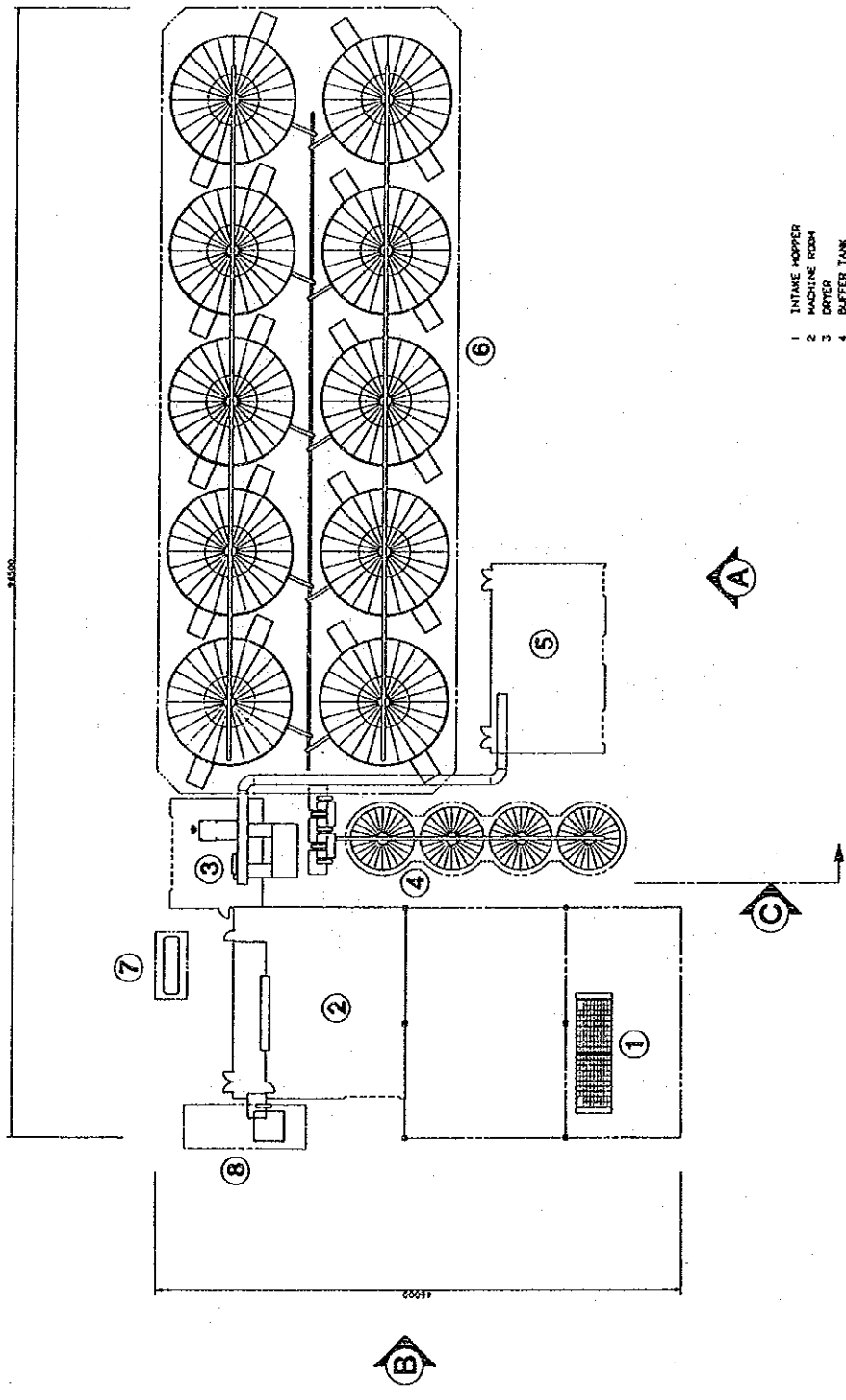
VIEW

SHABSHEER RICE STORAGE CENTER	ELEVATION - 1	DWG NO. A-3/5
----------------------------------	------------------	------------------

|||||

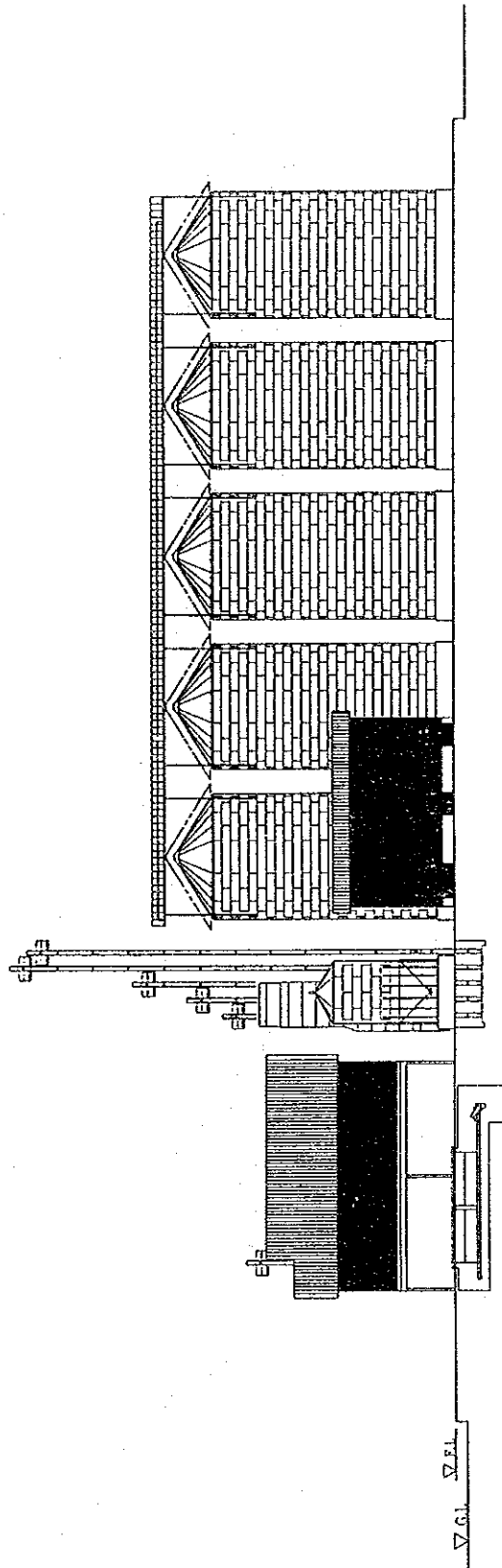


SHABSHEER RICE STORAGE CENTER	FLOW DIAGRAM	DWG NO. A-5/5
----------------------------------	-----------------	------------------



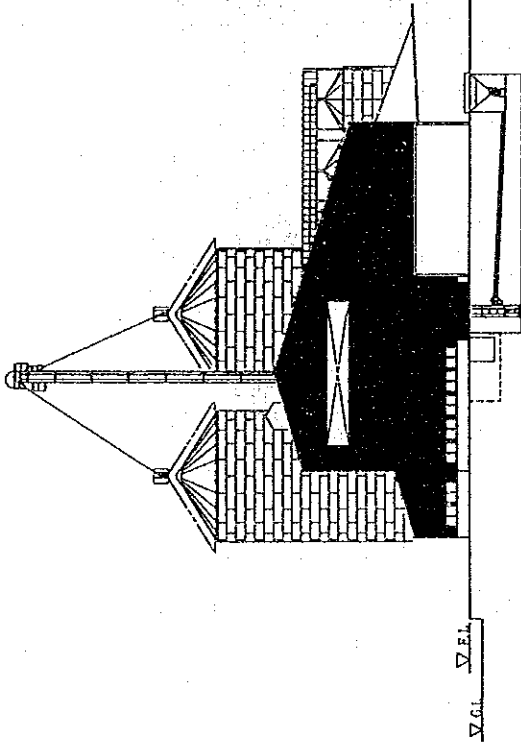
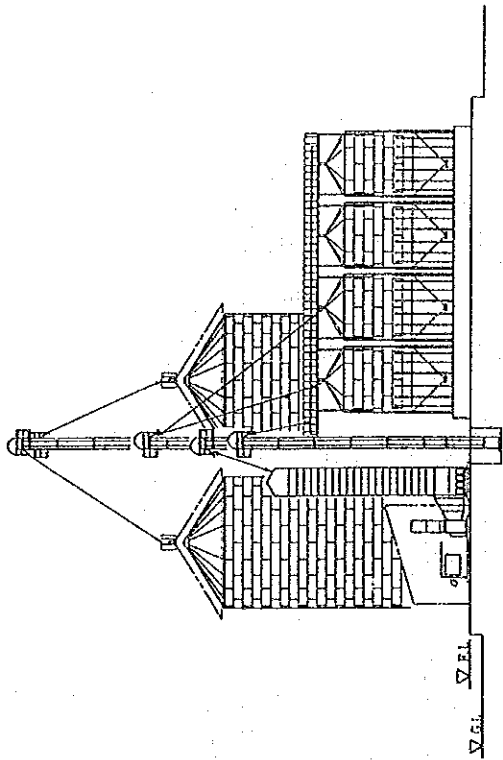
- 1 INTAKE HOPPER
- 2 MACHINE ROOM
- 3 DRYER
- 4 BUFFER TANK
- 5 DUST ROOM
- 6 STORAGE SILO
- 7 OIL STORAGE TANK
- 8 TRUCK SCALE (30T)

0.123456789



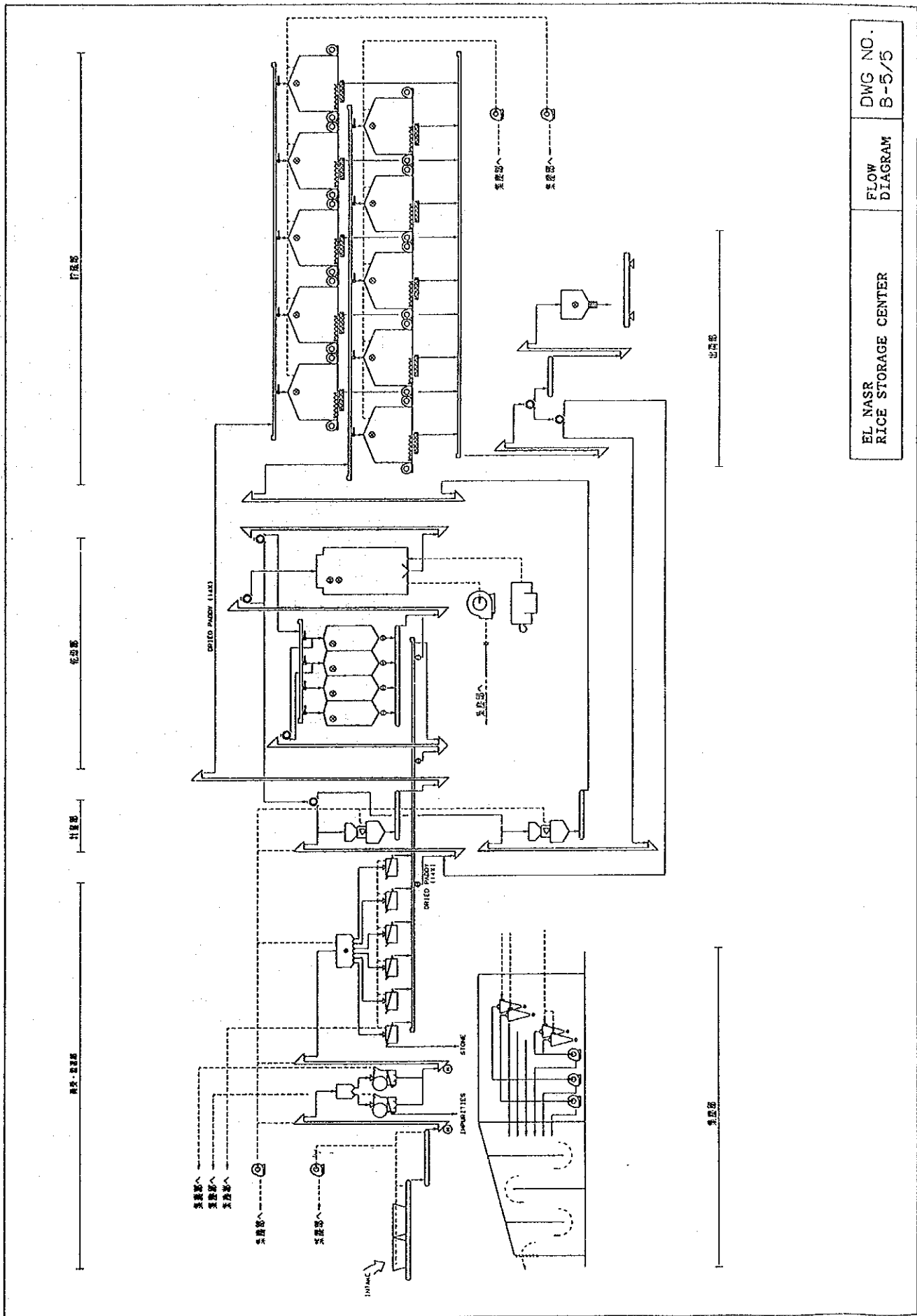
EL. NASR RICE STORAGE CENTER	ELEVATION - 1	DWG NO. B-3/5
---------------------------------	------------------	------------------

012345678910



EL NASR RICE STORAGE CENTER	ELEVATION - 2	DWG NO. B-4/5
--------------------------------	------------------	------------------

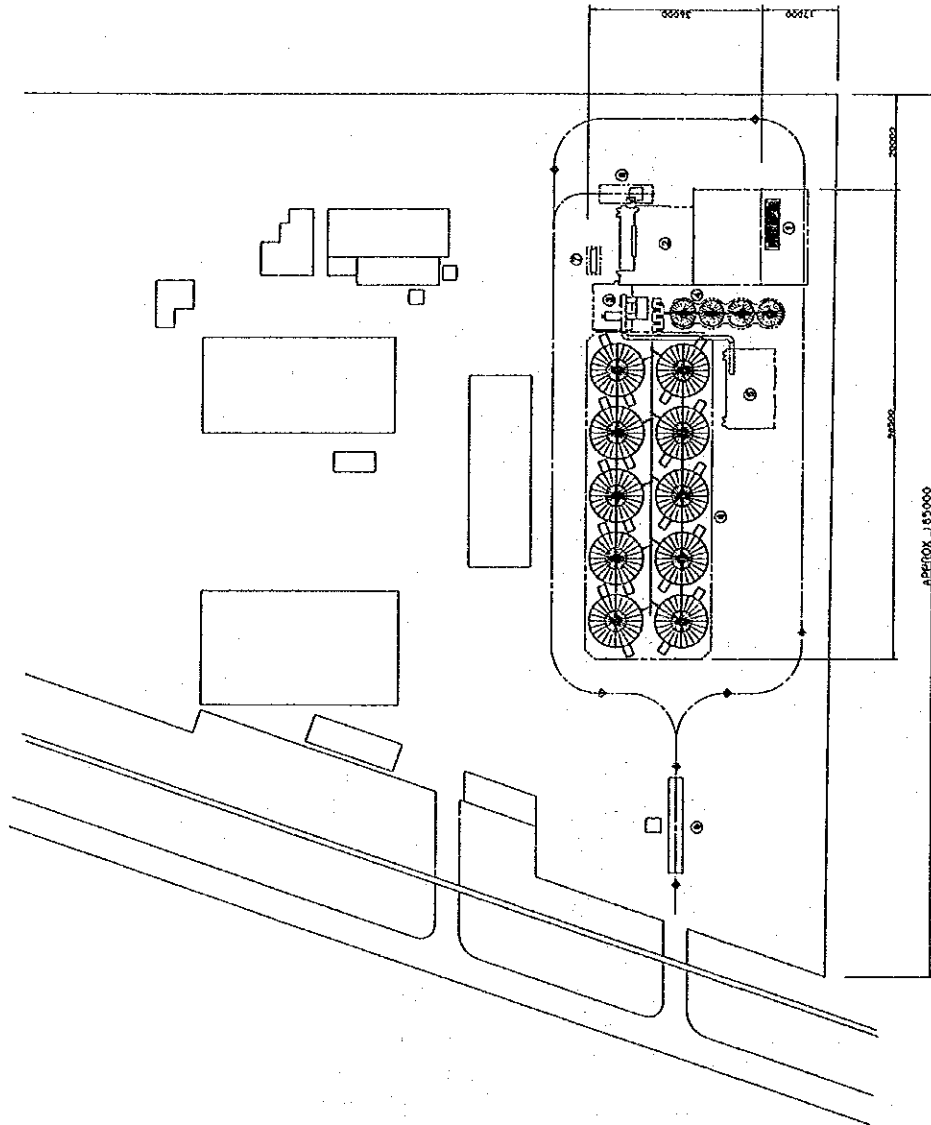
.....



EL NASR
RICE STORAGE CENTER

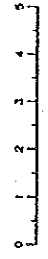
FLOW
DIAGRAM

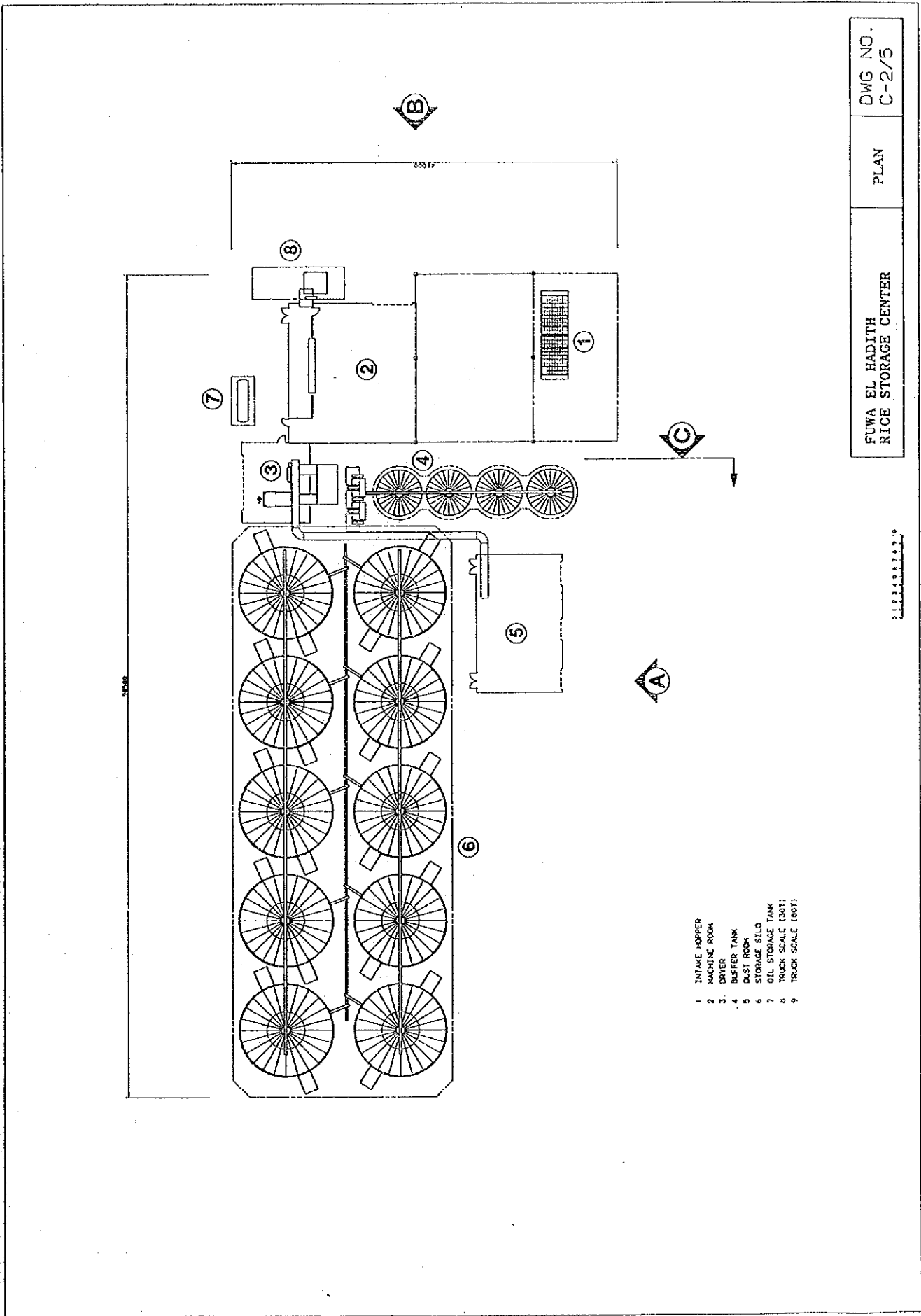
DWG NO.
B-5/5



- 1 INTAKE HOPPER
- 2 MACHINE ROOM
- 3 OFFICE
- 4 BUFFER TANK
- 5 DUST ROOM
- 6 STORAGE SILO
- 7 OIL STORAGE TANK
- 8 TRUCK SCALE (20T)
- 9 TRUCK SCALE (50T)

FUWA EL HADITH RICE STORAGE CENTER	SITE LAYOUT	DWG NO. C-1/5
---------------------------------------	----------------	------------------





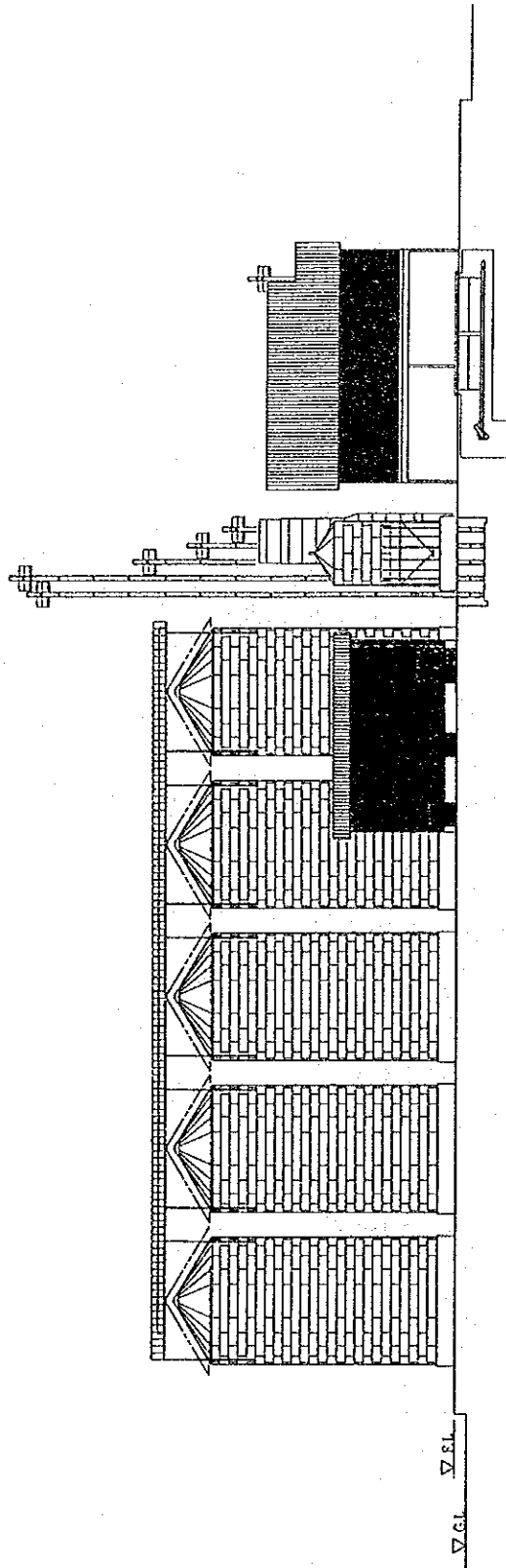
- 1 INTAKE HOPPER
- 2 MACHINE ROOM
- 3 DRYER
- 4 BUFFER TANK
- 5 DUST ROOM
- 6 STORAGE SILO
- 7 OIL STORAGE TANK
- 8 TRUCK SCALE (30T)
- 9 TRUCK SCALE (80T)

FUWA EL HADITH
RICE STORAGE CENTER

PLAN

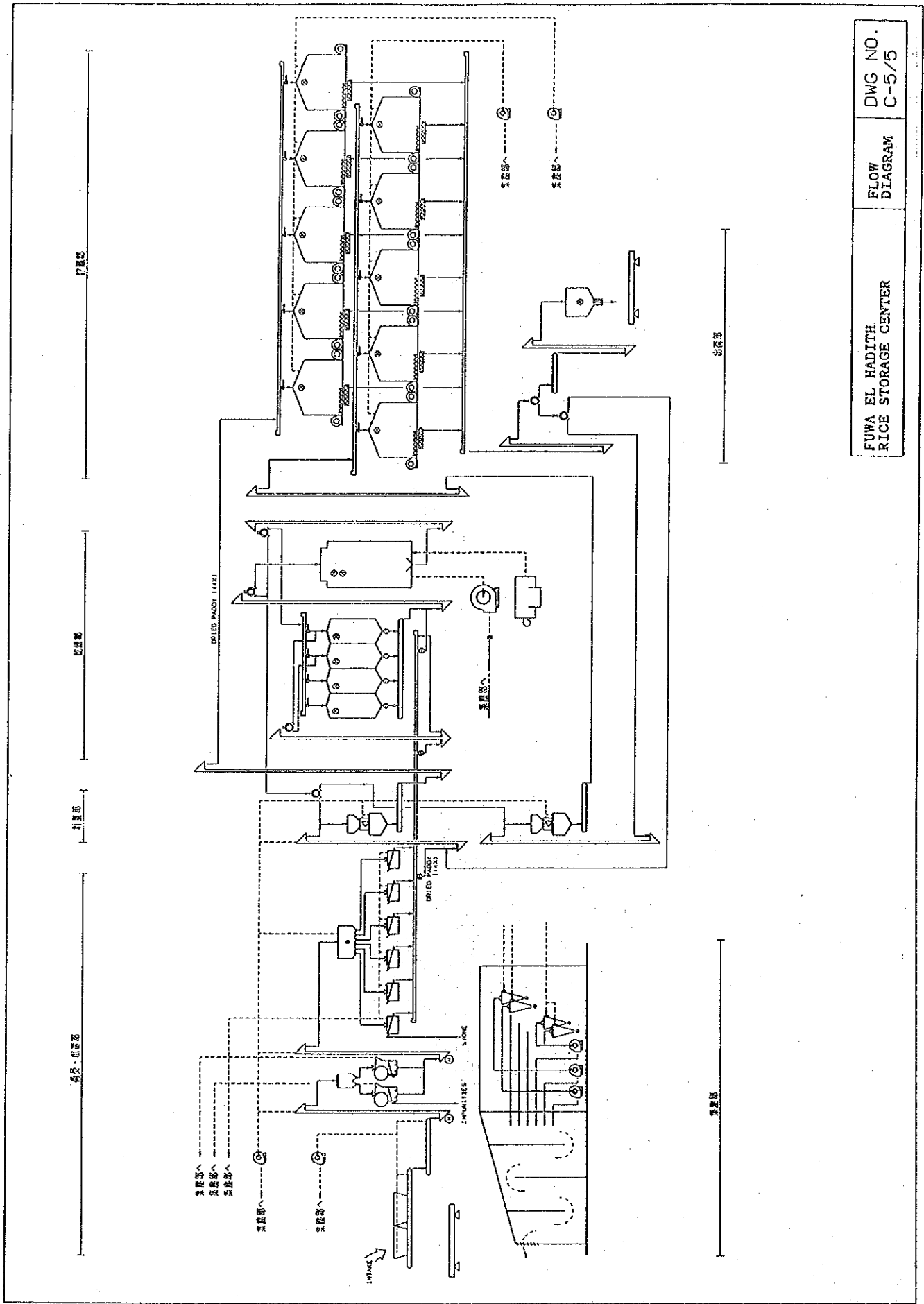
DWG NO.
C-2/5

0.123456789



FUWA EL HADITH RICE STORAGE CENTER	ELEVATION - 1	DWG NO. C-3/5
---------------------------------------	------------------	------------------

FINISH

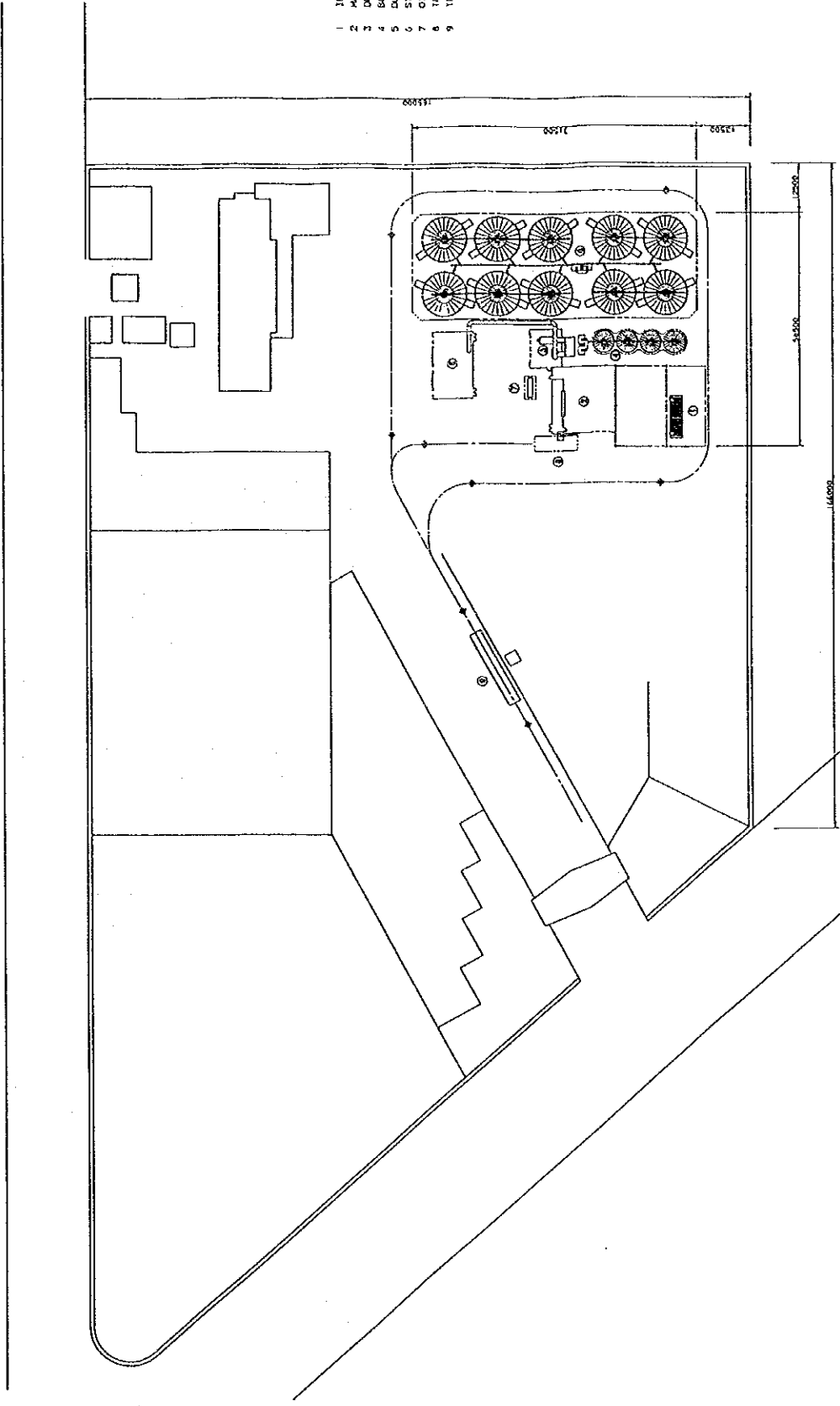


FUWA EL HADITH
RICE STORAGE CENTER

FLOW
DIAGRAM

DWG NO.
C-5/5

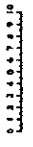
- 1 INTAKE WOPPER
- 2 MACHININE ROOM
- 3 DRYER
- 4 BUFFER TANK
- 5 DUST ROOM
- 6 STORAGE SILO
- 7 OIL STORAGE TANK
- 8 TRUCK SCALE (300T)
- 9 TRUCK SCALE (800T)



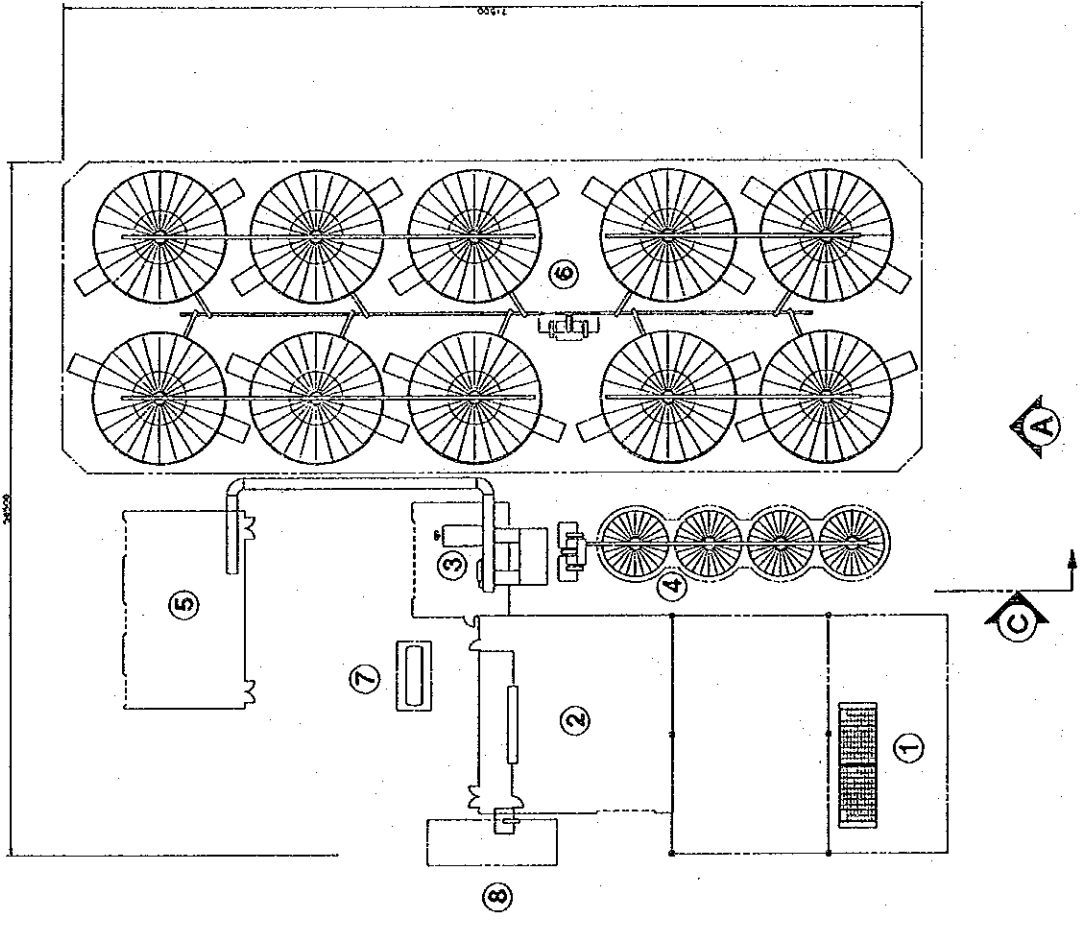
DWG NO.
D-2/5

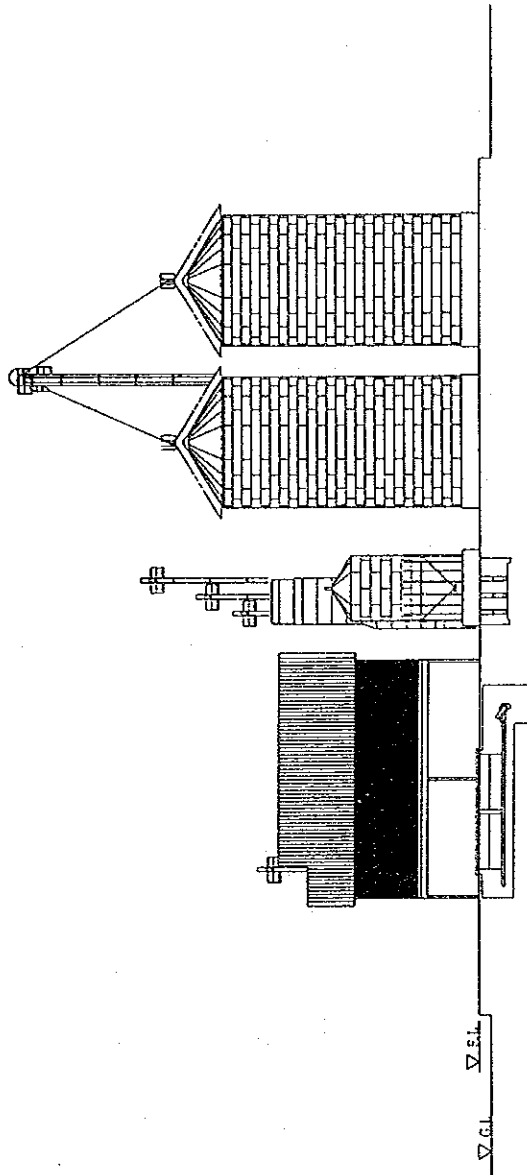
PLAN

ZAGAZIG
RICE STORAGE CENTER



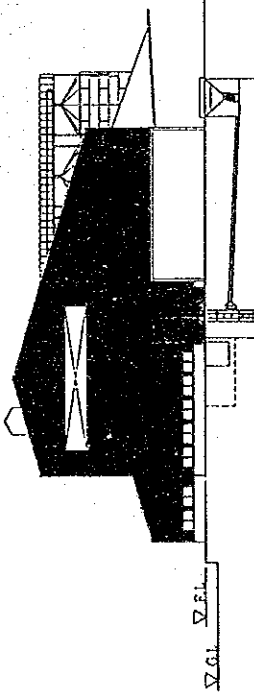
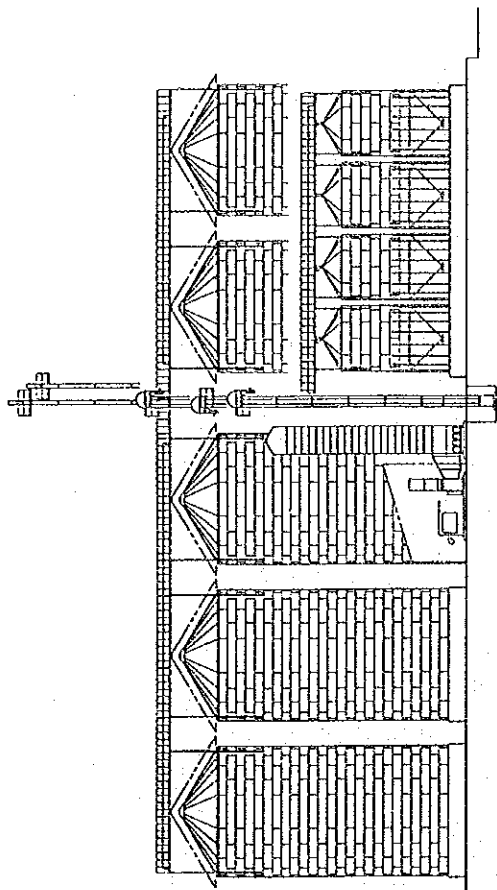
- 1 INTAKE HOPPER
- 2 MACHINE ROOM
- 3 DRYER
- 4 BUFFER TANK
- 5 DUST ROOM
- 6 STORAGE SILO
- 7 OIL STORAGE TANK
- 8 TRUCK SCALE (30T)
- 9 TRUCK SCALE (80T)





ZAGAZIG RICE STORAGE CENTER	ELEVATION - 1	DWG NO. D-3/5
--------------------------------	------------------	------------------

0122222222222222

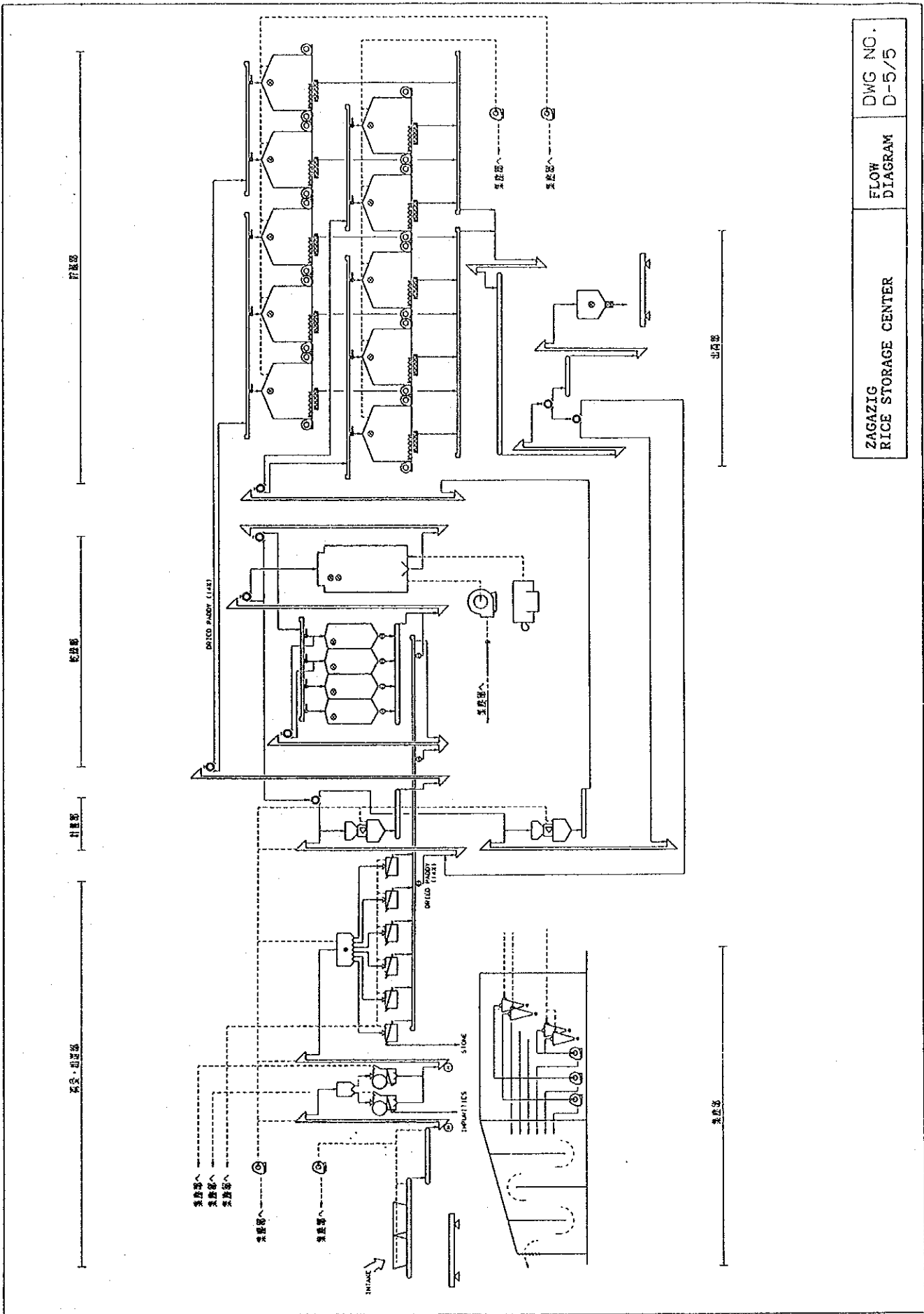


VIEW

VIEW

ZAGAZIG RICE STORAGE CENTER	ELEVATION - 2	DWG NO. D-4/5
--------------------------------	------------------	------------------

0.1.2.3.4.5.6.7.8.9.10



ZAGAZIG RICE STORAGE CENTER	FLOW DIAGRAM	DWG NO. D-5/5
--------------------------------	-----------------	------------------

JICA