

1) Power Receiving System

Electric power will be received for connection to the intake panel in the underground power room of the Children's Hospital under the responsibility of the Government of Pakistan. (See Fig. 4-4-i.)

The supply voltage will be 3 phase 400 V, single phase 230 V, with a frequency of 50 Hz.

The estimated system design loads will be as follows, 1,500 KVA in total.

a) Lighting, service outlets	300 KVA
b) Air conditioning, ventilation	700 KVA
c) Plumbing	30 KVA
d) Medical equipment	330 KVA
e) Lift	40 KVA
f) Others	100 KVA

2) Emergency Generator

A generator with a capacity of approximately 400 KVA, will be provided to supply power in the event of power failure. The loads supplied by the generator will be for lighting the accident emergency department, operating room, ICU, NICU examination room, nurse stations and other important loads such as those of medical equipment.

3) Main Low Tension Feeders

Low tension feeders will be laid from the distribution board in the power room to each lighting distribution board, power control board and distribution board for medical equipment. The supply voltage will be 3 phase 400 V for low tension power feeders, single phase 230 V for lighting and service outlets. As the voltage drop is high (10 %), the power supply for main medical equipment will be effected through an automatic voltage adjustment system. (See Fig. 4-4-ii.)

4) Power Supply System

Electric power shall be supplied to the power loads of chillers,

boilers, fans pumps and lifts. The required power loads will be controlled centrally.

5) Lighting and Service Outlets

Natural lighting shall be utilized as much as possible. As for artificial lighting, fluorescent lamps will be generally used, incandescent lamps being used in part. Lamps in the patients' rooms should be designed not to dazzle the patients in bed. The illuminance in the main rooms will be approximately as follows:

a) Office	300 lux
b) Clinic	300 lux
c) Examination room	750 lux
d) Operating room	1,000 lux
e) Ward	100 lux
f) Waiting hall	150 lux
f) Corridor, staircases	100 lux

Escape guide lamps will be installed in the corridors, stairwells and at the main entrances and exits. Service outlets comprise medical equipment outlets and other general outlets. The outlets for medical equipment shall be supplied with earthing pins.

6) Equipotential Patient Reference System

An equipotential patient reference system will be applied in the Operating Room, ICU and NICU to prevent electric shocks (micro shock).

7) Telephone System

The lines are extended by the Government of Pakistan to the terminal board in the telephone exchange room on the first floor. The lines are designed to carry about 10 circuits and approximately 100 extension telephones are planned. The exchange equipment will comprise an automatic cross bar system with a relay board. As an additional function, it will be connected to the doctor paging system and calls between the extension telephones of the Children's Hospital and those of the Teaching Hospital will be designed as well.

8) Public Address System

Loudspeakers will be installed in the halls and corridors for both the general and emergency public address services. Outside services will be provided from the outpatient wards to the waiting hall, as well as from the dispensary to the waiting hall. The amplifier set for the public address to the whole hospital will be installed in the office on the first floor.

9) Communal Television Sets

TV aerials and other necessary systems will be installed so that TV may be watched in the medical superintendent's office, deputy medical superintendent office, lounge and in the cafeteria.

10) Nurse Call Systems

Nurse call system will be provided for to call nurses from the patients rooms and lavatories and also to facilitate communication between the nurses and patients.

11) Automatic Fire Alarm System

In each room smoke detectors or heat sensors shall be installed according to the function of the different rooms. Smoke detectors shall be installed in the corridors and stairwells as a precaution against fire. When a fire is detected, bells will ring and indicated on the receiver in the administration office. A sub-receiver will be installed at the nurse stations.

12) Doctor Paging System

A radio antenna system to be connected and operated with telephone exchange equipment is required. Maximum paging capacity by the receiver is 100 circuits.

13) Electric Clock System

Electric clocks with time signals shall be provided in the halls, nurse stations and in other places where necessary. A clock for timing operations will be installed in the operating room, the master clock being placed in the telephone exchange room.

14) Lift System

The lift system will be as follows:

Item Use	Load Capacity		Speed (m/min.)	Number of Stops	Quantity
	Load (kg)	Number of Passengers			
Lift for beds	1,000	15	45	3	2

Fig 4-4-i Single Line Diagram for Power Supply

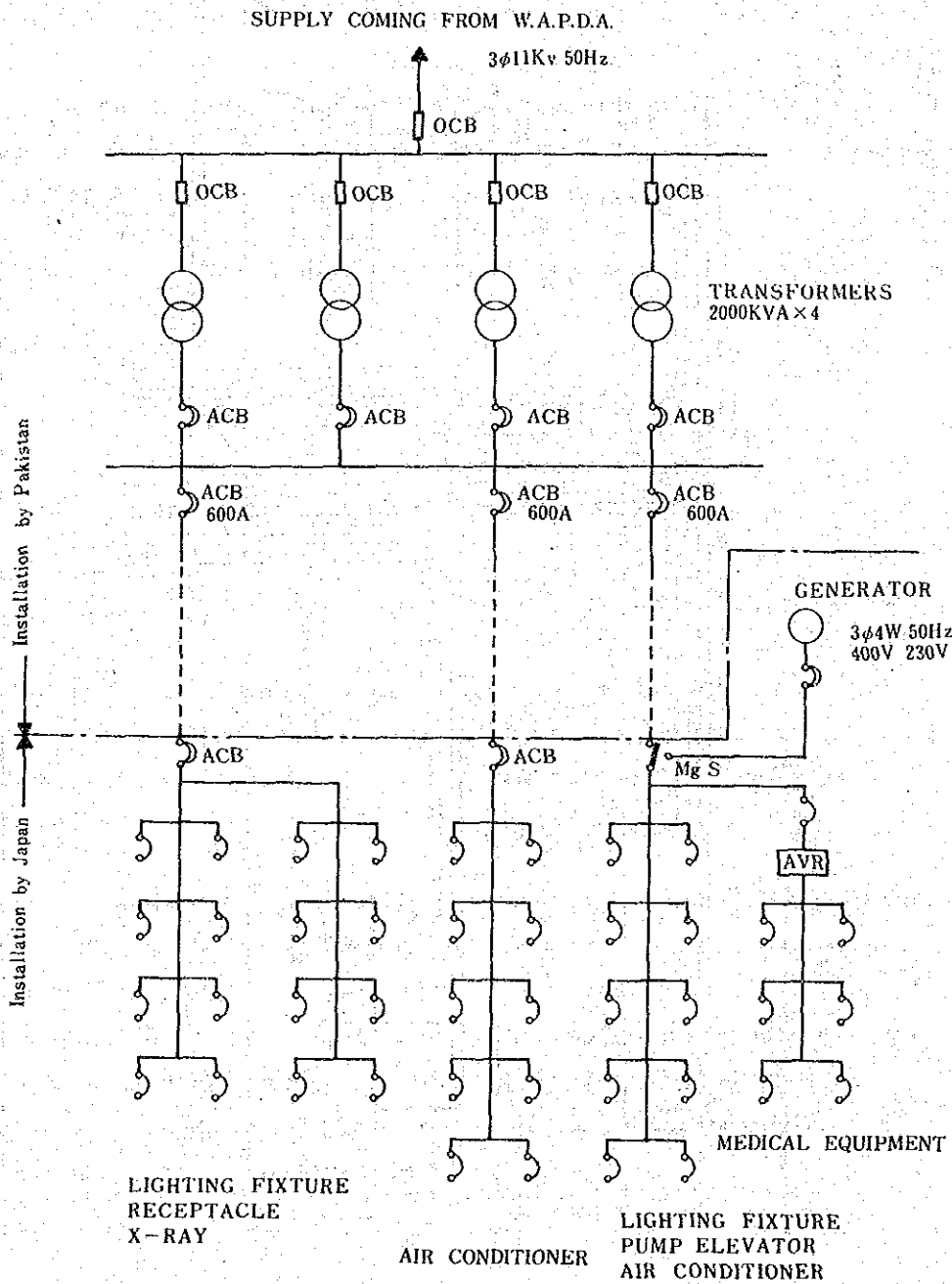
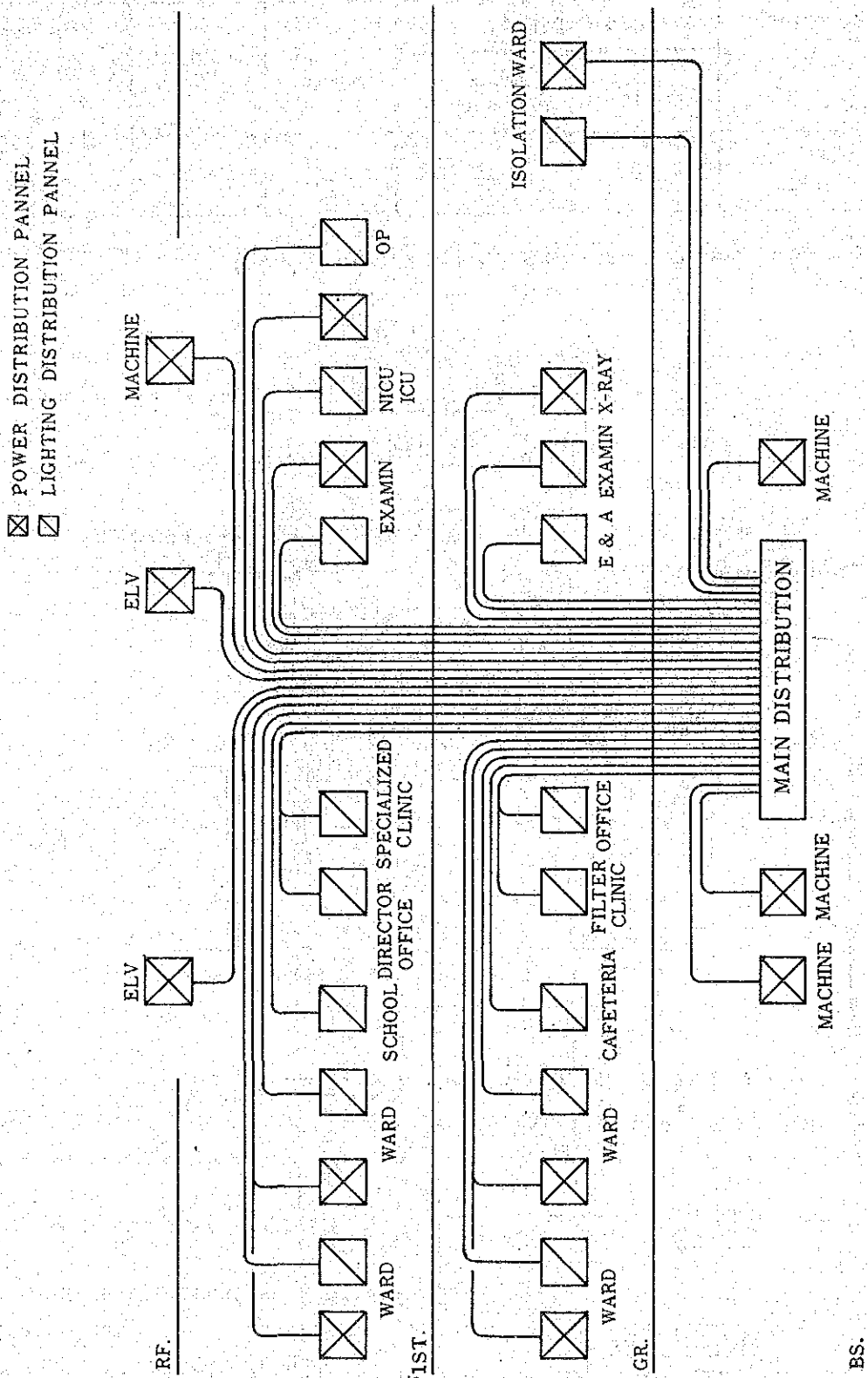


Fig 4-4-ii Power Distribution Diagram



(2) Ventilation and Air Conditioning System

1) Heating and Cooling Power System

The heat source system comprises a steam boiler, hot water tank and water softener. Being installed at a convenient location in the hospital, special consideration will be given to ensure that the equipment shall be pluralized to avoid a complete stoppage of operation during maintenance and cleaning. The load on the steam boiler will consist of a power source for the refrigerating machines, a heating system, a hot water supply, a laundry, medical equipment sterilizer and so forth. Natural gas, which is economical, will be utilized. Absorption refrigerating machines, the number of which shall be plural, utilizing steam, will be provided for the cooling power system. (See Fig. 4-4-iii.)

2) Planning for Air Conditioning Zoning

Zoning will be designed according to the temperature, humidity and the degree of cleanliness of the rooms, the usage of the rooms, and by the characteristics of the thermal loads.

Main systems comprises an Accident Emergency Dept., Outpatient Dept., Clinical Pathology Laboratory, Radiology Dept., Rehabilitation Dept., Operating Room, ICU, NICU, Burn Unit and Administration Dept. As a precaution against cold shock in the summer and heat shock in the winter, the temperature in the waiting hall of the outpatient ward shall be controlled at an intermediate temperature between that of indoors and outdoors. (See Fig. 4-4-iv.)

The conservation of energy will be achieved by means of the interception of air at the warm up stage and by taking in cool outside air at the intermediate stage as well as during the night. Wards will be included in the systems of patients' rooms, nurse stations, doctors' and nurses' rooms. Each isolation room will take in outside air independently and all the air will be exhausted through the exhaust air treatment system.

3) Planning for Ventilation

The airing system will be designed for rooms such as the boiler room and power room. The system for lavatories and disposal treatment room comprises only an air exhaust. Combustion gas containing grease from the kitchen shall be exhausted through the grease filter in the hood. Poisonous gas with odour generated in the examination rooms will be extracted through the draught chamber to be dispersed and exhausted. A small amount of exhaust which will not affect other factors shall be locally exhausted on the spot.

Fig. 4-4-iii Piping Diagram of Central Energy Plant

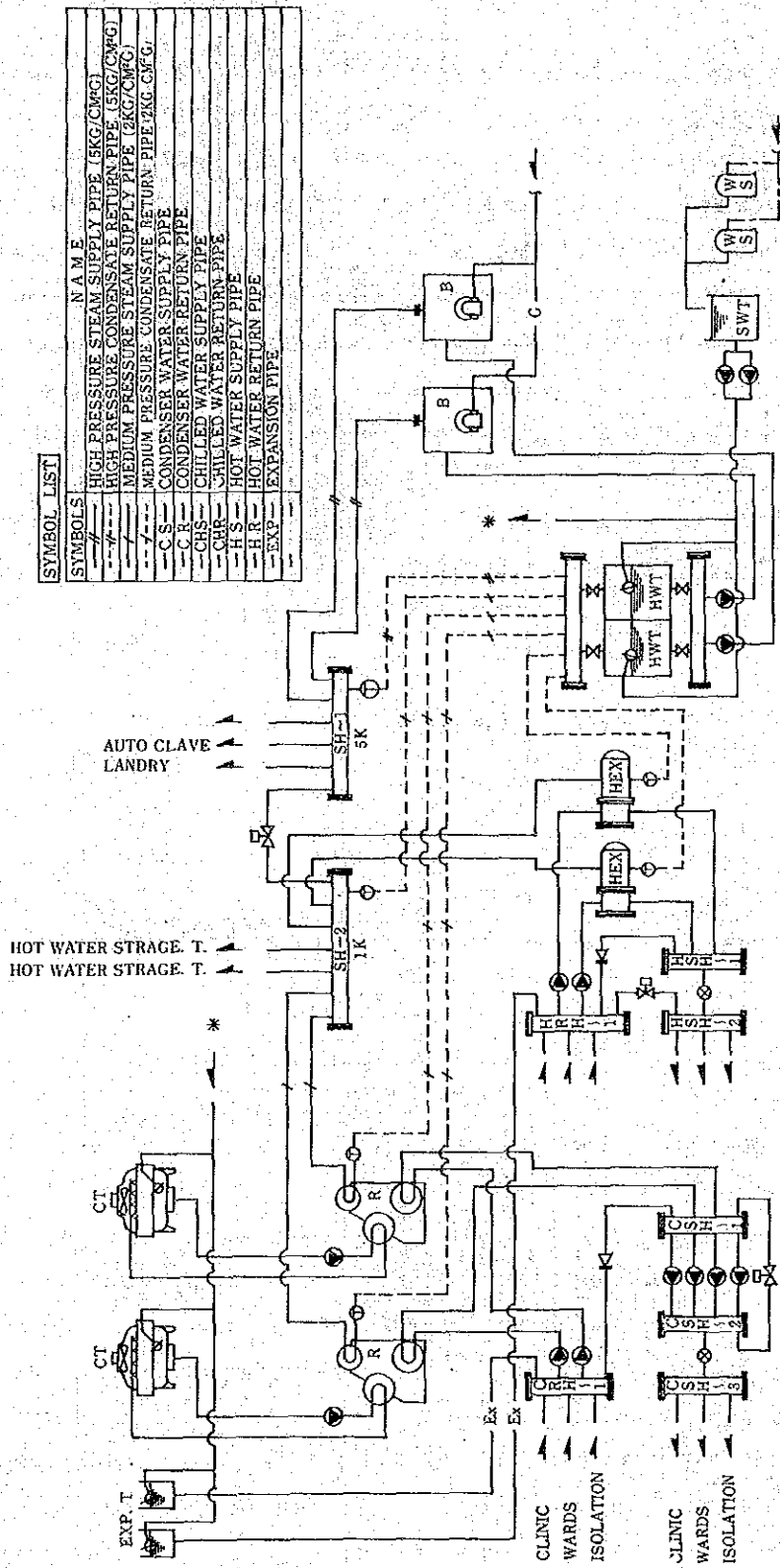
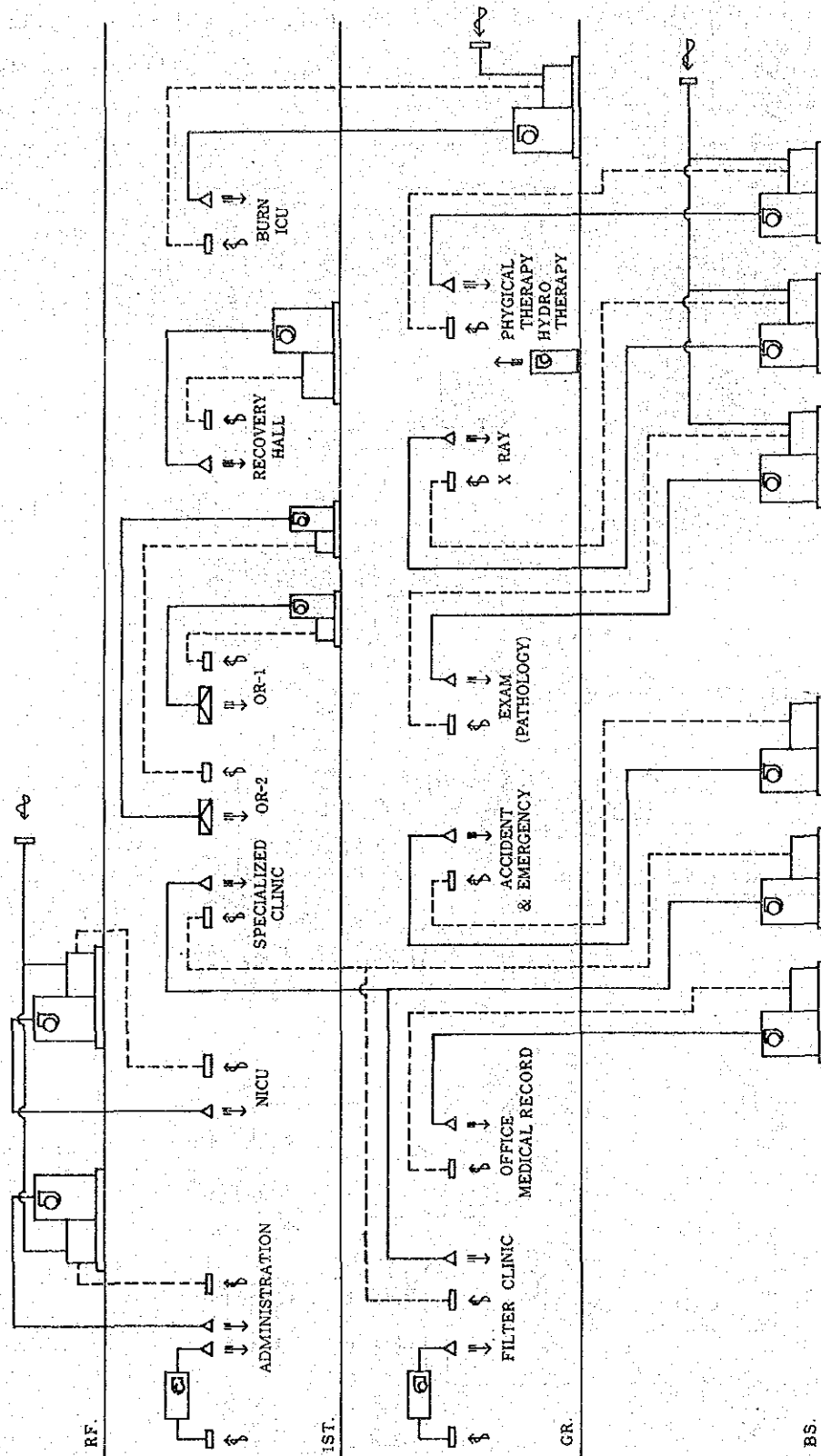


Fig. 4-4-iv Air Conditioning System for Clinical Ward



(3) Water Supply and Plumbing System

1) Water Supply

Water supply pipes utilizing the gravity system are being planned with the existing overhead water tank at the site which is approximately 30 m high with a capacity of 50,000 gallons. The water will be locally distributed to the demanded points. According to the presented water analysis data, it was considered "satisfactory". However, a water treatment system shall be provided in anticipation of the performance deterioration of air conditioning equipment as scale increases, since the values of calcium hardness, total hardness and residue on evaporation are high for the quality of the water in the cooling tower. The water for boilers and the cooling tower will be stored in the storage tank installed in the double slab underground to be supplied after treatment.

2) Hot Water Supply

The systems comprise a central supply system with a storage tank in the machine room to distribute hot water to necessary points, and the local supply system with small type boilers, mainly for drinking water.

3) Drainage System

The drainage system shall be systematized according to the water quality, as shown in Fig. 4-4-v. Storm water shall be channelled to the rain water pipes within the site, to be discharged finally into the rivers. For the drainage system of the pharmacy and examination rooms, a heavy metal treatment system will be applied in the examination rooms to be connected through the treatment system for the waste water, after washing the apparatus, to the drainage pipe within the site. Developing and fixing solutions from the automatic developers will be collected and the diluted solution only will be discharged into the treatment system. The waste water from the kitchen will be discharged after the grease and coarse garbage are caught in the grease trap.

4) City Gas

Gas from the two systems, i.e., the medium pressure system (1,000 ~ 2,000 mm Aq, maximum supply: 600 Nm/h), the energy source of the boilers and the low pressure system (100 ~ 200 mm Aq) for the kitchen, examination rooms and clinics etc., will be extended and distributed from the Teaching Hospital.

5) Fire Fighting System

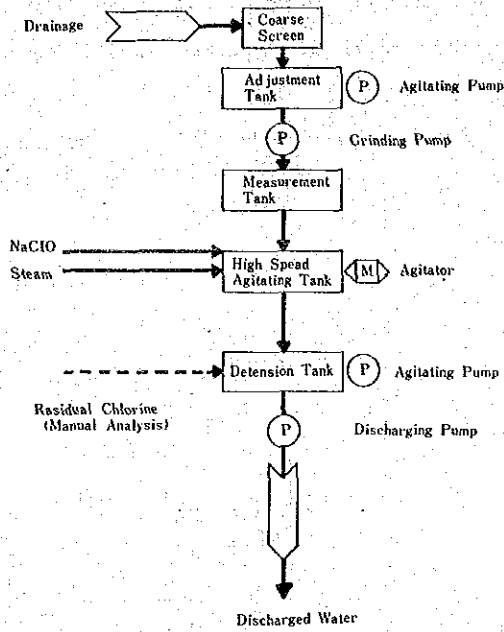
Diverging from the loop type feed pipes, outdoor fireplugs are installed in the I.H.C. (Islamabad Hospital Complex). Indoor hydrants, diverging from the same feed pipe, will be installed in each ward.

6) Medical Gas

From among the oxygen, nitrous oxide and compressed air, the required gas will be distributed by the central supply system to the Operating Room, ICU, Accident Emergency Dept., clinics and inpatients' rooms. Suction pumps will be installed in the machine room to suck the gas from each room. (See Fig. 4-4-vi.)

Fig. 4-4-v Drainage Treatment Flow Chart

1) Flow Chart of the Drainage System of the Isolation Ward



2) Flow Chart of the Drainage System of the Examination Rooms

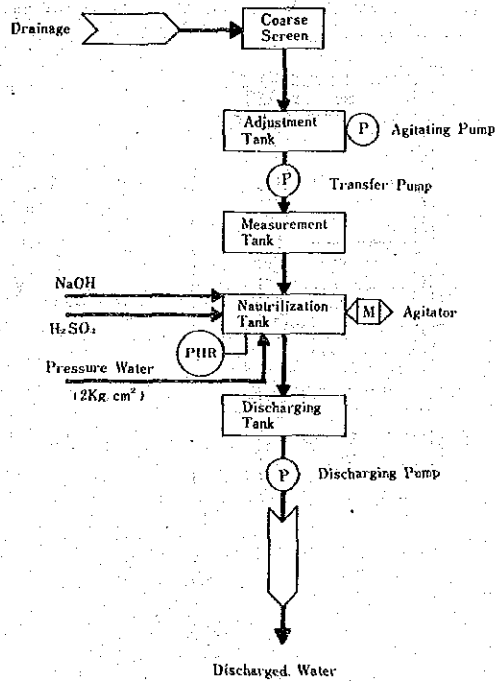
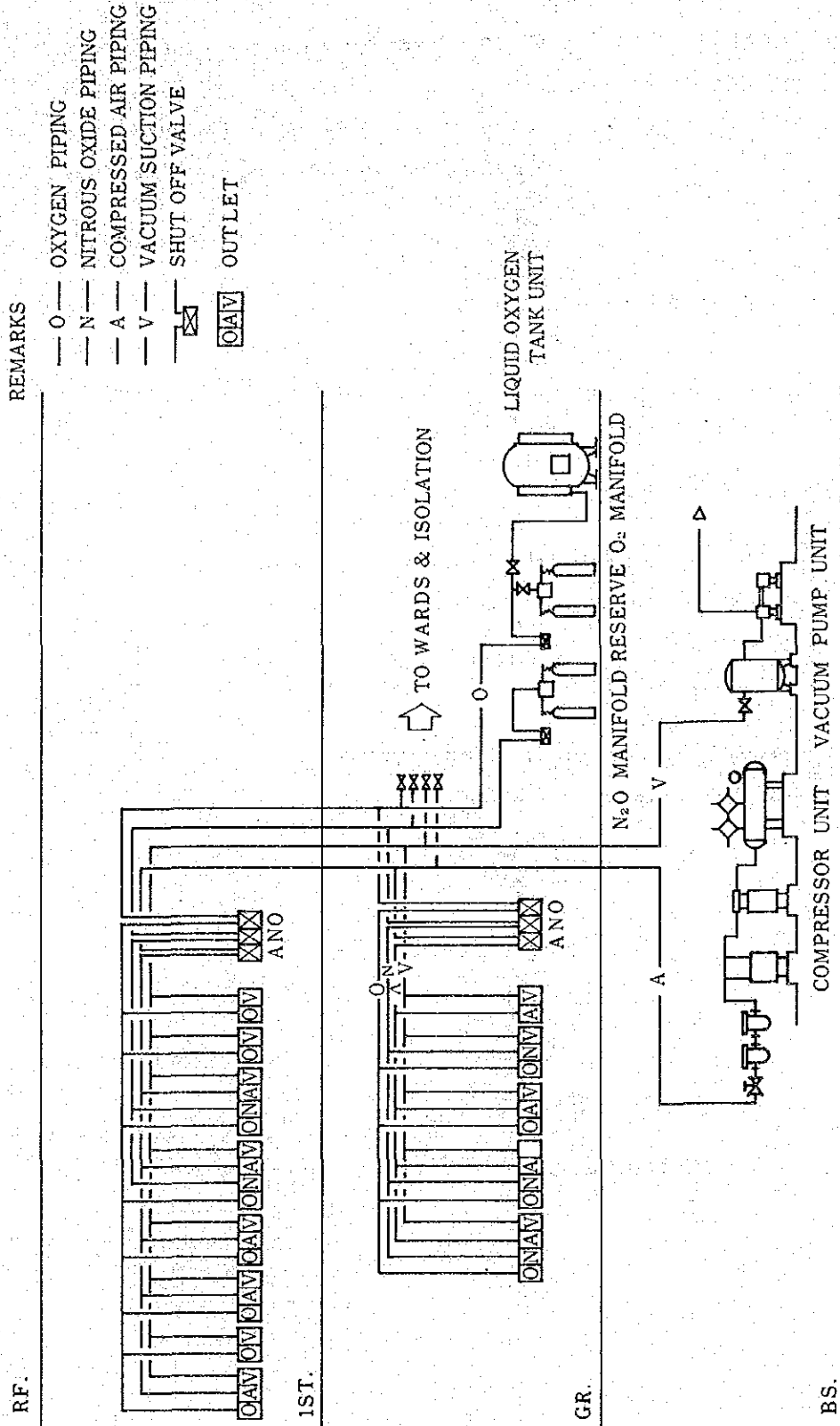


Fig 4-4-vi Medical Gas Piping Diagram



4-4-5 Planning for Medical Equipment

Medical equipment, which shall conform to the provisions of the prospectus and to the objectives of this medical facilities project, will be provided in consideration of the medical conditions in Pakistan. The criteria for selecting the types and standards of the equipment is based upon ease of operation and maintenance. The list of the major items of medical equipment planned on the above mentioned basis is attached to the appendix V.

4-4-6 Preliminary Drawings

DWG. NO. 1 SITE PLAN

DWG. NO. 2 BASEMENT FLOOR PLAN

DWG. NO. 3 GROUND FLOOR PLAN

DWG. NO. 4 1ST FLOOR PLAN

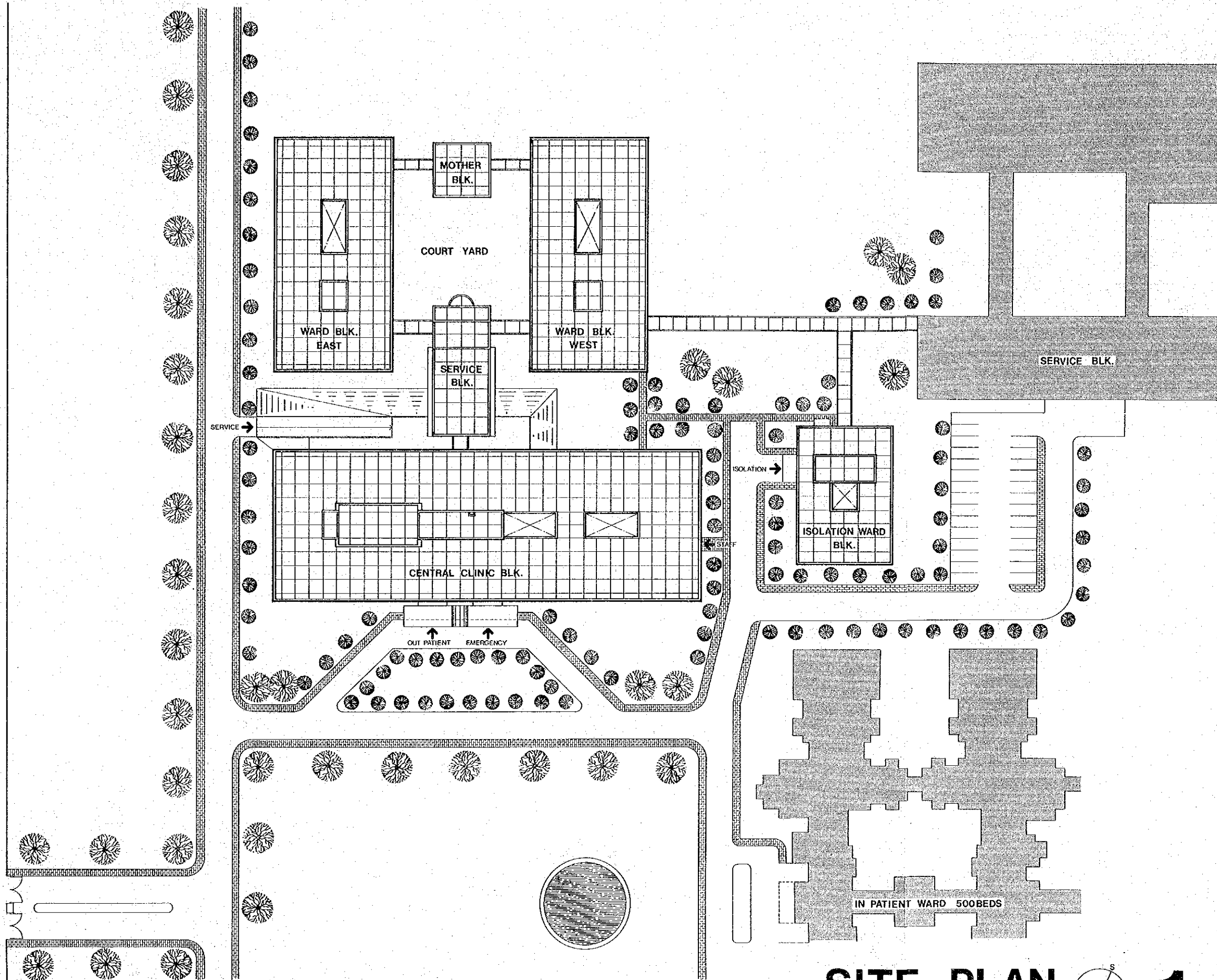
DWG. NO. 5 ROOF FLOOR PLAN

DWG. NO. 6 NORTH & EAST ELEVATIONS

DWG. NO. 7 SOUTH ELEVATIONS

DWG. NO. 8 SECTION & WEST ELEVATION

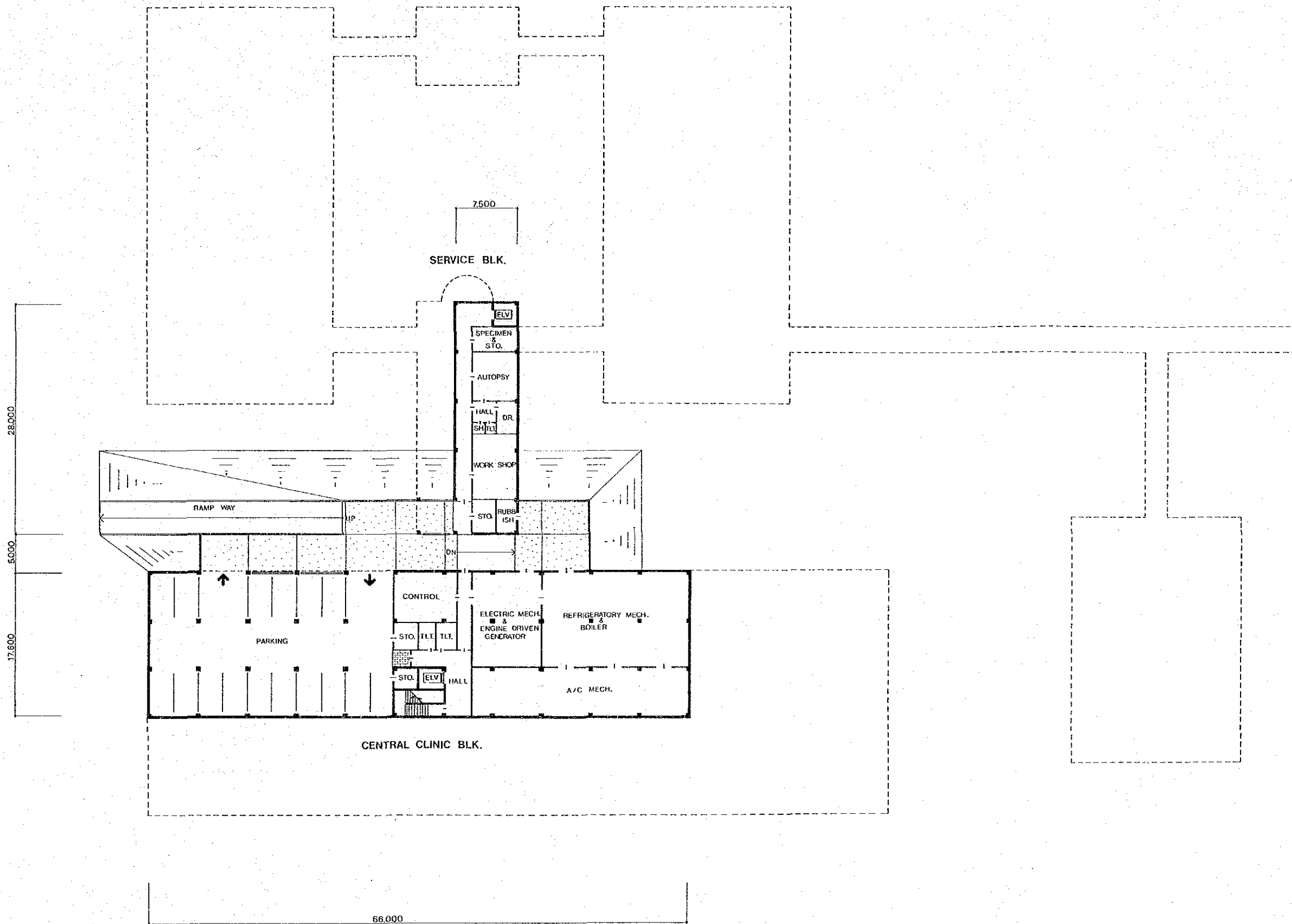
DWG. NO. 9 SECTIONS



SITE PLAN

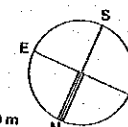
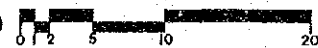
S, 1:800

0 5 10 20 40 m



BASEMENT FL. PLAN

S, 1:500

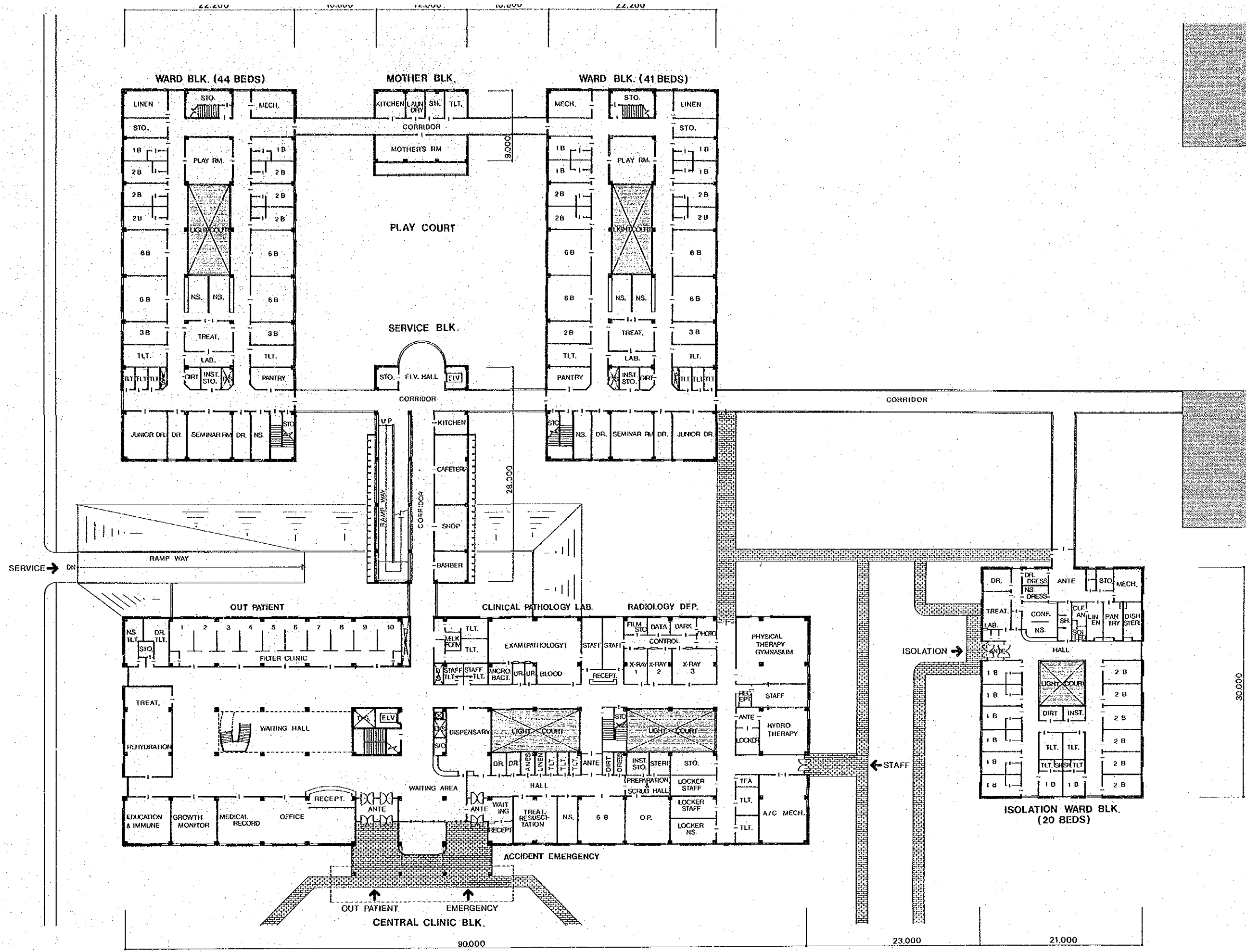


2

48.000

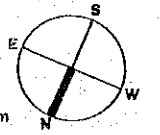
21.000

29.400

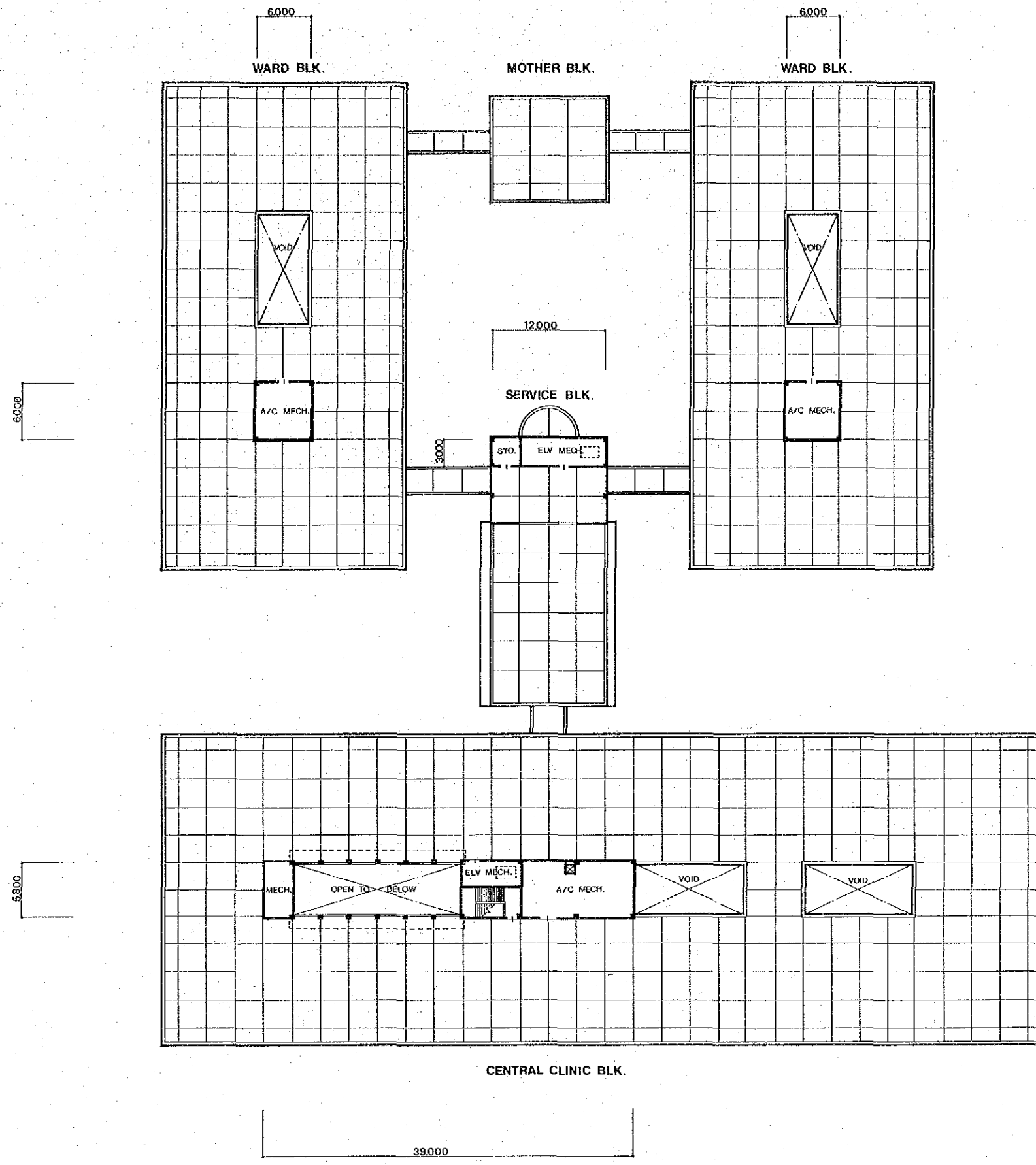


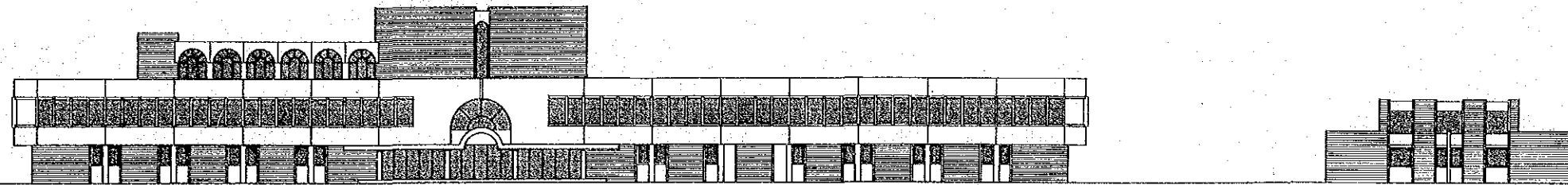
GROUND FL. PLAN

S, 1:500 0 2 5 10 20m

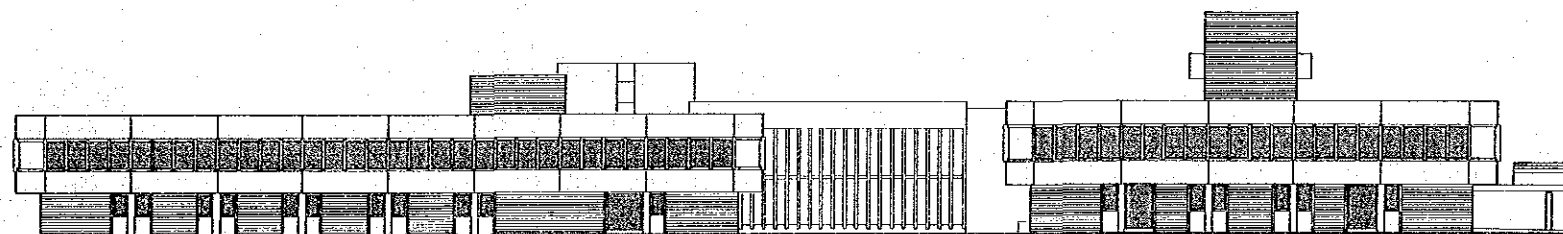


3





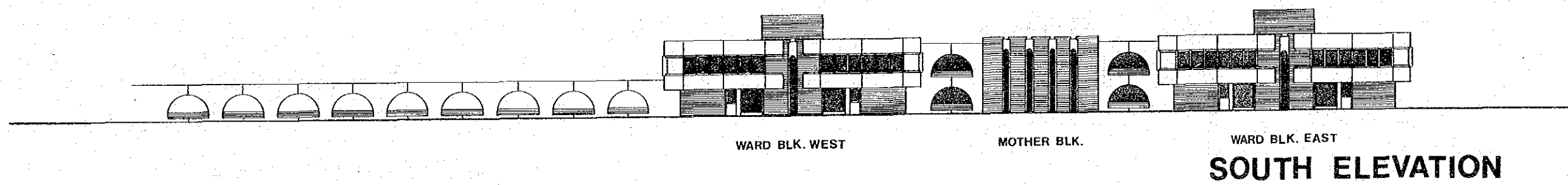
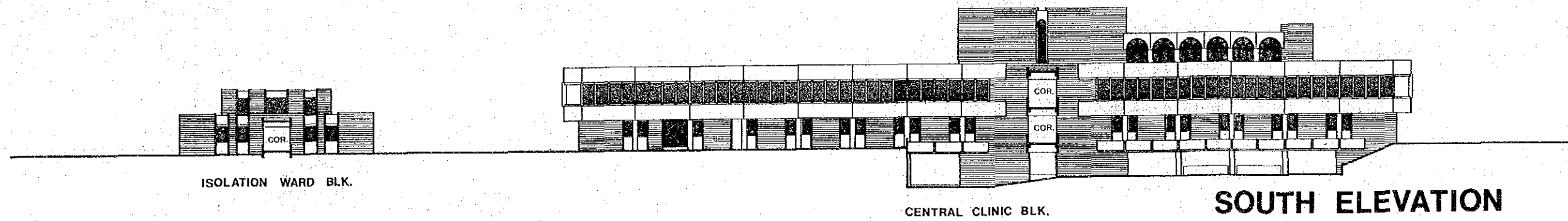
NORTH ELEVATION

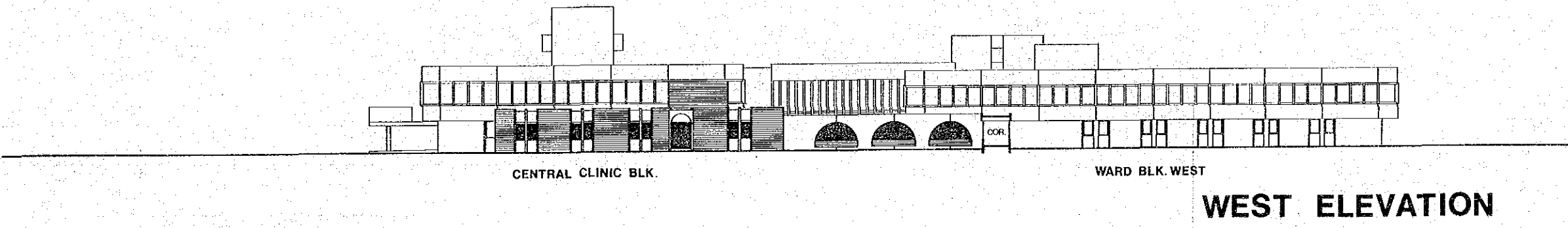
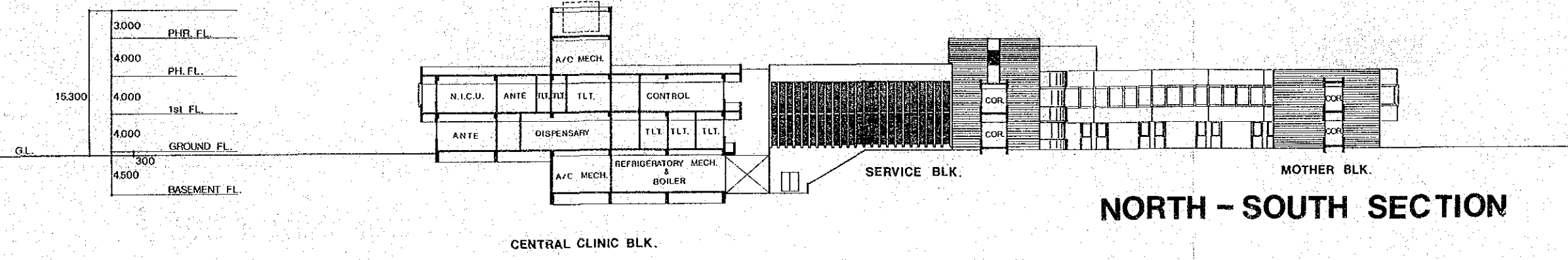


EAST ELEVATION

NORTH & EAST ELEVATIONS

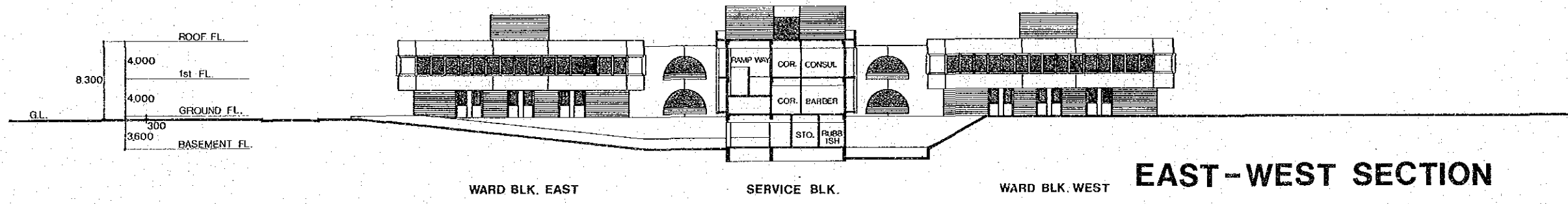
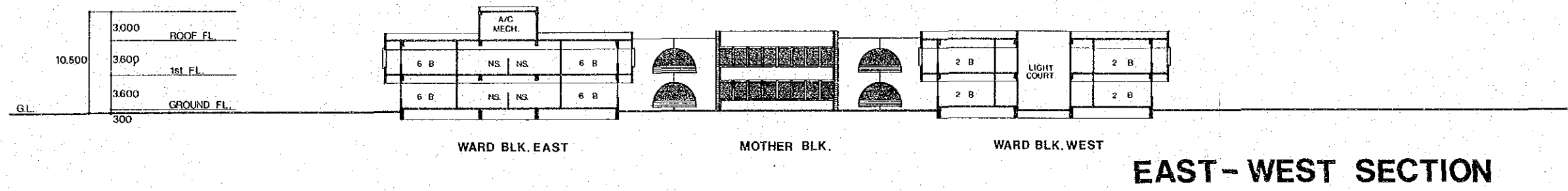
S, 1:500 0 2 5 10 20 m





SECTION & WEST ELEVATION 8

S, 1:500 0 2 5 10 20m



Chapter 5 System for Execution of the project

Chapter 5 System for Execution of the Project

This project concerning the Children's Hospital will not attain the expected objectives until smooth maintenance, administration and operation of the hospital are conducted after the completion of construction work.

The outline of the construction plan, maintenance, administration and operation after completion of construction are given below.

5-1 Execution of the Plan

This Children's Hospital construction plan will be executed with the grant aid of the Japanese Government. By this scheme, some work is executed under the Japanese grant aid and the remainder is the responsibility of the Government of Pakistan. It is necessary to execute this work as one project. In this construction plan, the division of responsibility between the Governments is as follows: The fund from grant aid shall cover the design, construction and supervision required for construction work of the Children's work. On the other hand, the Pakistan side shall be in charge of the removal of obstacle(s) at the building site, site formation and land readjustment, the completion of roads around the site and on premises, the measurement and investigation of the actual conditions at the site, tree planting and the infrastructure (the supply and connection of electricity, telephone, water drainage, gas, etc.) The Health and Social Welfare Division, Ministry of Health and Social Welfare, Federal Government of Pakistan, in charge of operation upon completion of the construction, will operate, maintain and control the facilities utilizing the non-development budget from out of the Government's ordinary budget.

5-2 Maintenance and Control Plan

When the construction of the children's hospital is completed, the Pakistan side will operate this hospital and maintain and control

the hospital facilities. At present, the anticipated maintenance and control features of the hospital facilities are as follows:

5-2-1 Maintenance of Facilities and Equipment

To maintain the facilities functions for a lengthy period of time, it is necessary to exercise correct and adequate maintenance and control. When buildings are neglected and are not maintained as a matter of routine, they quickly become damaged, resulting in various problems such a reduction of the functions. The building materials and equipment are subject to wear in the course of time. While carrying out routine maintenance and control always check the buildings and devices carefully, and at the same time, periodical inspection is required for the buildings and the equipment.

(1) Building

Usually, the purpose of building maintenance is to keep the buildings clean by daily cleaning and the repair of worn and damaged and aging parts. In the case of the buildings described in this plan, repair and remodelling are principally required for the interior and the exterior coating, while repairs to the structure are hardly required.

During the routine maintenance and control procedures, it is important to treat the buildings with care and to clean them conscientiously. It is effective to allocate adequate personnel for simple repairs.

(2) Building Equipment

To obtain the full the benefit of the various items of equipment, it is important to maintain and control their use. It is necessary to secure engineers to monitor electricity, machines, hygiene, etc. and to carry out repairs of detected during the routine inspections. Various pieces of equipment have their own expected lives and when these expire, old equipment must be replaced, or repaired, if possible.

The life of the principal items of equipment are as follows:

- | | |
|-------------------------|---------------------|
| 1) Generator | 15 ~ 20 years |
| 2) Power-board | 20 ~ 30 years |
| 3) Fluorescent lamp | 5,000 ~ 10,000 hrs. |
| 4) Incandescent lamp | 1,000 ~ 1,500 hrs |
| 5) Telephone exchange | 15 years |
| 6) Announcement machine | 10 ~ 20 years |
| 7) Elevator | 20 years |

(3) Medical Equipment

To use the medical machines effectively, it is important that the medical staff master the operation and the handling procedures. At the same time, it is necessary to secure maintenance engineers and technicians to be exclusively engaged in the maintenance work. In the medical equipment plan, medical equipment which can be easily maintained and controlled are being selected. It is necessary for this equipment to be checked by the maintenance engineers to prevent problems from occurring. Ideally, it is desirable to conclude a maintenance contract with the medical equipment manufacturers and their agents. Given careful consideration to these points this children's hospital can maintain its functions.

5-2-2 Personnel Plan of the Hospital

In running the Children's Hospital, the required personnel according to departments, shall be as follows:

	Wards				Outpatients Clinics						Central Clinic Dept.							Administration		Service Dept.		Total	
	General	Isolation	NICU	ICU Burn	Filter Clinic	Special	Emergency	Growth Monitor	Treat Rehyd.	Educ. Emu-nization	Pathology Exam.	X-Ray	Rehabilitation	Examination	Dialysis	Control Material	Operation	Dispensary			Machine		Others
Doctor	8 (1 x 8)	1	1	2	2	12	2	2	1		1	1					2		2	(Director, Dep. Director)			35
Jr. Doctor	16 (2 x 8)	2	2	1	8		2	5	2		1		1										40
Nurse	49 (6 x 8)	4	30	12	10	12	4	10	2	2	1	1	2	1	10					2 (Matron, Asst. Matron)			153
Nurse Aid	48 (6 x 8)	4	30	12		12	4	10	5	2	2	2	2	5	10								146
Test Technician										10		4											14
X-Ray technician											4												4
Therapist												3											3
Pharmacist																		10					10
Equipment Engineer																					10	10	20
Clerk					O.P.D 8 (Recep. Acct.)		1 (Recep- tion)				1	1								13 (Includ. 10 Clerks)		3 (Tel. Exchs.)	27
Total	120	11	63	27	28	36	9	26	9	14	10	5	5	5	6	22	10		17		10	13	452

5-2-3 Estimated Budget for the Operating Expenses of the Facility

The estimated budget for the annual operating expenses of the facility are as follows:

Operating expenses:	1,184,000 Rs/year
Repair expenses:	194,500 Rs/year
Personnel expenses:	6,612,000 Rs/year
Total	7,990,000 Rs/year

(1) Operating Expenses of the Facility (See Fig. 5-2-i.)

The estimated budget for the operation of the facility expenses at the children's hospital are as follows:

Electricity:	570,000 Rs/year
Gas	
Gas charge for air conditioning:	450,000 Rs/year
Gas charge for living:	13,000 Rs/year
Water	151,000 Rs/year
Total	1,184,000 Rs/year

(2) The repair expenses vary greatly over the course of the time. For example, it can be reasoned that the repair expenses of the buildings about 5 years after the completion of the buildings will be 1 rupee/m², annually and for the equipment about 5 rupee/m² annually. However, these repair expenses increase suddenly after 5 years have passed from the completion date. The repair expenses are calculated on the assumption that the annual average repair expenses for the building are 25 rupee/m² and those for the equipment are 50 rupee/m² for a 30-year period.

$$(25 + 50) \text{ rupee/m}^2 \times 12,000 \text{ m}^2 = 900,000 \text{ rupee/year}$$

The repair expenses for materials change according the frequency of their use. It is regarded as being approximately 2% of the material cost.

$$20,000,000 \text{ rupee} \times 0.02 = 400,000 \text{ rupee/year}$$

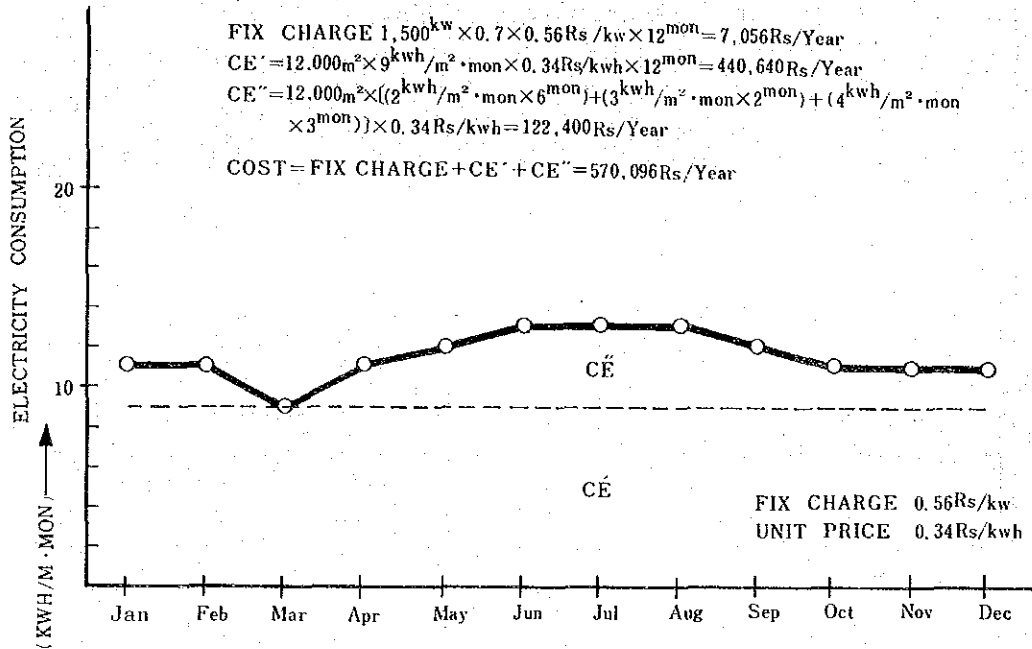
$$\text{Repair expenses (Total)} \quad 1,300,000 \text{ rupee/year}$$

(3) Hospital Operation Personnel Expenses (excluding Labourers)

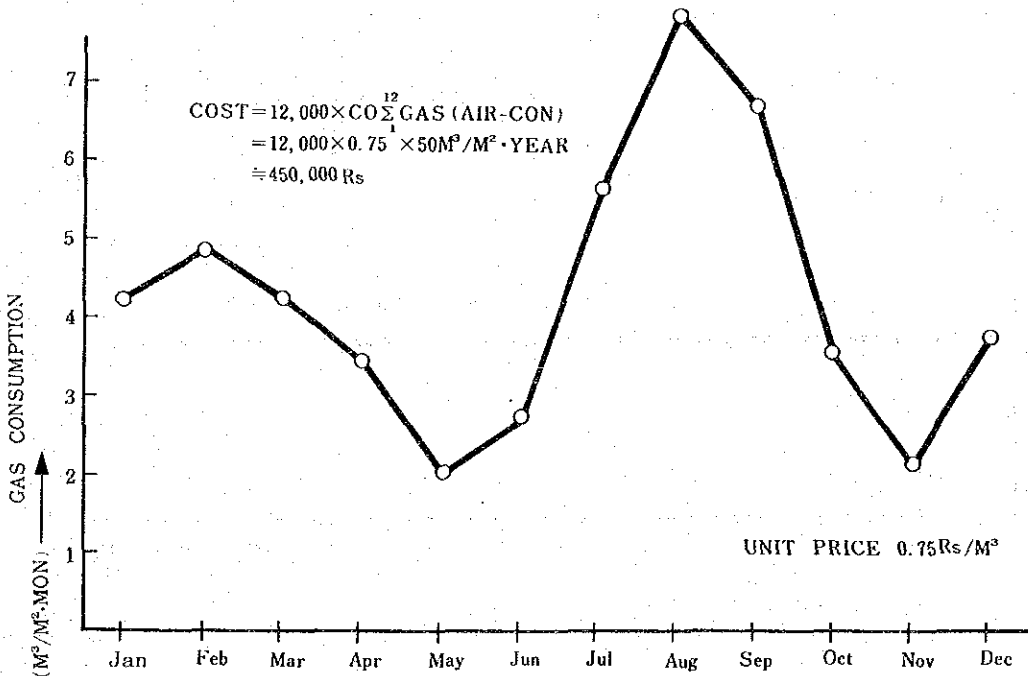
	Rs./man. month		persons		months	
Doctor	Rs. 3,000	x	35	x	12	= Rs. 1,260,000.-
Jr. Doctor	1,700	x	40	x	12	= Rs. 816,000.-
Nurse	1,000	x	153	x	12	= Rs. 1,836,000.-
Nurse Aid	800	x	146	x	12	= Rs. 1,401,600.-
Examination Technician, etc.	1,400	x	21	x	12	= Rs. 352,800.-
Pharmacist	1,000	x	10	x	12	= Rs. 120,000.-
Equipment Engineer	1,400	x	20	x	12	= Rs. 336,000.-
Clerk	2,000	x	5	x	12	= Rs. 120,000.-
"	1,400	x	22	x	12	= Rs. 369,600.-
Total						Rs. 6,612,000.-

Fig 5-2-i Operating Expenses of the Facility

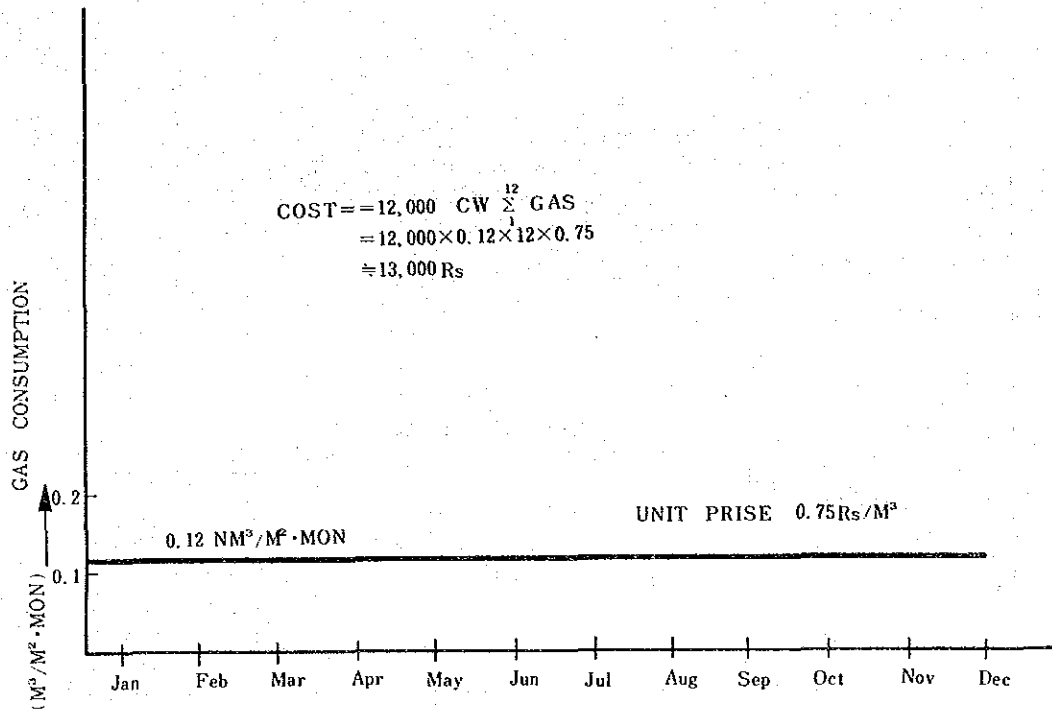
(1) Electricity Charges



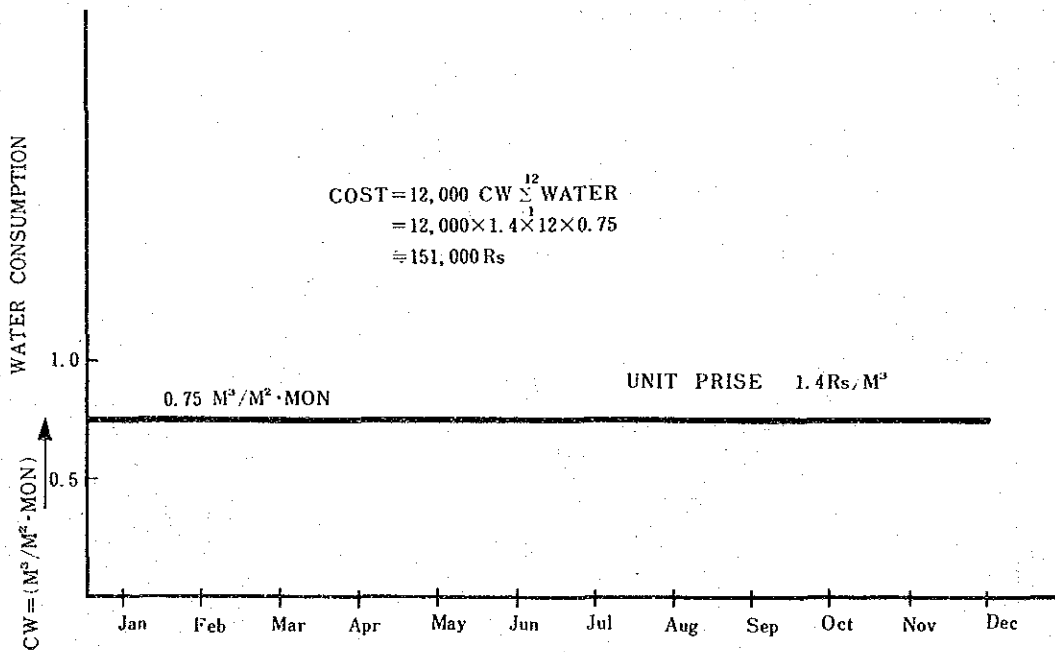
(2) Gas Charges for Air Conditioning



(3) Gas Charges for Livelihood



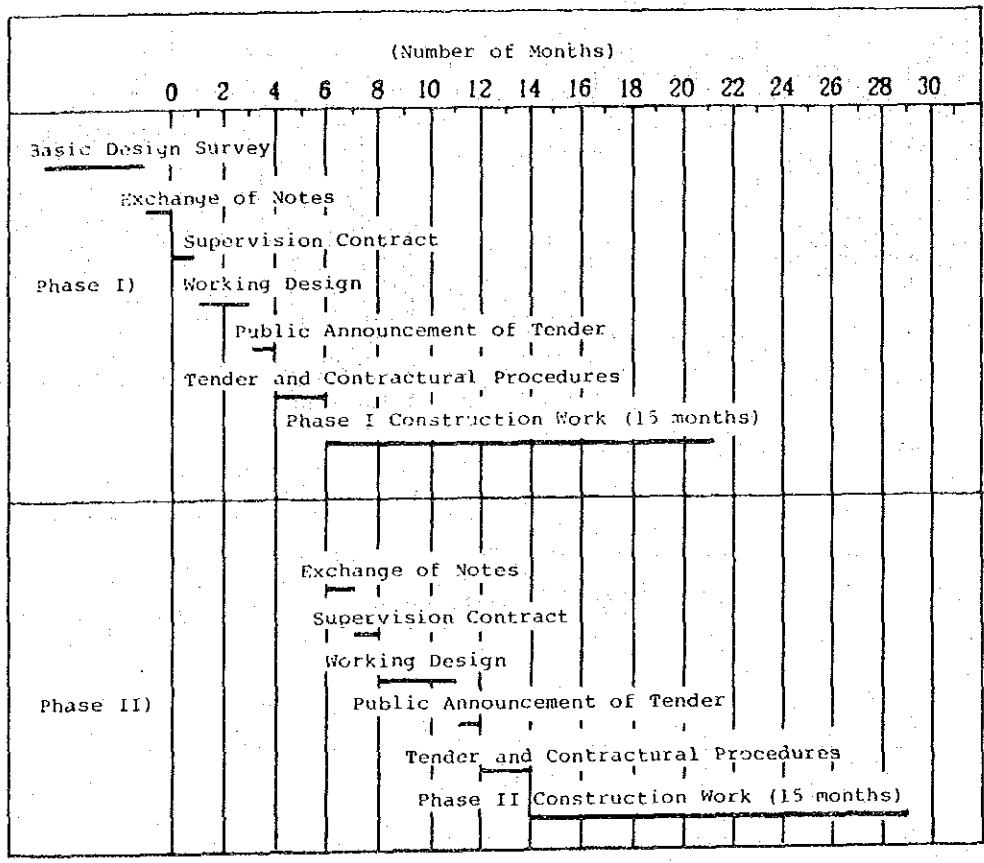
(4) Water Supply Charges



5-3 General Schedule

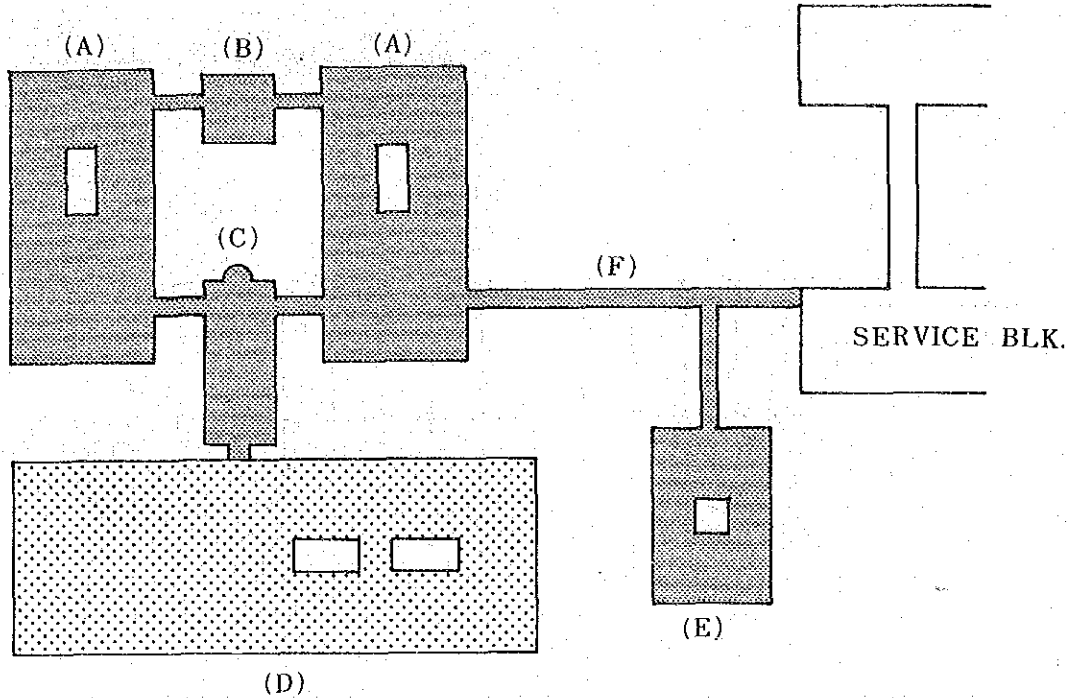
In executing this Children's Hospital construction plan with the Japanese Government's grant aid, we propose a schedule as laid out in 5-3-1 below. The work to be performed under the direct responsibility of the Government of Pakistan, shall be carried out according to this schedule.

5-3-1 Schedule



5-3-2 Division of Construction Work between Phase I and Phase II

The Children's Hospital Construction Project is divided into 2 phases. The diagram below shows the different phases of work under which each department falls.



 Construction Phase I  Construction Phase II

- (A) Ward BLK
- (B) Mother BLK
- (C) Service BLK
- (D) Central Clinic BLK
- (E) Isolation Ward BLK
- (F) Connecting Corridor

5-4 Main Construction Material Plan

- (1) The selection of construction materials will be based on the construction technology, material, process, economic conditions prevailing at the site and the construction time allowed.
- (2) The quality grade of the projected building will be planned to conform with that of the 500 Bed Teaching Hospital in the same complex.
- (3) The main material procurement plan is as follows:

	Japanese material	Pakistani material
Building Materials	Steel bars Steel and aluminium sash partition (simplified & stationary) X-ray room special wall material, special glass, vinyl tile Sign plan material	Sand, gravel, cement, brick, mortar, wood, terazzo blocks, marble, tile, glass plate, paint Asphalt water-proof material Wood joinery, concrete form plate
Electrical Equipment	Distribution panel generator NURSECALL electric clock public address system telephone system DOCTORCALL (paging) automatic fire alarm switch, receptacle (medical) elevator	Electric wire and cable Vinyl conduit tube lighting appliance (incl. bulb) switch, plug-receptacle (general)

	Japanese material	Pakistani material
Air Conditioning Equipment	Refrigerator, boiler, air conditioner pump, insulation material insulation material (GW), valve, galvanized steel plate blower, damper, monitoring panel	Steel pipe for piping steel pipe fitting insulation material (stilofoam)
Sanitary Equipment	Sanitary equipment valve, waste water treatment facility (for epidemic examination), hydrant box, medical treatment gas, kitchen facility (for cafeteria), laundry equipment	Sanitary equipment (Eastern style), steel pipe for plumbing, fitting for plumbing, cast-iron pipe for effluent, Hume pipe (reinforced concrete pipe)

Chapter 6 Assessment of the Project

Chapter 6 Assessment of the Project

6-1 Appropriateness of this Project and the Effects of the Assistance Offered

(1) The population of Pakistan at the end of 1977 or 1978 was estimated to have been 75,630,000 and it has been increasing continuously since 1970 at a rate of 3% per annum. The current Five-Year Plan is provided on the assumption that the rate of population increase during the period of this plan will be 2.8% per annum on the average. The objective is to assure basic medical services for the total population of this country by expanding the medical treatment system, modernizing the facilities and administering more vaccinations against malaria, BCG, polio and diphtheria, etc. The statistics show that the infant mortality rate is very high in this country, and this fact means that 1 in 10 new born babies die (Japan: 7.5 in 1000), and therefore, to reduce the infant mortality rate is to raise the average life expectancy of the people of this country. From such a high death rate among babies and infants, it is easy to understand the importance of the project for Pakistan to improve and strengthen a health-maintenance system and facilities for the babies and infants.

(2) Islamabad Hospital Complex is one of the most important projects among the Five-Year Plan for modernization of medical services as promoted by the Government of Pakistan. It is expected that the function of the Children's Hospital, which forms a part of the Complex, will be to improve and to expand medical care services for the children in Pakistan.

(3) Having the combined function of teaching hospital and general hospital, it is expected to provide a place of medical education and training for medical personnel and students in Pakistan. Considering the present circumstances that medical staff are increasingly needed, the effect on current demand will be very positive.

(4) Designed after full consideration for the actual condition in Pakistan, the Children's Hospital will also play a role as a

leading hospital responsible for children's medical care in the country with complete medical functions and facilities. It is also hoped that trained medical personnel who have already left Pakistan for posts at foreign medical facilities will eventually return to work at this new hospital.

(5) The characteristics of the Children's Hospital differs from what is generally the case in Japan a country with highly specialized pediatric hospitals. However, considering the standard of medical treatment public health and social conditions in Pakistan, this type of multi-purpose hospital with the main function of primary care, is very practical. It is hoped that its contribution towards children's medical care services in Pakistan will be considerable.

(6) From the aforementioned background, it is undoubtedly important for the Pakistani government to urgently construct this pediatric hospital in the Islamabad Hospital Complex. Furthermore, cooperation to be extended from the Japanese government to this construction program would make a great contribution to the improvement of health-maintenance and medical treatment systems for babies and infants of Pakistan, eventually making a contribution to the social and economic development of the country. It is in this significant area that Pakistan's expectation for Japan's cooperation to in this construction project is extremely high. In fact, this is considered to have an immense significance. It is also considered to be possible to further deepen the friendly relations between these two countries.

Chapter 7 Concluding Remarks and Proposition

Chapter 7 Concluding Remarks and Proposition

7-1 Concluding Remarks

In preparing this basic design, if an ideal pediatric hospital is to be planned based on that in Japan and in other industrialized countries in Europe and North America, it is estimated naturally that both its size and the budget will be considerably large. However, this basic design concept, the basic principle of which is to plan a children's hospital most appropriate for the present situation in Pakistan, considering the country's medical standard, public health, social situations and construction conditions, differs in character from that of highly specialized pediatric hospitals. Nevertheless, this project is very significant with regard to the present situation of children's medical care in Pakistan and it is fully expected that it will contribute a great deal to the promotion of children's health and medical care throughout the country.

7-2 Proposition

In order to secure the prompt realization of this construction project and also to ensure the smooth and effective operation of this new pediatric hospital for accomplishment of the initial objective, the following propositions are herein made to the Pakistan Government:

- (1) Propositions concerning the Implementation of this Construction Project
 - 1) Preparation of the Construction Site
 - 2) To provide the cooperation and conveniences essential for executing the design and construction work
 - 3) To give priority in supplying materials and equipment of good quality essential for the construction work
 - 4) Execution of the work to be carried out by the Pakistani parties concerned.

- 5) Cooperation for the acceleration of work progress.
- 6) The effective operation and maintenance of the hospital.
- 7) Sufficient maintenance and control of the building and equipment.

(2) Propositions Regarding Medical Treatment, Operation and Management of the Hospital

- 1) Establishment of an Effective Operation, Maintenance and Control System for the Hospital

In order to accomplish the smooth operation of this pediatric hospital and to achieve the initial objective, it is necessary to properly maintain the facilities and the equipment and also to establish an appropriate medical treatment and management system to match the facilities. To this end, it is necessary to urgently recruit a director, doctors for the various departments, an office manager, chief nurse, technicians and other key staff members of this hospital to control and operate the hospital. It is desirable, if possible, for these staff members to participate in this project from design stage.

- 2) Propositions Pertaining to the Adequate Maintenance and Management of the Building and Equipment and the Appropriate Budgeting of Expenses

It is necessary to organize a system to execute satisfactory standard of maintenance and to check of the buildings and the equipment on a periodical basis.

In other words, as this pediatric hospital is to be provided with a variety of equipment for air-conditioning, electrical and medical treatment services, it is mandatory for this hospital to be provided with skilled technicians, to be engaged exclusively in the maintenance and management of these buildings and equipments.

Other than the general technicians who shall be engaged in the maintenance and management of the buildings and the equipment, it is necessary to provide special training programs for technicians

in the following categories:

- a) Technicians assigned to the medical equipment
- b) Technicians assigned to the radiative equipment
- c) Technicians assigned to the air-conditioning equipment
- d) Technicians assigned to the electrical equipment
- e) Technicians assigned to management and control of energy
- f) Technicians assigned to lifting equipment
- g) Technicians assigned to equipment related to environmental preservation and pollution control

Further, since this Children's Hospital is to be equipped with a variety of facilities, its maintenance and administration expenses will be higher than those of existing hospitals in Pakistan. Therefore, it is necessary to carefully plan the maintenance and administration expenditure budget by taking into consideration the major elements which are described in the foregoing Maintenance and Control.

Appendix I

I – 1. Composition of the Survey Team

I – 2. Survey Schedule and Pakistani Participants

I – 3. Organizations Concerned

I – 4. Minutes of Basic Design Study

I – 5. Minutes of Confirmation Study of Basic Design

I – 6. Outline of the Study of Basic Design

I – 7. Outline of the Confirmation Study of Basic Design

Appendix I - 1 Composition of the Survey Team

1. Study of Basic Design (from April 24 to May 14, 1982)

- 1) Leader: Hirobumi Nemoto, Pediatrics Dept., Tokyo Women's Medical College Second Hospital
- 2) Member: Shozo Matsuura, Project Coordinator Basic Design Div., Grant Aid Dept., Japan International Cooperation Agency
- 3) Member: Toyoo Kawamura, Architectural Planner, Kisaburo Ito Architects & Engineers Inc.
- 4) Member: Kazuo Tsunetomi, Architectural Designer, Medical Equipment Engineer, Kisaburo Ito Architects & Engineers Inc.
- 5) Member: Iwao Yamanaka, Facilities Designer, Kisaburo Ito Architects & Engineers Inc.
- 6) Member: Katsuo Okuma, Facilities Designer, Kisaburo Ito Architects & Engineers Inc.
- 7) Member: Seiji Akiba, Structural Designer, Kisaburo Ito Architects & Engineers Inc.

2. Confirmation Study of Basic Design (from July 16 to July 25, 1982)

- 1) Leader: Hirobumi Nemoto, Pediatrics Dept., Tokyo Women's Medical College Second Hospital
- 2) Member: Jitsuo Takasugi, Project Coordinator Agricultural Planning Div., Agricultural Planning Dept., Japan International Cooperation Agency
- 3) Member: Toyoo Kawamura, Architectural Planner, Kisaburo Ito Architects & Engineers Inc.
- 4) Member: Kazuo Tsunetomi, Architectural Designer, Medical Equipment Engineer, Kisaburo Ito Architects & Engineers Inc.

Appendix I - 2 Survey Schedule and Pakistani Participants

1. Study of Basic Design (from April 24 to May 14, 1982)

(1) Study Schedule

Order	Date	Day of Week	Contents
1.	Apr. 24	Sat.	Left Tokyo
2.	Apr. 25	Sun.	Arrived in Islamabad via Karachi, Courtesy call at the Japanese Embassy (Ambassador Suzuki, Mr. Matsumoto, Secretary, Mr. Oshima, Secretary). Discussion among team members.
3.	Apr. 26	Mon.	Courtesy call at the Economic Affairs Division (Mr. S. G. Ahmad and others) and at the Health and Social Welfare Division (Mr. A. Sami Qureshi and others), Study at Rawalpindi General Hospital.
4.	Apr. 27	Tues.	Visited Islamabad Hospital Complex and Islamabad Central Government Polyclinic.
5.	Apr. 28	Wed.	Consultation with the Economic Affairs Div. at the IHC's project office and discussion with Mr. Afzar, the IHC consultant.
6.	Apr. 29	Thurs.	Consultation with the Ministry of Health and Social Welfare at the IHC's Project Director's office and a Question and Answer session on the study items with Mr. Afzal.
7.	Apr. 30	Fri.	Holiday. Discussion among team members.
8.	May 1	Sat.	National holiday (May Day). Discussion among team members.
9.	May 2	Sun.	Consultation with the Ministry of Health and Social Welfare at IHC's project office (medical material and equipment). Mr. Yamanaka and Mr. Okuma arrived in

Order	Date	Day of Week	Contents
			Islamabad. Drawings made. Re-scheduled study items.
10.	May 3	Mon.	Consultation with the Ministry of Health and Social Welfare at the IHC's project office (draft basic design). Question and answer session on the study items with Mr. Afzal.
11.	May 4	Tues.	Consultation with the Ministry of Health and Social Welfare at the IHC's Project Director's office (Signing the minutes). Intermediate report to the Ambassador. Study at the construction site of the IHC (compiling materials and information).
12.	May 5	Wed.	Consultation with the Ministry of Health and Social Welfare at the IHC's project office (technical discussion). Re-scheduled study items. Rearranged material. Dr. Nemoto, leader and Mr. Matsuura left for Japan.
13.	May 6	Thurs.	Consultation with the Ministry of Health and Social Welfare at the IHC's project office (technical discussion). Observed the current construction works at the site. Rearranged and analyzed the material compiled.
14.	May 7	Fri.	Holiday. Meeting among team members .
15.	May 8	Sat.	Consultation with the Ministry of Health and Social Welfare at the IHC project office (technical discussion). Meeting among team members.

Order	Date	Day of Week	Contents
16.	May 9	Sun.	Consultation with the Ministry of Health and Social Welfare at the IHC's project office (technical discussion). Rearranged material.
17.	May 10	Mon.	Visited the Central Telecommunication Laboratories. Rearranged and analyzed the material.
18.	May 11	Tues.	Study of IHC construction site and premises. Visited the Ministry of Health and Social Welfare building. Visited Rawalpindi General Hospital.
19.	May 12	Wed.	Outline report of the study at the Embassy (Minister Kuroiwa, Mr. Matsumoto, 1st Secretary). Reconfirmed the premises of the pediatric hospital. Final consultation with the Ministry of Health and Social Welfare at the IHC Project Director's office
20.	May 13	Thurs.	Left Islamabad and arrived in Karachi. Visited the Karachi Jinnah Hospital Cardiovascular Section.
21.	May 14	Fri.	Left Karachi and arrived in Tokyo.

(2) Pakistani Participants

1) Economic Affairs Division

Mr. S.G. Ahmad

Joint Secretary

Mr. Afzamadi Hmwosad

Deputy Chief

2) The Ministry of Health and Social Welfare

Mr. Sami Qureshi

Secretary Health

Brig. (Refd.) Tanwir ul Haq.

Project Director IHC

3) Other participants

Dr. Khawig Abbas

Children Specialist

Rawalpindi General

Hospital

Engineer Mohammad Affzal

Consultant from Engineer-

ing Associates for IHC

Engineer M.A. Bari

Chief Resident Engineer

IHC

2. Confirmation Study of Basic Design (from July 16 to July 25, 1982)

(1) Study Schedule

Order	Date	Day of Week	Contents
1.	July 16	Fri.	Left Tokyo
2.	July 17	Sat.	Arrived in Islamabad via Karachi. Visited the National Institute of Child Health, Jinnah Post-Graduate Hospital Center.
3.	July 18	Sun.	Made arrangements for the study schedule at the Embassy (Mr. Taguchi, secretary, Mr. Oshima, secretary). Consultation with the Ministry of Health and Social Welfare at the IHC project office.
4.	July 19	Mon.	Dr. Nemoto, leader and Mr. Takasugi joined the team. Consultation with the Ministry of Health and Social Welfare at the IHC Project Directors office.
5.	July 20	Tues.	Courtesy call at the Economic Affairs Div. Courtesy call at and consultation with the Ministry of Health and Social Welfare. Courtesy call at the Embassy and attended a luncheon party held by the Embassy. Consultation with the Ministry of Health and Social Welfare at the conference room (Brig. (Refd.) Dr. Tanwir ul Haq).
6.	July 21	Wed.	Final consultation with the Ministry of Health and Social Welfare at the IHC project Director's office (Signed the minutes). Report on the development of the study at the Embassy.

Order	Date	Day of Week	Contents
7.	Jul. 22	Thurs.	Visited the construction site of the IHC. Organized matters relating to consultation.
8.	Jul. 23	Fri.	Holiday. Meeting among team members.
9.	Jul. 24	Sat.	Organized matters relating to consultation. Left Islamabad.
10.	Jul. 25	Sun.	Arrived in Tokyo via Karachi.

(2) Pakistani Participants

1) Economic Affairs Division

Mr. Affzaluddin Ahmad	Deputy Secretary
Mr. M. Luftfullah	Joint Secretary
Mr. J. Suhil	Section Officer

2) The Ministry of Health and Social Welfare

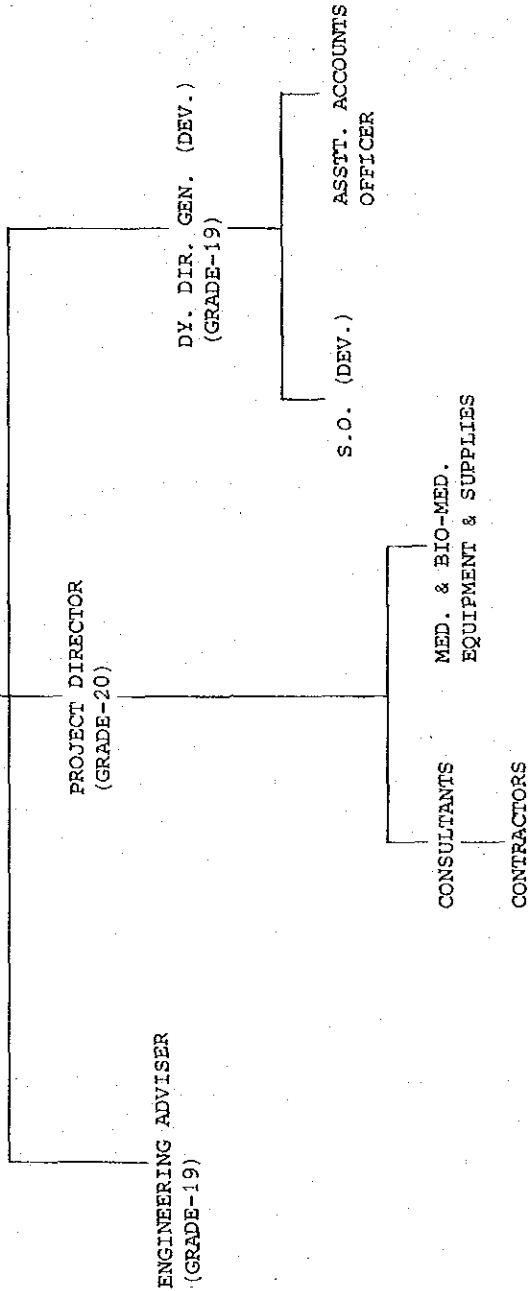
Mr. A. Sami Quereshi	Secretary Health
Mr. M. Iqbal Chandhry	Director General Health
Brig. (Refd.) Tanwir ul Haq.	Project Director IHC
Mrs. Dr. S. Bano Abha	Depy. Dir. General Health Division
Mr. Inamullah Khan	Section Officer, Develop- ment, Health Division
Mr. Mahmood ul Hassan	Section Officer, Personnel II Health Division
Mr. Parvez Akhtar	Eco. Investigator, Health Division

2. Islamabad Hospital Complex Project

ORGANIZATION

ISLAMABAD HOSPITAL COMPLEX PROJECT

DIRECTOR GENERAL HEALTH/ADDL. SECY.



COORDINATION

TECHNICAL

- a) PROJECT DIRECTOR WITH ENGINEERING ADVISER AND VICE VERSA.
- b) ENGINEERING ADVISER WITH CONSULTANTS AND VICE VERSA.
- c) ENGINEERING ADVISER WITH D.D.G. (DEV.), S.O. (DEV.), A.A.O. AND VICE VERSA.

MINISTERIAL LEVEL

- a) PROJECT DIRECTOR WITH D.D.G. (DEV.), A.A.O. AND VICE VERSA.
- b) ENGINEERING ADVISER WITH D.D.G. (DEV.), S.O. (DEV.), A.A.O. AND VICE VERSA.
- c) ENGINEERING CONSULTANTS WITH D.D.G. (DEV.), S.O. (DEV.), A.A.O. AND VICE VERSA.

Appendix I - 4 Minutes of Basic Design Study

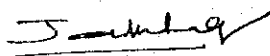
MINUTES OF DISCUSSIONS
ON
THE CONSTRUCTION PROJECT OF CHILDREN'S
HOSPITAL, ISLAMABAD, IN THE ISLAMIC RE-
PUBLIC OF PAKISTAN

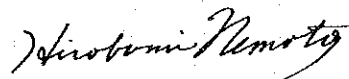
On the request from the Government of the Islamic Republic of Pakistan for the grant aid for establishing the Children's Hospital at Islamabad, the Government of Japan, through Japan International Cooperation Agency (JICA), has sent a team to Pakistan to carry out the Basic Design Study for construction of the Children's Hospital (the project) from 25th April to 13th May in 1982.

The Team visited the project site, existing medical facilities and held series of discussions and exchanged views with the Pakistani authorities concerned.

Both parties have agreed to recommend their respective Governments and authorities concerned to examine the results of the discussions attached herewith towards realization of the project.

4th May 1982
Islamabad
PAKISTAN


Brig (Retd)
(Tanwir Ul Haq)
Project Director
Islamabad Hospital Complex


(Dr. Hirobumi NEMOTO)
Leader
J I C A Team

- (1) The objective of the project is to provide medical facilities to the children of the population of Islamabad and its surrounding areas.
- (2) The construction site is in the Islamabad Hospital Complex as shown in Annexure - I.
- (3) J I C A carries out the basic design study in line with the activities described in the Inception Report.
- (4) The Government of Pakistan will take necessary measures on the condition that the grant aid by the Government of Japan is extended to the project:-
 - (i) To provide necessary data and information to a Japanese Consultants and a Contractor for the detailed engineering services and construction.
 - (ii) To secure land necessary for the construction of facilities and to clear, fill and level the site as needed before the commencement of construction.
 - (iii) To extend utility services such as electricity, water, and other incidental facilities to the sites during the construction.
 - (iv) To ensure prompt unloading and customs clearance in Pakistan of imported materials for the construction and facilities the internal transportation for team.
 - (v) To exempt Japanese nationals concerned from custom duties, internal taxes and other fiscal levies which may be imposed in Pakistan on the occasion of the supply of material and services for construction.

(vi) To provide and accord necessary permissions, license and other authorization required for carrying out the project.

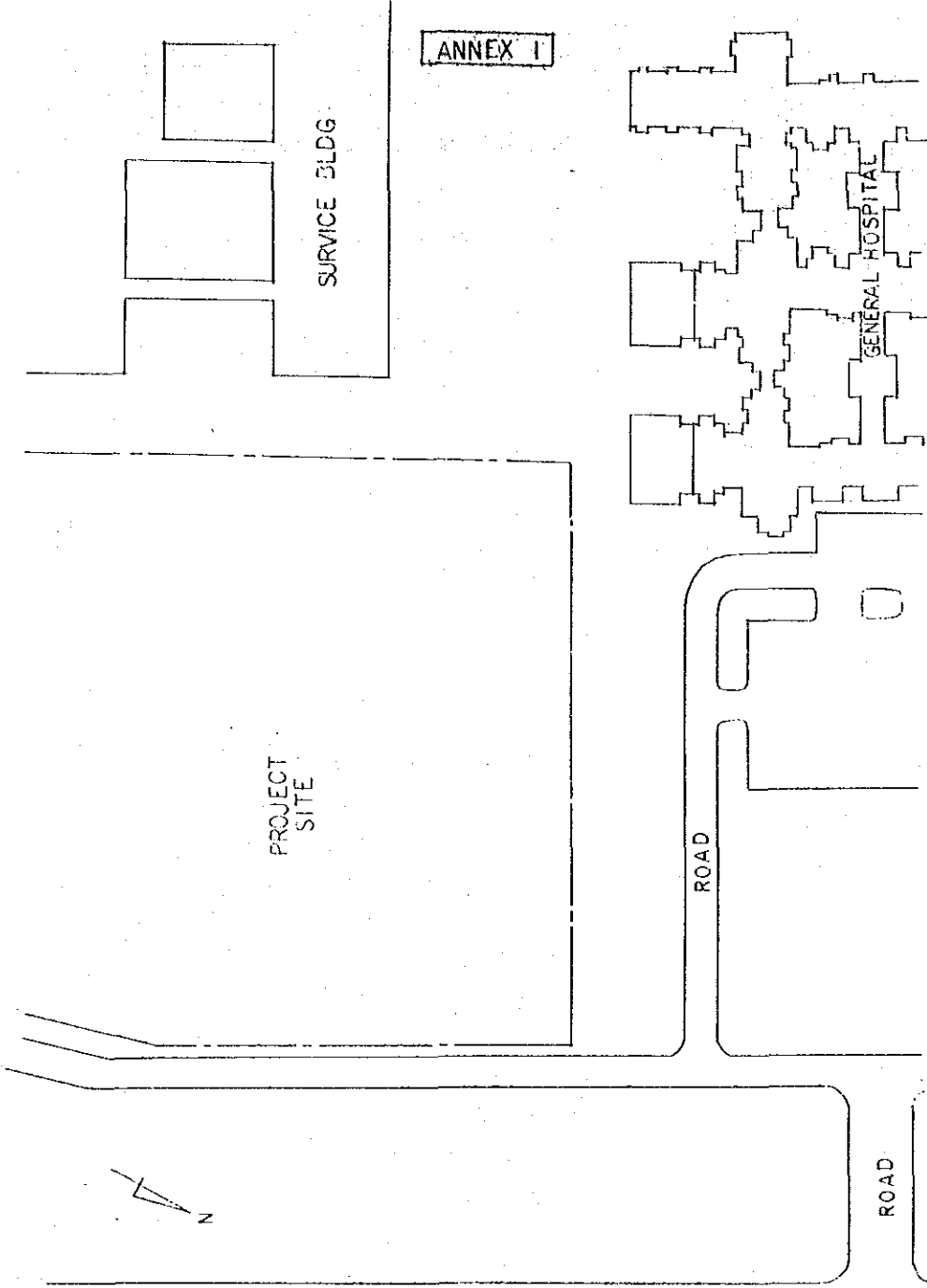
(5) The cost of buildings and facilities and items of principal equipment as requested by the Government of Pakistan will be borne by the Government of Japan:

(i) Buildings And Facilities

- (a) Out Patient & Emergency Department
- (b) Operation Theatres.
- (c) Radiology Department.
- (d) Pathology Laboratories.
- (e) Nursery with Premature Babies.
- (f) Intensive Care Unit.
- (g) Mother's Area.
- (h) Physiotherapy Department.
- (j) Administration Wing.
- (k) In Patients Ward with 200 beds.
- (l) Other incidental facilities

(ii) Equipment

Equipment items necessary for the project are listed in Annexure II. Numbers, rough specifications and appropriate alternatives of those equipment will be recommended in the Basic Design Study Report by J I C A.



ANNEXURE-II

List Of Principal Medical Equipment

<u>DEPARTMENT</u>	<u>DESCRIPTION</u>
1. General Wards	Bedpan Washing And Sterilizing Apparatus Body Wiping Trolley Hair Washing Trolley Hair Washing Chair Wheel Chair (Children) Dressing Cart Vacuum Suction Device Urinal Bedpan Carriage Bedpan Carriage Karte Bedpan Carriage Medicine Cart Oxygen Tent Supersonic Wave Nebrizer Dicubitus Protected Mattress Artificial Aspirating Machine Portable Electrocardiograph Automatic Blood Transfusion Pump
2. Out Patient Department	Fundus Scope
3. Ophthalmology	Fundus Scope Ophthalmoscope Fundusscop Slit Lamp Microscope Ophthalmology Clinical Unit Operating Table
4. Otolaryngology	Otolaryngology Clinic Otorhinology Unit Nebulizer Unit Vacuum Suction Device Simple Operation Bed Audiometer Static Sensograph

- 5. Nephrology & Urology Unit
 - Bronchoscope
 - Dialysis Equipment
- 6. Dermatology
 - Ointment making Table
- 7. Internal Medical
 - Medical Examination Table
 - X-Ray Film Viewing Box
 - Blood Pressure Meter
 - Equipment Cabinet
 - Stop Watch
- 8. Surgery
 - Medical Examination Table
 - X-Ray Film Viewing Box
 - Mechanical Cabinet
 - Stop Watch
- 9. Emergency
 - Medical Examination Table
 - X-Ray Film Viewing Box
 - Heart Monitor
 - Respirator
 - Defibrillator
 - Anesthesia Machine
 - Shadowless Light (Stand Type)
 - Emergency Cart
 - Emergency Resuscitation Equipment
 - Minor Surgery Set
 - Automatic Transfusion Pump
- 10. Orthopedics
 - Medical Examination Table
 - X-Ray Film Viewing Box
 - Plaster Table
 - Traction Equipment
 - Equipment Cabinet
- 11. Clinical Path Lab
 - Binocular Microscope
 - Trinocular Microscope
 - Lamp
 - Photographic Equipment
 - Direct Reading Balance
 - Chemical Balance
 - Hydrometer

Accessories of Microscope
Standard Centrifuge
Hematocrit Centrifuge
Cell Clinical Centrifugal Equipment
Refrigerator
Refrigerator + Freezer
Ice Machine
Incubator
Temperature Stabilizer
Sterilizer (Erobes)
Pipette Washer
Mixing Pipette Washer
Ultrasonic Washer
Pure Water Maker
Agitator
Pouring Injection (Hand-Ope)
Sterilization Filter
Electric Tools Set
Optometer
Osmotic Pressure Meter
Leukocyte Selecting Machine
Hemoglobin Test Machine
Bone Marrow Puncture
Draft Chamber
Automatic Analyzer
Electrophoresis
PH Meter
Blood Gas Analyzer

12. Physiological Lab

Electrocardiograph (1 Ch)
Multi Electrocardiograph
Phonocardiograph

Electroencephalograph
Electromyograph
Respiratory Resistance Meter

13. Radiograph Department
- Pediatric X-Ray Apparatus
 - X-Ray Television
 - Surgical X-Ray (Portable)
 - Automatic Film Processor
 - X-Ray Film Viewing Box
 - Group Indirect Chest Filming Equipment
 - Tomograph
14. Surgical Operation Department
- Operating Table
 - Shadowless Light (Multiple Light)
 - X-Ray Film Viewing Box
 - Sterilization Hand Washing Equipment (Automatic Package)
 - High Frequency Surgical Equipment
 - Vaporizer (Fluothane)
 - Ventilator
 - Respiratory Flowmeter
 - Intermittent Positive Pressure Respirator
 - Automatic Respiratory Equipment
 - Heart Scope Monitor
 - Cardiac Inspection Revive Equipment
 - Oxygen Tent
15. Surgical Operation Department
- Ultrasonic Nebulizer
 - Recovery Bed
 - Stretcher
 - Automatic Infusion Pump
 - Heart Rate Respiratory Monitor
 - Pediatrics Surgical Equipment
 - Micro-surgical Equipment
 - Continuous Vacuum Suction Device
 - Anesthetic Table
 - Vacuum Suction Device
 - Equipment Table
 - Operating Microscope
 - Dermatome
 - Electric Bone Surgical Equipment

- Rent Drill
- Space Hemostat Band
- Plaster Cutter
- Spinalcard Reform Equipment
- Plaster Table
- Artificial Hip-Joint Operation Machine
- Surgical Head Light
- Equipment Cabinet
- Warmer (Infusion)
- Refrigerator
- Freezer
- Electro Thermometer
- 16. Pharmacy
- Pharmaceutical Table
- Automatic Medicine Packing Machine
- Inspection Table
- Color Box
- Electronic Precision Balance
- Direct Reading Balance
- Water Distilling Apparatus
- Working Table
- Narcotic Safebox
- Drug Cabinet
- Freezer
- 17. Central Steri-
lize Supply Dept.
- High Pressure Steam Sterilizer
- E.O.G. Air-Rator
- Ultrasonic Cleaner (Compact)
- Bag Sealer
- 18. Rehabilitation
- Knee Exerciser
- Exercise Bicycle
- Parallel Bars
- Bowing Machine
- Training Bed
- Wheel Chair
- Walk Training Stair
- Overhead Frame
- Hydrotherapy Tank

19. NICU

Incubator

Resuscitator For Infant

Treatment Table For Infant

Phototherapy Apparatus

Respirator (CPAP Type)

(Intermitted Positive Pressure Brething)
(For Infant)

Oxymeter

Blood Gas Analyzer

Baby Scale

Breeding Bottle Sterilizer

Automatic Infusion Pump

Neonatal Monitor

Milk Freezer

Refrigerator

Cot

Appendix I - 5 Minutes of Confirmation Study of Basic Design

MINUTES OF DISCUSSIONS

ON

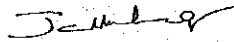
THE DRAFT REPORT OF THE BASIC DESIGN STUDY
ON THE CONSTRUCTION PROJECT OF CHILDREN'S
HOSPITAL, ISLAMABAD, IN THE ISLAMIC REPUBLIC OF PAKISTAN.

The Government of Japan has sent, through Japan International Cooperation Agency (JICA), a Basic Design Study Team to Pakistan from 18th July to 25th July, 1982 for the purpose of submitting and explaining the Draft Final Report of the Basic Design Study (the Report) on the Construction Project of the Children's Hospital (the Project).

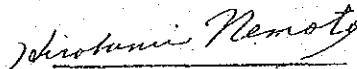
The team held meetings with the Pakistani staffs concerned to explain and to discuss on the Report. As a result of the discussions, both parties have agreed as follows:

1. The Report principally satisfied the Pakistani 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 Pakistani Government by early in September.

ISLAMABAD
24 July 1982



Brigadier
Leader Pakistani Team
(TANWIR UL HAQ)



Leader Japanese Survey Team
(HIROBUMI NEMOTO M.D.)

Appendix I - 6 Outline of the Study of Basic Design

6-1 Outline

The Japanese Government undertook the study at the site of the basic design in cooperation with the Japan International Cooperation Agency from April 24 to May 14, 1982. The study team undertook the necessary studies and consultations with the parties concerned in Pakistan to create the basic design. The following are the major results of the studies and consultations.

(1) The consultations made clear the discrepancies between the basic concept of the pediatric hospital of the Pakistan Government and the results of the study by the survey team. The Pakistan Government conceived a hospital capable of treating 2,000 outpatients a day and at the same time having the functions of a specialized children's hospital but its concept was neither specific nor had it been supported by an empirical study. The study team suggested on the basis of the results of the study that the hospital should most practicably be a general purpose child hospital taking into consideration the current medical standards, public health and social conditions of Pakistan and also having the minimum of specialist functions rather than one adopting advanced medical techniques of a university hospital level as seen in Japan and Western countries, and proposed their basic plan, while entering into consultations and living explanations. As a result, Pakistan side agreed to the draft plan in principle.

(2) This hospital shall be used for the practical training of nursing school and midwifery school students and also for the training of medical university graduates.

(3) Graduates of medical universities will become medical specialists after three to four years as junior doctors.

(4) About 4 percent of medical university graduates become pediatricians.

(5) The major diseases children suffer are diarrhea (bacteria, 30% ~ 40%, and viruses, 60%, but there are many cases where no

causes are known), infection of respiratory organs, and others including typhoid fever, tuberculosis and anomalotrophy.

(6) It is a Pakistani custom that when a patient is to be hospitalized, the mother accompanies the patient and remains until the patient is discharged. Therefore, a patient and the mother should be considered as a single unit and space for the mother should be provided for in the plan.

(7) Medical equipment should preferably be simple and easy to maintain rather than complicated and sophisticated.

(8) Pakistan assumes the responsibility of supplying only such utilities as electricity, gas and water. Our requests for the supply of various utilities were not accepted for the reason that an explanation had already been made at the preliminary study stage.

(9) The construction of the Islamabad Hospital Complex which was planned at an early stage of the planning of the city of Islamabad, was largely delayed because of financial problems and because of the necessity to review the plan, thus becoming a major factor behind the shortage of medical facilities in Islamabad. The government of Pakistan places priority on the construction of the main hospital within the complex and expects cooperation from Japan for the construction of the children's hospital as it would represent a monumental project cementing Pakistan - Japan relations.

(10) As the project has the personal backing of the president Pakistan side promises to secure sufficient budget to manage and operate the facility after completion.

6-2 Outline of the Study of Existing Facilities

The medical facilities on which the study was conducted are three hospitals located around Islamabad and one special hospital (cardiovascular).; These are outlined in the following.

(1) Rawalpindi General Hospital (Rawalpindi)

This was established in 1958 as the Punjab State Hospital having 125 beds. It was later placed under the control of the Federal Government and was placed again under the control of the State of Punjab as a teaching hospital connected with the Rawalpindi Medical College in 1980.

Since its founding, unplanned additions were repeatedly constructed and the hospital now has the following facilities.

Number of beds: Approx. 430

Number of doctors: 15

Subjects of Medical Examination: Internal medicine, surgery, urology, obstetrics and gynecology, oto-rhino-pharyngo-laryngology, orthopedics, ophthalmology, psychiatrics, pediatrics, I.C.U., dermatology.

Pediatric Department

Number of outpatients: 200 ~ 300/day

Number of beds: 22

Number of doctors: Specialist: 1

A few junior doctors or training doctors

Guide: Medical Superintendent Professor Dr. Nassar Ahmed

Pediatrician: Dr. K.A. Abbas

(2) Islamabad Polyclinic (Islamabad)

Founded in 1966.

Number of beds: 214 (24 for pediatric patients)

Number of outpatients: 1,500 ~ 2,000/day

Annual budget: Rs 16,900,000 (excluding medication)

Guide: Deputy Medical Superintendent Dr. Ashaf

Rawalpindi G.H. Dr. Abbas

(3) Holy Family (Rawalpindi)

(Planned to be an obstetrics & gynecology hospital after completion of the IHC)

Founded in 1950 as a private hospital of obstetrics, gynecology and pediatrics. It was designated the general hospital of the

State of Punjab in 1977 and became the state hospital in 1979.

Number of beds: Approx. 380

Number of outpatients: 500 ~ 800/day, 130,000/annum (number of
pediatric outpatients: 100 ~ 150/day)

It is the teaching hospital of the Rawalpindi Medical College. It is characterized that 50% of the patients, of which there are more female, are from rural area.

Annual budget: 8,000,000 rupees

Breakdown: Furnishings: 3,500,000 rupees

Manpower: 4,500,000 rupees

Guide: Medical Superintendent Dr. M. Sataar

(4) National Institute of Cardiovascular Diseases (Karachi)

This hospital is an institution founded under federal law on January 7, 1979. It is designed to perform the following functions.

- (i) Treatment of cardiovascular diseases by the latest methods
- (ii) The treatment and study of cardiovascular diseases - Acquisition of equipment and study
- (iii) Research in cooperation with foreign countries with the permission of the Federal Government
- (iv) Study of preventive measures for cardiovascular diseases
- (v) Training and education of medical students, nurses, etc.
- (vi) Development as an unsurpassed, advanced medical center for cardiovascular diseases.

The administrative organization has the Minister of Health and Social Welfare as its President and officials of the Ministry of Health and Social Welfare as the top-ranking members. Delegates from the economic circles, Karachi City and the State of Sind are among the members.

Mr. Afzal, a consulting engineer of Pakistan made arrangements

for our visit to this hospital. As the visit was made after office hours, no detailed minutes were obtained. The standards of the medical facilities and the buildings were observed despite the limited time available.

Of the four facilities, Rawalpindi General Hospital and Islamabad Poly Clinic do not have the architecture of a planned hospital construction because of repeated additions since their founding. Particularly anti-infection measures that may be important factors in the medical treatment of children were almost non-existent. A characteristic of the pediatrics section is the number of attendants, but both of these hospitals were extraordinarily crowded as compared to Japan. The arrangement of the related rooms and their sizes lacked a systematic approach, compounded by the shortage of doctors, nurses, paramedical staff and poor medical equipment. Poor lighting and aging facilities produced a image of gloomy hospitals. Compared with the ones in Japan and Western countries.

In the pediatric ward mothers or other relatives live with the patients. Provisions for cooking and washing, the rest room and shower room for these attendants were so dirty they were giving off an offensive odor. Such a situation must be corrected. The shortage of nurses may be covered by these women and the space allocated for these people can not be eliminated. Sufficient consideration will be required of these problems in the new hospital.

At the Holy Family in Rawalpindi, special care was paid to the separation of the general ward and pediatric ward and the wearing of gowns in the operating theatre. The maintenance of cleanliness was far from perfect and no air-conditioning was provided. It is said that attempts were made repeatedly for many years to put an end to the custom of a mother sleeping with the patient without success.

The medical equipment at the three hospitals was extremely poor. It seemed that in such facilities, equipment which is simple and easy to operate, as long as it has the intended functions, would be more effective than the latest sophisticated devices. The

National Institute of Cardiovascular Diseases in Karachi is a federally-owned hospital specializing in cardiovascular disease established 10 years ago to provide the medical services as outlined in the foregoing. Medical equipment such as the I.C.U., C.C.U., operating theatres, and examination room were not of a particularly high standard.

Appendix I - 7 Outline of the Confirmation Study of Basic Design

7-1 Outline

The Japanese Government conducted a confirmation study of the basic design in cooperation with the Japan International Cooperation Agency from July 16 to July 25, 1982. The study team consulted with Pakistani participants for the purpose of reaching a basic agreement on the draft report on the study of the basic design.

(1) The following is the content with further details from consultations between the study team and the Pakistani participants.

1) As the result of detailed consultation on mortuary facilities, it was made clear that there is no need for a soul-appeasing room but a dissection room is required for the purpose of pathological autopsy. It was agreed that such a dissection room would be provided underground.

2) Pakistan side requested the provision of a dental clinic. It was agreed that the oral cavity surgery section would be included among the specialist treatment for outpatients.

3) It was agreed that an isolation ward would be provided near the outpatient treatment ward. In Pakistan it is quite rare for an infectious illness to be detected beforehand and isolated. The patient is usually isolated at the time of his visit to a hospital when it is found necessary.

(2) The following is the content of the request made by the Pakistani officials.

1) Playground Equipment

There was a request for the supply of such playground equipment as a swing and see-saw for the playroom or courtyard. The survey team turned down the request for the reason that such equipment does not meet the assistance objective and the Pakistani participants agreed.