3-3 OPERATION AND MAINTENANCE PLAN

(1) Basic policy

The aim of the maintenance program is to improve and expand medical services in terms of both quality and quantity by the scale-up and renovation of the medical facilities. In addition, in order to run the self-developing operation, it will be necessary to secure maintenance staff and funds as well as to strengthen the organization.

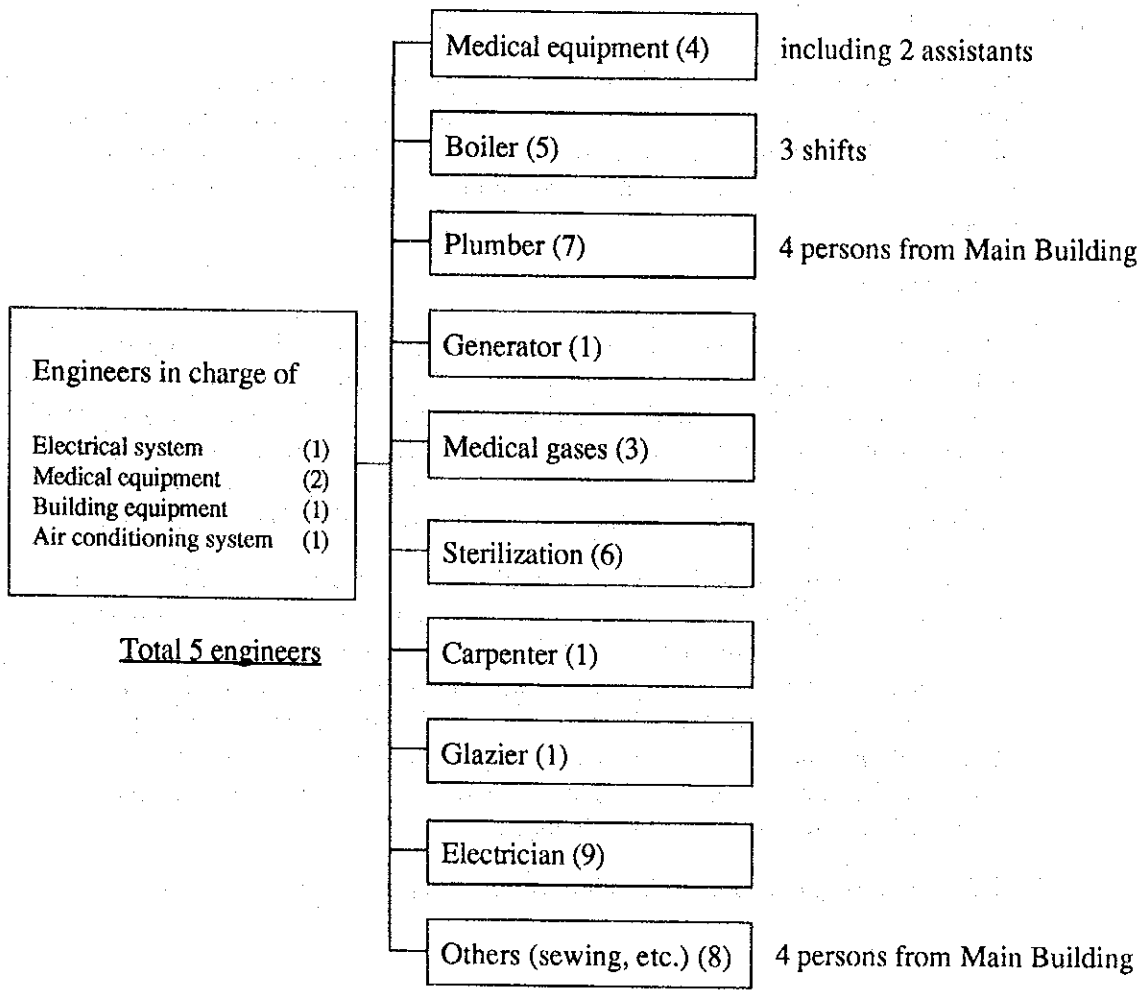
(2) Strengthening the organization

Maintenance staff are secured to a certain degree even under the existing system. Currently, medical equipment and systems are maintained by a staff of 45 under the supervision of four engineers. Daily inspection and regular maintenance on medical equipment, electrical systems and building equipment are carried out by the engineers. However, there is neither an engineer in charge of the maintenance of the air conditioning system nor a satisfactory comprehensive maintenance program.

The staff in the existing organization would suffice. With the aim of running the self-developing operation in the future, however, it is desirable to establish such an organizational structure that is capable of performing sufficient maintenance by employing an engineer in charge of the maintenance of the air conditioning system to manage equipment maintenance staff. It will also be necessary to prepare for the failures of equipment requiring expertise in maintenance such as elevators, boilers and generators by concluding a maintenance contract so that service technicians will be dispatched promptly in the event of failures.

The desirable organization of the administration department is shown below.

Organization of Administration Department



For equipment maintenance items and intervals, see Table 2-1-3.

Table 3-3-1 Building equipment maintenance items

1. Central monitoring and control systems

Equipment name	Maintenance items	Maintenance intervals					
		Hourly	Daily	Weekly	Monthly	Biannually	As necessary
Monitoring and control board Protective relay board Monitoring board Converter board Auxiliary relay board Distribution board Annunciator board	(1) Check appearances visually for fouling and damage.		○				
	(2) Check to see that signal and pilot lamps go on. (including tests)		○				
	(3) Make sure that control switches and change-over switches are in a normal position.		○				
	(4) Check to be sure that alarm units function normally.		○				
	(5) Check and record indicator readings.	○					
	(6) Check to see that recorders function normally.	○					
Uninterruptive power supply unit (CVCF)	(1) Check appearances visually for fouling and damage.				○		
	(2) Check to be sure that the unit is triggered normally.				○		

2. Electrical system

Equipment name	Maintenance items	Maintenance intervals					
		Hourly	Daily	Weekly	Monthly	Biannually	As necessary
Isolator	(1) Check insulators for fouling and damage.				○		
	(2) Check terminals and blades for discoloration at contact parts.				○		
Circuit breaker Oil-immersed circuit breaker Non-oil circuit breaker	(1) Check bushings for fouling, break and cracking.			○			
	(2) Check to see that oil is at a proper level.			○			
	(3) Check oil bath temperature. (with a thermo-label, etc.)			○			
	(4) Check circuit breakers for noises and malodor.			○			
	(5) Check control elements for damage and looseness.				○		
Transformer Oil -immersed transformer Dry type transformer	(1) Check to see that oil is at a proper level.			○			
	(2) Check oil temperature.		○				
	(3) Check transformers for noises, malodor and vibrations.		○				
	(4) Check the casing for fouling, rust and oil leaks.				○		
	(5) Check bushings for fouling and damage, and overheat at terminals.			○			
	(6) Check a breather oil level and desiccator.				○		
	(7) Check a difference in temperature between radiators.				○		
	(8) Check to see that cooling fans function normally.		○				
	(9) Check nitrogen gas pressure.		○				
Power capacitor	(1) Check the casing for fouling, damage, corrosion, expansion and oil leaks.				○		
	(2) Check it for noises and malodor.				○		
	(3) Check insulators for fouling and damage.				○		
Lightning arrester	(1) Check exteriors for damage, break and rust.				○		
Instrument transformer	(1) Check exteriors for fouling.				○		
	(2) Check it for noises and malodor.				○		
Bus-bar and cable	(1) Check appearances visually for abnormal conditions.				○		
Power fuse	(1) Check protective tubes for fouling, damage and corrosion.			○			
	(2) Check insulators for fouling and damage.			○			
	(3) Check terminals for overheat and discoloration.			○			

Equipment name	Maintenance items	Maintenance intervals					
		Hourly	Daily	Weekly	Monthly	Biannually	As necessary
Power receiving board Power distribution board (including cubicles)	(1) Check appearances visually for fouling and damage.				○		
	(2) Check to see that signal and pilot lamps go on.			○			
	(3) Check and record indicator readings.			○			
	(4) Check to see that control diverter switches function normally.				○		
Protective relay	(1) Check covers and glass for fouling and break.				○		
	(2) Check to see that targets for indicating actuation are at a normal position.		○				
Electrical Room	(1) Check the room for the evidence of water leaks and residues.				○		
	(2) Check to see that fittings on ceilings and walls are fixed firmly.				○		
Distribution transformer	(1) The same as power receiving transformer.				○		
Trunk line and bus-duct	(1) Check them for fouling, damage, deformation, overheat and discoloration.				○		
	(2) Check to see that supporting materials are fixed securely.				○		
	(3) Check flanges for looseness.				○		
Distribution board	(1) Check appearances visually for fouling and damage.				○		
	(2) Check to see that instruments mounted inside/outside boards are in normal conditions.				○		
	(3) Check connecting terminals for overheat.				○		
	(4) Check to see that signal and pilot lamps go on.				○		
	(5) Check lighting remote-controller transformers for overheat.				○		
Motor	(1) Check appearances visually for fouling and damage.				○		
	(2) Check motors for vibrations, noises, malodor.			○			
	(3) Check exteriors for overheat.				○		
Control and operation boards	(1) Check appearances visually for fouling and damage.				○		
	(2) Check to see that pilot lamps flickers normally.				○		
	(3) Check them for noises and malodor.				○		
	(4) Check terminals for looseness, discoloration and overheat.				○		
	(5) Check and record instrument readings.				○		
Lighting system, fixtures and receptacles	(1) Check appearances visually for fouling and damage.					○	
	(2) Check to be sure that lighting fixtures are fixed firmly.				○		
	(3) Check to see that lighting equipment is in good condition.				○		
Engine and compressor	(1) Check appearances for fouling, damage, rust, and oil, water or steam leaks.				○		
	(2) Check a lubricant level and lubricants for fouling and leaks.				○		
	(3) Check a fuel level and fuels for leaks.				○		
	(4) Check a cooling water flow rate and cooling water for leaks.				○		
	(5) Check to be sure that valves in oil, water and air systems are actuated normally.				○		
	(6) Make a test-run to check and record instrument readings.				○		
	(7)				○		
	(8)				○		

Equipment name	Maintenance items	Maintenance intervals					
		Hourly	Daily	Weekly	Monthly	Biannually	As necessary
Generator	(1) Check appearances visually for fouling, damage and rust.				○		
	(2) Check a bearing oil level.				○		
	(3) Make a test-run to check vibrations, noises and malodor.				○		
	(4) Check to be sure that vibration isolators function normally.				○		
	(5) Check brushes, slip rings and commutators for wear, discoloration and abnormal sparking. (excluding brushless generators)				○		
Generator board	(1) Check appearances visually for fouling and damage.				○		
	(2) Check and record instrument readings.				○		
	(3) Check to see that manual/auto change-over switches are in a normal position.				○		
Battery	(1) Check a battery liquid level.				○		
	(2) Check electrodes for deformation, damage and falling off.				○		
	(3) Check terminals for deformation and corrosion, and fastening bolts for looseness.				○		
	(4) Check steel support frames for fouling, rust and corrosion.				○		
Battery charger	(1) Check board appearances for fouling and damage.				○		
	(2) Check to see that pilot lamps go on.				○		
	(3) Check it for noises and malodor.				○		
	(4) Check and record charging voltage and amperage.				○		
Electric clock Public-address system Interphone TV common antenna system	(1) Check appearances visually for damage.				○		
	(2) Check to be sure that systems is operated normally.			○			
Lightning rod and grounding conductor	(1) Check appearances visually for damage.				○		
	(2) Check insulators and supporting hardware for break.				○		
	(3) Check to see that grounding conductors are connected securely.				○		

3. Plumbing system

Equipment name	Maintenance items	Maintenance intervals					
		Hour-ly	Daily	Week-ly	Month-ly	Biannu-ally	As neces-sary
Water receiving tank Elevated water receiving tank	(1) Check the inside for deposits and fouling.				○		
	(2) Check to be sure that alarm and control units function normally.				○		
	(3) Check them for rust and damage.				○		
	(4) Check to see that ball taps and PM valves are actuated normally.				○		
	(5) Check to be sure that manholes are locked.				○		
	(6) Check insect screens for tightness.				○		
Water supply pump	(1) Check pressure and amperage to be sure that a pump is under normal operation.	○					
	(2) Check it for noises and vibrations.	○					
	(3) Check to be sure that a foot valve and check valve function normally.			○			
	(4) Check to see that water drops normally from a gland.			○			
	(5) Check to see that oil is at a proper level.			○			
	(6) Check to see that water is drained normally.			○			
Hot water tank	(1) Check hot water temperature, water head and vapor pressure.	○					
	(2) Check a tank for water leaks and damage.	○					
	(3) Check pressure and amperage to be sure that a circulation pump is under normal operation.	○					
	(4) Check hot water through hot water supply valves at the end of pipes for color and turbidity.	○					
Chemicals injection unit (for a rust inhibitor)	(1) Check appearances visually for damage.			○			
	(2) Check connections for leaks.			○			
	(3) Check an inhibitor flow rate.		○				
	(4) Check the unit for noises and vibrations.			○			
Water heater	(1) Check the heater for water or gas leaks.			○			
	(2) Check hot water temperature, combustion state and exhaust gases.			○			
	(3) Check a hot water level.			○			
	(4) Check to see that a temperature controller is actuated normally.			○			
Wash basin	(1) Check the basin for cracking and break.			○			
	(2) Check water faucets and connections for water leaks.			○			
	(3) Check to see that water is drained normally.			○			
Cistern and flush valve	(1) Check them for plugging.			○			
	(2) Check to see that ball taps are actuated normally.			○			
	(3) Check a water level.			○			
	(4) Check them for water leaks.			○			
Water closet and urinal	(1) Check them for cracking and break.			○			
	(2) Check to see that water is drained normally.			○			
	(3) Check them for water leaks.			○			
Drain piping	(1) Check drain piping for water leaks.				○		
	(2) Check to see that water is drained normally.				○		

Equipment name	Maintenance items	Maintenance intervals					
		Hourly	Daily	Weekly	Monthly	Biannually	As necessary
Annually Sewage tank Miscellaneous waste water tank Artesian spring tank	(1) Check the tanks for an outbreak of injurious insects.			○			
	(2) Check the tanks for malodor.			○			
	(3) Check to be sure that alarm and control units function normally.			○			
	(4) Check the tanks to see that the inside is kept free of suspended particles and deposits.			○			
	(5) Check insect screens for tightness.			○			
	(6) Check to be sure that manholes are closed tight.			○			
Drainage basin	(1) Check the basin for an outbreak of injurious insects.			○			
	(2) Check the basin for malodor.			○			
	(3) Check the basin to see that the inside is kept free of deposits and fouling.			○			
Drain pump Sewage pump Miscellaneous waste water pump Artesian spring pump	(1) Check pressure and amperage to be sure that the pumps are under normal operation.	○					
	(2) Check the pumps for noises and vibrations.	○					
	(3) Check to be sure that check valves are actuated normally.			○			
	(4) Check to see that oil is at a proper level. (Check pumps of vertical type every day.)	○		○			
Gas system	(1) Check gas equipment and piping for leaks.			○			
	(2) Check to see that gas detectors function normally.			○			

4. Air conditioning and ventilation systems

Equipment name	Maintenance items	Maintenance intervals							
		Hourly	Daily	Weekly	Monthly	Once every two months	Biannually	Annually	As necessary
Boiler	(1) Record the pressure and temperature of main steam, and a water level.	○							
	(2) Check to be sure that water level gauges function normally.		○						
	(3) Measure a boiler feed water vapor rate, and check water vapor for fouling.		○						
	(4) Check and adjust automatic control units.		○						
	(5) Check to see that damper and vanes function normally.				○				
	(6) Check the outside of a boiler for fouling.				○				
	(7) Check to see that the inside of a combustion chamber is in normal condition.			○					
	(8) Check auxiliary piping for damage and leaks.						○		
	(9) Check to see that safety devices function normally. (earthquake detectors and flame eyes, etc.)				○				
Boiler water feed system	(1) Check to see that the boiler water feed system functions normally.		○						
Burner (Oil, Gas)	(1) Check to see that fuel control valves are actuated normally.		○						
	(2) Check burners and air nozzles for carbon deposits.		○						
	(3) Check to see that flame eyes function normally.		○						
	(4) Check to be sure that low water level shut-off devices function normally.		○						
	(5) Check to see that ignition devices function normally.		○						
Heavy oil and service tanks	(1) Check the tanks and piping for oil leaks.			○					
	(2) Check to see that gear pumps are under normal operation.				○				
Piping and auxiliary equipment	(1) Check the piping system for gas leaks.		○						
	(2) Check to be sure that gas flow meters (gas meters) function normally.		○						
	(3) Check to see that shut-off valves function normally.				○				
Duct and stack	(1) Check appearances for damage.							○	
	(2) Check to be sure that the stack is free of deposits at the bottom.				○				
Refrigerator Reciprocating type Turbo type Screw type Auxiliary equipment	(1) Check to see that extraction and recovery units function normally.		○						
	(2) Check to be sure that pumps are under normal operation.		○						
	(3) Check to see that automatic control units function normally.				○				
	(4) Check to see that safety devices function normally.				○				
	(5) Record instrument readings. (oil pressure, oil level, bearing temperature, vaporizing pressure, condensing pressure, cold and hot water temperature, and cooling water temperature)	○			○				
	(6) Check refrigerators for refrigerant leaks.				○				
	(7) Auxiliary equipment	○							

Equipment name	Maintenance items	Maintenance intervals							
		Hourly	Daily	Weekly	Monthly	Once every two months	Biannually	Annually	As necessary
Package type air conditioner	(1) Check the temperature of hot water and cooling water at inlet/outlet.		○						
	(2) Check ammeter readings.		○						
	(3) Check air conditioners for noises and vibrations.				○				
	(4) Check and adjust automatic control units.				○				
	(5) Check auxiliary equipment for damage and corrosion.				○				
	(6) Check to see that make-up water and float valves are actuated normally.				○				
	(7) Check air filters for fouling.				○				
	(8) Check cooling coils for fouling.						○		
	(9) Check pipes of various types for damage and water leaks.				○				
	(10) Check drain pans for damage, fouling and plugging.				○				
Air conditioner	(1) Check air filters for fouling, deposits and break.				○				
	(2) Adjust set values of temperature and humidity sensors.						○		
	(3) Adjust volume dampers.						○		
	(4) Check thermal insulation materials on the casing for damage.						○		
	(5) Check to see that automatic control units function normally.					○			
	(6) Check the inside of air conditioners and ducts for fouling.				○				
	(7) Check to see that automatic control valves of various types are actuated normally.						○		
	(8) Check drain pans for fouling and drain pipes for plugging.					○			
	(9) Check coil surfaces for fouling.						○		
Air cleaner and humidifier	(1) Check them for noises.				○				
	(2) Check to see that spray and flooding nozzles function normally.				○				
	(3) Check water tanks for fouling and corrosion.						○		
	(4) Check distributors and eliminators for fouling and damage.						○		
	(5) Check to see that make-up water valves function normally.						○		
	(6) Check piping for damage and water leaks.						○		
Air filter (Auto roll type)	(1) Check to be sure that take-up devices such as shafts, guide rolls, chains and gears function normally.				○				
	(2) Check differential pressure sensors for fouling.						○		
	(3) Check to see that automatic control units function normally.				○				

Equipment name	Maintenance items	Maintenance intervals							
		Hour-ly	Daily	Week-ly	Month-ly	Once every two months	Biannu-ally	Annu-ally	As neces-sary
Cold, hot and cooling water circulation units	(1) Check coil surfaces for fouling.						○		
	(2) Check the inside/outside of expansion tanks for corrosion.						○		
	(3) Check the amperage of pumps.		○						
	(4) Check pressure gage readings.		○						
	(5) Check to be sure that rotating, sliding and moving parts are in normal condition. (free of noises, malodor and overheat)		○						
	(6) Check to see that oil is at a proper level, and refill them as necessary.				○				
	(7) Check to see that water drops normally from a gland.		○						
	(8) Check the piping system for damage, rust and water built-up.				○				
	(9) Check to see that valves function normally.						○		
	(10) Check heat storage tanks for fouled water.						○		
Blower and exhauster	(1) Check ammeter readings.		○						
	(2) Check impellers and casings for fouling.						○		
	(3) Check them for vibrations, noises and loosen bolts.				○				
	(4) Check them for rust and corrosion.						○		
	(5) Check to be sure that V-belts are under normal tension.				○				
	(6) Check bearing temperature.				○				
	(7) Check ducts in Kitchen for oil-fouling.						○		
	(8) Check hoods and grease filters in Kitchen for fouling.				○				
Air duct and auxiliary equipment	(1) Check air ducts for air leaks.						○		
	(2) Check to be sure that dampers function normally.						○		
	(3) Check ducts, hoods, grease filters in Kitchen for fouling.				○				
	(4) Check air outlets and ventilating openings for fouling.					○			

5. Fire fighting system

Equipment name	Maintenance items	Maintenance intervals			
		Daily	Monthly	Once every three months	Annually
Fire extinguisher	(1) Check to be sure that fire extinguishers are placed and signs posted at predetermined locations.			○	
	(2) Check to be sure that appropriate indications and signs are posted at proper locations.			○	
	(3) Check them for deformation, damage and corrosion.			○	
	(4) Check them for chemicals leaks.			○	
	(5) Check pressure gauge readings.			○	
	(6) Check wheels for deformation and damage.			○	
Indoor (outdoor) fire hydrant	(1) Check to see that booster pumps start normally.			○	
	(2) Check to be sure that valves open/close at a normal position without leaks.			○	
	(3) Check to be sure that the water in the priming tank is at a normal level and the low water level alarm functions normally.			○	
	(4) Check to be sure that appropriate indications and signs are posted at proper locations.			○	
	(5) Check to see that hoses and nozzles are stored in sound condition.			○	
	(6) Check to see that pilot lamps go on normally.			○	
Automatic fire alarm system	(1) Check battery voltage.			○	
	(2) Check to see that switches are positioned normally.			○	
	(3) Test pilot lamps of various types for normal illumination.			○	
	(4) Check push button protective covers for damage.			○	
Emergency exit and leading signs	(1) Check them for deformation and damage.			○	
	(2) Check them for illumination by stand-by power sources. (Take inspection notes.)			○	
Fire door	(1) Check appearances visually for damage.			○	
Emergency lighting system	(1) Check to be sure that equipment is mounted normally.			○	
	(2) Check appearances visually for fouling and damage.			○	
Elevator					

6. Environmental and health control

Equipment name	Maintenance items	Maintenance intervals			
		Daily	Week-ly	Month-ly	Annu-ally
Air system	(1) Check temperature and humidity.	○			
Water supply system	(1) Measure residual chlorine.	○			
	(2) Check tanks to see that the inside is kept free of suspended matters and deposits.			○	
	(3) Check tank walls for damage and cracking.			○	
	(4) Check water in tanks for turbidity.			○	
	(5) Check to see that manholes are locked.			○	
	(6) Check manholes for damage and corrosion.			○	
	(7) Check to be sure that manholes are water-tight.			○	
	(8) Check insect screens for damage.			○	
	(9) Check to be sure that alarm units function normally.			○	
	(10) Check to see that ball taps are actuated normally.			○	
	(11) Check to see that pumps and valves are operated normally.			○	
Drainage system	(1) Check tanks to see that the inside is kept free of suspended matters and deposits.			○	
	(2) Check tank walls for damage and cracking.			○	
	(3) Check to be sure that manholes are closed tight.			○	
	(4) Check the drainage system for an outbreak of injurious insects.			○	
	(5) Check the system for malodor.			○	
	(6) Check insect screens for damage.			○	
	(7) Check to be sure that alarm units function normally.			○	
	(8) Check to see that automatic control units function normally.			○	
	(9) Check to see that pumps and valves are operated normally.			○	
	(10) Check to be sure that timers function normally.			○	
	(11) Check drain and vent pipes for damage, corrosion, plugging and leaks.			○	
	(12) Check interceptors for plugging, and measure the amount of sediments and suspended matters inside them.			○	
	(13) Check to see that traps are well sealed.			○	
	(14) Check traps for deposits and scaling.			○	
	(15) Check to see that aerators, mixers and auxiliary pumps are operated normally.			○	

(3) Maintenance staff plan

The hospital has a good grasp of the program of establishing an integral maintenance system by employing an engineer in charge of the maintenance of the air conditioning system and developing a maintenance plan. It has also been confirmed by the hospital that autonomous and independent maintenance would be made possible when the system is established.

(4) Developing maintenance budgets

Since expenses of maintenance staff will be covered by national treasury funds, expenses of spare parts and maintenance work are estimated. In the future, equipment renewal costs need to be estimated based on actual service life. Although the timing of renewal varies depending on equipment, it is necessary to develop the maintenance plan in accordance with the above-mentioned maintenance items and intervals.

Expenses necessary for maintenance by specialty firms

Equipment subject to maintenance	Expenses of regular maintenance (LE)	Remarks
Boiler	15,000	
Refrigerator	24,000	
Air conditioning system	75,000	
Generator	40,000	
Elevator	18,000	

CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION

CHAPTER 4: PROJECT EVALUATION AND RECOMMENDATION

4-1 PROJECT EFFECT

This project is considered to have the propriety for the following reasons.

(1) A large number of the toilets and the washbasins of the wards and inpatient's departments are destroyed, and unable to be used. And the mal-usage, such as disposing things in the toilets and the drainage are causing the clogs in the drainpipes. At times, the sewage flows out into the corridors, bringing about an incredible filthiness, unbecoming of a hospital.
In the medical ward side of the building, adoption of the locally made toilets and lavatory sinks are being considered. Also, plans are being made to shorten the cross cut of the drain pipes and to set up the pipes in locations which would make it easier to be maintained. This way, it would make it easier to deal with in case of clogs, as well as preventing any possible damages.
These repairs would be carried out together with the operations of the hospital, and since the construction deals with the basic structures (floor structure, piping systems), it could not be dealt by the Egyptian technology. Thus, in order to ensure the cleanliness, which is the basic hospital function, a quick enforcement of the plan by the grant aid of the Japanese government is necessary.

(2) In 1994, the hospital has treated 138,303 outpatients, 7,665 inpatients, and 4,008 surgeries. In the past five years, the number of outpatients have rapidly increased by 1.5 times, inpatients by 1.35 times, and surgeries by 1.35 the original number. And the hospital functions are in a peak of congestion.
One of the causes for this congestion is the 200 surgical operations per month which takes place in the dispensary room (which only has conventional air conditioning and medical gasses are sent by gas cylinders), used as outpatient surgery room, which should have been taken place in the former hospital building. And since the completion of the reconstruction of the former Pediatric Hospital would be year 2001, the present situation is yet to be dissolved.
In order to improve such conditions, the reparations of the 4th floor surgery room (so that 3 rooms could be used at a time), and the extension of the outpatients' waiting room and the outpatients emergency is inevitable and speedy reaction is required.

(3) The number of inpatients in the ICU of the 4th and 5th floor, and the medical wards (on the 2nd, 3rd, 4th floors), except surgical ward on the 3rd floor, between and during February and mid-March of 1995 are as follows:

	number of patients	Newborns (under 1 months: %)	Infants (1 month to a year)
February	333	81 (24.3%)	134 (40.2%)
March	483	116 (24.0%)	154 (31.9%)

25% of the patients in the ward are newborns under one month, and the large proportion of inpatients are held by the newborns and the infants.

The total number of patients in the 4th floor ICU (12 beds) in February and March were 76 consisting of 21 (27.6%) newborns and 19 (25.0%) infants. Which shows almost the similar tendency as in the general wards.
In order to improve the present situation in which newborns are being treated in dispersed conditions in different wards, or a number of newborns in serious conditions could not enter the ICU, plans are being considered. In it, discussion were made to bring the sections treating the newborns in one part of the hospital in order to aim for the efficiency, or to separate from the NICU (the newborn ICU) to improve the functions and to increase the number of beds.
Meanwhile, by the self support of the Egyptian side, the Neonatal Intermediate Unit was newly set up within the 2nd floor medical ward.
However, although there is an oxygen supply and aspiration system, the compressed air is only present in the pipe system, and the ordinary respirator system could not be used. Together with the fact that there is only a conventional air conditioner set in it. Also, there is no preparing room in front of the ward thus the cleanliness is equal to that of the general wards.
Since the condition is as such, the consolidation of the NICU apart from the present ICU, is strongly required for achieving the cleanliness, and for its role as an educative hospital.

(4) The existing generators, boilers, and large refrigerators are Japanese manufactures, and since there are no agencies in Egypt and not maintenance contracts are made, they are barely operating by the technical help given by the JICA specialists.
At the moment, they seem to be able to operate for a few more years. However, it is desirable that they would be changed to the local goods in the near future when they reach the end of the mechanical lives so that maintenance is possible. By this, contributions to the hospital's improvement of self maintenance could be achieved.

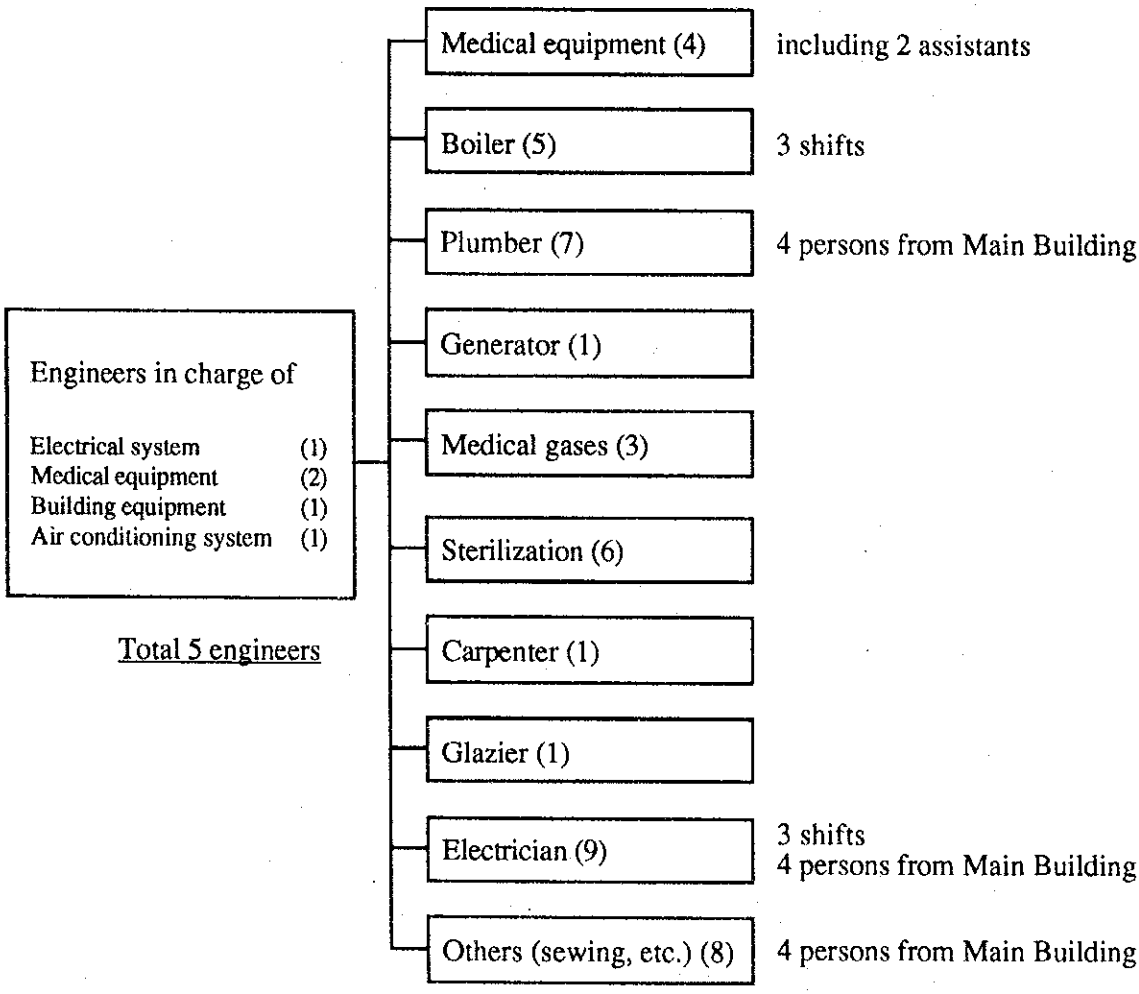
4-2 Recommendation

The hospital has been founded in 1982 by the grant aid of the Japanese government, and the Pediatric Cardiosurgey department was established by the expansion in 1986. And its activities ever since, has been gaining high evaluation within, and out of the country, and is also playing an important role as an educational facility of the pediatric hospitals.
And the project-style technological help enforced since 1983 has been showing progress. The hospital is called as the "Japan Hospital" and has become popular and trusted by the Egyptian people. The role it is playing for the friendship and goodwill of Japan and Egypt is great, and has become a symbol of the Japanese-Egyptian cooperation.
However, it has been nearly 13 years since the foundation, and there is a conspicuous superannuating due to environmental changes such as the increase of patients, re-construction of the former pediatric hospital, which is causing the increase of usage. The superannuation of the facilities due to the lack of maintenance is also notable. Thus, it is inevitable for the rehabilitation based on its independent and functional development, such as the setting of the NICU, in order to maintain the central educative and medical role as the role model of the pediatric hospitals in Egypt.
Therefore, it is judged there is great appropriateness for this construction to be undertaken by the grant aid of the Japanese government.
However, although the construction is completed, it is without question that a future maintenance plan is important in order for the lasting of the building.
Lastly, we request the following points to the Egyptian government in order to proceed with the Project.

(1) The cost needed to rebuild, repair, and maintain the facilities, as could be seen in the below chart of the example of the Japanese governmental offices, several times as much the cost of the initial construction would be needed.
As a proposal, the statistical understanding of the maintenance fee per year and the insurance of the annual budget accordingly, is necessary. And in long terms, a building of a maintenance, rehabilitation plan, the calculation and the insurance of the budget for it, would be required.

(2) The maintenance structure of the hospital is as follows.

The situation of the facilities are far from being called good, especially there are problems in the air conditioning and sanitary related areas. As an organization, the engineers taking care of these facilities are lacking, and there is a need for able mechanical engineers. And concerning the technicians of the boilers, which is the core of the facility, and the improvement of the maintenance knowledge by holding a study at the boiler makers is required.



(3) Since the construction would be proceeded while operating the hospital, not only the construction procedures, but thorough counterplans for the safety, prevention of noise, oscillation, and the dust is necessary.
Also, concerning the maintenance of the hospital functions accompanied by the construction procedures are requested to be regulated under the responsibility of the Cairo University Pediatric Hospital.

Appendices]

1. Member List of the Survey Team
2. Survey Schedule
3. List of Party Concerned in the Recipient Country
4. Minutes of Discussion
5. Cost Estimation Borne by the Recipient Country
6. Reply of the Questionnaire
7. Hearing Data of Patient Satisfaction in CUPH

1. Member List of the Survey Team

1-1 Basic Design Study Team (1995. March 23 - April 12)

Team Leader	Mr. Kiyoto Kurokawa	Grant Aid Study & Design Department, JICA
Coordinator	Mr. Tomohiro Ishimori	Grant Aid Management Department, JICS
Project Manager	Mr. Motoaki Murao	Nikken Sekkei
Architect	Mr. Shinji Miyoshi	Nikken Sekkei
Electrical Engineer	Mr. Shuichiro Hoshino	Nikken Sekkei

1-2 Draft Final Report Explanation Team (1995. July 13 - July 22)

Team Leader	Miss Etsuko Ishibashi	Tokyo International Centre, JICA
Project Manager	Mr.. Motoaki Murao	Nikken Sekkei
Electrical Engineer	Mr. Shuichiro Hoshino	Nikken Sekkei

2. Survey Schedule

2-1 Basic Design Study (1995. March 23 - April 12)

No.	Date	Description	Stay
1	Mar. 23 Thu.	Leave Tokyo for Cairo (LH711)	Frankfurt
2	Mar. 24 Fri.	Arrive Cairo (LH594)	Cairo
3	Mar. 25 Sat.	Courtesy call at CUPH. Meeting with CUPH JICA Experts. Investigation of the existing CUPH	Cairo
4	Mar. 26 Sun.	Courtesy call at the Japanese Embassy and JICA Office and MOIC. Investigation of the existing CUPH.	Cairo
5	Mar. 27 Mon.	Investigation of the existing CUPH. Meeting with CUPH	Cairo
6	Mar. 28 Tue.	Investigation of the existing CUPH. Meeting with CUPH (Mr. Kurokawa, PM arrive Cairo.)	Cairo
7	Mar. 29 Wed.	Meeting with CUPH. Courtesy call at Ministry of Education. Visit to the High Institute of Nursing.	Cairo
8	Mar. 30 Thu.	Investigation of the existing CUPH. Meeting with CUPH. Visit to CSPM. Courtesy call at Cairo University. Visit to Cairo University Hospital.	Cairo
9	Mar. 31 Fri.	Investigation of the existing CUPH	Cairo
10	Apr. 1 Sat.	Meeting with CUPH. Prepare a draft minutes	Cairo
11	Apr. 2 Sun.	Confirmation of the Minutes with CUPH and CUPH JICA Experts. Reporting to the Japanese Embassy and JICA Cairo Office	Cairo
12	Apr. 3 Mon.	Investigation of the existing CUPH. Visit to New Kasr El Ainy Teaching Hospital. (*Mr. Kurokawa, Mr. Ishimori and Mr. Miyoshi leave Cairo by BA154.)	Cairo (*London)
13	Apr. 4 Tue.	Investigation of the material cost. Meeting with Dr. Eweda.	Cairo
14	Apr. 5 Wed.	Meeting with Dr. Naggar. Investigation of the existing CUPH	Cairo
15	Apr. 6 Thu.	Visit to Boiler Manufacturer. Investigation of the existing CUPH. Hearing from patients.	Cairo
16	Apr. 7 Fri.	Investigation of the existing CUPH.	Cairo
17	Apr. 8 Sat.	Investigation of the existing CUPH.	Cairo
18	Apr. 9 Sun.	Report to JICA Cairo Office.	Cairo
19	Apr. 10 Mon.	(Mr. Murao and Mr. Hoshino leave Cairo by BA154.)	London
20	Apr. 11 Tue.	Transit	
21	Apr. 12 Wed.	(Mr. Murao and Mr. Hoshino arrive Tokyo by BA007.)	

Note CUPH : Cairo University Paediatric Hospital
MOPIC : Ministry of International Cooperation
JICA : Japan International Cooperation Agency

2-2 Draft Final Report Explanation (1995. July 13 - July 22)

No.	Date	Description	Stay
1	July 13 Thu.	Leave Tokyo for Cairo (LH711)	Frankfurt
2	July 14 Fri.	Arrive Cairo (LH594)	Cairo
3	July 15 Sat.	Meeting with CUPH JICA Experts. Courtesy call at CUPH and Cairo University. Meeting with CUPH and Cairo University.	Cairo
4	July 16 Sun.	Courtesy call at the Japanese Embassy, JICA Office and MOIC. Meeting with CUPH and Cairo University.	Cairo
5	July 17 Mon.	Meeting with CUPH and Cairo University.	Cairo
6	July 18 Tue.	Meeting with CUPH and Cairo University. Confirmation of the Minutes with CUPH and CUPH JICA Experts.	Cairo
7	July 19 Wed.	Report to JICA Cairo Office and the Japanese Embassy.	Cairo
8	July 20 Thu.	Leave Cairo for London (BA154).	London
9	July 21 Fri.	Transit	
10	July 22 Sat.	Arrive at Tokyo (JL402)	Tokyo

3. List of party Concerned in the Recipient Country

Japanese Embassy	
Mr. Hideaki Domichi	Minister
Mr. Nozomu Okibe	First Secretary
Mr. Akihiko Yahiro	First Secretary
JICA Cairo Office	
Mr. Tadashi Shimoura	Resident Representative
Mr. Hidetoshi Ishioka	Assistant to Resident Representative
Mr. Mahmoud Abd El-Halim	Development Officer
Mr. Mohamed Kamel Sadek	Public Relation
JICA CUPH Experts	
Mr. Jiro Takeshita	Anesthesiology
Mr. Yukihiro Okawa	Medical Equipment
Miss Mariko Kurosawa	Nursing
Miss Reiko Kawamoto	Nursing
Mr. Naoyuki Yazawa	Clinical Examination
Mr. Shuji Noda	Coordinator
Ministry of International Cooperation	
Mr. Wahib El Miniawy	Ambassador, Advisor for the Minister of International Cooperation
Mr. Mohsin M. Sadek	Director of Japan Department
Ms. Samiha Barakot	Director of Japan Department
Mr. Ashref Attia Nafal	Economic Researcher, Japan Department
Ministry of Education	
Prof. Dr. Hussein Kamel Baha El-Din	Minister of Education
Cairo University Pediatric Hospital	
Prof. Dr. Mohammed El-Naggar	Director
Dr. Assem Dl-Fiky	Assistant Director
Dr. Ahmed El-Beleidy	Assistant Director
Mr. Magda Zein El-Abedin	Chief Administrator
Mrs. Wafaa Mohamed Aly	Engineer
Mrs. Amal Abdel-Moneim	Engineer
Cairo University	
Prof. Moufid Shehab	President
Prof. Dr. Farouk Ismaeil	Deputy President
Prof. Dr. Moataz El-Sherbini	Vice Dean, Faculty of Medicine
Prof. M.T. Kaptam MD	Vice Dean, Faculty of Medicine
Prof. Dr. Abdel Malie Hussei Aly	General Director of All Kasr El-Aini
Prof. Dr. Mohammed Khalil	Head of Pediatric Department
Prof. Dr. Ali Abdel-Rahman	Prof. Concret Design-Faculty of Engineering
Prof. Dr. Essam El-Din Khalil	Prof. Faculty of Engineering
Prof. Dr. Aly Abdel-Rarhan	Prof. Faculty of Engineering
Prof. Dr. Mamdouh Abdel-Aziz	Prof. Faculty of Engineering
Rrof. Dr. Ramzy El-Barodi	Director of Old Pediatric Hospital (Abu Elrich Hospital)
Prof. Mohamed M. Eweda	Prof. Architecture-Technology
Prof. Mohamed Kadry	Prof. Faculty of Medicine
Manufacturer	
Mohamed Samy	Sales manager Babcock & Wilcox Egypt S.A.E.

4. Minutes of Discussion

4-1 Minutes of Discussions (Basic Design Survey)

Signed on 2 April, 1995

4-2 Minutes of Discussions (Draft Final Report Explanation)

Signed on 18 July, 1995

MINUTES OF DISCUSSIONS
ON
BASIC DESIGN STUDY
ON
THE PROJECT FOR REHABILITATION OF CAIRO UNIVERSITY PEDIATRIC HOSPITAL IN ARAB REPUBLIC OF EGYPT

In response to the request of the Government of Arab Republic of Egypt ,the Government of Japan has decided to conduct a Basic Design Study on the Project for Rehabilitation of Cairo University Pediatric Hospital (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Egypt a study team, headed by Mr. Kiycto Kurokawa, First Basic Design Study Division, Grant Aid Study & Design Department, JICA from March 24 to April 10, 1995.

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

In the course of discussions and field survey, both parties have confirmed the main items on the attached . The team will proceed to further studies and prepare the Basic Design Study Report.

Cairo, April 2, 1995

Mr. Kiyoto Kurokawa
Leader,
Basic Design Study Team,
JICA

Dr. Farouk Ismaeil
Deputy President,
Cairo University

Witness

Mrs. Zahia Abu Zaid
General Director of Asia Dept.
Ministry of International Cooperation

ATTACHMENT

1. The Objective of the Project

The short-term objective of the Project is to rehabilitate engineering facilities in the CUPH as a teaching hospital, leading to improvement of the medical technology in Egypt, thus contributing to the betterment of Egypt's health conditions.

2. The Project Site

The Project site is the Cairo University Pediatric Hospital.

3. Responsible and Implementing Organization

1) Responsible for the Project is the Cairo University.

2) Implementing Organization for the Project is the Cairo University Pediatric Hospital.

3) The Cairo University has formed a High Counsil for Rehabilitation of the Cairo University Pediatric Hospital whose members are from the Cairo University staffs. (hereinafter reffered to as "Counsil".)

4. Items requested by Cairo University

After discussions with the Basic Design Study Team, the following items with the priority were finally requested by the Cairo University. (See ANNEX- I)

1) Renovation of the facilities.
2) Repair of the facilities.
3) Expansion of the facilities.

(Note: Renovation is to renew the most part of the facilities.
Repair is to mend the defective part only.)

The study Team has understood the necessity of the request, however, the final components of the Project will be decided after further studies.

5. Main points for further studies for Expansion of the facilities.

1) Replanning of the back yard area
2) Building in court yard area and additional floor on the sixth floor.
3) Relocation of the bathrooms, laundry etc.

Japanese Study Team's opinion

1) From the technical point of view, the Study team advised that court yard shall be remained unchanged for the purpose of natural ventilation, lighting, and structual safety.

However the feasibility of using court yard for additional two stories will be examined.

2) Additional floor on the sixth floor will be difficult because of original structual design of the building.

3) Efficient use of flooring.

For the relocation of the rooms, the Study team suggested that the hospital has still enough room, efficient use of flooring should be reconsidered by the Cairo University.

Opinion of the Cairo University

1) The Cairo University want to increase the number of beds,according to the increase of patients.

2) Twenty-three Items are the most urgent portion of the Rehabilitaion Project.

6. Japan's Grant Aid System

1) The Cairo University has understood the system of Japanese Grant Aid explained by the Team.(See Annex II .)

2) The Government of the Arabic Republic of Egypt will take the necessary measures described in Annex III for the smooth implementation of the Project, on condition that the Grant Aid by the Government of Japan is extended to the Project.

7. Schedule of the Study

1) The consultants will proceed to further studies in Egypt until April 10, 1995.

2) JICA will prepare the draft report on the Project in English and dispatch a mission to Egypt in order to explain the contents of the draft report in around June,1995.

3) In case that the contents of the draft report are accepted in principal by the Cairo University,JICA will compile the final report on the Project and send it to the Government of Egypt by the Middle of August,1995.

8. Monitoring

The Cairo University has the responsibility of monitoring progress of all phases of the Project such as allocation of funds and utilization of equipment purchase, distribution, quality control, maintenance and utilization of equipment, manpower development, training based upon the indicators given in ANNEX – Ⅳ.

9. Management of the Cairo University Pediatric Hospital

The Cairo university will make the best effort to execute the Japanese experts' proposal described in ANNEX– Ⅴ.

10 Answer for the Questionnaire

It is requested to reply the Questionnaire, which was presented to the Cairo University by the Study team on 27th, March 1995,until the end of April 1995.

The Counsil is responsible for prepairing and submitting the answer. Written answers will be submitted to the JICA, Egypt office.

11 Other relevant issues

During the construction work, it is necessary to stop the partial function of the hospital. In that case the Cairo University will solve the problem by itself,according to the plan submitted by the study team.

(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

Area	Item	Floor		Location	Note
1.1(a)	In-patient toilets	2F	1	12-13,B-C	RN
			2	12-13,D-E	RN
			3	12-13,D-E	RN
		3F	1	12-13,B-C	RN
			2	12-13,D-E	RN
			3	12-13,D-E	RN
		4F	1	12-13,B-C	RN
			2	12-13,D-E	RN
			3	12-13,D-E	RN
1.1(b)	Out-patient toilets	2F	1	18-19,C-D	RN
			2	18-19,C-D	RN
1.1(c)	Other toilets	1F	1	2-3,C-D	RN
			2	2-3,C-D	RN
		2F	1	12-13,B-C	RN
			2	12-13,D-E	RN
		3F	1	12-13,B-C	RN
			2	12-13,D-E	RN
		4F	1	12-13,B-C	RN
			2	12-13,D-E	RN
		5F	1	01-02,E-F	RN
			2	01-02,E-F	RN
			3	1-2,A,f	RN
			4	12-13,D-E	RN
			5	12-13,D-E	RN
			6	15-16,D-E	RN
			7	18-19,D-E	RN
			8	18-19,D-E	RN
		6F	1	01-02,E-F	RN
			2	01-02,E-F	RN
			3	1-2,F	RN
			4	2-3,D-E	RN
			5	14-15,B-E	RN
			6	15-16,B-C	RN

(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

Area	Item	Floor		Location	Note
1.3	New toilets & Shower Rm.	2F	1,2	2-3,A-B	RN
			3,4	2-3,E-F	RN
			5	1-2,A-B	RN
		3F	1,2	2-3,A-B	RN
			3,4	2-3,E-F	RN
			5	1-2,A-B	RN
		4F	1	2-3,E-F	RN
				1-2,A-B	RN
				14-15,A0-A	RN
1.4	Increase toilets	1F	1	15-16,A0-A	RN
			2		RN
2.1	Plumbing of hospital				RP
2.2	Central A/C	2F,3F,4F			RN
2.3	Repair stairs	1F-6F	1	1-2,C-D	RP*
			2	12-13,C-D	RP*
2.4	Basement pit(for piping etc.)				RN
3	Repair laundry	1F	1	2-5,B-D	RN
4	Repair kitchen	1F	1	1-4,A-B	RN
5.1(a)	Extension of wait Rm.	1F	1	14-18,A-E	RN
		2F	1	14-18,A-E	EX
5.1(b)	Vent. Sys. of out-patient	1F	1	14-18,A-E	RN
		2F	1	14-18,A-E	RN
5.1(c)	Chairs of out-patient	1F	1	14-18,A-E	RN*
		2F	1	14-18,A-E	RN*
5.1(d)	Video monitors	1F	1	14-18,A-E	RN*
	(for out-patient education)	2F	1	14-18,A-E	RN*
5.2(a)	New stairs	1F-3F	1	17-18,C-D	RN/EX
5.2(b)	Wait Rm. of Lab etc.	3F	1	16-17,C-D	RN/EX
6.1	Nurse Rm.	2F	1	3-4,B-D	RN
			2	3-4,C-E	RN
		3F	1	3-4,B-D	RN
			2	3-4,C-E	RN
		4F	1	3-4,B-D	RN
			2	3-4,C-E	RN
6.2	Addtional doctor's Rm.	2F	1		EX**
			2		EX**
		3F	1		EX**
			2		EX**
		4F	1		EX**

(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

Area	Item	Floor		Location	Note
6.2	Addtional doctor's Rm.		2		EX**
6.3(a)	2 treatment Rm.	2F	1	9-10,B-D	RN
			2	9-10,C-E	RN
		3F	1	9-10,B-D	RN
			2	9-10,C-E	RN
		4F	1	9-10,B-D	RN
			2	3-4,D	RN
6.3(b)	Oxy. suct. comp. air			ditto	RN
6.3(c)	Cereamictiles for walls			ditto	RP*
6.3(d)	Storage system			ditto	Others*
6.3(e)	Improve. floor material			ditto	RP*
6.3(f)	Improve. drain excretion			ditto	RN*
6.3(g)	Improve. sink			ditto	RN
6.4	1 wait Rm. for families	4F	1		RN**
7.1	New boilers			19-20,B-C	RN
7.2	Another set of boilers	1F	1	5-6,C	RN
7.3(a)	Supply hot water	5F,6F			RN
7.3(b)	Supply hot water	2F,3F,4F			RN
7.4	A Rm. for technicians	1F	1	19-20,C-D	RN
7.5	Improv. comp. air				RN
8.1	Change mother Rm.	2F	1		RN**
8.2	Change mother Rm.	3F	1	4-5,B-E	RN
8.3	Change mother Rm.	4F	1	4-5,B-E	RN
8.4	New 2 mother Rm.	2F	1	3-4,C	EX
		3F	1	2-3,D	EX
9	Improve wash-space	2F	1	1-2,E-F	RN
		3F	1	1-2,E-F	RN
		4F	1	1-2,E-F	RN
10.1	Improve sterilization Rm.	4F	1	15-18,C-D	RN/EX
10.2	Autoclaves,EOG,EOG-excre.			ditto	RN
10.3	Storage			ditto	RN
10.4	Passage separation of clean			ditto	RN
11.1	Change doors of enter	4F			RP*
11.2	Additional video sys. f/OP	4F		19-20,A-B	RN
11.3	Changing Rm. position	4F	1	14-15,A-B	RN
			2	13-14,A-B	RN
			3	12-13,A-B	RN
11.4	Doctors' Rm		1	15-16,A-B	RN
11.5	Nurses' Rm		1	15-16,A-B	RN

(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

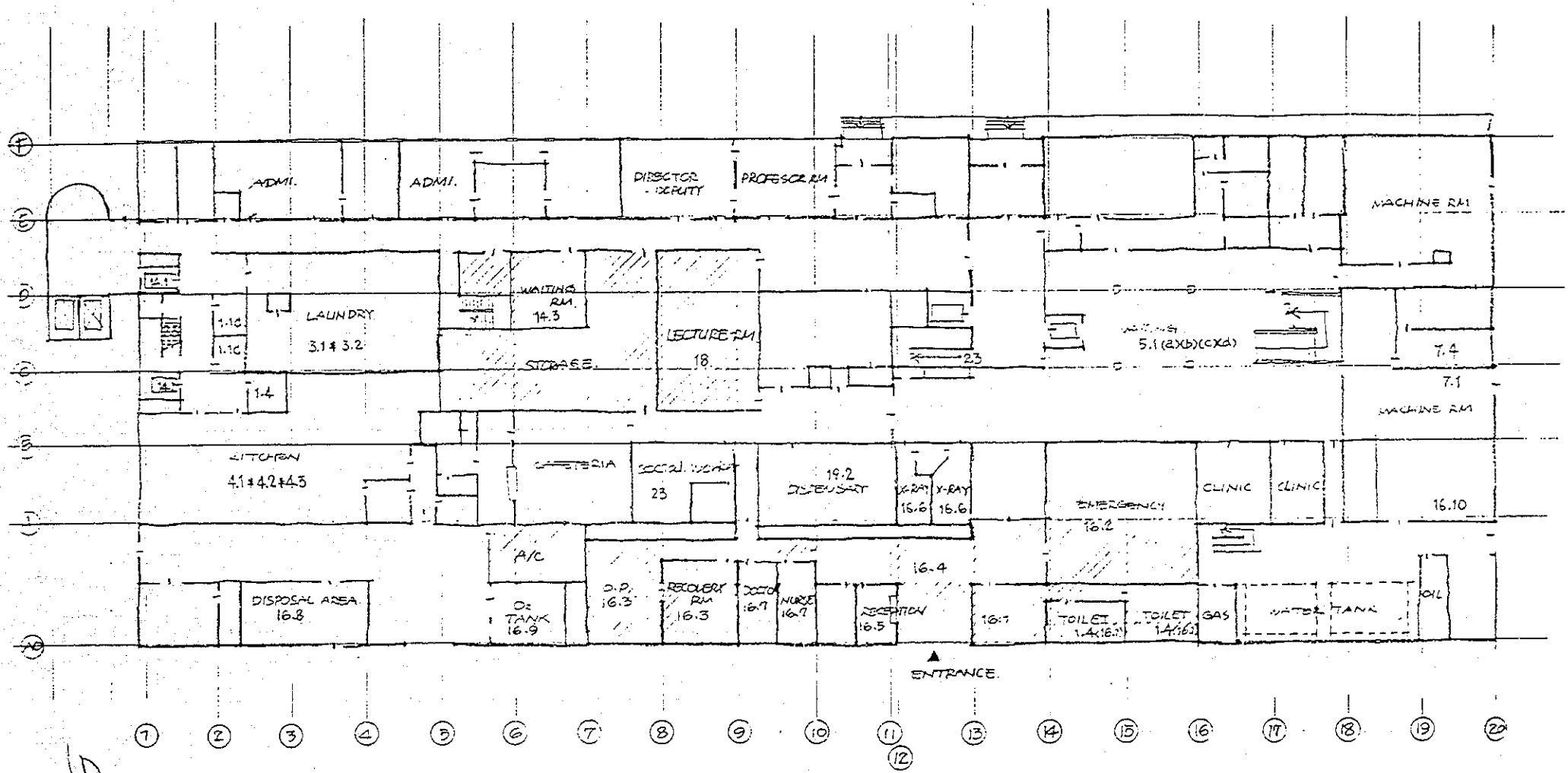
Area	Item	Floor		Location	Note
11.6	Remove outside corrid				RN
11.7	Exp. & Improv. A/C sys			19-20,B-D	RN
11.8	Indivisual controlled A/C				RN
11.9	A new straight passway to ICU			18-19,D-E	RN
11.10	Improve storage in OT			16-17,A-B	RN
11.11(a)	new mop washing Rm.			16-17,B-C	RN
11.11(b)	new mop washing Rm.			15-16,B-C	RN
11.12	Anesthesia & NO2 gas excretion				RN
11.13	Outlet & pipe sys. of medcal gas				RN
12.1	Improv. ICU	4F		15-19,D-E	RN
12.1(a)	Entorance of stuffs				RN
12.(b)	New changing Rm. for doctors			12-13,E-F	RN
12.1(b)	New changing Rm. for nurses			13-14,E-F	RN
12.1(c)	Doctors' Rm.			14-15,E-F	RN
12.1(d)	Nurses' Rm.			14-15,E-F	RN
12.1(e)	Laboratory			14-15,D-E	RN
12.1(f)	Storage Rm.			17-18,E-F	RN
12.1(g)	Isolation Rm.			19-20,D-E	RN
12.1(h)	Piping outlets of medical gases				RN
12.1(i)	Improvement A/C			19-20,E	RN
12.2(a)	Separat NICU from ICU	2F		6-9,B-D	RN
12.2(b)	Changing Rms.				RN
12.2(c)	Piping outlets of medical gases				RN
12.2(d)	New A/C for NICU				RN
12.3	Improve gas axerotion	4F		15-19,D-E	RN
12.4	Piping outlets of medical gases				RN
13	Paint & repair doors				RP*
14.1	Repair damaged elevator				RP*
14.2	Add new elevators	1F-7F			Others**
14.3	Add 2 waiting Rm.	1F			RN
15.1	Water reserver in the basement F.				Others**
15.2	New control Rm. for M&E	1F			RN**
15.3	New generator sys.	1F			RN
16.1	Toilets for out-patient	1F		ref.1.4	RN/EX
16.2	Emergency uhit	1F		14-16,A0-B	RN/EX
16.3	Operation Rm.	1F		7-8,A0-A	RN/EX
16.4	Entrance	1F		12-13,A0-A	RN
16.5	Reception	1F		10-11,A0-A	RN/EX
16.6	Two Rm. of radiology service	1F		12-13,A-B	RN

(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

Area	Item	Floor		Location	Note
16.7	Doctors'&Nurses'Rm	1F		9-10,A0-A	RN/EX
16.8	Garbage Storage	1F		9-10,A0-A	RN
16.9	Oxygen storage	1F		6-7,A0-A	RN
16.10	Improve copm. air & suct. sys	1F			RN
16.11	Outlet & pipe sys. of medcal gas	1F			RN
17.1	Improve bacteriology sec.	3F		14-15,E-F	RN*
17.2	Add staff Rm.	3F		15-16,E-G	RN
17.3	Transfer endoscopy sec.	3F		14-16,C-D	RN/EX
17.4	Sec. of EEG and ECG	3F		14-15,D-E	RN
18	New lecture Rm.	1F		8-9,B-E	EX
19.1	Storage	6F		3-10,A-B	RN
19.2	Pharmacy	1F		9-11,A-B	RN
19.3(a)	New engineers' Rm.	6F			RN**
19.3(b)	New engineers' Rm.	6F			RN**
19.3(c)	New work shop on 7F	7F			OM**
19.3(d)	Extend new elevator			ref.14.2	OM**
20.1	Improv. anesthesia gas excretion	5F	1	18-20,A-B	RN
			2	18-19,B-D	RN
			3	17-20,E-F	RN
20.2	Control switch of A/C in 5F OP Rm.	5F	1	18-20,A-B	RN
			2	18-20,B-D	RN
20.3	Steam excretion sys.	5F	1	17-18,A-B	RN
21.1	Repair & Improve Doctors' Rm.	2F	1		RN/EX**
			2		RN/EX**
		3F	1		EX**
			2		EX**
		4F	1		EX**
		4F	2		EX**
		5F	1		EX**
			2		EX**
		6F	1		EX**
			2		EX**
21.2	Repair & Improve Doctors' Rm.	6F	1	9-11,D	RN
22.2	Waiting Rm. for visitors	1F		6-7,D	RN/EX
22.3	Repair & Improve administration Rm.	5F	1		EX**
			2		EX**
			3		EX**
23	Repair & Improve social workers' Rm.	1F	1	7-9,A-B	RN
		2F	1	2-3,A-B	RN

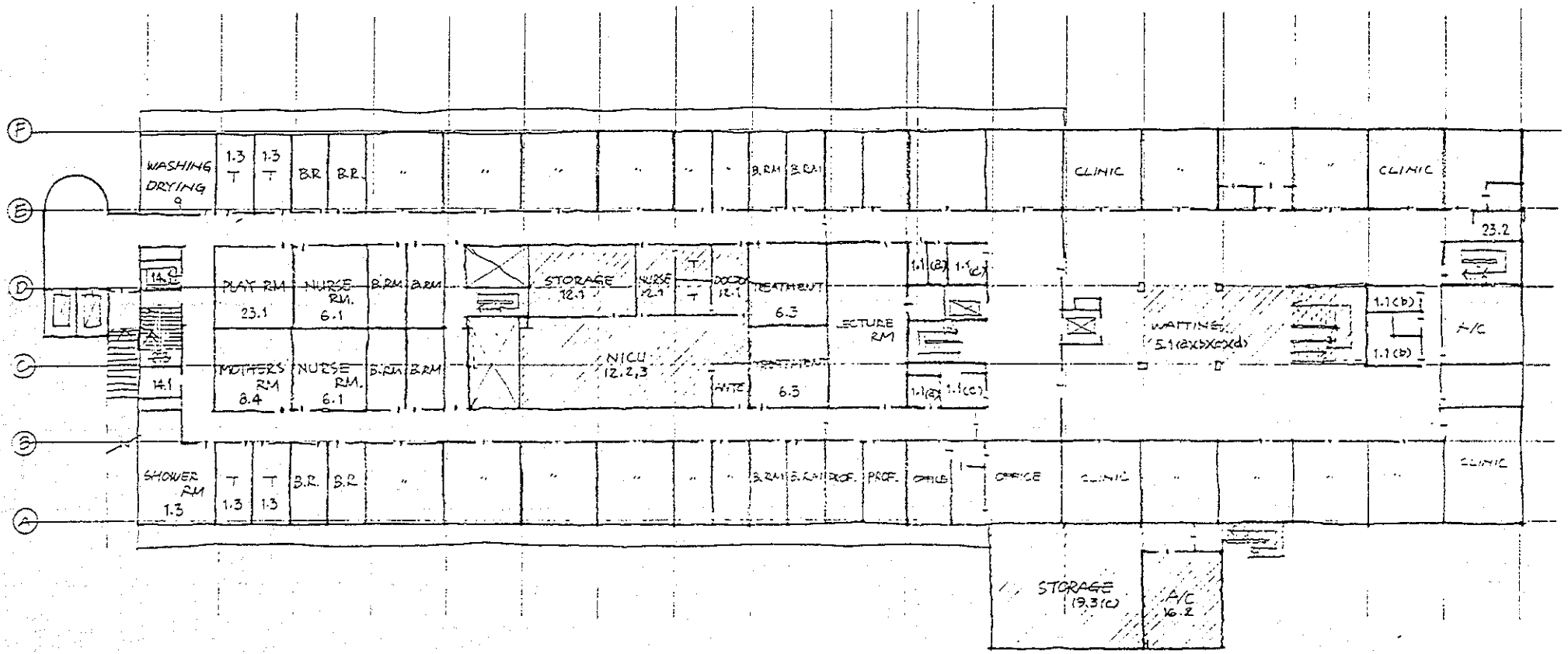
(Note)
EX:Expantion Others
RP:Repair *:Excecuted by Cairo University
RN:Renovation
OT:Omitted **:Omitted scope of work

Area	Item	Floor		Location	Note
23	Repair & Improve social workers' Rm.	2F	1	19-20,E	RN
		3F	1	1-2,EF	RN

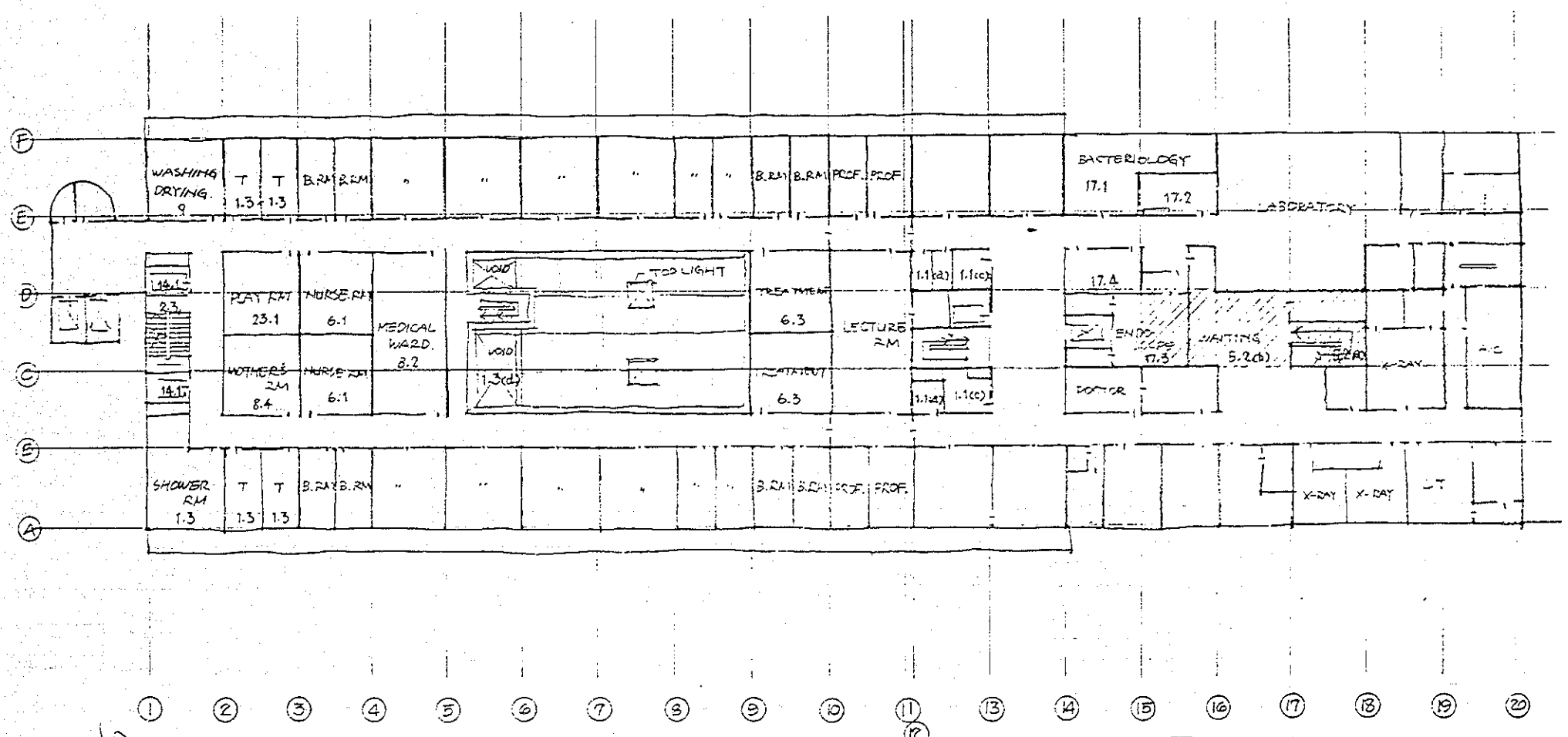


1ST FLOOR PLAN 1/300

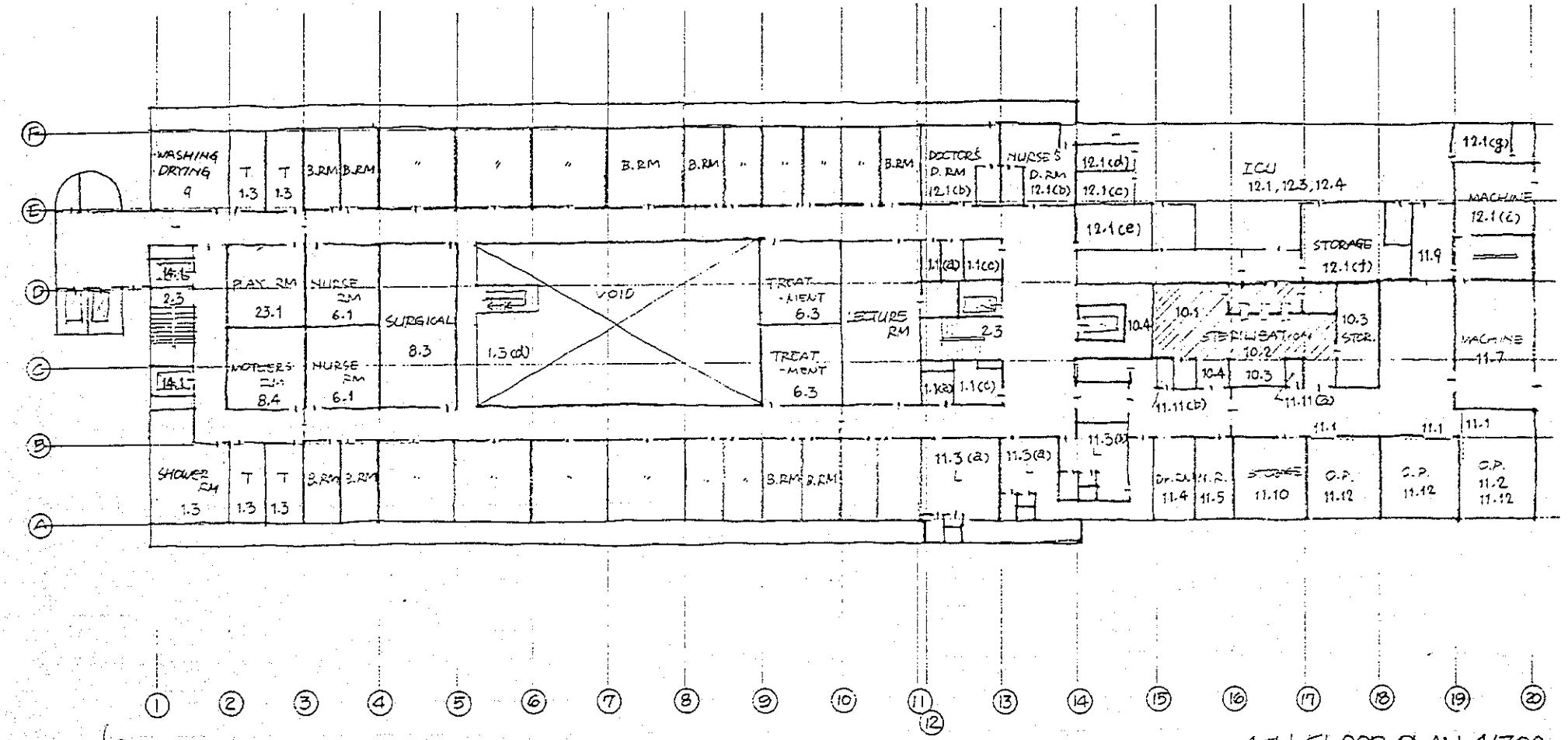
▨ : EXPANSION AREA



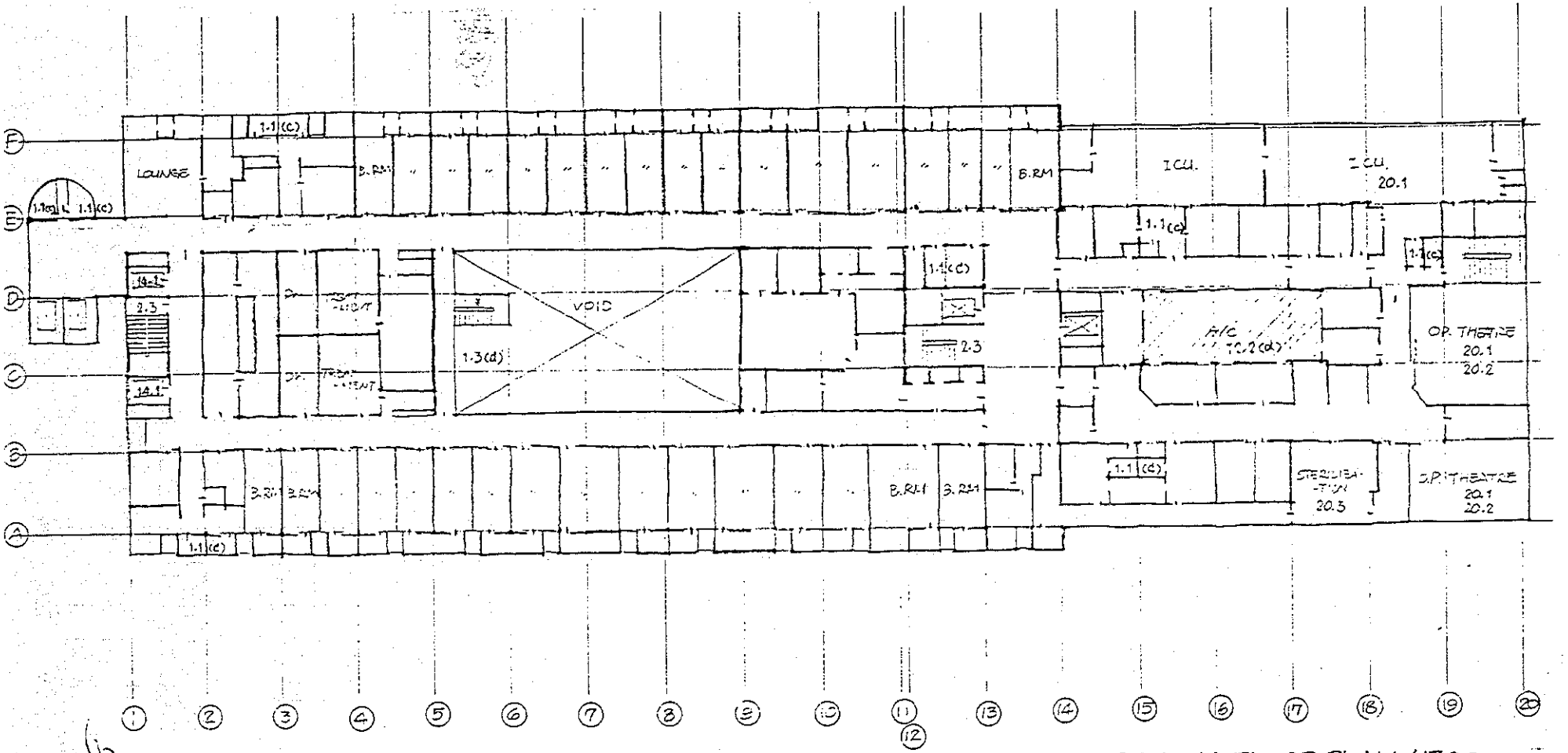
2ND FLOOR PLAN 1/300



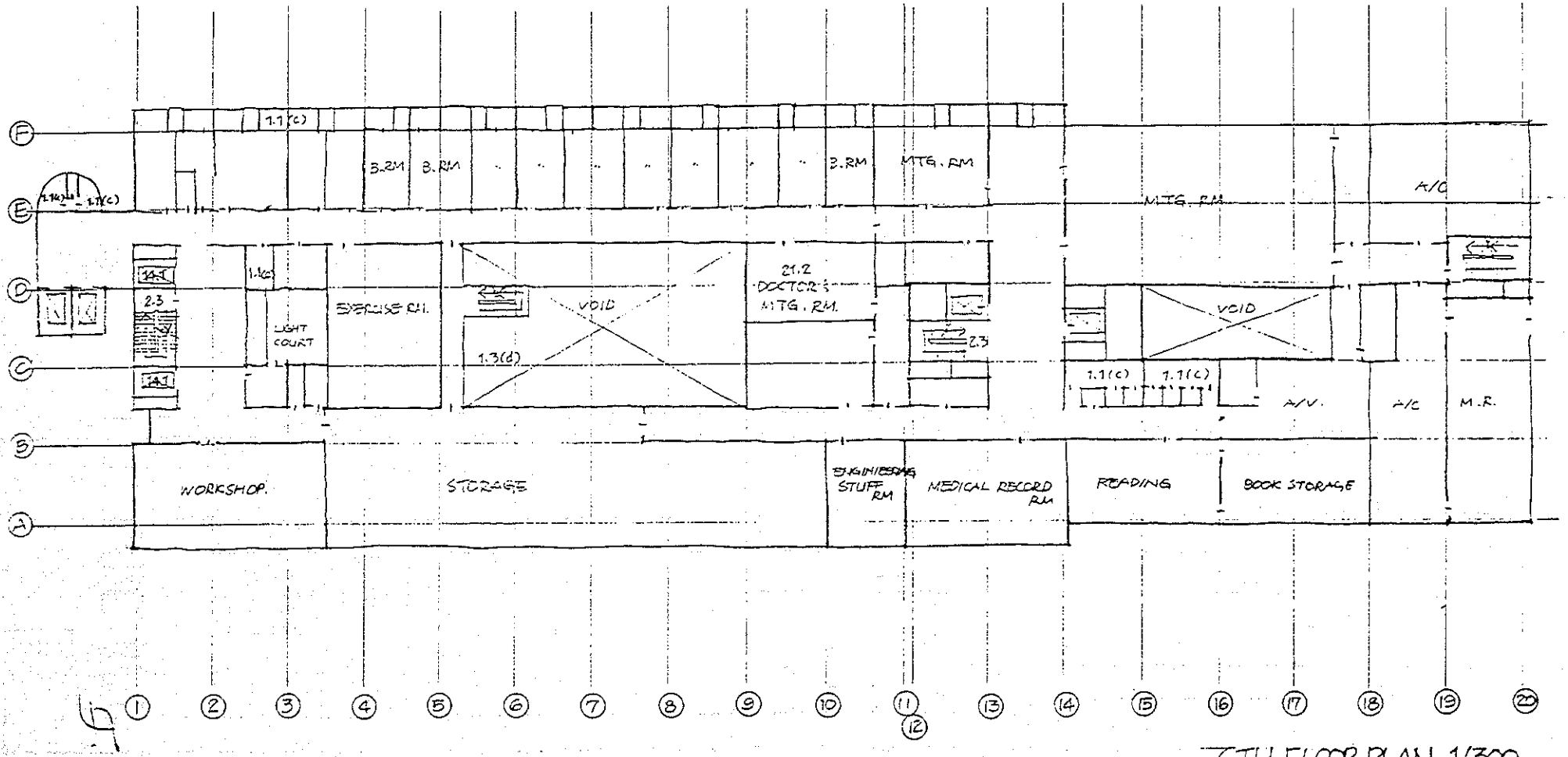
3RD FLOOR PLAN 1/300



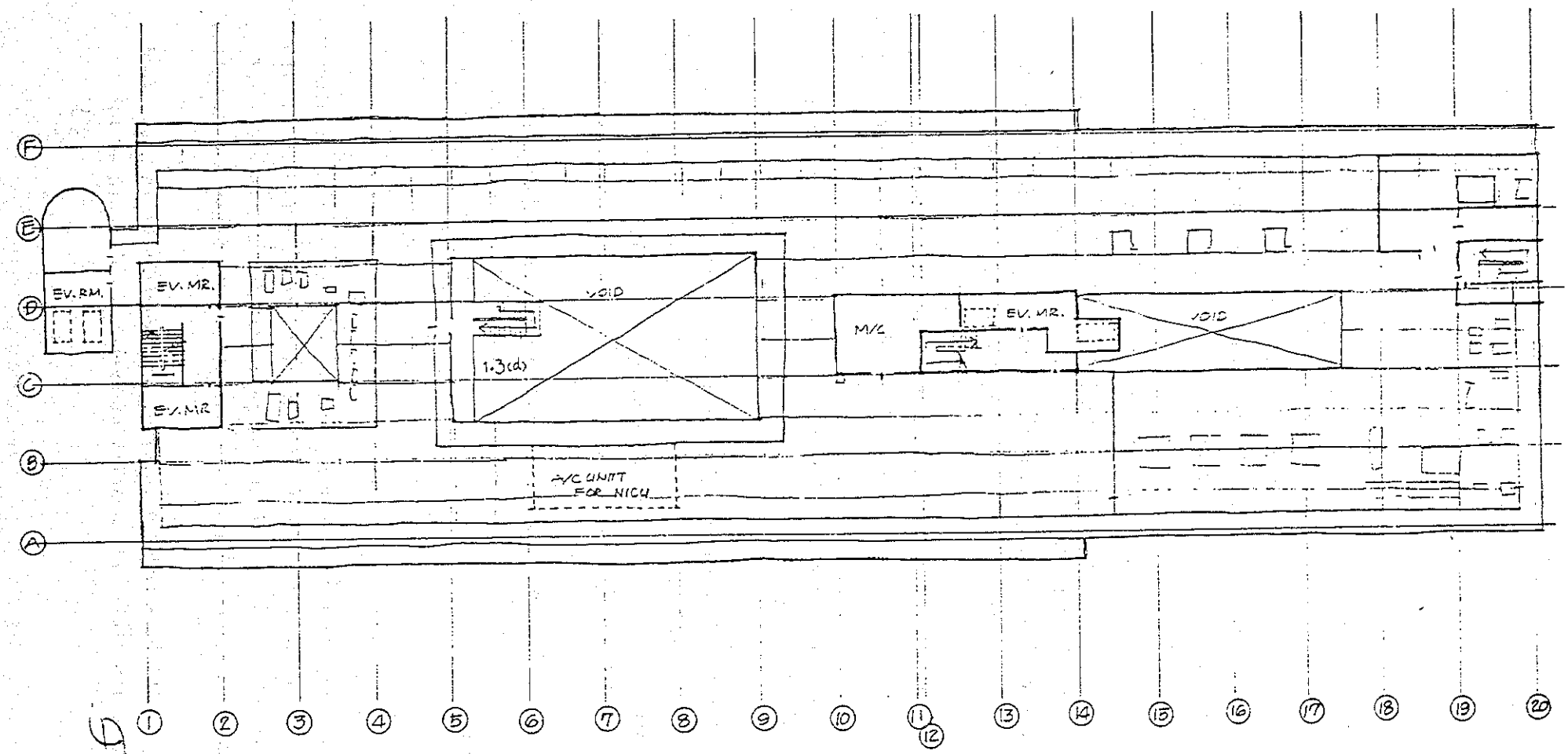
4TH FLOOR PLAN 1/300



5TH FLOOR PLAN 1/300



6TH FLOOR PLAN 1/300



ROOF PLAN 1/300

ANNEX-II

Japan's Grant Aid

1. Japan's Grant Aid Procedures

The Japan's Grant Aid Program is executed through the following procedures.

(1) Application (Request made by a recipient country)
Study (Basic Design Study conducted by JICA)
Appraisal & Approval (Appraisal by the Government of Japan and Approval by Cabinet.)
Implementation (The Notes exchanged between the Government of Japan and the recipient country.)

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If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

At the second step, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

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At the fourth step, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

2. Basic Design Study

(1) Content of the study

The aim of the Basic Design Study (hereinafter referred to as "the Study") conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

1) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the

recipient country necessary for the Project's implimentation.

2) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid scheme from a technical ,social and economic point of view.

3) Confirmation of items agreed on by both parties concerning the basic concept of the Project.

4) Preparation of a basic design of the Project

5) Estimatation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the grant aid project. The basic design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

The Government of Japan requests the Government of recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organization of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

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The consulting firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on Project's implimentation after the Exchange of Notes, in order to maintain technical consistency and also avoid any undue delay in implementation should the selection process be repeated.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid ?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc) for economic and social development of the country under principals in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2)Exchange of Note (E/N)

The Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objective of the project, Period of execution , conditions and amount of the Grant Aid ,etc., are confirmed.

(3)"The period of the Grant" means the one fiscal year which the Cabinet approves the Project for . Within the fiscal year, all procedures such as Exchange of Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and financial payment to them must be completed.
Hoever in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the grant aid can be further extended for a maximum of one fiscal year at most by mutual agreement betweeen the two Governments.

(4)The Grant is used properly and exclusively for the purchase of products.
Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.
When the two Governments deem it necessary, grant aid may be used for the purchase of the products or services of a third country.
However the prime contractors, namely, consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term"Japanse nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5)Necessity of the " Verification ".
The government of the recipient country or its designated authority will conclude contracts in Japanese yen with Japanese nationals.
Those contracts shall be veified by the Government of Japan. The"verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertaking required of the Government of recipient country.
In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

1)To secure land necessary for the sites of the Project and clear, level and reclaim the land prior to commencement of the construction.
2)To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the site.
3)To secure buildings prior to the procurement In case the installation of the equipment.

4) To ensure all the expenses and prompt execution for unloading ,customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

5) To exempt Japanese nationals from customs duties ,internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

6) 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 the recipient country and stay therin for the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain amd use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(8) " Re-Export "

The products purchased under the Grant should not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

1) The government of the recipient country or its designated authority should open an account in the name of Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank") The Government of Japan will execute the Grant Aid by making payments in Japanese Yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

2) The payment will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the government of the recipient country or its designated authority.

ANNEX III : Necessary measures to be taken by the Government of Arab Republic of Egypt in case Japan's Grant Aid is executed.

1. To secure the land for the costruction of building and facilities related to the Project

2. To provide facilities for distribution of electricity, water supply, telephone, drainage and other incidental facilities

3. To ensure prompt unloading and customs clearance at ports of disembarkation in the Arab Republic of Egypt and internal transportation therein of the products purchased under the Grant

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 the Arab Republic of Egypt

5. To accord Japanese Nationals whose services may be required in connection with the supply of products and the services under the verified contract such facilities as may be necessary for their work in accordance with the relevant laws and regulatoins of the Arab Republic of Egypt

6. To maintain and use properly and effectively facilities rehabilitated and equipment purchased under the Grant Aid

7. To bear all the expenses other than those covered by the Grant, necessary for the excution of the Project

ANNEX-IV

Monitoring Indicators

1. Basic Philosophy

   * Whether or not there is a basic philosophy.
   * To what extent the basic philosophy has filtered into the hospital staffers.
   * Conformity of the basic philosophy to the actual situation.

2. Conformity of the Facilities

   2-1) Conformity of the hospital facilities to regional medical activities

   * To use patient statistics to determine the regional coverage of the medical services provided.
     - No. of patients by residential area and by type of illness
   * Investigate the scale of hospital wards and the medical departments covered by medical institutions in the region.

3. Diagnosis/Treatment Functions

   3-1) Medical Departments in which Diagnosis/Treatment is Provided.

   a) Summary of activities (by month, for the past five years)

   * No. of physicians by specialty (by medical department)
   * No. of patient beds
   * Bed occupancy ratio
   * No. of inpatients (by medical department)
   * No. of outpatients (by medical department)

   b) Quality of the activities

   * No. of Medical departments in which diagnosis and treatment is provided.
   * Special outpatient clinic
   * Emergency aid system
   * Whether or not the system of treatment by medical ter.ns is adopted.
   * Whether or not conferences are held regularly.
   * whether or not the hospital accepts interns.
   * Whether or not the hospital collaborates with other medical institutions.

3-2) Nursing Department

* No. of nurses (by medical department)
* Ratio of registered nurses vs. practical nurses
* Nursing system
* Average night duty days per month (average)
* System for education/training
* Time study on the work hours of nurses
* Whether or not medical clerks are allocated.
* System for delivering goods and supplies

3-3) Pharmaceutical Department

* Whether or not guidance is given on the taking of medicine.
* Whether or not the patients' history of taking medicine can be traced.
* Whether or not the system of administering medicines to inpatients through a unified channel is adopted.
* Waiting time of outpatients (average)
* Inventory system
* Establishment of a standard optimum stock
* Number of medicine items available
* Whether or not the medicines readily available in patient wards undergo regular inspection. If you have any, please show the contents.

3-4) Inspection Department

* No. of inspection items that can be carried out.
* No. of inspection specialists
* Whether or not the inspection systems are computerized. If yours are computerized, please show the contents.
* Whether or not subcontractors are used.
* Whether or not the hospital carries out inspections commissioned by other hospitals. If so, please show the contents.

3-5) Radiology Department

* Contents and types of equipment
* No. of radiology specialists
* Conditions of protection measures

3-6) Meal Service Department

* No. of nutritionists
* Whether or not meals are adequately heated and served at adequate timings.
* How long is the menu cycle.
* How are the ingredients for meals preserved (place of storage, how many days' supply)

3-7) Operation Department

* No. of operation rooms and their main usage
* Whether each operation room is used exclusively for a particular department, or is used on a shared basis
* No. of operations by operation methodology
* Securing of anesthegists
* Cleanliness of the operation rooms
* Whether or not the operation schedule is managed smoothly

3-8) Material and Equipment Department

* Range and volume of the activities (per day, per month)

  Medical equipment and materials
  Sterilization equipment and materials
  Sanitary equipment and materials
  General equipment and materials

* No. of staffers
* type and quantity of equipment
* Degree and range of cleanliness management
* Delivery method

3-9) Others

* Whether or not the hospital has rehabilitation facilities.
* Whether or not the hospital has a visiting nurses' room.
* Whether or not the hospital has a visiting nurses' room.
* Whether or not the hospital adopts countermeasures against nosocomial (in-hospital) infection (if yes, the specific measures adopted).
* Management of the patients' medical histories

3-10) Conformity of the hospital facilities to regional medical activities

* No. of patients consulted per physician per day (for inpatients, and for outpatients)
* No. of medicines prepared per Pharmaceutical Department staffer per day
* No. of inspections carried out per inspection specialist per day
* No. of radiological inspections carried out per radiology specialist per day
* No. of meals prepared per Meal Service Department staffer per day

4. Balance of Accounts

* Income — Government subsidy
  Income from pay beds
  Income from advanced medical treatment
  (Heart survey, X-ray diagnosis, etc.)
  Income from high level services (ICU, paid-basis rehabilitation care, etc.)
* Costs — Personnel costs

  Equipment/material costs
  - For medicine
  - For medical equipment
  - For preparing meals

  Expenses
  - Infrastructure (power and water supply)
  - Maintenance costs
  - Expendable supplies

5. Financial Data

* Balance Sheet
* Turnover ratio of total liabilities and net worth
* Current ratio
* Quick ratio
* Constitutional ratio of owned capital to liabilities
* Interest costs average ratio

6. Services Provided to Patients

* Whether or not amenities are provided for the hospital facilities

T. Kyoto

* Degree of patient satisfaction

7. Management and Maintenance
   * Organization of the hospital
   * Personnel Management
   * System of maintenance

8. Workplace Environment
   * Whether or not dormitories for staffers are provided.
   * Whether or not day nurseries for staffers are provided.
   * Whether or not welfare facilities are provided.
   * Whether or not a system of lending uniforms to staffers is adopted.
   * Whether or not regular health checkups are carried out on staffers.
   * Working hours
   * To confirm whether good communication is maintained between the management and the labor by focusing on the following two points:
     - Whether or not the hospital has an in-house public relations journal.
     - Whether or not there are activities hosted by the hospital

9. Facilities and Buildings
   * Perception based on external appearance (confirm the image of the hospital by visually inspecting the damages and soils on the exteriors of the hospital facilities)
   * Perception based on the appearance of interiors (confirm the image of the hospital by visually inspecting the damages and soils on the interiors of the hospital facilities)
   * Sense of cleanliness
   * History of the buildings and facilities
   * Structure
   * The period of durability (Physical)
   * Availability of vertical transport systems
   * Air-conditioning systems
   * Electrical systems
   * Plumbing and sanitary systems
   * Existing problems

10. Machines and Devices

* Medical machines and devices (steam sterilizer, gas sterilizer, etc.)
* Future plans to renew the machines and devices.

ANNEX V

Improvement of Engineering Section in CUPH

March, 1995

I. Administration:

1. It takes long time to get custom clearance for machines and their spare-parts which come from Japan:
Dr. Asem will take care of this problem, and try to improve the present situation.

2. Lack of working space for engineering section:
For proper activities of engineering section, enough space is necessary.

3. Man-Power resources:
In all fields of engineering section, there are problems of man-power. Cairo University should consider the increase of number of staffs.

1) Boiler section (related to retirement of Mr. Abdel Alim)
Two qualified technicians are necessary for boiler section. The retirement of Mr. Abdel Alim should be postponed or another staffs should be employed.

2) Mechanical section for building maintenance:
Two engineers are necessary.

II. Repair of Facilities and medical equipment:

1. Renewal of goods and equipment:
ex. Mattress, Gas Oven, Fire Extinguisher, Major Operating Table, Anesthesia Apparatus, Major Operating Light, Electo-surgical apparatus and Portable Defibrillator ...etc.
Old fire extinguisher that expired long time ago should be changed at once.

2. Repair of machines for better running:
With regard to above item II-1, a new independent budget of the CUPH for repair and maintenance of all facilities and medical equipment in the hospital, should be established about 5000-6000 L.E. per month .
Responsible staff should be nominated to manage this budget smoothly.

3. Repair record and statistics:
ex. Monthly cost of repair and running.
These reports should be made by engineering section (Mr. Ohkawa at the time being) and sent to the director of this hospital. Using these reports, the hospital can get regular budget for proper activities of engineering section.

MINUTES OF DISCUSSIONS

ON

BASIC DESIGN STUDY

ON

THE PROJECT FOR REHABILITATION OF CAIRO UNIVERSITY PEDIATRIC HOSPITAL IN ARAB REPUBLIC OF EGYPT

(CONSULTATION ON DRAFT BASIC DESIGN REPORT)

In April 1995, the Japan International Cooperation Agency (JICA) dispatched the Basic Design Study teams on the Project for REHABILITATION OF CAIRO UNIVERSITY PEDIATRIC HOSPITAL (hereinafter referred to as "the Project"), to the Arab Republic of Egypt, and through discussions, field survey, and technical examination of the results in Japan, has prepared the draft Basic Design report of the study.

In order to explain and consult the Cairo University on the components of the draft report, JICA sent a study team, which is headed by Miss. Etsuko Ishibashi Japan International Cooperation Agency is scheduled to stay in the country from July 14th to July 20th, 1995.

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

CAIRO, JULY 18, 1995

Etsuko Ishibashi

Miss. Etsuko ISHIBASHI
Leader,
Basic Design Study Team,
Tokyo International Centre
JICA

F. Ismail

Dr. Farouk ISMAEIL
Deputy President,
Cairo University

ATTACHMENT

1. Components of Draft Basic Design Report

   The Cairo University has agreed and accepted in principles the components of the Draft Basic Design Report proposed by the team.

   The new priority of each contents is shown in Annex-I.

2. Japan's Grant Aid system

   (1) The Cairo University has understood the system of Japanese Grant Aid explained by the team. (See Annex-II)

   (2) The Government of Egypt will take the necessary measures, described in ANNEX-III, for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

3. Further schedule

   The team will make the Final Report in accordance with the confirmed items, and send it to the Government of Egypt and the Cairo University by the end of Sept. 1995.

4. Confirmation and additional items

   The both sides have confirmed all the points appearing in the Minutes of Discussions signed on Apr. 2 1995.

   (1) The following items will be covered by the Cairo University.

   1. Shadowless lamps on the 4th Floor. (Existing shadowless lamps will be reused.)

   2. Archetectural finishing and mechanical and electrical work of the Lecture room and the Storage.

   (2) Cairo university will be responsible for completing the following items ;

   1. Renovation work;
      - Ceramic tile for walls of stairs
      - Chairs of outpatient waiting hall
      - Improvement of floor and wall in treatment room
      - Electrically controlled doors for operation theater
      - Paint and repair doors
   2. Annual maintenance costs;
      (Annual Maintenance Cost of Boiler,
      Refrigerator, Air Conditioner, Generator, Elevator)

   (3) Cairo University has responsibility of providing of necessary additional running cost of NICU and Emergency unit in case Japan's grant is executed.

   (4) Cairo University will be responsible for the payment of custom duties for the rehabilitation project in case Japan's grant is executed. Japanese side will make effort to provide materials and equipments available from the local market in Egypt

5. Procedure of the Renovation Works

   The renovation works assigned to the Japanese side must be carried out under the condition where the Hospital is operating normally. Moreover, the renovation works need to be implemented in different locations throughout the Hospital. Hence, the renovation works should place top priority on ensuring the safety of patients, outpatients, as well as the hospital staffers, and minimizing any hazardous effect it may have on the environment. Nevertheless, it is impossible to partially suspend the functions of the Hospital. Efforts should therefore be made to coordinate the operation of the Hospital with the schedule of the renovation works. (See Annex-IV)

ANNEX-I

Prio-rity Order	No. in List of Requests	Items for Renovation	Floor	Note
1	1.1	Renovation of all Lavatories in the building (General Ward to be relocated)	1-6	
1*	1.3	Relocation/renovation of Lavatories and Showers in Patient Wards	1,2,3,4	
1*	6.3	Relocation and expansion of Treatment Rooms	2,3,4	
1*	6.1	Furnishing of Nurses' Changing Room/Rest Rooms	2,3,4	
1*	9	Relocation and renovation of laundry for inpatients	2,3,4	
1*	8	Relocation and renovation of Mothers' Rooms	2,3,4	
1*	23.1	Relocation of Social Workers' Rooms	2,3,4	
2	3	Renovation of ventilating system in the 1st Floor Laundry	1	
2	4	Renovation of ventilating system in the 1st Floor Kitchen	1	
3	2.4	Renovation of plumbing system in Basement Pit	B1	
4	5.1	Expansion of Outpatient Waiting Hall space	1,2	
4	5.2	Passage from Outpatient area to Labolatory/ Radiology Department Expansion of Waiting Hall for Labolatry/Radiology Department	2,3 3	
5	10 11	Relocation and expansion of Sterilization Autoclave,EOG sterilizer Renovation of General Operation Rooms -Renovation of Clean Zone -Individual air conditioning system -Excess anesthetic gas exhaust system -Conduit run for Video monitoring system in No.3 Operation theater on 4th Floor	4 4	
6	12	Renovation of ICU	4	
7	20	5th Floor Operation Room, Excess anesthetic gas exhaust system 5th Floor Sterilization,Sterilization steam exhaust system	5 5	

continue to next page

Priority Order	No. in List of Requests	Items for Renovation	Floor	Note
8	16	Emergency Outpatient Department -Relocation of Lavatories for emergency outpatients -Relocation of Operation Rooms for emergency outpatients -X-rays for emergency outpatients Medical gas (for both suction and compressed air)	1	
9	12.2	New installation of NICU	2,R	
10	19	Relocation of Phamacy in large courtyard area Expansion of the engineering-related rooms	1 2 or 6	
11	18	1st Floor Lecture Room	1	
12	22.2	Waiting Hall for Visitors	1	
13	15.3	Renovation of the generator system	1,6	
14	7	Renovation of the boiler system	1	

(Note) 1*: Work arising from the renovation of Lavatories and Shower Rooms.

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The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc) for economic and social development of the country under principals in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2)Exchange of Note (E/N)

The Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objective of the project, Period of execution , conditions and amount of the Grant Aid ,etc., are confirmed.

(3)"The period of the Grant" means the one fiscal year which the Cabinet approves the Project for . Within the fiscal year, all procedures such as Exchange of Notes, concluding contracts with (a)consultant firm(s) and (a) contractor(s) and financial payment to them must be completed.
Hoever in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the grant aid can be further extended for a maximum of one fiscal year at most by mutual agreement betweeen the two Governments.

(4)The Grant is used properly and exclusively for the purchase of products.
Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.
When the two Governments deem it necessary, grant aid may be used for the purchase of the products or services of a third country.
However the prime contractors, namely, consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term"Japanse nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(5)Necessity of the " Verification ".
The government of the recipient country or its designated authority will conclude contracts in Japanese yen with Japanese nationals.
Those contracts shall be veified by the Government of Japan. The"verification" is deemed necessary to secure accountability to Japanese taxpayers.

(6) Undertaking required of the Government of recipient country.
In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

1)To secure land necessary for the sites of the Project and clear, level and reclaim the land prior to commencement of the construction.
2)To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the site.
3)To secure buildings prior to the procurement in case the installation of the equipment.

4) To ensure all the expenses and prompt execution for unloading , customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.

5) To exempt Japanese nationals from customs duties , internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.

6) 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 the recipient country and stay therin for the performance of their work.

(7) "Proper Use"

The recipient country is required to maintain amd use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(8) " Re-Export "

The products purchased under the Grant should not be re-exported from the recipient country..

(9) Banking Arrangement (B/A)

1) The government of the recipient country or its designated authority should open an account in the name of Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank") The Government of Japan will execute the Grant Aid by making payments in Japanese Yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

2) The payment will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the government of the recipient country or its designated authority.

ANNEX III : Necessary measures to be taken by the Government of Arab Republic of Egypt in case Japan's Grant Aid is executed.

1. To secure the land for the costruction of building and facilities related to the Project

2. To provide facilities for distribution of electricity, water supply, telephone, drainage and other incidental facilities

3. To ensure prompt unloading and customs clearance at ports of disembarkation in the Arab Republic of Egypt and internal transportation therein of the products purchased under the Grant

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 the Arab Republic of Egypt

5. To accord Japanese Nationals whose services may be required in connection with the supply of products and the services under the verified contract such facilities as may be necessary for their work in accordance with the relevant laws and regulatoins of the Arab Republic of Egypt

6. To maintain and use properly and effectively facilities rehabilitated and equipment purchased under the Grant Aid

7. To bear all the expenses other than those covered by the Grant, necessary for the excution of the Project

ANNEX IV

PROCEDURE OF THE RENOVATION WORKS

The following points should sufficiently be taken into account also by the Hospital side, to ensure that safety within the Hospital is maintained and interruption of the Hospital functions is minimized.

(1) Mutulal cooporation must be made in the detail design stage to coordinate the schedule of renovation works with the operation plan of the Hospital.

(2) The Hospital must provide at its own responsibility the replacements for the rooms that will become unusable during the renovation works.

(3) The Hospital should allocate a space of 80 - 100 m^2 inside its facilities to serve as an on-site office.

(4) The Hospital should also provide assistance in the negotiations with the relevant authorities for obtaining approval to use the southern road as a temporary equipment yard.

(5) Once the renovation works have been launched, it will be necessary to hold, for each site of renovation, a committee meeting for dealing with the expansion works. Members of the committee and staffers of the relevant sections shall discuss the detailed process and technics of the renovation works.

(6) The Hospital shall be responsible for relocation and storage of medical devices and furnitures necessitated by renovation of the facilities.

(7) The renovation works consist of a series of partial construction works and relocation of rooms. Hence, inspection and handing over shall be carried out on a facility-by-facility (room-by-room) basis.

5. Cost Estimation Borne by the Recipient Country

The construction work for the facilities will consist both of work to be covered by the government of Japan and that to be covered by the government of Egypt. The following is the estimated cost for the work to be covered by the Government of Egypt, calculated on the basis of the basic given in chapter 2.

1) Work to be covered by the Government of Egypt

• ceramic tile for walls of stairs	70,000 LE
• chairs of outpatient	60,000 LE
• video monitors	900,000 LE
• improvement of floor and wall in treatment room	40,000 LE
• electrically controlled doors for operation theater	160,000 LE
• paint & repair doors	150,000 LE
• interior work for lecture room	280,000 LE
• movement of equipment in the room according to the construction schedule	20,000 LE
• import duties	1,288,000 LE

Total 2,968,000 LE

6. Reply of the questionaire

1- **Name Of Facility :** **Cairo University Pediatric Hospital (CUPH)**
Address: **Cairo University New Children's Hospital (Abou-El-Rish)**
3 Aly Ibrahim St., El-Mounira, Cairo, Egypt.
Telephone: **3640513**
Name Of Representative:
Prof. Dr. Mohamed El-Naggar
Director,
Cairo University Pediatric Hospital.

2. **Basic Philosophy:**

2.1. **Basic Philosophy Of CUPH:**

2.1.a. **Medical Service:**

CUPH is the leading Pediatric Hospital in Egypt. It is a referral hospital, receiving patients with complicated diseases, not only from Cairo, but also from all over the country. With its diverse medical and surgical specialties it is sometimes the last hope for many sick children and their families. In spite of its relatively limited area and number of beds, CUPH is trying to cope efficiently with the huge number of acute and chronic patients who present to the hospital every day.

2.1.b. **Educational Services:**

CUPH remains as the leader of Pediatric educational hospitals all over Egypt and Middle East. It receives trainees from all other Universities and ministry of health. Its role in upgrading educational level in the field of medical care for sick children is remarkable.

2.1.c. **Research Work:**

In the national planning of childhood care, CUPH, through participating in wide spread research work as well as international and national conferences, plays an important role for upgrading childhood services by giving information about childhood medical problems to guide higher authorities in planning policies for upgrading the current services.

2.2. **Medical Service:**

Staff of CUPH realizes the unique nature and excellent reputation of the hospital and are doing their best to offer best possible services.

2.3. **Conformity Of The Basic Philosophy:**

The major problem facing CUPH is its area. Though the largest pediatric hospital in Egypt, it is relatively small and in many instances due to limitation of beds, it cannot accept all children presenting to the hospital in need for admission.

3. **Conformity Of The Facilities:**

Within the surrounding region, there is no other pediatric hospitals, but only few outpatients are linked to near hospitals. There is no regionalization of medical

services and patients come to the hospital not only from Cairo, but also from very remote parts of the country. (Annex : 1 and 2).

4.1.a. Summary Of Activities Of The Hospital:

Total number of physicians according to their ranking:

(1) Professors : 35
(2) Assistant Professors : 21
(3) Lecturers : 25
(4) Assistant Lecturers : 52
(5) Full Time Doctors : 75
(6) Resident Doctors : 31

Number of patient beds : 342 beds

Bed occupancy ratio: 85%

Although the occupancy is only 85% (which doesn't conform with the overloaded work), this ratio can be explained by the daily discharges in preparation for next day admissions.

Average number of daily inpatient admissions : 30 patients.

Average number of daily outpatient attendants : 1000 patients

4.1.b. Quality Of The Activities:

6 Medical and 1 surgical inpatient sections
1 private section
Outpatient clinics including 12 general pediatric clinics, 24 specialized clinics providing the service for 24 medical and surgical subspecialties and out-patient emergency unit (see enclosed list, annex: 3)

- Emergency aid system:
- An outpatient emergency unit with 18 beds facility.
- Pediatric intensive care unit with 14 beds.
- Intermediary care unit for neonates with 12 incubators, opened recently in March 1995.
- Postoperative ICU (5th. floor) 8 beds

System of treatment by medical terms : *Yes* .

Conference:
- Each one of the 6 medical sections holds a weekly conference.
- A weekly conference (staff round) for the whole hospital is carried out every Wednesday.

Hospital accepts interns : *Yes* .

Collaboration with other medical institutions : *Yes* .

Examples : Higher Institute Of Nursing
National Research Center
Cairo University Hospital
Egyptian Pediatric Association
Ministry Of Health

4.2. Nursing Department:

Number of Nurses in this hospital : 329
- Higher Institute Graduates : 12
- Nursing School Graduates : 317

Average Night Duty Days Per Month :

Night shifts are made on rotatory, monthly basis.

Education / Training System:

- Bed-side training with senior high-institute nurses.
- Periodic lectures.

- Presence of Medical Clerks : *No* .

System For Delivering Goods And Supplies:

Medicines and disposables are received from the hospital pharmacy and storage on monthly basis for each department, guided by the predicted estimates of consumption.

4.3. Pharmaceutical Department:

Guidance on taking the medicine's and patient's history of receiving medicine is the responsibility and duty of the doctor in charge of treatment not the pharmacists.

- Administering medicines to inpatients through a unified channel : *Yes* .
- The hospital budget cannot supply medicines to all outpatients, as the service is almost free of charge (1 L.E. which is equivalent to 25 Yens for medical consultation). Efforts are made to supply medicines for chronic long-term diseases.
e.g. anti-tuberculous drugs, bronchodilators.
- Establishment of a standard optimum stock: *Yes* .
- Number of medicine items available:
  Ampoules : 87
  Syrups : 33
  Tablets : 27

Regular inspections on inpatient medicines in wards : *Yes* .
(Residents and house officers are inspecting drugs on daily basis).

4.4. Inspection Department:

Does not exist in CUPH.

4.5. **Radiology Department**

4.5.a. **Equipment :**

3 X-ray machines (Toshiba).
1 Angiography CGR (General Electric)
1 C.T. Scanner (Shimadzu)
3 Mobile X-ray machines (Toshiba)
4 Developing/Processing machines (Kodak)

4.5.b. **Number Of Radiology Specialists :**

Radiologists : 6
Technicians : 12

4.5.c. **Conditions Of Protection Measures :**

Meet the criteria dictated by the Egyptian Laws.

4.6. **Meal Service Department :**

4.6.a. **Number Of Nutritionists :** 18
Number Of Other Workers : 21

4.6.b. **Heating Of Meals :** *Yes , lunch only*
Timing Of Service : *Suitable*
Three meals per day : at 7:00 A.M. , 2:00 P.M. , 6:00 P.M.

4.6.c. **Menu Cycle :** Does not exist, however there are different menus to suit different ages and medical conditions of patients.

4.6.d. **Ingredients Of Meals:**

Ingredients of meals are preserved in the refrigerator of kitchen. Most meals and components are supplied on daily basis, keeping storage at its minimum.

4.7. **Operation Department :**

4.7.a. **Number Of Operation Rooms:**

Three rooms for general and specialized pediatric surgery.
One room for minor general surgery, ENT, Ophthalmology and emergencies.
Two rooms for ultra clean surgery (cardiothoracic and Neurosurgery).

4.7.b. **Usage Of Operation Rooms:**

Operation rooms are used on share basis.

4.7.c. **Number Of Operations:** (Annex: 4)

- General Surgery 4th. floor : 80 operations/month
- Orthopedics : 30 operations/month
- Urology : 35 operations/month
- Ophthalmology : 55 operations/months
- E.N.T. : 20 operations/month

4.7.d. **Securing Of Anesthetists:**
There is no scavenging system of anesthetic gas in the operation theaters to get rid of anesthetic gases by closed method.

4.7.e. **Cleanliness Of Operation Rooms:**
The infection control committee, composed of Egyptian as well as Japanese experts working in CUPH is continuously monitoring the status of hospital cleanliness. Recent trends can be seen from Annex: 5 which is supplied by JICA experts in CUPH.

4.7.f. **Operation Schedule:**
The operation schedule is not managed smoothly due to the problems of overcrowd and the rather long waiting lists dictated by the relatively large number of children needing surgery.

4.8. **Material And Equipment Department:**
Equipment, whether medical, mechanical or electrical, is the responsibility of the Engineering department which is composed of 4 Engineers and 50 technicians.

4.9. **Others:**

4.9.a. **Rehabilitation Facilities:**
Department of physiotherapy and rehabilitation exists in out-patient as well as in 6th. floor.

4.9.b. **Visiting Nurses' Rooms :** *No* .

4.9.c. **Countermeasures Against Nosocomial Infections:** (Annex: 6)
An infection control committee which meets on monthly basis is studying, evaluating the status and putting programs for reducing nosocomial infections.

5. **Balance Of Accounts:**

- Income : Government 5460000 Egyptian pounds.
- Private sector, advanced medical treatment and high service : (ICU, etc.) : 553905
- Costs Equipment, Material Costs
  - Medicine : 2663403
  - Medical Equipment : 650000
  - Expendable supplies : 400424
- Expenses :
  - Infrastructure (electricity, power and water) : 43672
  - Maintenance Costs : 720874
  - Expendable Supplies : 1240319

6. **Financial Data:**

It is very difficult to answer these questions. We need cooperation with JICA experts for better hospital management.

7. **Services Provided To Patients:**

7.1. **Amenities:** *Yes* , e.g. three play rooms in in-patient wards.

7.2. **Degree Of Patient Satisfaction :**

A team from Japan had visited the hospital to assess this particular point. Report is enclosed (Annex: 2).

8. **Management And Maintenance :**

8.1. **Organization Of The Hospital :**

Director of CUPH : Prof. Dr. Mohamed El-Naggar
Deputy Director of CUPH (for surgical affairs) :
Ass. Prof. Dr. Asem El-Fiky
Deputy Director of CUPH (for medical affairs) :
Ass. Prof. Dr. Ahmed El-Beleidy
Chief Administrator : Mr. Aly Hashem
Chief Engineer : Eng. Magda Zein-El-Abedin
Hospital Matron : Mrs. Fawzia Mohsen

8.2. **Maintenance System :**

The organization of engineering section is shown in (Annex: 7)
To overcome the problems which were noticed with the opening of CUPH in early 80s, all new equipment could be purchased only when a competent local dealer or agent is available in Cairo. Whenever possible maintenance contracts are signed with agents.

9. **Work Environment :**

9.1. **Dormitories For Staffs :** *Yes* , (only for resident doctors and staffs).

9.2. **Day Nurseries For Staffs :** *No* .

9.3. **Welfare Facilities :** *No* .

9.4. **Lending Uniforms To Staffs :** *Yes* (not for doctors)

9.5. **Regular Health Checkups On Staffs :** *Yes* .

9.6. **Working Hours :**

Nurses :	7:30 P.M. - 1:30 P.M. ,	1:30 P.M. - 11:30 P.M. ,	7:30 P.M. - 7:30 A.M.
Employees :	8:00 A.M. - 2:00 P.M. ,	2:00 P.M. - 09:00 P.M. ,	9:00 P.M. - 8:00 A.M.
Doctors :	8:00 A.M. - 2:00 P.M. ,	2:00 P.M. - 09:00 P.M. ,	9:00 P.M. - 8:00 A.M.

9.7.a. **In-House Public Relations Journal :** *No* .

9.7.b. **Activities Hosted By The Hospital:** *Yes* .
e.g. Many parties in Out Patient clinics and Feasts parties.

10. **Facilities And Buildings:**
It is very difficult to answer these questions, although we have tried enthusiastically.

11. **Machines and Devices:**
11.1:
Renewal Of Many Medical Machines and Devices e.g. (steam sterilizer, gas sterilizer, etc...) is necessary, because almost all of them have been working for 12 years, when the hospital was inaugurated in 1983.

11.2 **Future Plans To Renew The Machines And Devices:** (Annex: 8)

M. Elnaggar

Prof. Dr. Mohamed El-Naggar
Director
Cairo University Pediatric Hospital

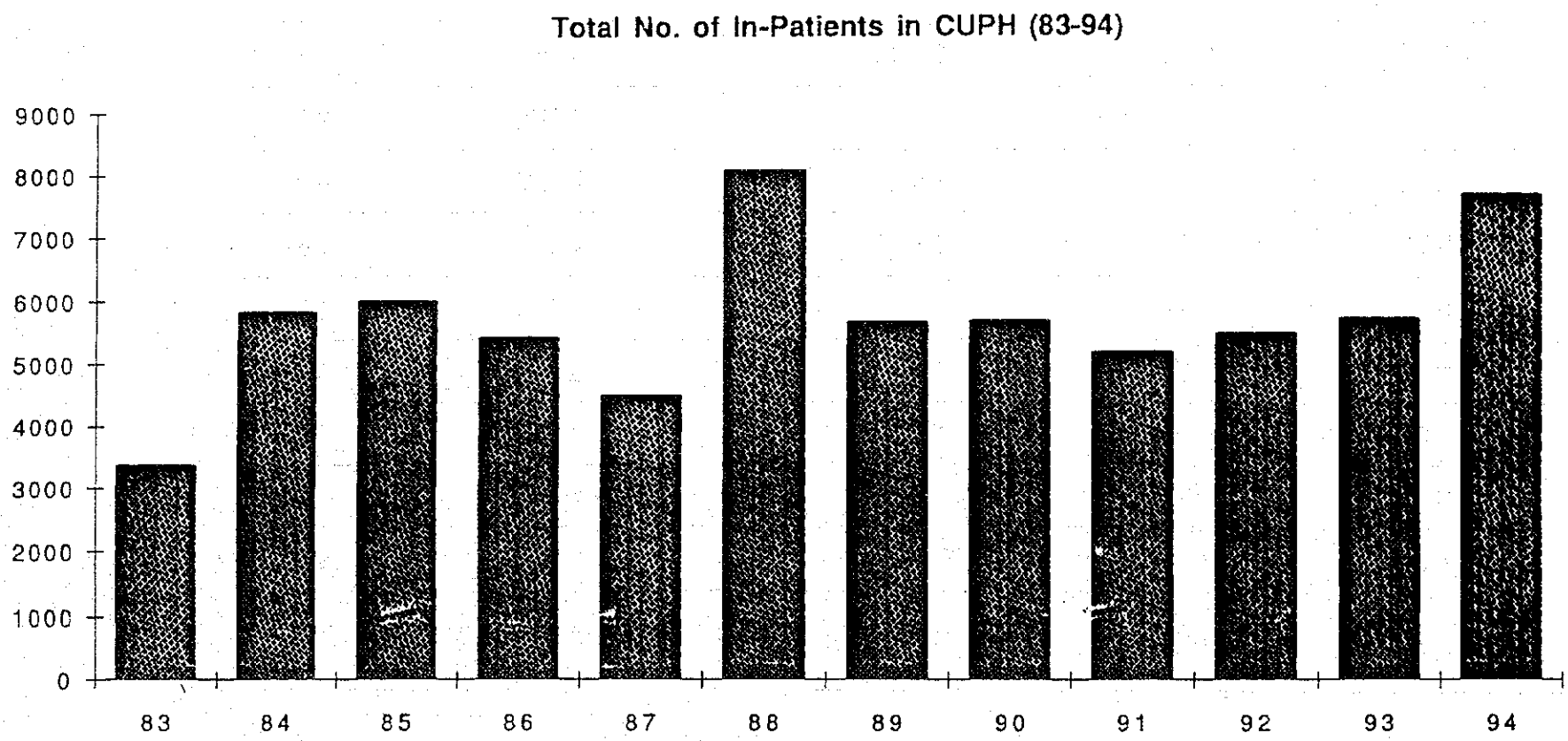
LIST OF ANNEXES :

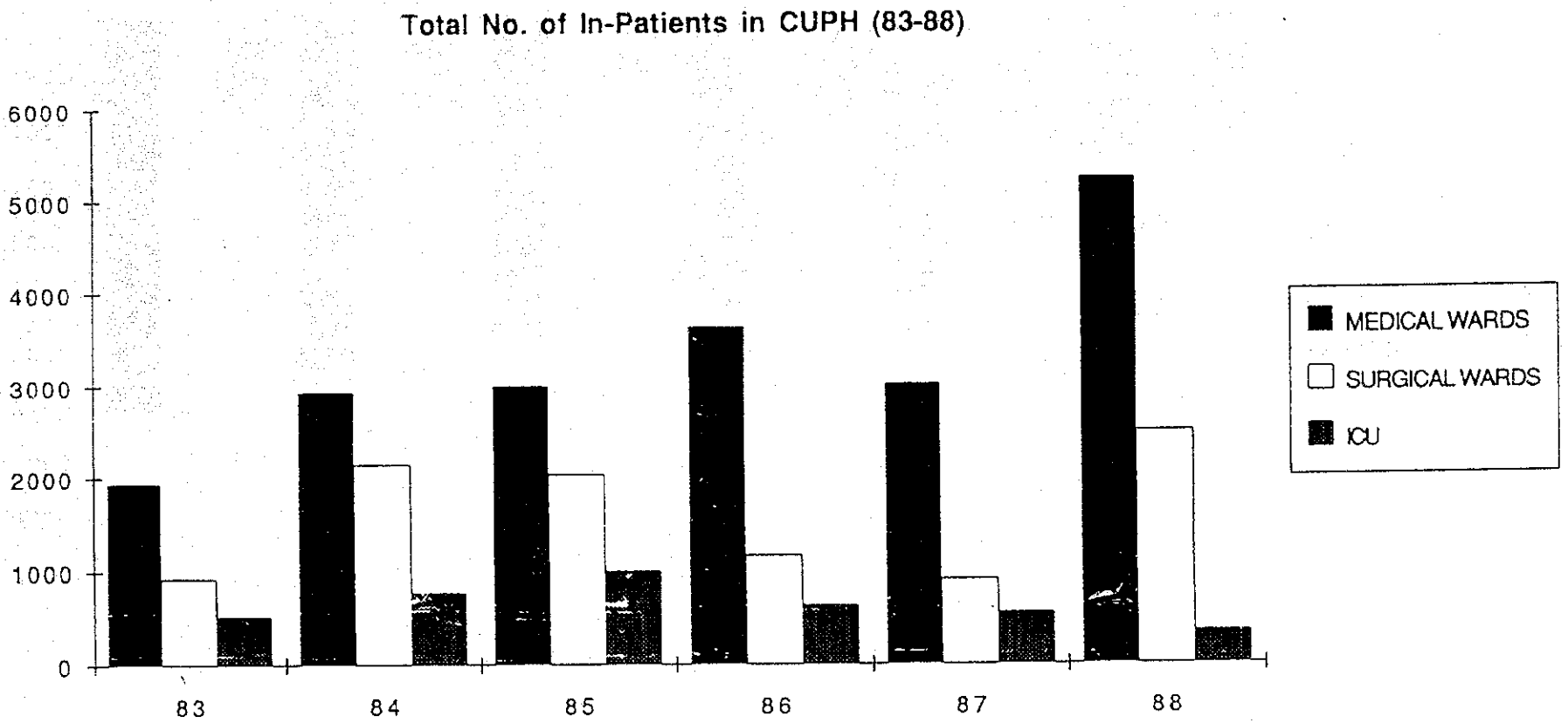
1- Statistical Data Of Out-Patients And In-Patients In CUPH.
2- Report Of Mr. Yakuwa And Mr. Maruchi.
3- Out-Patient Clinics.
4- Number Of Operations.
5- Report On Environmental Sanitation In CUPH (IV)
6- Infection Control Committee, The List Of Members And Activities.
7- Organization Of Engineering Section For Maintenance System.
8- Future Plans To Renew The Machines And Devices.

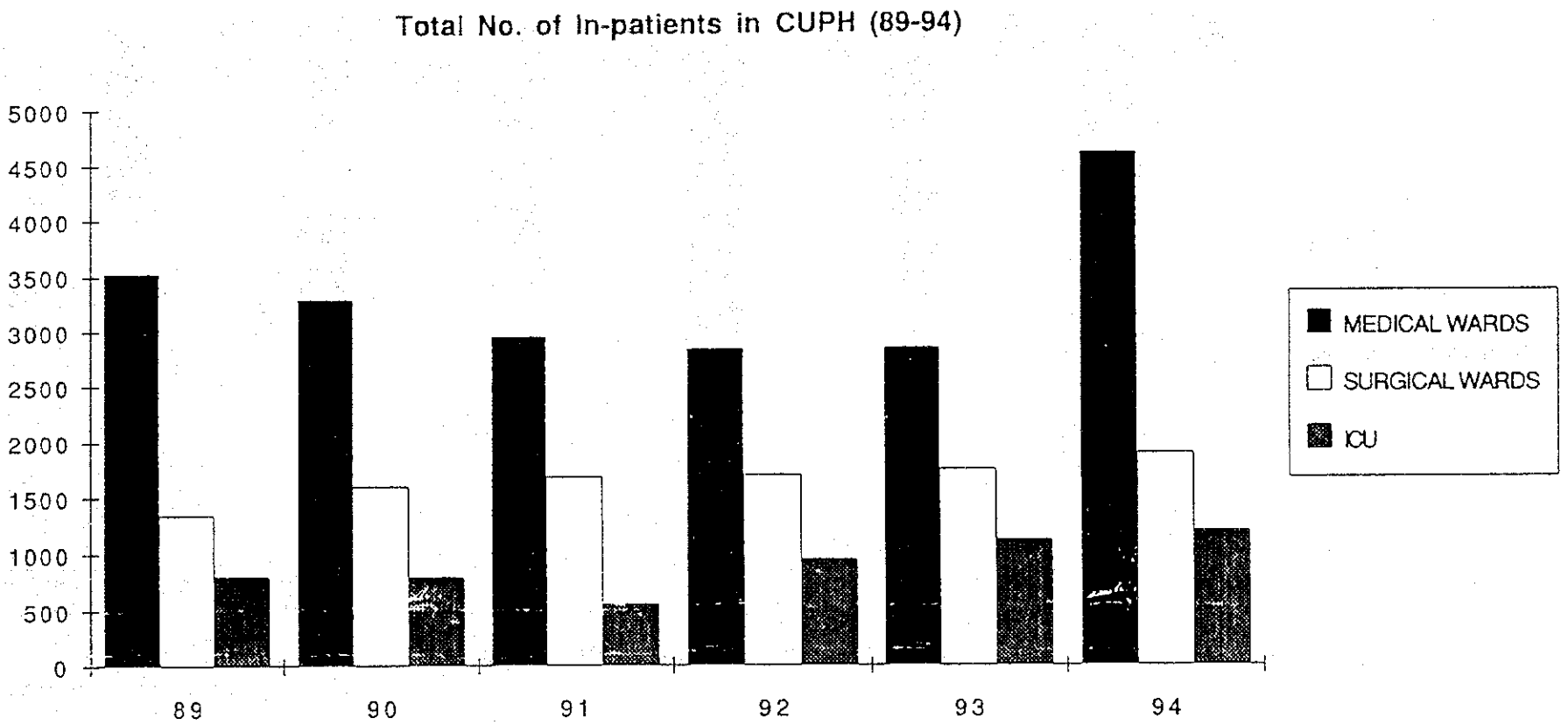
ANNEX : 1

TOTAL NUMBER OF IN-PATIENTS IN CUPH(83-94)

	MEDICAL WARDS	SURGICAL WARDS	ICU	IN-PATIENTS
83	1938	927	521	3386
84	2929	2140	781	5850
85	2992	2026	1001	6019
86	3628	1166	637	5431
87	3020	919	558	4497
88	5236	2494	354	8084
89	3525	1345	804	5674
90	3292	1599	794	5685
91	2949	1680	558	5187
92	2828	1696	947	5471
93	2837	1754	1112	5703
94	4594	1883	1188	7665


Total No. of In-Patients in CUPH (83-94)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
83
84
85
86
87
88
89
90
91
92
93
94


Total No. of In-Patients in CUPH (83-88)
6000
5000
4000
3000
2000
1000
0
83
84
85
86
87
88
MEDICAL WARDS
SURGICAL WARDS
ICU


Total No. of In-patients in CUPH (89-94)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
89
90
91
92
93
94
MEDICAL WARDS
SURGICAL WARDS
ICU

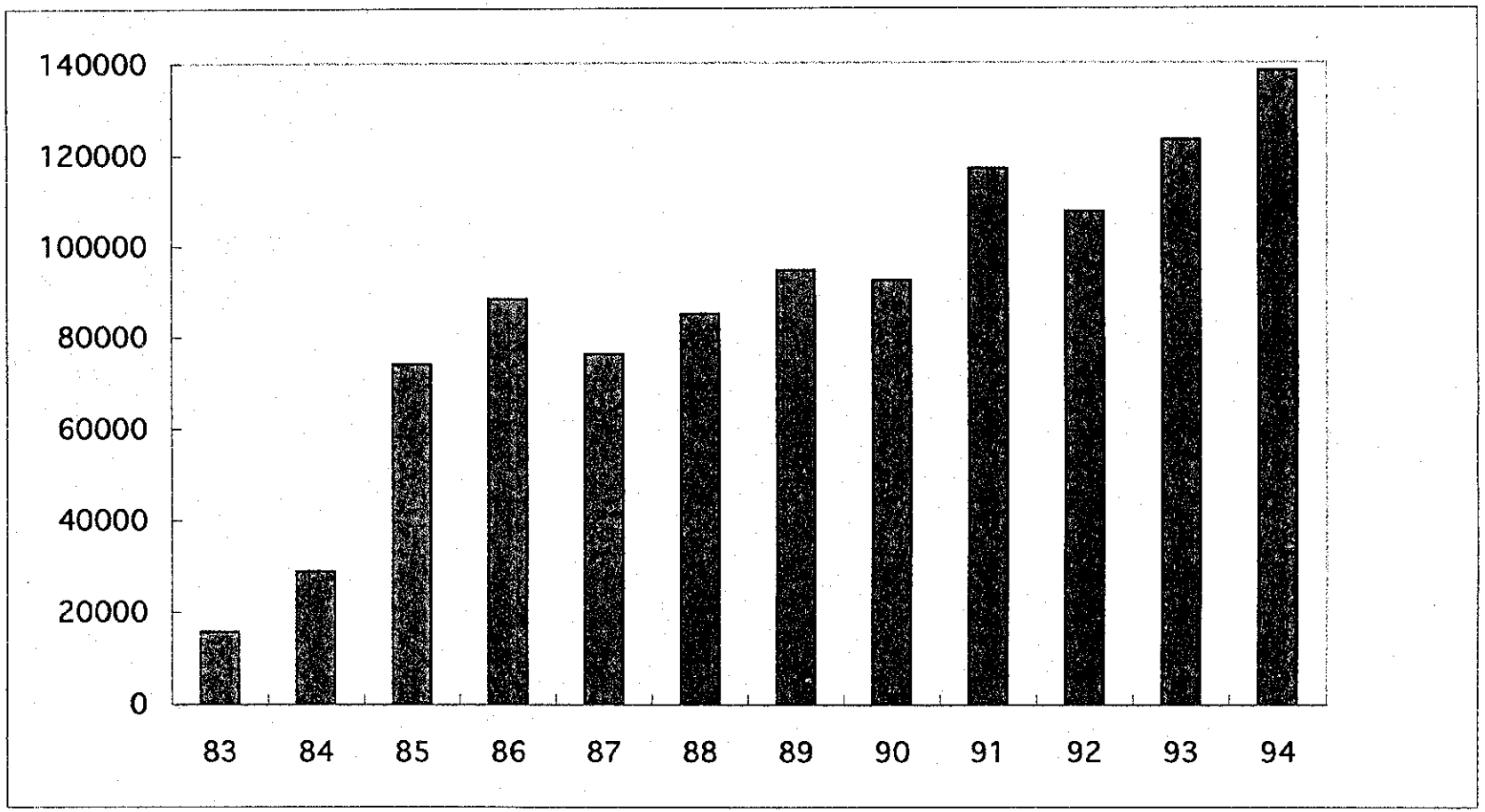
TOTAL NUMBER OF OUT-PATIENT VISITORS (83-94)

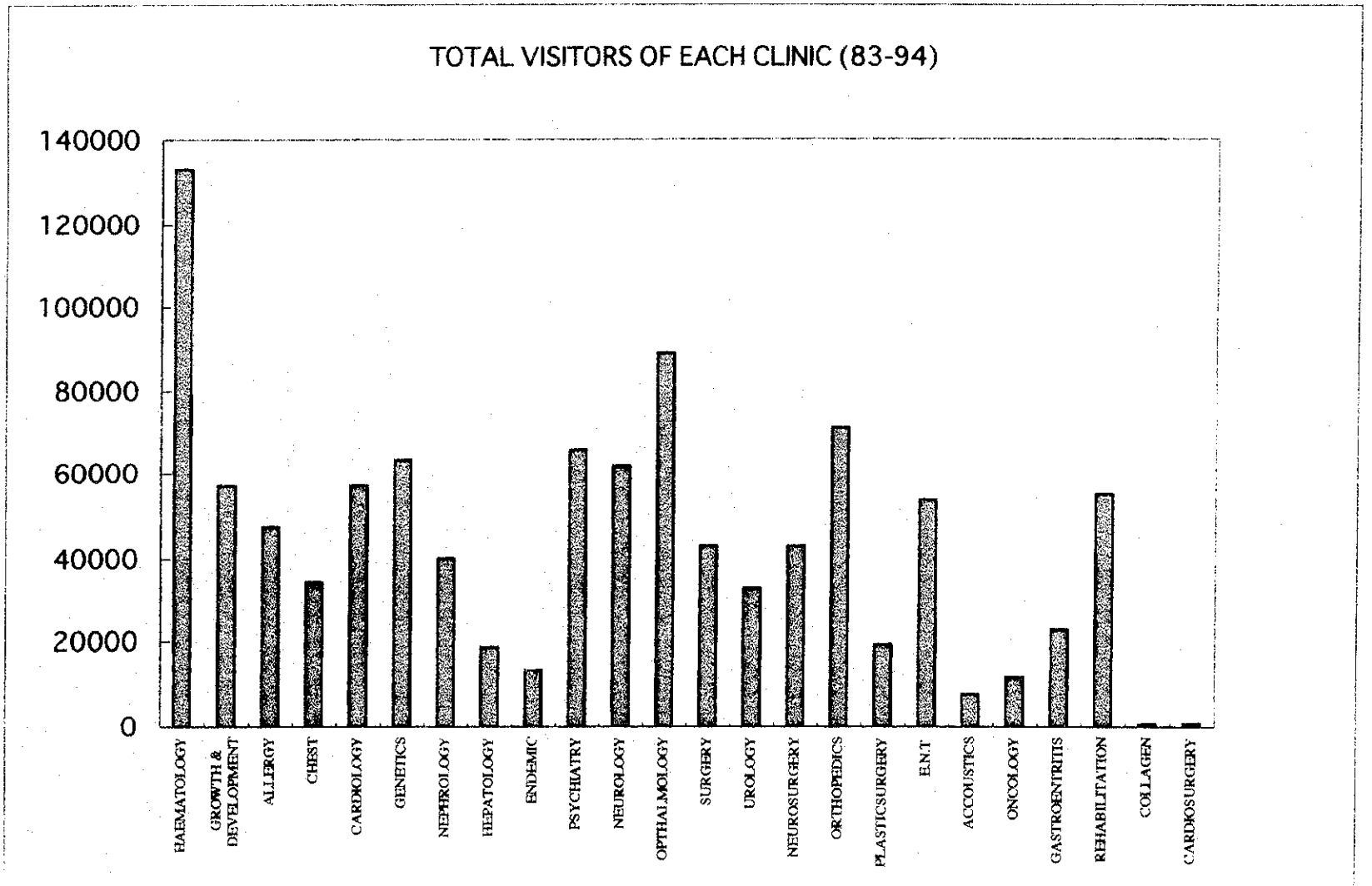
Clinic	1983	1984	1985	1986	1987	1988
HAEMATOLOGY	955	3007	6514	5985	6465	8985
GROWTH & DEVELOPMENT	1323	2111	3043	4244	2977	2790
ALLERGY	823	1139	3738	4670	3980	4400
CHEST	1087	901	2654	2581	2275	2517
CARDIOLOGY	1404	1816	5423	6487	5154	4938
GENETICS	2794	5704	6618	5961	4702	5576
NEPHROLOGY	361	1149	2416	2962	3593	3748
HEPATOLOGY	0	0	1334	1629	1778	1335
ENDEMIC	0	0	1310	206	0	379
PSYCHIATRY	903	1664	5946	7754	4781	4859
NEUROLOGY	1232	1783	3631	6069	3177	7310
OPTHALMOLOGY	875	1280	4258	9716	11417	9869
SURGERY	1001	1386	2013	3125	2510	3904
UROLOGY	200	586	1219	2903	2133	3320
NEUROSURGERY	400	2200	2373	3252	2842	3611
ORTHOPEDICS	101	444	4700	4811	4136	4618
PLASTICSURGERY	100	300	1200	1203	1167	1495
E.N.T.	503	1133	4277	5829	2840	3742
ACCOUSTICS						
ONCOLOGY						
GASTROENTRITIS						
REHABILITATION	1629	2196	11412	9017	10319	7544
COLLAGEN						
CARDIOSURGERY						
TOTAL	15691	28799	74079	88404	76246	84940

TOTAL NUMBER OF OUT-PATIENT VISITORS (83-94)

Clinic	1989	1990	1991	1992	1993	1994	TOTAL
HAEMATOLOGY	11863	15789	19620	20431	18419	15120	133153
GROWTH & DEVELOPMENT	3666	4511	6074	6673	8901	10725	57038
ALLERGY	3862	3035	5640	4987	4974	6150	47398
CHEST	2681	3707	4770	4265	3652	3288	34378
CARDIOLOGY	4991	4904	5244	5032	5290	6339	57022
GENETICS	5627	5492	4199	4276	6213	6069	63231
NEPHROLOGY	3608	4145	4721	5264	3949	4096	40012
HEPATOLOGY	1201	1098	1795	2207	2281	3872	18530
ENDEMIC	1879	2567	2520	1524	2092	944	13421
PSYCHIATRY	6429	7056	9099	7462	7506	2301	65760
NEUROLOGY	11466	10970	16166			0	61804
OPTHALMOLOGY	7573	6519	6008	8654	10870	12014	89053
SURGERY	2085	3687	3527	5169	5221	9320	42948
UROLOGY	1887	2977	3632	4070	4281	5574	32782
NEUROSURGERY	2718	2993	4508	4524	5818	7725	42964
ORTHOPEDICS	6650	7197	10175	10153	7056	11057	71098
PLASTICSURGERY	935	1038	1728	2528	4134	3315	19143
E.N.T.	2713	4117	5907	8480	7084	6925	53550
ACCOUSTICS		717	1709	1948	1677	1539	7590
ONCOLOGY					6495	5267	11762
GASTROENTRITIS					7359	15309	22668
REHABILITATION	12875						54992
COLLAGEN						584	584
CARDIOSURGERY						770	770
TOTAL	94709	92519	117042	107647	123272	138303	1041651

Total Number of Out-patient Visitors (83-94)




TOTAL VISITORS OF EACH CLINIC (83-94)
140000
120000
100000
80000
60000
40000
20000
0
HAEMATOLOGY
GROWTH & DEVELOPMENT
ALLERGY
CHEST
CARDIOLOGY
GENETICS
NEPHROLOGY
HEPATOLOGY
ENDEMIC
PSYCHIATRY
NEUROLOGY
OPTHALMOLOGY
SURGERY
UROLOGY
NEUROSURGERY
ORTHOPEDICS
PLASTICSURGERY
E.N.T
ACCOUSTICS
ONCOLOGY
GASTROENTRITIS
REHABILITATION
COLLAGEN
CARDIOSURGERY

Annex 2

Prof.. Dr. Mohamed El-Badawy El-Naggar
Director of Cairo University New
Pediatric Hospital

Sub: The Study about Patient's Needs in Cairo University New Pediatric Hospital

We wish to express our grateful appreciation to Cairo University New Pediatric Hospital (CUPH) for the successful activity of joint project both Egyptian and Japanese people.

Our highest appreciation and deepest gratitude to prof. Dr. Mohamed El-Badaway El-Naggar Director of CUPH and heartiful thanks to all CUPH staff for their cooperation.

We also express our sincerely appreciation for all egyptian people for helping our stay (even our first visit in Egypt).

During our stay in CUPH, the simple assessment of Patient's needs in CUPH has been done by interview on three questions. This research could be very essential findings for what patients required to the CUPH.

Hospital administrators or staff tend to give medical treatment without consideration of real patient's needs. It happens frequently to loose the attitude which study about patient's opinions, requests and wishes as to the hospital. However, the patient's needs are very important point to make better hospital management.

The patient's opinions, requests and wishes identified by this research might be a good suggestion for making better hospital function.

We would like to report the result of our study.

Date:12th October 1994.
Cairo

Keiji Yakuwa
&
Shin Maruchi
Japanese short term expert,
Hospital administration

THE STUDY ABOUT PATIENT'S NEEDS IN CUPH

1. OBJECTIVE:

The purpose of this research is to identify the patient's needs for CUPH and reflect them to hospital management.

2. STUDY METHOD:

1) The study is conducted in out-patient's department area CUPH, on 8th October 1994.
2) Thirty samples are collected randomly.
3) Three questions are prepared and interview to mother/father of their patients.

multiple choice type questionnair may not reflect the real mind and patients often scared the interview in certain reason. Therefore, interviewer explain what we are doing in order to make patients relax fully.

3. QUESTIONNAIR:

Question 1 Where are you living?

It is measured patients expectancy and creditability for CUPH.

Question 2 Would you tell us your assessment for CUPH, Choose the followings.

(a) excellent (b) fare (c) not good

If you choose (a) or (c), please tell us your detail opinion.

The hospital basically depends on the relationship between patient and hospital attitude such as management, staff attitude, services etc. This question could be derive patient's evaluation as to hospital and also be known their opinions.

Question 3 Would you give us whatever you request to CUPH frankly.

4. RESULT and DISCUSSION

(RESULT)

Q-1: Covering area

Distance	less than 5km	5km-10km	more than 10km
% of total patients	17.9%	32.1%	50%

Distance: The radius at the center of CUPH

50% of total patients comes from far area(Japanese criterion). This show us that CUPH give high medical services, and people assess CUPH in high grade even if the lack of children hospital. There are a lot of needs for children to get such better medical services.

(DISCUSSION)

Only the area where patients come to CUPH was studied in this research, however it could be classified on diseases so that, endemic data will be known. Epidimiological study help us the prevention of diseases. In this view point, it is very much important to make better medical record in out patient section ~~as well~~ at the first. It is also useful for students education to do better diagnosis and research.

Q-2 Evaluation for CUPH

(RESULT)

Evaluation	excellent	fare	not good	do not know
% of total number	32.1%	39.3%	17.9%	10.7%

The reason why excellent:

1) good doctors (6 persons)
2) good security (2 persons)
3) success of operation
4) clean hospital(ward)

The reason why not good:

1) long waiting time (5 persons)
   include x-ray and Lab. examination
2) lack of space(small hospital)
3) bad nurse's attitude
4) it is not possible to take treatment in the village after discharge.

71.4% of total made answer excellent or fare, it means most people satisfied for CUPH. However 20% of total answered bad as the reason for long waiting time.

(DISCUSSION)

The hospital which has a lot of out patient used to think that it is no way to solve long waiting time because patient choose the hospital by themselves, and never solve this problem. If the hospital act like this attitude, it could be changed his attitude. It has to be standing at the patient's side, otherwise it can not solve this problem.

The followings are simple suggestions in order to improve.

1) to improve reception system
2) to introduce reservation system
3) to give the enough information by hospital, such as giving exactly waiting time (if patient knows how many hours they have to wait, they might agree with long waiting time)

Q-3 Request from patients

(RESULT)

1) very good for all parts in the hospital (3 persons)
2) long waiting time (6 persons)
3) high expense for X-ray and laboratory examination (4 persons)
   (required free charge for them)
4) staff attitude (5 persons)
   less doctor's explanation, bad nurse attitude etc.
5) hospital facility (2 persons)
   lack of toilet, crowed etc.

(DISCUSSION)

a) Some of patient's request or opinion include real solution for the problems, but at the same time, patients sometimes request unreasonably in their selfish-mind. It is necessary to listen their request and analyze them by expertized manner, for instance, regarding with the long waiting time as mentioned in Q-2, the hospital has to inform the waiting time to the patients clearly. One window(section) introduce for this purpose and help both hospital and patient.
The function of this window(section) is ;

1) to give real information to eliminate patient's selfish-mind and misunderstanding.
2) to be a liaison sector between patient and related department in the hospital and also be a consultation for patient.
3) to be a section which listen patient's opinion and analyze them.

b) Most patients are refered one in CUPH from other medical department. It might be a good cooperation between CUPH and other medical organization(hospitals, health center etc.). The effective and efficient relationship between CUPH and other medical services center shows us the importance of CUPH. Therefore, the window(section)for refered patients from far area could be introduced as the reference hospital role. As we mentioned, this section help both patient and doctors. furthermore, it might be helpful to know the information about endemic aspects and preventive diseases.

c) The hospital services ~~consist~~ is one of the part of hospital function, such as in diagnosis, treatment, nursing, examination, nutrition and medical consultation etc.

If hospital services is not good, the assessment of the hospital would come very bad even if the diagnose or treatment are excellent. We have to give better services as much as we can.

One of our suggestion is to put hospital guidance brochure at the reception. It might be a information activity for CUPH.

1) out-patient guidance;
   name of department, function of department, opening time, location, etc. including some pictures.
2) in-patient guidance;
   awareness(regulation)for in-patient, good prepared by patient information of visiting day/time etc.

d) CUPH charge on X-ray and laboratory examination ~~fee~~, admission ticket, inpatient bed at the present. Off course patient desire to take better service in free charge, however, it can not manage to keep better and advance medical services in a limited government budget.

In the future, CUPH will have take a necessary procedure to keep the enough budget in order to maintain the hospital nicely.

ANNEX 3 :

THE OUTPATIENT DEPARTMENT (OPD):

1. GENERAL PEDIATRIC CLINICS (12 CLINICS)

2. SPECIALIZED CLINICS (24 PEDIATRIC SUBSPECIALTY):

2.1. Oncology
2.2. Physical Medicine and Rehabilitation.
2.3. Gastroenterology and Rehydration.
2.4. Hematology.
2.5. Endocrinology (including diabetes).
2.6. Allergy and immunology.
2.7. Pulmonary diseases (including T.B.) .
2.8. Genetics.
2.9. Rheumatology.
2.10. Hepatology.
2.11. Nephrology.
2.12. Tropical Diseases.
2.13. Neurology.
2.14. Psychiatry.
2.15. Nutrition.
2.16. General Surgery.
2.17. Chest and Heart Surgery.
2.18. Neurosurgery.
2.19. Urology.
2.20. Orthopedic Surgery.
2.21. Plastic Surgery.
2.22. E.N.T.
2.23. Audiometry and Phoniatries.
2.24. Ophthalmology (including squint).

3. EMERGENCY OPD ROOMS (WORKING 24 HOURS A DAY, 7 DAYS A WEEK)

3.1. Medical Emergency Room.
3.2. Surgical Emergency Room.

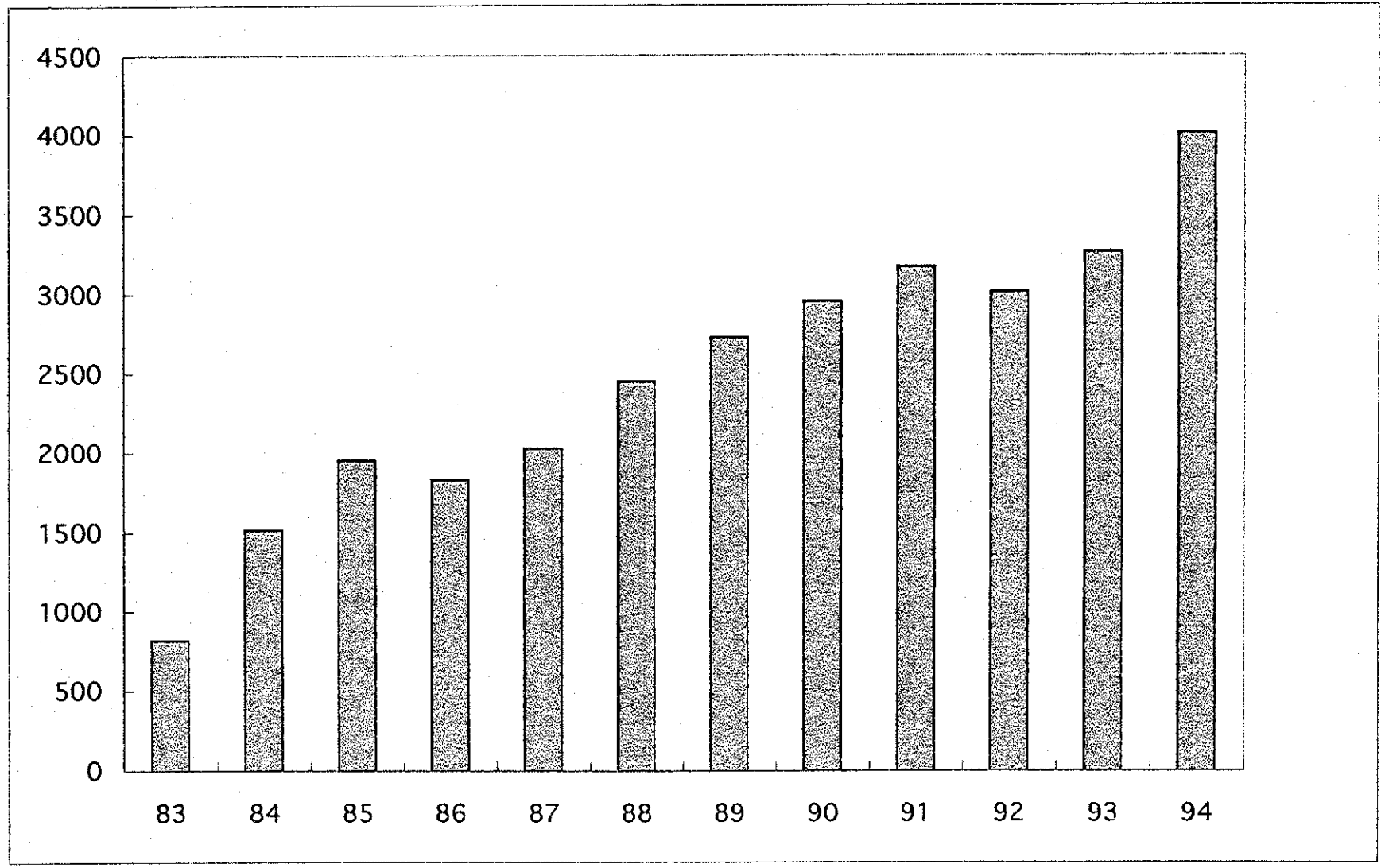
ANNEX : 4

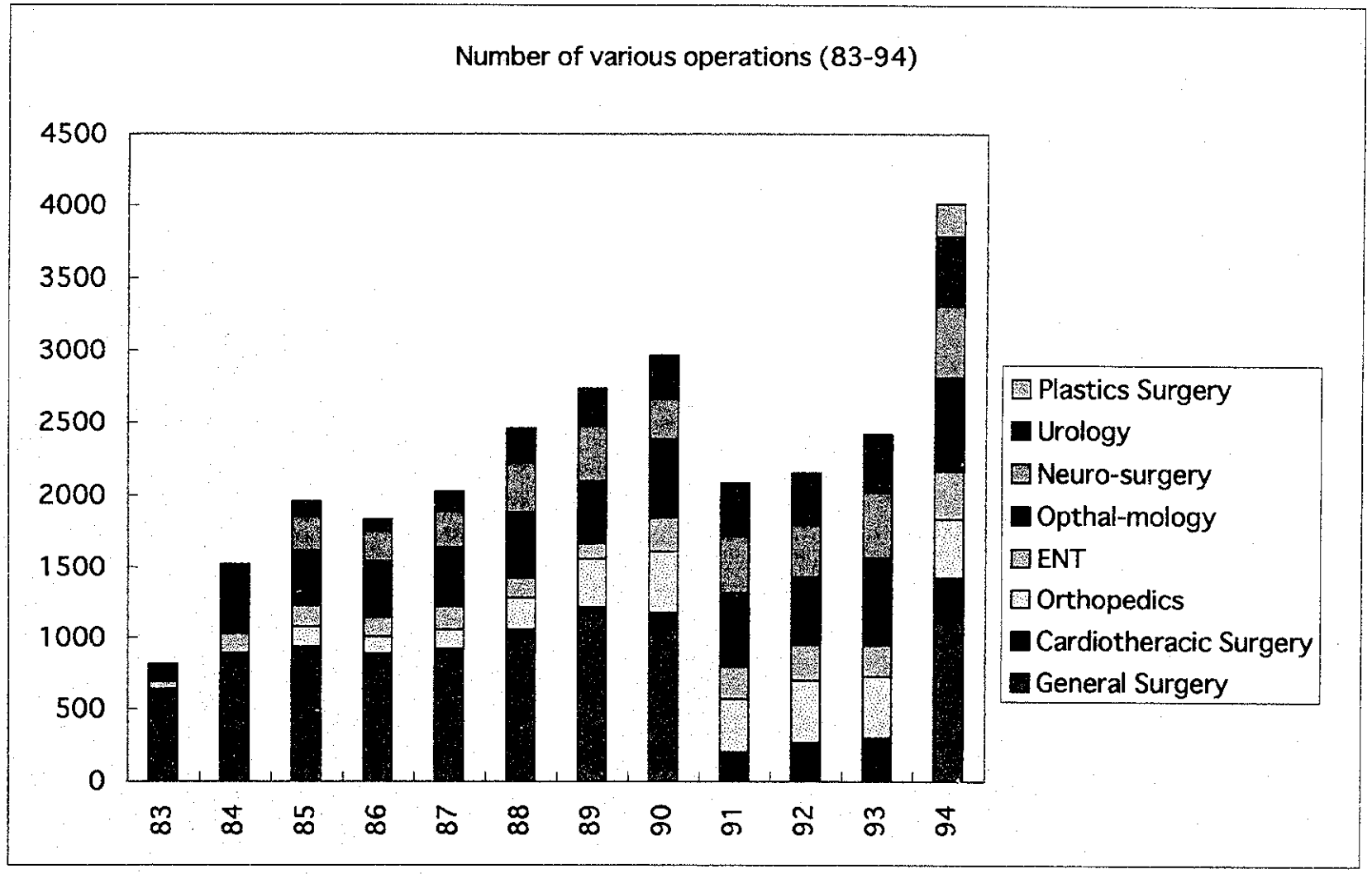
TOTAL NUMBER OF OPERATION IN CUPH (83-94)

	General Surgery	Cardiotheracic Surgery	Orthopedics	ENT	Opthal-mology	Neuro-surgery	Urology	Plastics Surgery	Total
83	634	0	0	57	122	0	0	0	813
84	887	0	0	139	460	0	32	0	1518
85	933	0	139	152	391	234	105	0	1954
86	862	21	119	138	400	211	79	0	1830
87	889	30	134	161	422	248	141	0	2025
88	994	57	226	143	456	342	235	0	2453
89	1164	43	351	106	431	373	263	0	2731
90	1077	92	439	232	534	286	299	0	2959
91	1097*	203	362	227	517	405	364	0	2078
92	869*	268	424	254	480	363	358	0	2147
93	858*	300	420	224	618	450	399	0	2411
94	1106	310	409	334	644	507	474	224	4008

Note : "*" Including Plastic Surgery

Total Number of Operations in CUPH (83-94)




Number of various operations (83-94)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
83
84
85
86
87
88
89
90
91
92
93
94
Plastics Surgery
Urology
Neuro-surgery
Opthal-mology
ENT
Orthopedics
Cardiotheracic Surgery
General Surgery

NUMBER OF OPERATIONS
IN EACH OPERATION THEATER
January-March 1995

	January	February	March
First Floor Operation Theater			
General Surgery	69	60	51
E.N.T	106	84	70
Ophthalmology	36	38	63
Forth Floor Operation Theater			
General Surgery	81	63	73
Orthopedics	46	27	32
Urology	35	28	27
E.N.T	18	16	18
Ophthalmology	46	38	54
Fifth Floor Operation Theater			
Cardiothoracic Surgery	23	23	22
Neurosurgery	43	33	28
Plastics Surgery	19	13	16
TOTAL	522	423	454

Annex 5

STUDY OF ENVIRONMENTAL SANITATION

IN CUPH (IV)

Prof. Dr. Mohamed El-Naggar*, Ass. Prof. Dr. Asem El-Fiky*
Ass. Prof. Dr. Ahmed El-Beleidy*, Ass. Prof. Dr. Mohamed Badawi*
Dr. J. Takeshita**, Y. Ohkawa**, M. Kurosawa**, MPHM S. Noda**
Prof. Dr. Soheir Helal***, Dr. Amani El-Kholy***, Dr. Yasmine Ali***.

* Department of Pediatrics, Cairo University ** JICA experts
*** Department of Microbiology in CUPH

SUMMARY:

We have checked the cleanliness at ICUs and operation theater (OT)s in this hospital, biologically, using culture plates in March 1995.

In both ICUs and OTs, our efforts to improve the level of this hospital have proved to be definitely effective, in comparison with the data of the study in 1994. Especially, the dramatic improvement of OTs at both 4F and 5F was achieved.

Outside of ICUs and OTs, bacterial contamination in the air is suspected as same as the old result, although the qualitative impression of assayed agar plates is better than before. To make it clear, further study on this problem will be continued.

Much more patients than expectation have rushed, every day, to ask for medical intervention, but we should not forget to serve all patients with good sanitary environment for highly qualified therapy. Therefore, we have to continue our efforts to improve the sanitary condition, that is: education for the hospital personnel, patients and their families, keeping the floor-cleaning, adequate air conditioning, supplying enough disposable articles and so on.

Parallel to these efforts, we have to consider the renewal or rehabilitation of the hospital.

INTRODUCTION:

Our hospital is very crowded with a large number of patients and their families and we must serve highly qualified therapy as possible as we can. As the first requisite for advanced therapeutic procedures, a good environmental sanitation is necessary, especially in ICUs and OTs [1)-3)].

The purpose of this study is to understand the bacterial contamination in our hospital at present, comparing it with data of 1994, and improve sanitary condition as the final target.

METHOD:

For biological (bacteriological) method, two culture plates (nutrient agar, 10 cm. diameter) were kept on the floor of each assayed point, exposed to the air for 30 minutes. After 24 and 48 hours' incubation of all plates at 37°C, the number of colonies grown on the surface of the nutrient agar was counted.

Four control plates were not exposed to the air, but other processes were same as the above mentioned.

We took samples at two points of OTs (Ante Hall and one operation room), at one point of each ICU (central position of ICU, on the floor near the patient bed), and outside of ICU (general corridor).

After 48 hours' incubation, Gram's staining was done of 5 to 10 colonies selected from each agar plate at 4 points, such as; operation room No. 3 at 4F-OT, operation room No. 2 at 5F-OT, and near the patient's beds of both ICUs at 4F and 5F.

Photographs of the colonies on the nutrient agar were taken after 48 hours' incubation, too.

Our measurements were performed in the morning of 13th. March 1995, while the routine clinical practices were being done as usual, in both ICUs and all operating rooms of OTs, actively.

RESULT:

In both operation theaters and ICUs, the numbers of air floating bacteria were at much less level than that outside of ICUs (general corridor) at 4F and 5F (photos 1 and 2). The all four control plates showed no growth of bacteria.

The average numbers of bacterial colonies of two culture plates, after 24 hours (white column) and 48 hours (black column) incubations at 37°C, are presented, and compared with data from the report made in 1994. The height of column indicates the number of bacteria grown per one nutrient agar plate, by exposition to air for 30 minutes.

The number of bacteria inside ICUs and OTs, decreased certainly, compared with the higher column of 1994's report. In operation rooms at both OTs at 4F and 5F, the bacterial number has decreased to the level of one-tenth.

The bacterial number at Ante Hall of 4F-OT of this study, has decreased clearly. The two plates of Ante Hall of 5F-OT were contaminated accidentally during assay, and we have omitted the data.

The result of Gram's staining colonies was shown in Table 1. The Gram's staining was performed using one agar plate of each point after colony counting, and the other one of two plates was used for photograph. We could get 7 and 5 colonies from the plate of 4F-OT and 5F-OT, respectively.

We selected 10 colonies at random, from one plate of both 4F-ICU and 5F-ICU, respectively.

Gram's positive cocci are dominant and followed by Gram's negative rods. None of Gram's negative cocci were obtained.

DISCUSSION:

The improvement of environmental sanitary condition of both OTs and ICUs in this hospital has been clarified with the decreased number of air floating bacteria on this study. And it is also clear that our efforts such as; education, area zoning, cleaning the floor and supply of enough disposables have proved to be very effective to improve the sanitary condition of ICUs and OTs.

In our study, there was a dramatic decrease of bacteria in OTs. The reason of difference between the results of ICUs and OTs are supposed as follows; the difference of number of personnel and patients, the level of difficulty to limit entrance, the number and type of physical barriers like doors, and systems of exchanging uniforms and shoes.

We should recognize that the responsible staffs in the hospital could improve the sanitary condition of ICUs and OTs, in spite of presence of many difficulties.

We will continue our effort, aiming to much higher level, of course. If we stop it, the condition may return to the bad one, rapidly and easily.

We will continue the discussion about the sanitary condition outside of ICUs and OTs. The number of air floating bacteria were more than one hundred per each plate in the main corridor of the hospital, and at the same level as that of our study in 1994, numerically.

On the other hand, we have gotten the impression that the results showed the decrease of number of air floating bacteria in this hospital, from direct observation of colonies on agar plates (Photos 1 and 2, and Ref. 3). But we could not confirm it because of difficulty of colony counting.

In our previous reports [1)~3)], we have shown that the number of air floating bacteria and dust particles decrease stepwise from dirty area to clean one like a cascade. If we want to keep OTs or ICUs clean, we should improve the condition outside of these units at first.

Vice versa, the improvement of all ICUs and OTs in this study suggest that the general condition of the hospital has become much better. Further study will make it clear.

Parallel to the above mentioned efforts, it is time to consider the necessity of renewal or rehabilitation of this hospital. For example, the ventilation system and waiting hall of out-patient clinic, control of patient's passway, the structure of 4F-ICU and OT, and the position of sterilization unit should be improved or repaired.

With regard to Gram's staining in this study, we found that Gram's positive cocci are dominant, followed by Gram's negative rods in OTs and ICUs. From data of out-patient clinic and general wards in the last report [3)], we showed that Gram's positive Cocci and rods were dominant. The difference

between two reports is interesting but further study should be continued to make it clear.

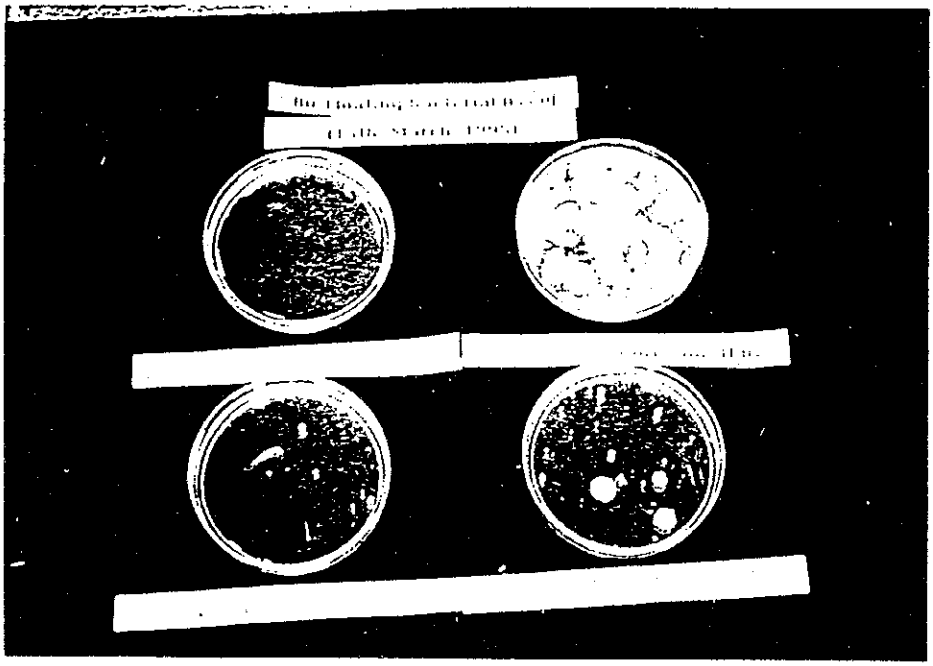
REFERENCES:

1) Takeshita, J. et al.: Study of Environmental Sanitation in CUPH (I), preparing for publication.
2) Khalil, M. et al.: Study of Environmental Sanitation in CUPH (II), preparing for publication.
3) Khalil, M. et al.: Study of Environmental Sanitation in CUPH (III), preparing for publication.

Photo. 1 Air floating Bacteria

Control

4F-Con



4F-OPE

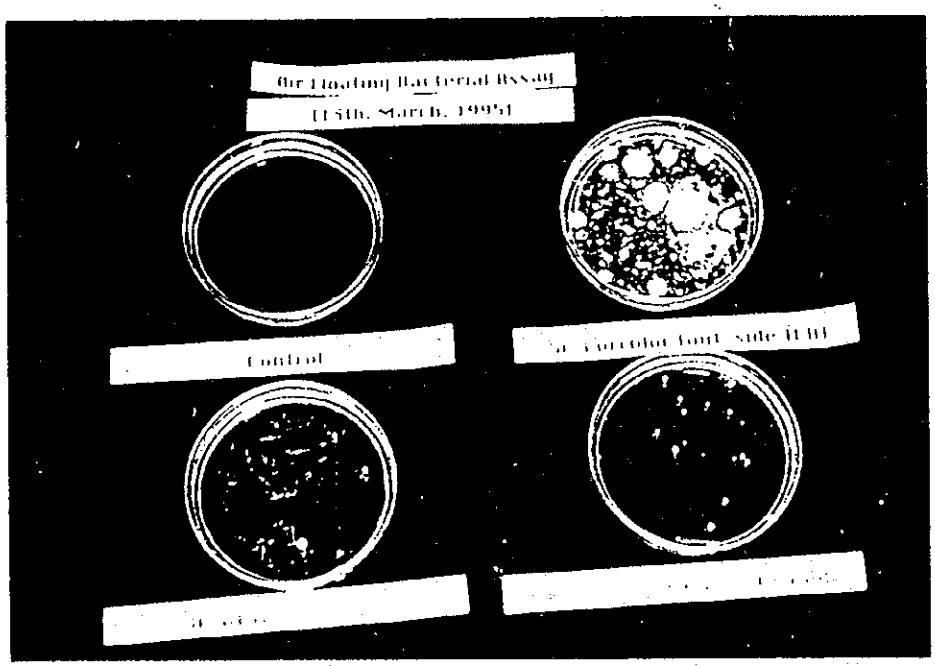
Room No. 3

4F-IC

Photo. 2

Control

5F-Corr



5F-OPE

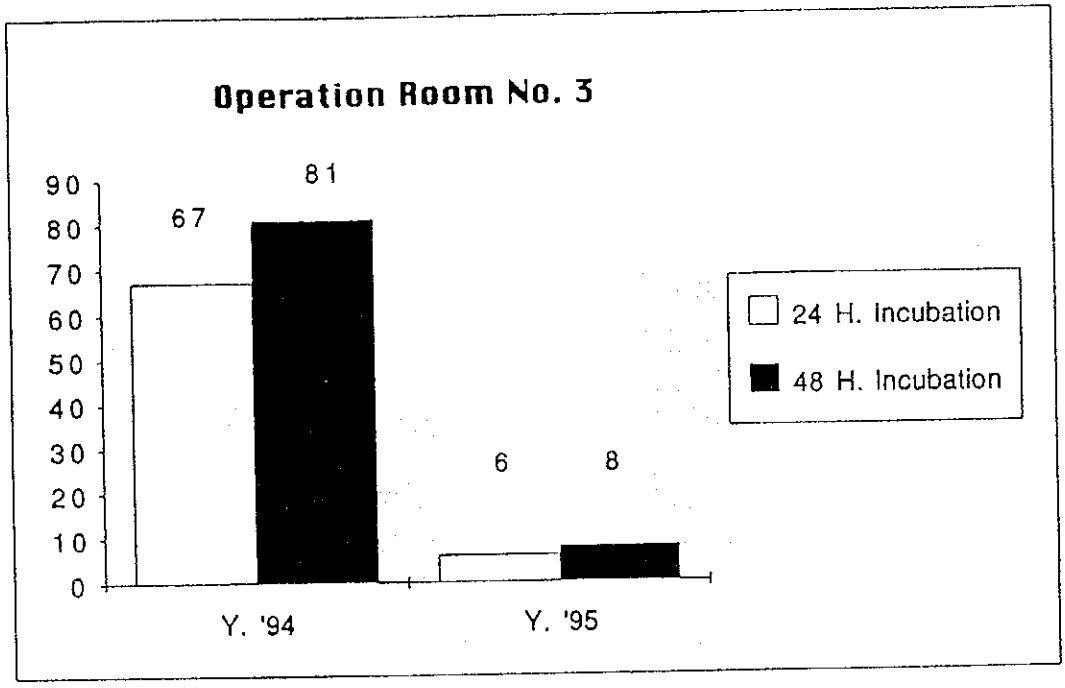
Room No. 2

5F-IC

Fig.1: 4F-OT

Comparison of Environmental Sanitation between Mar. '94 and Mar. '95 using bacterial Assay

Incubation Time at 37°C for 24 hours and 48 hours



No. Of Bacteria

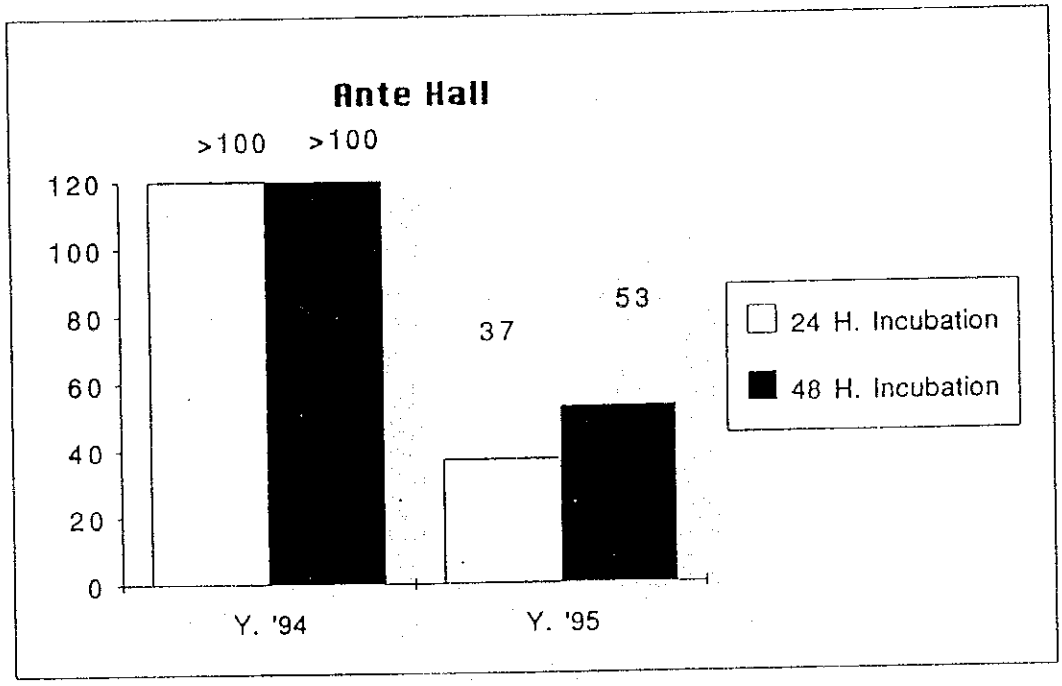


Fig.2: 4F-ICU

Comparison of Environmental Sanitation between Mar. '94 - Mar. '95 using bacterial Assay

Incubation Time at 37°C for 24 hours and 48 hours

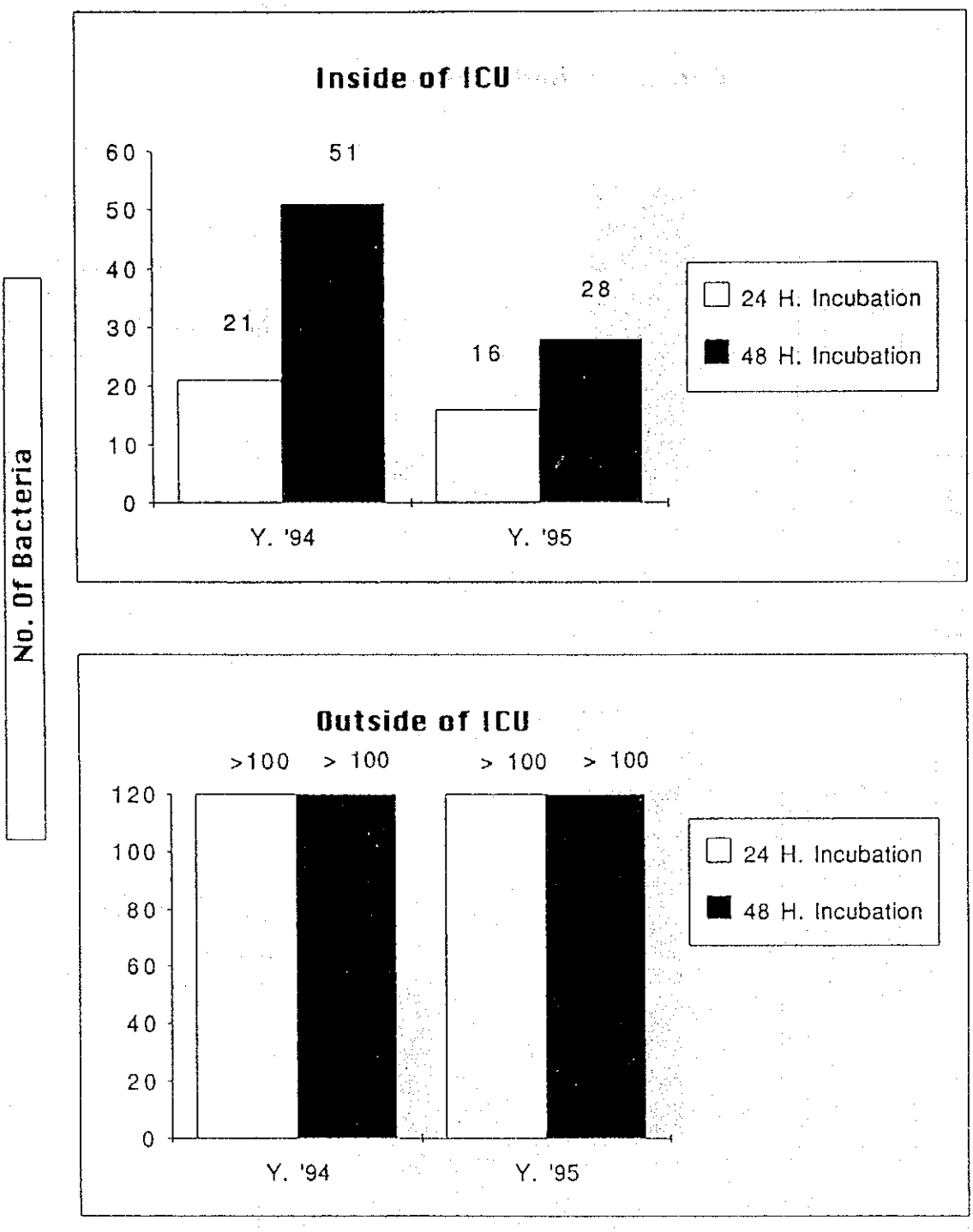
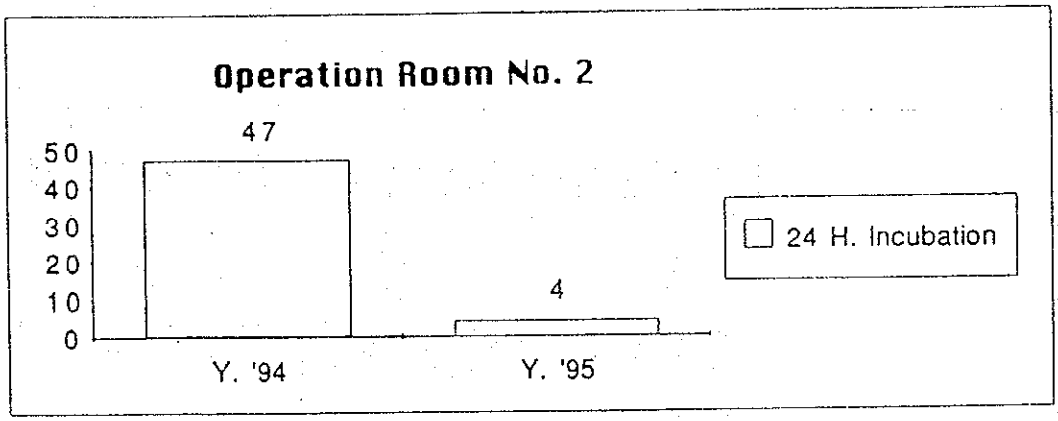
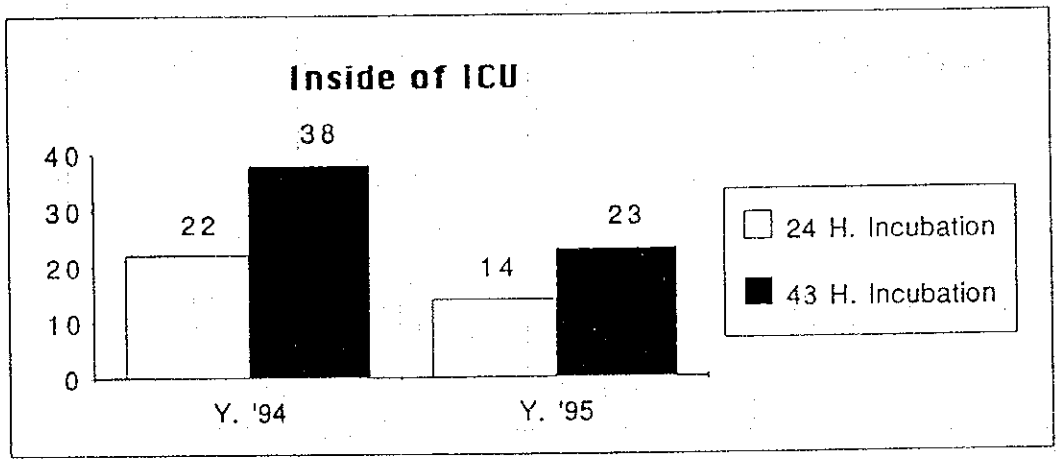


Fig.3: 5F-OT&ICU

Comparison of Environmental Sanitation between Mar. '94 - Mar. '95 using bacterial Assay

Incubation Time at 37°C for 24 hours and 48 hours





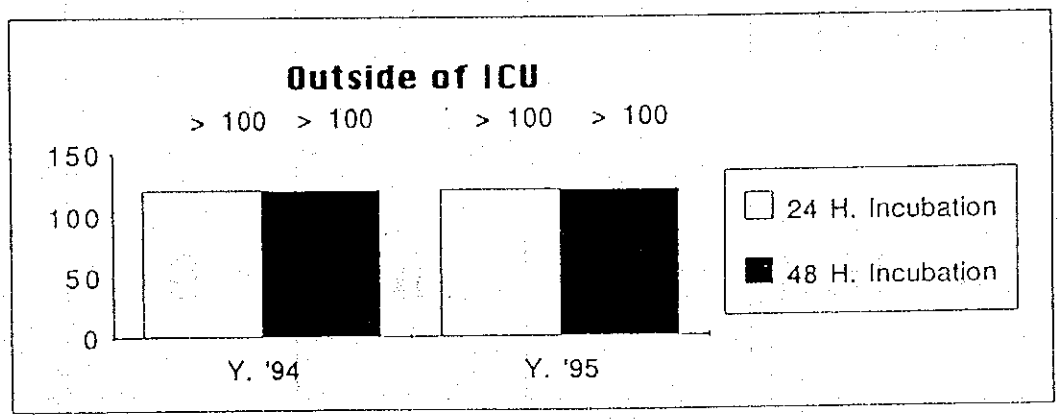


Table 1

Gram's Staining of Colonies, Sampled From OTs and ICUs

	Gram (+) Cocci	Gram (-) Cocci	Gram (+) Rods	Gram (-) Rods
4F-OT	7	0	0	0
4F-ICU	7	0	0	3
5F-OT	2	0	1	2
5F-ICU	7	0	0	3

Annex 6

Dec. 11th., 1994

Members of Infection Control Committee (I.C.C.):

I. Egyptian Counterpart:

*Prof. Dr. Mohamed El-Naggar (CUPH Director)
Dr. Ahmed El-Beleidy
Dr. Assem El-Fiky
Dr. Mohamed Badawi
Prof. Dr. Soheir Helal
Dr. Azza Moustafa
Prof. Dr. Laila Hussein
Mr. Aly Hashem

II. Japanese Counterpart:

Dr. Takeshita
Mr. Ohkawa
Miss. Kurosawa
Mr. Noda

III. Other Members of the Committee:

Dr. Hisham Kamel (5th. ICU)
Dr. Ahmed Tarek (4th. ICU)
Dr. Ahmed El-Sawi (5th. NICU and Private Section)
Ms. Fawzia Abdel Rahman - Matron
Ms. Aida Mohamed - Assistant Matron
Ms. Hoda Mohamed (5th. ICU)
Ms. Soheir Sayed (5th. ICU)
Ms. Afaf Hosni (4th. ICU)
Ms. Miral Ibrahim (5th. OP)
Ms. Halima Mohamed (4th. OP)
Ms. Josephine Daoud (4th. ICU)
Ms. Karima Khamis (5th. OP)
Ms. Hoda Hassan (5th. NICU)
Ms. Ebtesaam (1st. OP)
Ms. Saadia Nassef
Ms. Manal Saied (4th. ICU)
Eng. Magda Zein El-Abedin
Eng. Wafaa Mohamed
Eng. Maher Halim
Ms. Afaf Gharib
Mr. Abdel Salam

Dec. 11th., 1994

Activities of 'Infection Control Committee' (I.C.C.) in CUPH

I. General:

1) A monthly meeting attended by all I.C.C. members on the first Sunday at 10:00 o'clock.
2) Monthly lecture about basical and clinical microbiology is to be held separately from day of I.C.C. meeting.

II. Specific:

1) Improvement of the sanitary state of the hospital:
   a- Monthly Inspection report about the sanitary state of the hospital.
   b- Regular inspection of each area and checking, by doctors, of the above report.
2) Surveying and Monitoring:
   a- Surveying patients that are clinically suspected with nosocomial infection, daily.
   b- Weekly monitoring laboratory data for microbial agents, or daily, if necessary.
      1. Bacterial spectra of clinical samples.
      2. Antibiotics' spectra and their efficiency.
   c- Environmental Survey:
      1. Using Agar Plates: every six months.
      2. Using Laser Particle Counter: every six months.
3) Checking sterilization Machines and sterilization Monitoring, using physical, chemical and biological methods, every day.
4) Following regulations of each area, especially in catheterization unit, I.C.Us and operation theaters.
5) House keeping instructions.
6) Health education to the children and their mothers, and personal hygiene.

Dec, 11th., 1994

ACTIVITIES AND RESPONSIBLE MEMBERS OF I.C.C.

I. GENERAL:

1) **A Monthly Meeting attended by all I.C.C. members on the first Sunday at 10:00 o'clock.**
Prof. Dr. Mohamed El-Naggar is responsible for all activities of I.C.C.
Mr. Aly Hashem informs all members of I.C.C. with meeting time.

2) **Monthly lecture about basical and clinical microbiology is to be held separately from day of I.C.C. meeting.**
Dr. Mohamed Badawi arranges the lectures.
December, 1994 Prof. Dr. Soheir Helal
January, 1995 Dr. Jiro Takeshita

II. SPECIFIC:

1) **Improvement of the sanitary state of the hospital:**
a- Monthly Inspection report about the sanitary state of the hospital:
Eng. Maher Halim
1F - Kitchen, Laundry, Administration rooms, Out-patient clinics.
2F - Out-patient clinics.
Mrs. Fawzia Abdel Rahman and Mrs. Aida Mohamed
2F, 3F and 4F - In-patient wards
Eng. Magda Zein El-Abedin
3F Laboratory, Radiology, 5F Catheter Room and water tanks
Ms. Josephine Daoud and Ms. Afaf Hosni
4F - ICU
Ms. Hoda Mohamed and Ms. Soheir Sayed
5F - ICU
Ms. Halima Mohamed
4F - OT
Ms. Miral Ibrahim and Ms. Karima Khamis
5F - OT
Ms. Sabah Hussein
5F - Private wards
Ms. Hoda Hassan
5F - NICU
Mr. Aly Hashem
6F - All rooms
Ms. Kurosawa
Helps the nursing staff in each section

b- Regular inspection of each area and checking, by doctors, of the above report.

Dr. Mohamed Badawi
1F, 2F - Out-patient clinics

Dr. Ahmed El-Beleidy
2F, 3F, 4F, 5F - In-patient wards.

Dr. Asem El-Fiky
4F and 5F - OT

Prof. Dr. Laila Hussein and Dr. Hesham Kamel
5F - ICU

Dr. Ahmed El-Sawi
5F - NICU and Private Section

Dr. Ahmed Tarek
4F -ICU

Reports from other areas can be checked by:
Dr. Mohamed Badawi or Dr. Ahmed El-Beleidy

2) Surveying and Monitoring:

a- Surveying patients that are clinically suspected with nosocomial infection, daily.

Every resident in each section is responsible for surveillance of nosocomial infection. Nosocomial infection is reported to Dr. Ahmed El-Beleidy by lecturers or assistant leturers, if it happens.

b- Weekly monitoring laboratory data for microbial agents.
1. Bacterial spectra of clinical samples.
2. Antibiotics' spectra and their efficiency.

c- Environmental Survey:
1. Using Agar Plates: every six months.
2. Using Laser Particle Counter: every six months.

Assigned person in each section and staff of department of microbiology in the laboratory.
Dr. Takeshita helps them.

3) Checking sterilization Machines and sterilization Monitoring, using physical, chemical and biological methods, every day.
Eng. Magda Zein El-Abedin
Eng. Wafaa Mohamed
Mr. Ookawa helps them.

4) Following regulations of each area, especially in catheterization unit, I.C.Us and operation theaters.
According to the assigned nurses:

4F - ICU	*Ms. Josephine Daoud*
5F - ICU	*Ms. Hoda Mohamed*
4F - OT	*Ms. Halima Mohamed*

5F - OT *Ms. Miral Ibrahim*
Dr. Takeshita helps them.

5) **House keeping instructions.**
Mrs. Fawzia Abdel Rahman and Mrs. Aida Mohamed are responsible for giving instructions to female workers.
Mr. Abdel Salam is responsible for giving instructions to male workers.
Mr. Noda helps them.

6) **Health education to the children and their mothers, and personal hygiene.**
Ms. Afaf Gharib and her team are responsible for these activities
Ms. Kurosawa helps them.

ANNEX 7 :

LIST OF EMPLOYEES AND WORKERS IN ENGINEERING SECTION

First:	**Engineers:**	**Number**
1-	Head of Engineering Section	1
2-	Medical Engineer	2
3-	Architecture	1
Second:	**Qualified Technicians:**	
1-	Electrician	1
2-	Medical Equipment	4
3-	Air Conditioners	1
Third:	**Technical Workers:**	
1-	Sterilization	6
2-	Boiler	6
3-	Electrician	9
4-	Diesel	1
5-	Carpenter	2
6-	Medical Gas	4
7-	Plumber	8
8-	Tailor	8
9-	Glass	1
10-	Air Conditioners	1
11-	Cleanliness Worker	2
12-	Secretary	1
	Total	59

ANNEX 8 :

FUTURE PLANS TO RENEW THE MACHINES AND DEVICES:

1995-1996 :
CARDIOLOGY DEPARTMENT:
Echocardiography apparatus 2
Tetrodes for catheter machine
COMPUTER DEPARTMENT
Central Mini Computer for the hospital
FOURTH FLOOR OPERATION THEATER
Major Operating Table
Anesthesia Apparatus
Major Operating Light
Minor Operating Light
Electro-surgical Unit
Surgical Scrub Station
High Speed Sterilizer
Electronic Hyper/Hypothermia Unit
Portable Defirillator
X-ray film illuminator
Autoclave

1996-1997 :
FIRST FLOOR OPERATION THEATER
Major Operating Table
Anesthesia Apparatus
Major Operating Light
Minor Operating Light
Electro-surgical Unit
Surgical Scrub Station
High Speed Sterilizer
Electronic Hyper/Hypothermia Unit
Portable Defirillator
X-ray film illuminator
Autoclave
WARDS
X-ray film illuminator
Child Scale
Infant Scale
Operating Light
Examination Couch
Sterilizer
Dressing Chart
Oxygen Flowmeter