

MINISTRY OF EDUCATION, CULTURE
AND HEALTH
REPUBLIC OF KAZAKHSTAN

No. 1

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR IMPROVEMENT
OF ALMATY REGIONAL HEALTHCARE
IN
THE REPUBLIC OF KAZAKHSTAN**

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OF ALMATY REGIONAL HEALTHCARE IN THE REPUBLIC OF KAZAKHSTAN

MARCH 1998

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PREFACE

In response to a request from the Government of the Republic of Kazakhstan, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Almaty Regional Health Care in the Republic of Kazakhstan and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Kazakhstan a study team from October 7 to November 9, 1997.

The team held discussions with the officials concerned of the Government of Kazakhstan, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Kazakhstan in order to discuss a draft basic design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Kazakhstan for their close cooperation extended to the team.

March, 1998



Kimio Fujita

President

Japan International Cooperation Agency

March, 1998

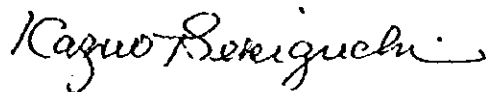
Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of Almaty Regional Health Care in the Republic of Kazakhstan.

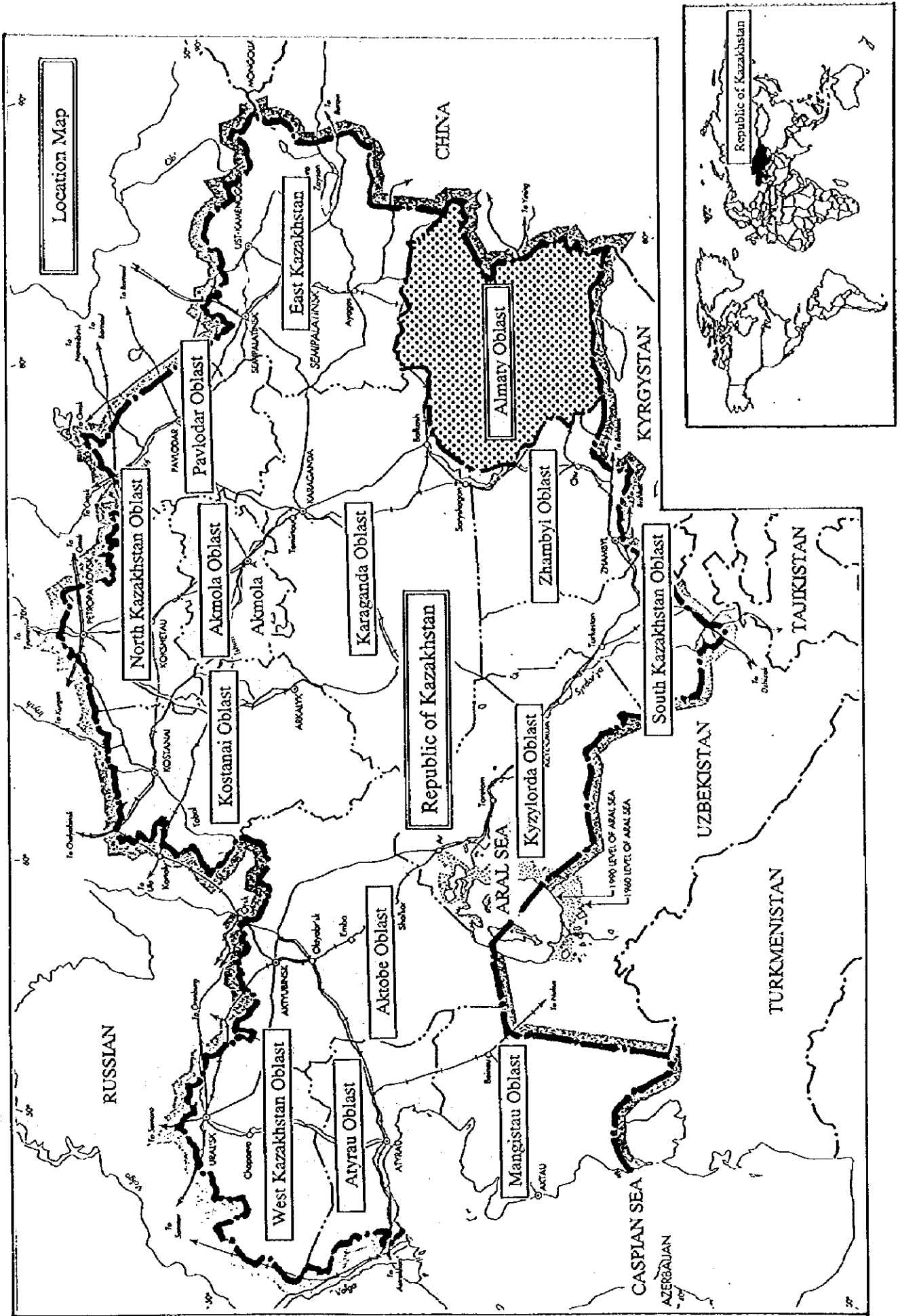
This study was conducted by UNICO International Corporation, under a contract to JICA, during the period from October 1, 1997 to March 31, 1998. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Kazakhstan and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

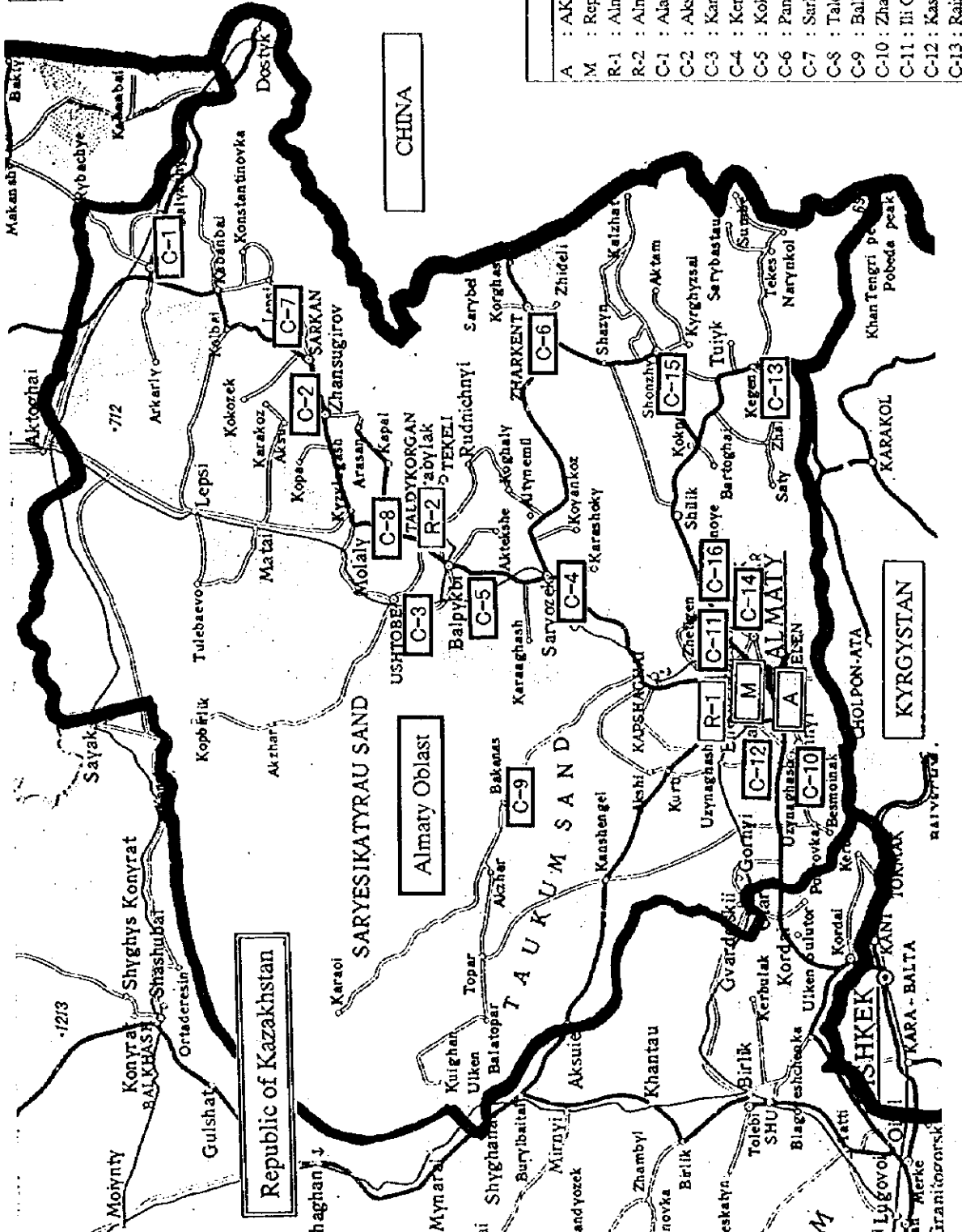
Very truly yours,



Kazuo Sekiguchi
Project manager,
Basic design study team on
the Project for Improvement of Almaty Regional
Health Care in the Republic of Kazakhstan
UNICO International Corporation



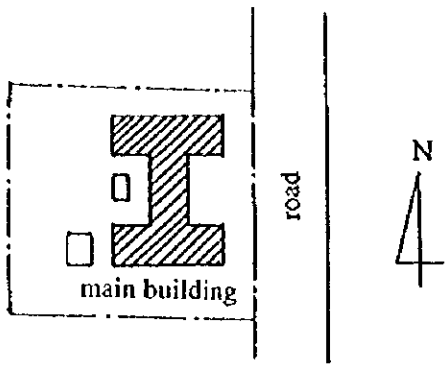
Location Map



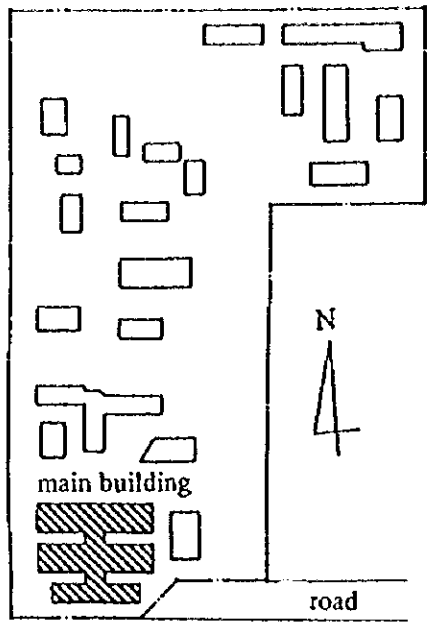
Location Map	
A	: AKSAI Children's Hospital
M	: Republican Medical College
R-1	: Almaty Regional Hospital No.1
R-2	: Almaty Regional Hospital No.2
C-1	: Alakol Central District Hospital
C-2	: Aksoui C.D.H.
C-3	: Karatal C.D.H.
C-4	: Kerbulak C.D.H.
C-5	: Koksoui C.D.H.
C-6	: Panfilovsk C.D.H.
C-7	: Sarkand C.D.H.
C-8	: Taldykourgan C.D.H.
C-9	: Balkhash C.D.H.
C-10	: Zhambyl C.D.H.
C-11	: Ili C.D.H.
C-12	: Kaskelen C.D.H.
C-13	: Raimbek C.D.H.
C-14	: Talgar C.D.H.
C-15	: Uigur C.D.H.
C-16	: Enbekshi-kazak C.D.H.



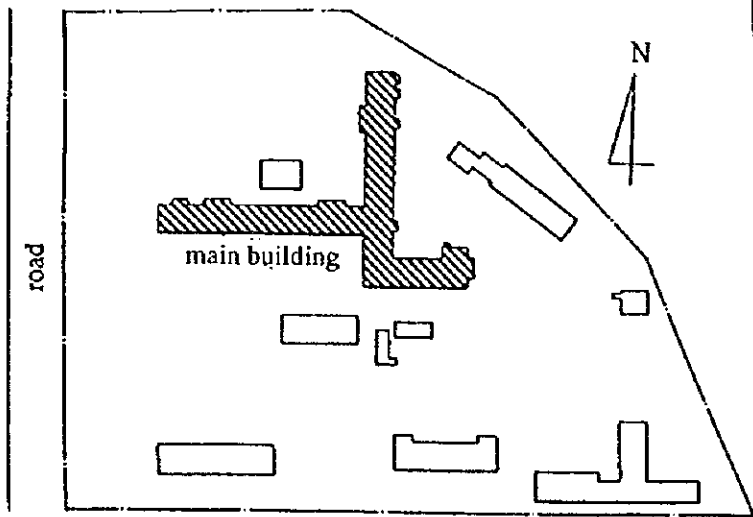
SITE PLAN



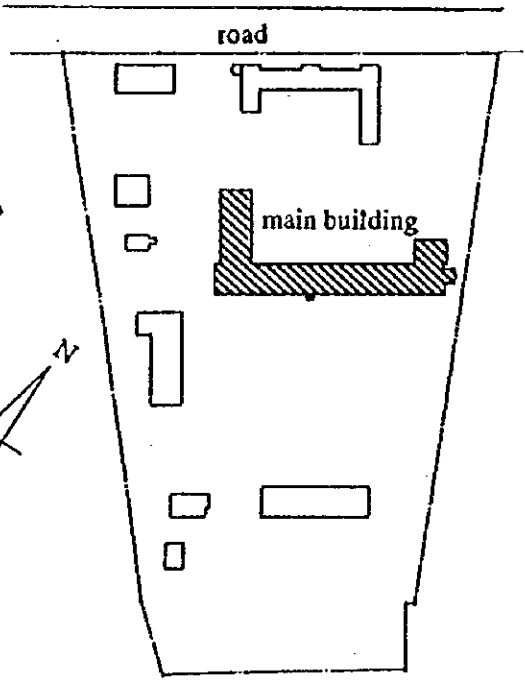
M : Republican Medical College



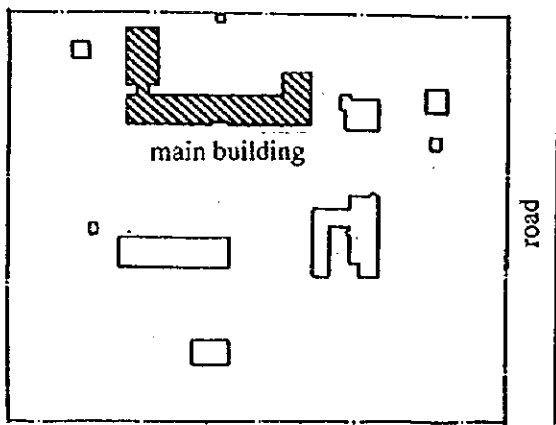
A : Aksai Children's Hospital



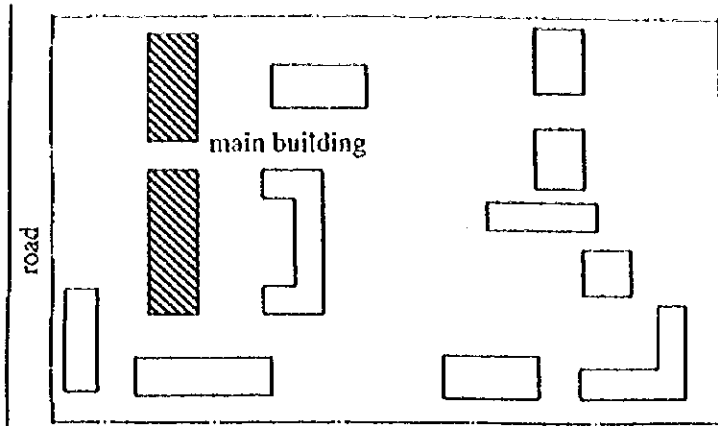
R-2 : Almaty Regional Hospital No.2



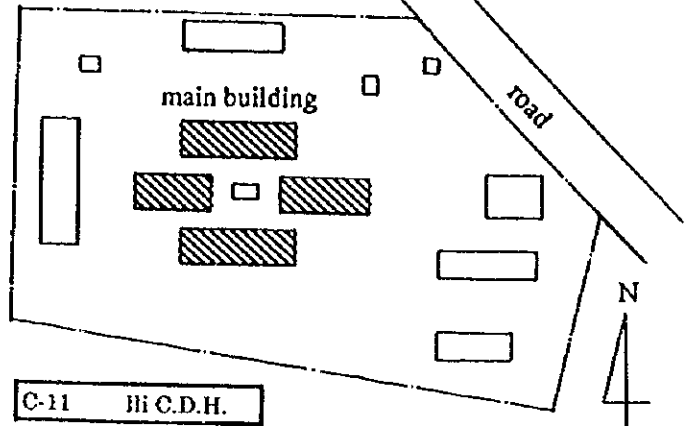
C-5 : Koksoui Central District Hospital



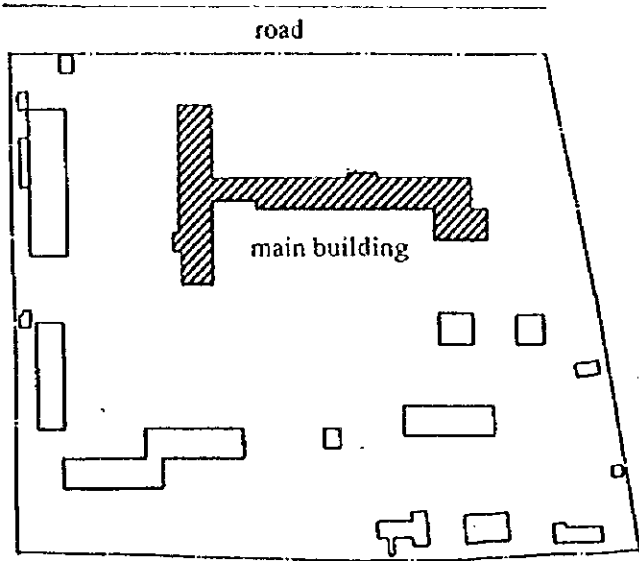
C-6 Panfilovsk C.D.H.



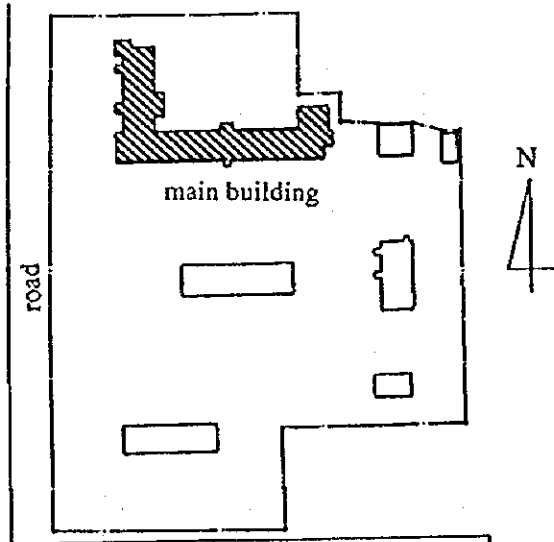
C-7 Sarkand C.D.H



C-11 Hi C.D.H.



C-12 Kaskelen C.D.H.



C-13 : Raimbek Central District Hospital

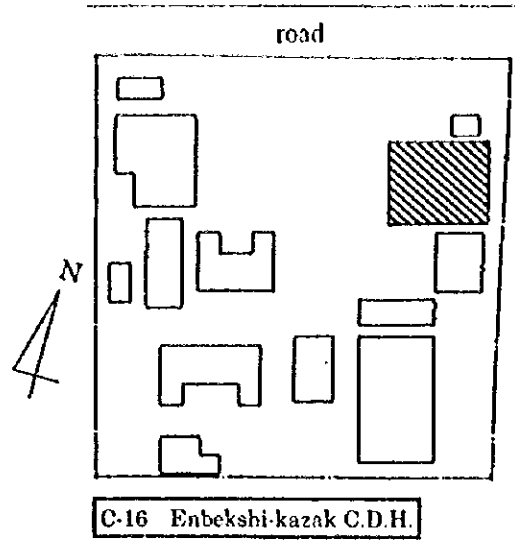
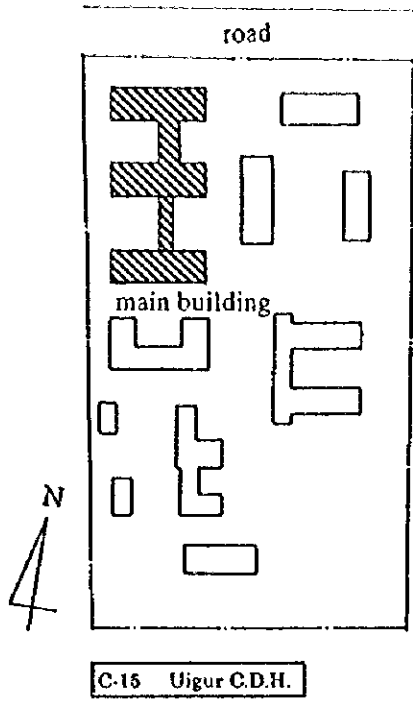


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CHAPTER 1 BACKGROUND OF THE PROJECT

Chapter 1 Background of the Project

The Republic of Kazakhstan started its economic reforms in around 1987 and launched efforts to transform itself to market economy by adopting a privatization program in 1991 when the former USSR staggered its final step toward collapse. The program still forms the basis of economy policy of the country which is struggling to make a major shift from centrally planned economy to market economy and to build self-sufficient economy as a newly independent state. Nevertheless, the collapse of the USSR wiped out a traditional economic system and economic ties with the Russian Republic broke down severely to result in economic deterioration of the country. In May 1992, the Kazakhstan government announced a strategic plan "aiming to develop into the free economy in the next fifteen to twenty years," under which a wide range of economic reforms has been promoted, including legislation to support the shift to market economy, control of inflation, reconstruction of the oil industry, trade liberalization, tax reforms, and restructuring of the financial sector. However, the efforts have failed to boost domestic production, with sluggishness of consumption, while inflation did not subside. As a result, the national economy experienced negative growth in the consecutive years.

Table 1 Growth Rate of Real GDP

	1991	1992	1993
Growth rate of real GDP (%)	-14.9	-14.3	-13.0

Source: Business World

Under these circumstances, the country's healthy conditions seem to be adversely affected by the deteriorating economic conditions, as seen from vital statistics. The average life expectancy shorted to 66.8 years in 1994, compared to 70.5 years in 1990; the death rate per 1,000 population rose to 10.1 persons in 1996 from 7.7 in 1990, which the infant mortality rate per 1,000 live births remained mostly unchanged, 26.4 in 1990 and 26.3 in 1996. The number of medical doctors per 10,000 population declined from some 40 in 1991 to 32.4 in 1996. This reflects the discontinuation of special incentives to medical doctors as well as school teachers and athletes who enjoyed privileges in the former USSR. Furthermore, there are a large difference in the number of doctors between urban and rural areas; 72.9 doctors per 10,000 population in Almaty City (1996) compared to an average 20.7 in rural areas. The gap is clearly reflected in the

number of deaths due to respiratory and infectious diseases, which is 50% higher in rural areas than Almaty City (Table 2). In the former USSR, high quality medical service was available with free of charge. After the country's independence, government expenditure was severely cut back, including medical expenditure that represented only 2.0% of GDP in 1994, far below 3.8% in Kyrgyzstan and 4.0% in Russia in the same year. Financial difficulties have caused the shortage of medical supplies and the aging of medical equipment, accompanied by deterioration of medical service. According to a survey conducted for 16 Central District Hospitals in the Almaty oblast, most hospitals cited the most serious problems caused by financial difficulty: 1) deterioration and shortage of medical equipment and materials; 2) the shortage of medical supplies; and 3) the inability to repair or rehabilitate aged facilities including buildings.

Table 2 Major Health and Medical Service Indices

Indices	Kazakhstan			1990	1993
	County	Almaty city	Rural		
Average life expectancy	66.8	-	-	70.5	-
Death rate (per 1,000 population)	10.1	-	-	7.7	9.2
Infant mortality rate (per 1,000 live births)	26.3	-	-	26.4	28.4
No. of deaths due to respiratory disease (per 100,000 population)	-	60.2	88.4	-	-
No. of deaths due to infectious disease (per 100,000 population)	-	30.2	46.7	-	-
No. of doctors (per 10,000 population)	32.4	72.9	20.7	-	-

Source : 1990 and 1993 data by the World Bank, and 1996 data by the Ministry of Health of Kazakhstan.

The average life expectancy is based on 1994 data.

As part of its efforts to improve the grave conditions, the Kazakhstan government requested the Japanese government in the fall of 1996 to provide grant-in-aid consisting of supply of medical equipment and materials to the Republican Children's Clinical Hospital "Aksai" (abbreviated as the "Aksai Children's Hospital") and the Republican Medical College for the Medium-level Medical Personnel Training and Retraining (abbreviated as the "Republican Medical College"). The Aksai Children's Hospital is specialized in medical examination of children affected by environmental pollution, treatment of kidney and urinary diseases, and deformities and diseases in

the area of pedia-orthopedics. It not only serves as top referral hospital in orthopedics at a national level, but contributes greatly to local medical service in the oblast by sending a mobile medical team (consisting of 7-8 members) to Central District Hospitals, mainly those in the Almaty Oblast, to provide medical treatment and technical guidance. However, their medical equipment, mostly manufactured in the 1970s and 1980s, is deteriorated and cannot be relied on. Furthermore, vehicles used for mobile service are dilapidated and their moving range is limited to an area within a 150km radius of Almaty City. The Republican Medical College is the largest medical college in the country to train medical service personnel including feldshers (responsible for health care guidance, simple surgical treatment, touch, inspection, and auscultation), nurses, midwives and laboratory technicians). Graduates contribute to the improvement of local medical service at different referral levels, mainly in the oblast. Again the college also faces deterioration and shortage of equipment and materials for medical education and training, and students are unable to receive sufficient education.

In response to the request, the Japanese government sent a project formation study team in March 1997 to conduct a reconnaissance study. The study team concluded that it would be desirable to supply medical equipment and materials to medical facilities in the entire oblast, including FAPs, under a formal project entitled "Improvement of Almaty Regional Healthcare." In particular, FAPs are spearheading local medical service by responding to everyday medical needs of local residents. They are only staffed by feldshers, nurses and midwives, and the absence of doctors limits their scope of activity. They also suffer from the shortage of basic medical equipment and materials, including stethoscopes, blood pressure manometers, and suture instruments and materials, hindering everyday health care activities.

Based on the report of the study team, the Japanese government sent the Basic Design Study Team on the Project for Improvement of Almaty Regional Healthcare to the country in October 1997 to conduct activities required for project design. At that time, the Kazakhstan government requested supply of medical equipment and materials to Aksai Children's Hospital, the Republican Medical College and FAPs.

During the field survey, the basic design study team was informed that the Almaty oblast annexed the Taldykourgan oblast. Then, through discussion with the local counterparts, it was recognized that the upgrading of medical resources at Almaty

Regional Hospitals and Central District Hospitals, not included in the original request, would be essential in achieving the purpose of improving medical service standards in the entire oblast. As a result, 2 Regional Hospitals and 16 Central District Hospitals were added to the list so as to cover five key components of the regional medical system. The Regional Hospitals are located in Almaty and Taldykourgan and serve as top referral hospitals in the oblast. They have a necessary set of medical equipment, but some of them are severely deteriorated and can only treat a limited number of patients. In other areas, there are experienced doctors, but the lack of medical equipment prevents them from making proper diagnosis or making adequate treatment. As a result, they often fail to meet medical service expected for top referral hospitals. The another additional component, 16 Central District Hospitals play a leading role in respective service areas. They are responsible for teaching medical techniques, through consultation, to lower tier medical institutions in the entire referral system of the oblast (Fig.1), including village hospitals, village health centers, and FAPs, and manage operating funds and human resources. However, their medical equipment, including X-ray equipment, was mainly made in the 1960s through the 1980s and is fairly aged. As a result, they are often unable to provide proper diagnosis and treatment.

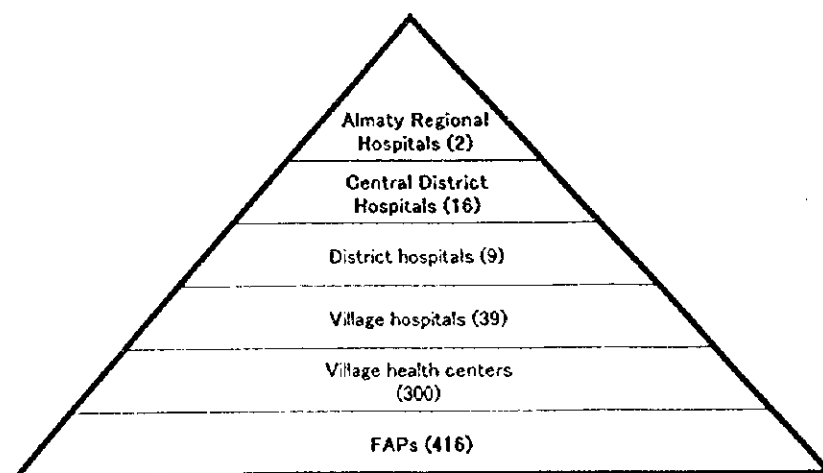


Figure 1 Referral System in the Almaty Oblast

Against the above background, the Kazakhstan government made a formal request to the Japanese government for grant-in-aid to supply medical equipment materials to Aksai Children's Hospital, the Republic Medical College, 2 Regional Hospitals, 16 Central District Hospitals and 320 FAPs for the purpose of improving medical service levels in the oblast.

CHAPTER 2 CONTENTS OF THE PROJECT

Chapter 2 Contents of the Project

2-1 Objectives of the Project

The primary objective of the project is to supply medical equipment and supplies to the Republic Medical College, the Aksai Children's Hospital, 16 Central District Hospitals, 2 Regional Hospitals, and 320 FAPs, thereby to help raise medical service standards in the oblast as a whole. It is expected to contribute greatly to the accomplishment of the country's long-term vision "Kazakhstan in 2030 (1997-2030)" which sets forth the improvement of public health, education and social welfare conditions as one of the important goals.

2-2 Basic Concept of the Project

To select medical equipment and supplies adequate to local needs, the study team collected information from diverse sources through discussion with government officials to identify their expectations for the project, interview surveys of government and related organizations, and field surveys of medical facilities and equipment that include interview with doctors and medical staff concerning the current conditions and needs. Major findings are summarized as follows:

- (1) Medical service standards have been generally declining in the oblast, as evidenced by the increase in death rate and the shorter life expectancy.
- (2) Largely due to geographical conditions characterized by vast land area and low population density, the entire oblast is divided into 16 districts, each of which has a structured medical service system, rather than a highly centralized system under which medical facilities in Almaty City treat large portions of patients.
- (3) Since the country's independence, medical facilities at every level have purchased few medical equipment, and as a result, a large number of existing equipment has reached its service life and is already dilapidated.
- (4) As the government has been undergoing financial difficulties since independence, medical facilities have not received sufficient operating funds and face difficulty in securing high equipment maintenance costs including expandable supplies and spare parts.

- (5) Nevertheless, the referral system led by Regional hospitals, established under the former USSR, is still functioning well.

In consideration to the above factors as well as other relevant conditions, the study team has developed the basic concept of the project which is summarized as follows.

Aksai Children's Hospital

As this hospital serves as one of top referral hospitals in pediatrics, the project will focus on supply of medical equipment which allows it to fulfill its important role. At the same time, the project will support the hospital's mobile medical team in providing service at the Central District Hospitals. The team's service area is currently limited to a 150km radius of Almaty City. The project is designed to extend the service, on a continuous basis, to the entire oblast and eventually to the East Kazakhstan oblast (1,000km from Almaty City) which was covered by the mobile team during the former USSR age.

Republic Medical College

As the college's students receive practical training using large medical equipment at its affiliated hospitals, the project does not need to supply such equipment for demonstration purposes. Instead, the project will focus on equipment that is useful in teaching basic knowledge and techniques required by feldshers, nurses and other medical staff, such as first aid, disinfection and sterilization, and laboratory testing.

The quantity of equipment to be supplied to the college is determined according to the number of groups which are organized by dividing up each class (Table 3). In principle, one equipment will be supplied to each group, while 2-3 units will be assigned for frequently used equipment, and 1-2 units for each class for display or less frequently used equipment.

Table 3 Course Structure

Equipment	Course	Intake	No. of class	No. of students / class	No. of students / group
1 Therapy	Associate doctor	90	3	30	3
2 Pediatric	Associate doctor	60	2	30	3
3 Surgical	Associate doctor	48	2	24	2
4 E.N.T.	Associate doctor	40	2	20	2
5 Laboratory	Laboratory technician	120	6	20	2
6 Dentistry	Associate dentist	96	4	24	2
7 Obstetric	Midwife	40	2	20	2
8 Anatomy	General	-	-	-	-
9 Nursing	Nurse	180	5	36	3
10 General	General	-	-	-	-
	Pharmacist	40	2	20	2
	Therapist	40	2	20	2
Total		754			

Regional Hospitals

The two Regional Hospitals serve as the top referral hospital in each region. However, their core treatment functions do not have sufficient diagnostic equipment, and the project will supply a necessary set of equipment including endoscopes.

Central District Hospitals

The Almaty oblast is divided into 16 districts, each of which has the Central District Hospital serving as the top referral facility in the district. By supplying a necessary set of equipment used to fulfill core functions, including surgical operation, radiation and clinical examination, the project aims to eliminate the differences in medical service levels among the hospitals.

FAPs

The FAPs serve as the forefront of local medical service. While their medical service capabilities are limited due to the absence of doctors, they are playing a vital role in meeting everyday medical needs of local people, including health care of pregnant women and delicate infants, treatment of minor injuries, and resuscitation. The project will supply equipment to allow feldshers, nurses and other medical staff of the FAPs to provide full service.

Based on the basic concept, the following selection criteria have been established.

(1) Equipment with high priority

- ① Equipment with relatively small maintenance costs, including spare parts and expendable supplies;
- ② Basic equipment which can contribute to the improvement of local medical service in the country;
- ③ Equipment which renews or adds to existing equipment; and
- ④ Equipment with high frequency of use.

In addition, priority should be given to equipment that is urgently required by each facility: equipment related to urology and orthopedics for the Aksai Children's Hospital; equipment required for practical training at the Republic Medical College; and equipment essential in providing basic treatment (without a doctor) by the FAPs.

(2) Equipment with low priority or to be dropped from the final list

- ① Equipment used for research purposes;
- ② Equipment which has uncertainty in maintenance organization or budgeting;
- ③ Equipment which is still serviceable;
- ④ Equipment which is not consistent with existing equipment or technology level;
- ⑤ Equipment which spare parts and expendable supplies are not budgeted;
- ⑥ Equipment which spare parts and expendable supplies are difficult to obtain due to the lack of support by manufacturers or their agents;
- ⑦ Equipment which can be easily obtained in the country and can be purchased under the current budget of a recipient facility
- ⑧ Equipment which cannot comply with environmental standards; and
- ⑨ Equipment which storage place is not secured.

2-3 Basic Design

2-3-1 Design Concept

(1) Environmental considerations

No equipment to be supplied has special environmental requirements for its installation and use. All the facilities are provided with sufficient heating in winter to keep temperature levels required for proper operation of all the equipment. On the other hand, motor vehicles may need to conform to specifications for the use in cold areas. To install X-ray equipment, the floor must be reinforced with concrete. As concrete placed under a very cold weather may not attain design strength due to the freezing of moisture, careful temperature control will be required during the work.

(2) Social considerations

As Russian is widely used as an official language in Kazakhstan, operating instructions and manuals of the supplied equipment will accompany Russian translations.

(3) Employment considerations

The project will use local contractors for transportation of equipment from Almaty City to each facility, unloading, unpacking, and installation, which will require a number of workers.

(4) Considerations to maintenance capabilities

Each of the recipient facilities has maintenance engineers who deal with minor mechanical and electrical troubles of equipment. Maintenance of sophisticated equipment was previously in the hands of the Ministry of Health and is now contracted to a private company, MEDTECHNICA. It has 106 employees including 7 experienced engineers (7-10 years) and will be able to take care of equipment to be supplied under the project. Thus, equipment that requires periodical maintenance work will be selected according to the existing levels of maintenance service available within the country.

(5) Considerations to the type and grade of equipment

The project will primarily supply equipment which will upgrade or add to the existing equipment. Equipment to be newly supplied or added will be limited to those which require no or little maintenance costs.

(6) Considerations to the project schedule

It is difficult to transport equipment to each site during the coldest period when road surfaces become slippery due to snow drift or freezing. Thus, transportation will be scheduled to end in December.

2-3-2 Basic Design

(1) Overall plan

The supplied equipment is primarily basic equipment which can contribute to the improvement of local medical service and is expected to be used frequently. Most of them upgrade or add to the existing equipment. There is space to install the equipment and it has been confirmed that the available space is sufficient in terms of size and shape. Nevertheless, the recipient facilities will be responsible, at their own cost, for providing such space by relocating or disposing the existing equipment. Equipment using radiation will be accommodated in the already shielded rooms, and no special work will be required to reinforce floors, walls, ceilings or doors. However, the Central District Hospitals in Aksoui and Uigur have wooden floor which is not strong enough to install heavy equipment. The facilities will be responsible for constructing the foundation suitable for equipment at the request of its supplier. Also, the Aksai Children's Hospital will increase its power supply capacity due to the upgrading of the high pressure steam sterilizer by replacing trunk lines and distribution boards. Also extension of water supply and rain pipes will be required at the Aksai hospital and the Republic Medical College with installation of dental equipment and high pressure steam sterilizers. These works have to be carried out by the facilities at their own cost, at the request of equipment suppliers.

(2) Equipment plan

The results of evaluation of each equipment in terms of urgency and rationale are summarized in Tables 4 through 9. Also, the names of major equipment

and their specifications are listed in Tables 11 through 17.

Evaluation of existing equipment

- A: Fully serviceable**
- B: Serviceable but fairly aged to require replacement within a few years**
- C: Severely deteriorated and requiring urgent replacement**

Reasons for non-inclusion in the final list

- a: Presence of existing equipment which is serviceable for the next five or more years**
- b: Equipment locally available at low cost**
- c: Equipment which requires large costs for maintenance as well as the purchase of spare parts and expendable supplies**
- d: Equipment which is currently available in sufficient quantities**
- e: Equipment requiring advanced technology for equipment use**
- f: Equipment for research purpose**
- g: Equipment producing small benefits**
- h: Equipment with excessively high capacity compared to the number of patients or inspection requirements**
- i: Equipment which is similar to equipment already requested**

Then, there was some equipment that required evaluation in terms of frequency of use and operation. The results of evaluation are summarized as follows.

Table 4 Evaluation (AKSAI Children's Hospital)

AKSAI Children's Hospital	DESCRIPTION	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Decision	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1 ENDOSCOPY DEPARTMENT															
1	Duodeno fiberscope pediatric	C	1	1						X	X	a	X	0	Manufactured 1989
2	Gastrointestinal fiberscope pediatric set	A	1	1				1		O	O		O	1	Manufactured 1994, Japanese aid, 1994, Japanese aid
3	Colono fiberscope pediatric	C	1	1						X	X	a	X	0	
4	Lecture scope	C	1							O	X	e	X	0	
5	Electro surgical unit	C	1							X	X	e	X	0	
6	Halogen light source	C	1	2						X	X	a	X	0	
7	Endoscopic suction	C	1	1						X	X	a	X	0	
8	Endoscopic cabinet	A	1			1	1			O	O		O	1	Wooden
9	Endoscopic table	C	1	1						X	X	a	X	0	
2 UROLOGY DEPARTMENT															
1	Cysto-urethroscope pediatric	A	1		1		1			O	O		O	1	
2	Cysto-urethroscope, micro	C	1	1						X	X	a	X	0	
3	Cysto-urethro fiberscope	A	1			1	1			O	O		O	1	
4	Resectoscope	B	1			1	1			O	O		O	1	
5	Ureteral stone dislodger	B	1		O	O	1			O	O		O	1	
6	Urethral bougie set, curved w/o channel	A	1		O	O	1			O	O		O	1	
7	Endoscopic and proctoscope table	A	1	1		1	1			O	O		O	1	
8	Nephro-fiberscope for child	C	1							O	X	g	X	0	
9	Electrohydraulic system	A	1		1		1			O	O		O	1	
10	High frequency electrosurgical unit	A	1			1	1			O	O		O	1	
11	Urethrotomy knife set	A	1		O	O	1			O	O		O	1	
12	Video documentation system for endourology	C	1							X	X	g	X	0	
13	Portable coagulator	A	1			1	1			O	O		O	1	
14	Urodynamic monitor	A	1		1		1			O	O		O	1	
15	Endoscopic suction pump set	A	1		1		1			O	O		O	1	
16	Light source with light cable	A	1	1	1		1			O	O		O	1	
3 ENT DEPARTMENT															
1	Dual channel	A	1	1		1	1			O	O		O	1	Hungary
2	Laryngoscope set	A	1	1	1		1			O	O		O	1	
3	Laryngo microsurgery instrument set	A	1		O	O	1			O	O		O	1	
4	ENT Unit	A	1					1		O	O		O	1	
4 OPHTHALMOLOGY DEPARTMENT															
1	Fundus camera	A	1					1		O	O		O	1	
2	Chair-mounted unit	A	1			1	1			O	O		O	1	
3	Slit lamp	A	1	1	1		1			O	O		O	1	
4	Diagnostic and treatment set	A	1		O	O	1			O	O		O	1	
5 ICU DEPARTMENT															
1	Electrocardiograph 1ch	B	1		1		1			O	O		O	1	Manufactured 1989
2	Electrocardiograph 6 ch	A	1		1		1			O	O		O	1	Manufactured 1989
3	Hardwire/telemetry central monitor	C	1							X	X	c	X	0	
4	Defibrillator	A	1		1		1			O	O		O	1	
5	Infusion pump	A	1					1		O	O		O	1	
6	Ultrasonic nebulator	A	4		2	1	3	1		O	O		O	4	
7	Bedside monitor	A	4		3		3	1		O	O		O	4	8 beds

AKSAI Children's Hospital DESCRIPTION	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
8. Ventilator infant/adult	A	1			1	1			○	○		○	1	Manufactured 1972
9 Plasma pheresis apparatus	B	1		1					○	×	c	×	0	
10. Anesthesia apparatus	C	1						×	×	e	×	0		
6 REHABILITATION DEPARTMENT														
1. Ankle & leg exerciser	A	1					1	○	○			○	1	
2. Lower limb extension	A	1					1	○	○			○	1	
3. Ankle exercise sandal	A	3			2	2	1	○	○			○	3	
4. Restractor	A	1					1	○	○			○	1	
5. Quadriceps	A	1					1	○	○			○	1	
6. Rowing machine	A	1		1		1		○	○			○	1	
7. Exercise stairs	A	1					1	○	○			○	1	
8. Curb and ramp	A	1			1	1		○	○			○	1	
9. Rotary wrist machine	A	1		1		1		○	○			○	1	
10. Shoulder wheel	A	1		1		1		○	○			○	1	
11. Wrist roll	A	1			1	1		○	○			○	1	
12. Wrist rotator	A	1			1	1		○	○			○	1	
13. Shoulder ladder (curb)	A	1		1		1		○	○			○	1	
14. Shoulder ladder (strait)	A	2		1		1		○	○			○	1	
15. Curved back board exerciser	A	1					1	○	○			○	1	
16. Transcutaneous	A	1	2		1	1		○	○			○	1	
17. Interferential therapy unit	A	1	1		1	1		○	○			○	1	
18. Treadmill	A	1			1	1		○	○			○	1	
19. Ortho trac, cervical	C	1						×	×	i		×	0	
20. Ortho trac, duplex	C	1						×	×	i		×	0	
21. Ortho trac, portable	A	1					1	○	○			○	1	
22. Perceptial motor training set	A	4					4	○	○			○	4	
7 CCS DEPARTMENT														
1. High pressure steam sterilizer	A	1	2		1	1		○	○			○	1	
2. High pressure liquid steam sterilizer	A	1	2		1	1		○	○			○	1	
3. Ultrasonic cleaner set	A	1			1	1		○	○			○	1	
4. Hot air sterilizer	B	1	1	1		1		○	○			○	1	
5. Warm distilling apparatus	B	1	1	1		1		○	○			○	1	
8 DENTAL DEPARTMENT														
1. Dental x-ray unit	A	1			1	1		○	○			○	1	
2. Laboratory lathe	A	1		1		1		○	○			○	1	
3. Crown preparation kit fg	A	1		○	○	1		○	○			○	1	
4. Dental unit	A	1	1		1	1		○	○			○	1	Manufactured 1995/1973
9 Physiology														
1. Spirometer	A	1					1	○	○			○	1	
2. Ultrasound linear scanner	A	1	1				1	○	○			○	1	1994, Japanese aid, 1996(10,802patients)
3. Electrocardiograph 1ch	A	1		1		1		○	○			○	1	
4. Electrocardiograph 6ch	A	1		1		1		○	○			○	1	Manufactured 1986
5. Electroencephalograph	A	1	1	1		1		○	○			○	1	Manufactured 1979, 1997
6. Electro myograph	B	1		1		1		○	○			○	1	
7. Recording chronaxie meter	C	1						×	×	g		×	0	
10 X-RAY DEPARTMENT														
1. Universal general x-ray unit	A	1		1		1		○	○			○	1	Manufactured 1967, 1996(5,300patients), 1997(5,500patients), working for 250 days
2. Portable x-ray diagnostic unit	A	1		1		1		○	○			○	1	Manufactured 1983, ICU patients
3. X-ray film illuminator	A	3	2		3	3		○	○			○	3	
4. Protective apron	A	6		5	1	6		○	○			○	6	

AKSAI Children's Hospital	DESCRIPTION	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
	5 X-ray tv system	A	1		1		1							1	Manufactured 1967, 1996(5,296patients), 1997(4,727patients), working Apr 250 days 50 prints/day
	6 Automatic film	B	1		1		1							1	
11 PHARMACY DEPARTMENT															
	1 Prescription counter	B	2	1	2		2							2	
	2 Refrigerator	B	1	2		1	1							1	
	3 Autoclave	B	1		1		1							1	Manufactured 1973.
	4 Electric analytical balance	B	1	1	1		1							1	
12 LABORATORY DEPARTMENT															
	1 Blood gas analyzer	C	1	2						X	X	a	X	0	Manufactured 1994, Japanese aid
	2 Analyzer glucose	A	1					1						1	
	3 Centrifuge	A	1	4		1	1							1	
	4 Hamatocrit centrifuge	A	1	1		1	1							1	
	5 Blood cell analyzer	A	1		1		1							1	Manufactured 1989
	6 Spectrophotometer	A	1	1	1		1							1	Manufactured 1985
	7 Deep freezer (-40°C)	A	1	2		1	1							1	
	8 Electric analytical balance	A	1	2		1	1							1	
	9 pH meter	A	1							X	X	i	X	0	
	10 Laboratory microscope (mono)	A	5	12	2	3	5							5	
	11 Laboratory glass ware	C	1	0	0	0					X	a	X	0	
13 OPERATING DEPARTMENT															
	1 Anesthesia apparatus	A	3	1	1	2	3							3	Manufactured 1985(2)/1987.
	2 Operating table	A	2		1	1	2							2	
	3 Electric suction unit	A	3	1	1	2	3							3	
	4 Operating table	A	1		1		1							1	
	5 Gastrectomy instrument set	A	1		0	0	1							1	
	6 Cholecystotomy instrument set	A	1		0	0	1							1	
	7 Standard plastic surgery set	A	2		0	0	2							2	
	8 Nephrectomy instrument set	A	5		0	0	5							5	
	9 Prostomy instrument set	A	5		0	0	5							5	
	10 Appendectomy instrument set	A	3		0	0	3							3	
	11 Mosquito hemostatic forceps	B	100		0	0	100							100	
	12 Kocher hemostatic forceps	B	100		0	0	100							100	
	13 Pean hemostatic forceps	B	100		0	0	100							100	
	14 Kelly hemostatic forceps	B	100		0	0	100							100	
	15 Hegar mayo needle holder 20cm	B	20		0	0	20							20	
	16 Standard operating scissors	B	20		0	0	20							20	
	17 Operating instrument	A	2		0	0	2							2	
	18 Langenbeck periosteal	B	20		0	0	20							20	
	19 Venotomy instrument	B	4		0	0	4							4	
	20 Solid state bipolar coagulator unit	B	3	1	1	2	3							3	
	21 Electric bone drill unit	B	1		1		1							1	
	22 Cancellous bone screw	B	1		0	0	1							1	
	23 Screw driver	B	5		0	0	5							5	

AKSAI Children's Hospital		Relation											Note	
DESCRIPTION	Priority	Requested Quantity	Existing Condition			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision		Quantity
			A	B	C	Renewal	Addition	New						
24 Depth gauge	B	10		○	○	10			○	○		○	10	
25 Langenbeck bone holding forceps	B	5		○	○	5			○	○		○	5	
26 Farabeuf-lambotte bone holding forceps	B	10		○	○	10			○	○		○	10	
27 Rongeur forceps	B	10		○	○	10			○	○		○	10	
28 Still-lure rongeur	B	10		○	○	10			○	○		○	10	
29 Liston bone cutting forceps	B	20		○	○	20			○	○		○	20	
30 Arthroplastic chisel gouge & osteotomy set discontinued	B	1		○	○	1			○	○		○	1	
31 Nylon hammer	B	4		○	○	4			○	○		○	4	
32 Conzelt goniometer	B	10		○	○	10			○	○		○	10	
33 Pin cutter	B	10		○	○	10			○	○		○	10	
34 Hand-surgery operating set	B	1		○	○	1			○	○		○	1	
35 Spinal cord traction frame	B	2		1	1	2			○	○		○	2	
36 Dematome	B	2		1		1	1		○	○		○	2	
37 Metal work tool set	B	1		○	○	1			○	○		○	1	
38 Rollator (large)	B	10		6		6	4		○	○		○	10	
39 Rollator (small)	B	10		3		3	7		○	○		○	10	
40 X-ray film illuminator	A	2	1	2		2			○	○		○	2	
41 UV hand washing apparatus	A	1			1	1			○	○		○	1	
42 UV disinfection lamp	A	3		1	2	3			○	○		○	3	
43 Operating cilling lights	B	2	1	2		2			○	○		○	2	
14 OTHERS														
1 Ambulance	B	1	1	1		1			○	○		○	1	Manufactured 1995
2 Minibus	B	1			1	1			○	○		○	1	
3 Portable ultrasound	B	1					1		○	○		○	1	carried on minibus

Table 5 Evaluation (Medical College)

Medical College	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note	
			Existing Condition			Renewal	Addition	New							
			A	B	C										
THERAPY DEPARTMENT															
1	CPR trining mannequin adult	A	3		1			1	2					3	Manufactured 1979
2	Resuscitation bag adult	A	3			1		1	2					3	Manufactured 1980
3	Patient bed with position changing function	A	3							3				3	
4	Stretcher	C	1								x	c	x	0	
5	Can with lid for ointment large	C	20								x	c	x	0	
6	Can with lid for ointment small	C	10								x	c	x	0	
7	Thoracic drainage set	C	6								x	a	x	0	
8	Blood sedimentation measurement unit	A	10		2			2	8					10	Manufactured 1980
9	Thoracic drainage kit	C	10								x	a	x	0	
10	Gastric tube 10FG	B	10		6			6	1					10	Manufactured 1982
11	Duodenal tube 12FG	B	10		6			6	1					10	Manufactured 1982
12	Electrocardiograph 1ch	A	2		1	1		2						2	Manufactured 1985
13	Urinal Bed Bottle male	C	5								x	c	x	0	
14	Urinal Bed Bottle female	C	5								x	c	x	0	
15	Wash basin & wash bain stand	C	1								x	c	x	0	
16	Bedpan	A	5		2	3		5						5	
17	Graduated measuring Syylinder 250ml	B	2	3					2					2	Manufactured 1982
18	Graduated measuring Syylinder 500ml	B	2	3					2					2	Manufactured 1982
19	Gradusted measuring Syylinder 1000ml	B	2	3					2					2	Manufactured 1982
20	Urimeter	A	6		1			1	5					6	Manufactured 1980
PEDIATRIC DEPARTMENT															
1	Stethoscope for baby	A	16		2	2		1	12					16	
2	Thoracic drainage set	C	1								x	a	x	0	
3	Cuff for child	A	1		3	1		1						1	
4	CPR training mannequin, infant	A	3					1	2					3	Manufactured 1980
5	Resuscitation bag for child	A	3		2	1		3						3	
6	Resuscitation bag for newborn	A	3		1	2		3						3	
7	Electric suction unit	C	2								x	c	x	0	
8	Gastric tube 6FG	B	50		30	20		50						50	Manufactured 1980
9	Nasal catheter for newborn	B	10		10			10						10	Manufactured 1980
10	Baby bed	B	3		2			2	1					3	Manufactured 1980
11	Mannequin infant	A	3		2	1		3						3	Manufactured 1980
SURGICAL DEPARTMENT															
1	Electric suction unit	B	1		1			1						1	Manufactured 1982
2	Set for surgical instrument	B	1		0	0		1						1	Manufactured 1970
3	Suture scissors (straight)	A	12		1	2		6	6					12	
4	Suture scissors (curved)	A	12		3	3		6	6					12	
5	Dressing scissors	A	6		1	2		6						6	
6	Suture needle (straight)	A	12		0	0		12						12	
7	Suture needle (angle)	A	12		0	0		12						12	
8	Needle holder (straight)	A	6		0	0		6						6	
9	Needle holder (angle)	A	6		0	0		6						6	
10	Needle for bone biopsy	C	6								x	a	x	0	
11	Operation room simulation	C	1								x	a	x	0	

Medical Collage	Equipment	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
E.N.T. DEPARTMENT															
1	Wooden hammer	C	5							○	×	d	×	0	
2	Othoscope	A	2		1	1	2			○	○		○	2	Manufactured 1980
3	Model of ear	C	1							○	×	e	×	0	
4	Model of eye	C	1							○	×	e	×	0	
5	Model of respiratory organ	B	1					1		○	○		○	1	
6	Nasal forceps Haltmann adult	A	12		○	○	12			○	○		○	12	Manufactured 1980
7	Nasal forceps Haltmann child	A	12		○	○	12			○	○		○	12	Manufactured 1980
8	Larynx tube	B	20		○	○	20			○	○		○	20	Manufactured 1980
9	Funnel for ear check	A	20		○	○	20			○	○		○	20	Manufactured 1980
10	Larynx syringe	A	10		○	○	10			○	○		○	10	Manufactured 1980
11	Larynx mirrors	A	20		○	○	20			○	○		○	20	Manufactured 1980
12	Supatula	A	10		○	○	10			○	○		○	10	Manufactured 1980
13	Desk light	A	2		1	1	2			○	○		○	2	
LABORATORY DEPARTMENT															
1	Balance for centrifuge tubes with thermostat	B	4					1		○	○		○	1	
2	Antibiotics lamp	C	4							×	×	e	×	0	
3	Paster's oven	A	4		1	3	4			○	○		○	4	
4	Different bacteria infection set	C	25							×	×	a	×	0	
5	Hemoglobinometer	A	12		1		11			○	○		○	12	Manufactured 1982
6	Photoelectrocolorimeter	A	1		1		1			○	○		○	1	Manufactured 1985
7	Noise & vibration meter	B	2		1		1	1		○	○		○	2	
8	Microscope, monocular	A	10		6		6	11		○	○		○	20	Manufactured 1975
9	Microscope, binocular	A	10							×	×	c	×	0	
10	Chemical balance	A	1		1		1			○	○		○	1	Manufactured 1980
DENTISTRY															
1	Dental unit w/air compressor	A	2		1		1	1		○	○		○	2	
2	Set of treatment equipment for dentist	A	2		○	○	2			○	○		○	2	
3	Antibacteria lamp	C	1							×	×	e	×	0	
4	Table for instrument with caster	C	2							○	×	e	×	0	
5	Electric Oven	B	1		1		1			○	○		○	1	
6	Laboratory lathe	B	2		1		1	1		○	○		○	2	
7	Dental autoclave desk top	A	1		1		1			○	○		○	1	
OBSTETRIC															
1	Set of obstetric equipment	A	1		○	○	1			○	○		○	1	
2	Body-height measuring rod	B	2		2		2			○	○		○	2	
3	Infant weight scale (manual)	B	2		2		2			○	○		○	2	
4	Dressing scissors	A	2		2		2			○	○		○	2	
5	Needle holder, straight	A	2		2		2			○	○		○	2	
6	Needle holder, angle	A	2		2		2			○	○		○	2	
7	Model of pregnancy	C	1							○	×	b	×	0	
8	Model of delivery training	A	1		1		1			○	○		○	1	

Medical College	Equipment	Priority	Requested Quantity	Existing Condition			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				A	B	C	Renewal	Addition	New						
ANATOMY DEPARTMENT															
1	Muscles model	C	6	6						○	×	b	×	0	
2	Digestive organ model	C	6	6						○	×	b	×	0	
3	Male genital organs model	C	6	6						○	×	b	×	0	
4	Female genital organs model	C	6	6						○	×	b	×	0	
5	Whole Body model (male, female)	B	1					1		○	○		○	1	
6	Sympathetic nervous model	C	1							×	×	d	×	0	
NURSING DEPARTMENT															
1	Boiling sterilizer (small)	A	12					12		○	○		○	12	
2	Case kettle (medium)	B	6		1	1	2	1		○	○		○	6	
3	Case kettle (small)	B	6		1	2	3	3		○	○		○	6	
4	Anatomy forceps w/o teeth	A	36		○	○	36			○	○		○	36	
5	Anatomy forceps (small) w/o teeth	A	36		○	○	36			○	○		○	36	
6	Needle	A	500		○	○	500			○	○		○	500	Manufactured 1978
7	Surgical smooth forceps	A	12		○	○	12			○	○		○	12	Manufactured 1978
8	Glass syringe 1cc	C	10							○	×	c	×	0	
9	Glass syringe 2cc	C	10							○	×	c	×	0	
10	Glass syringe 5cc	C	10							○	×	c	×	0	
11	Glass syringe 10cc	C	10							○	×	c	×	0	
12	Glass syringe 20cc	C	10							○	×	c	×	0	
13	Mouth gag	A	6		2		2	1		○	○		○	6	Manufactured 1980
14	Tongue forceps	A	10		10		10			○	○		○	10	Manufactured 1975
15	Oxygen inhaler	A	2		2		2			○	○		○	2	Manufactured 1982
16	Glass Gane's syringe	B	12		○	○	12			○	○		○	12	Manufactured 1980
17	Oxygen supply unit w/Oxygen mask	A	2		2		2			○	○		○	2	Manufactured 1980
18	Blood pressure manometer desk top w/ cuff	A	12		3	2	5	7		○	○		○	12	
19	Blood pressure manometer, aneroid type w/ cuff	A	12		8		8	1		○	○		○	12	Manufactured 1980
20	Stethoscope	A	12		10		10	2		○	○		○	12	Manufactured 1980
21	Kidney type basin	A	21		○	○	21			○	○		○	21	Manufactured 1980
22	Square type basin	A	24		○	○	24			○	○		○	24	Manufactured 1980
23	Cleaning enema with nozzle	C	12							○	×	d	×	0	
24	Rubber balloon for enema	C	6							○	×	d	×	0	
25	Abdominal drainage kit	C	12							×	×	d	×	0	
26	Foleycatheter 16FG	B	12		1	8	12			○	○		○	12	Manufactured 1980
27	Pad for the prevention of bed sore	A	10		2	5	7	3		○	○		○	10	
28	Autoclave desk top	A	10		1	6	10			○	○		○	10	
29	Gastric tube 10FG	C	12							○	×	c	×	0	
30	Gastric tube 30FG	B	12		6		6	6		○	○		○	12	Manufactured 1980
31	Duodenal tube 12FG	B	12		6		6	6		○	○		○	12	Manufactured 1982
32	Ice bag	C	20							○	×	b	×	0	
33	Water Feeding director	C	15							○	×	c	×	0	
34	Wheel chair	A	1		1	2	3	1		○	○		○	1	
35	Syringe pump	C	2							×	×	a	×	0	
36	Infusion pump	C	2							×	×	a	×	0	
37	Thermometer	C	1							○	×	b	×	0	
38	Defibrillator	C	1							×	×	a	×	0	

Medical College		Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
Equipment															
39	Forarm model for intravenous injection	A	21			6	6	18					21	Manufactured 1980	
40	Model hip for bolus injection training	A	12			1	1	8					12		
41	Instrument set for FAPs	B	20						20				20	Same components of FAPs	
GENERAL															
1	Video system	A	1						2				2		
2	Video library for medical	A	1						1				1		
3	Copy machine	A	2		1	1	2						2		
4	OHP	B	2		1	1	2						2		
5	Direct projector	A	2						1				1		
6	Printing machine	A	2						2				2		
7	Slideprojector	A	3		3		3						3		
8	Screen	A	6		2	1	3						3		
9	PC computer set	A	2						2				2		
10	Video camera set	A	2						1				1		
11	35mm camera set	A	2						1				1		

Table 6 Evaluation (Central District Hospitals)

C-1 Alakol	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1	1			○	○		○	1	Manufactured 1985	
2 Negatoscope	B	3		3	3			○	○		○	3	Manufactured 1980	
3 Electrocardiograph permanent (6ch)	C	1						○	×	i	×	0		
4 Electrocardiograph transportable (1ch)	B	3		1	1	2		○	○		○	3	Manufactured 1987	
5 Apparatus of ultrasound examination	C	1						○	×	i	×	0		
6 Fibrogastroscope	B	1					1	○	○		○	1		
7 Hemoglobinmeter (manual)	A	2		2	2			○	○		○	2		
8 Photoelectrocolorimeter	B	1	1			1		○	○		○	1		
9 Centrifuge	A	2	1	1	2			○	○		○	2	Manufactured 1987	
10 Defibrillator	B	1		1	1			○	○		○	1	Manufactured 1987	
11 Bed side monitors	B	1		1	1			○	○		○	1	Manufactured 1989	
12 Office computer	A	1					1	○	○		○	1		
13 Operation table	A	1		1	1			○	○		○	1	Manufactured 1977	
14 Big surgical set of instruments	A	1		○	○	1		○	○		○	1		
15 Transportable shadeless operation lamp (w/battery)	A	2		2	2			○	○		○	2	Manufactured 1982	
16 Electric suction pump	A	2		1	1	1		○	○		○	2	Manufactured 1982	
17 Dental unit and treatment instrument set	A	1		○	○	1		○	○		○	1		
18 Hot air sterilizer	A	1	1	2	2	2		○	○		○	2	Manufactured 1987	
19 Dental technical table	C	1		2	1			○	×	i	×	0		
20 Anesthesia apparatus	B	1		1	1			○	○		○	1	Manufactured 1982	
21 Wheelchair	A	1			1	1		○	○		○	1		
22 Ambulance	B	1		1	1	1		○	○		○	1	Manufactured 1981, 100,000km	
23 X-ray apparatus transportable	C	1						○	×	d	×	0		
24 Spirogram	B	1					1	○	○		○	1		
25 Aquadistiller	C	1						○	×	b	×	0		
26 Respiratory equipment (Ventilator)	C	1						○	×	g	×	0		
27 Bandaging table	C	1						○	×	d	×	0		
28 Ultrasound frequency current treatment's apparatus	C	1	○					○	○	d	×	0		
29 Diadinamical current treatment's apparatus	C	1	○					○	○	d	×	0		
30 Set for the room of physical culture	A	1		○	○	○		○	○		○	1		
31 Gynecological chair	C	1						○	×	d	×	0		
32 Trolley for transportation	C	1						○	×	d	×	0		
33 Furniture (Surgical table)	C	2						○	×	d	×	0		
34 Nurse's table	C	2						○	×	b	×	0		
35 Functional bed	A	5		6	5			○	○		○	5		
36 Infant incubator	B	1		1	2	1		○	○		○	1	Manufactured 1987	
37 Electrocoagulator	B	1		2	1	1		○	○		○	1	Manufactured 1985	
38 Portable ultrasound	B	1		1	1	1		○	○		○	1	Manufactured 1989	
39 Colono fiberscope	C	1						○	×	g	×	0		
40 Fluorograph	C	1						○	×	g	×	0		
41 Laparoscope	C	1						×	×	g	×	0		
42 Massage table	C	1						○	×	b	×	0		
43 Prosector's table (table for anatomy)	C	1						×	×	g	×	0		
44 Traumatological & Orthopaedic operation table	C	1						×	×	g	×	0		
45 Biochemical analyzer	C	1						×	×	h	×	0		
46 Liquid's doser	C	1						○	×	c	×	0		
Ad Microscope		1	1		1			○	○		○	1		

C-2 Aksoui	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1	1				○	○		○	1	Manufactured 1979
2 Negatoscope	B	3		3	3				○	○		○	3	
3 Electrocardiograph permanent (6ch)	C	1							x	x	i	x	0	
4 Electrocardiograph transportable (1ch)	B	3		1	2	3			○	○		○	3	
5 Apparatus of ultrasound examination	C	1							○	x	i	x	0	
6 Fibrogastroscope	B	1			1	1			○	○		○	1	
7 Hemoglobinmeter (manual)	A	2			1	1	1		○	○		○	2	
8 Photoelectrocolorimeter	B	1	1	1		1			○	○		○	1	
9 Centrifuge	A	2	1	2		2			○	○		○	2	
10 Defibrillator	B	1					1		○	○		○	1	
11 Bed side monitors	B	1		1		1			○	○		○	1	
12 Office computer	A	1					1		○	○		○	1	
13 Operation table	A	1	3		1	1			○	○		○	1	
14 Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15 Transportable shadeless operation lamp (w/battery)	A	2	1	2		2			○	○		○	2	
16 Electric suction pump	A	2	2	2		2			○	○		○	2	
17 Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	
18 Hot air sterilizer	A	1	8	1	1	1			○	○		○	1	
19 Dental technical table	C	1	3		1				○	x	i	x	0	
20 Anesthesia apparatus	B	1		1	1	2			○	○		○	2	Manufactured 1977/1979
21 Wheelchair	A	1		1		1			○	○		○	1	
22 Ambulance	B	1		1		1			○	○		○	1	Manufactured 1988, 130,000km
23 X-ray apparatus transportable	C	1	1						x	x	d	x	0	
24 Spirogram	B	1			1	1			○	○		○	1	
25 Aquadistiller	C	1		1					○	x	b	x	0	
26 Respiratory equipment (Ventilator)	C	1	3	1	1				○	x	g	x	0	
27 Bandaging table	C	1	1						x	x	d	x	0	
28 Ultrasound frequency current treatment's apparatus	C	1	○						x	x	d	x	0	
29 Diadinamical current treatment's apparatus	C	1	○						x	x	d	x	0	
30 Set for the room of physical culture	A	1		○	○	1			○	○		○	1	
31 Gynecological chair	C	1	3						x	x	d	x	0	
32 Trolley for transportation	C	1	1						x	x	d	x	0	
33 Furniture (Surgical table)	C	2	24						x	x	d	x	0	
34 Nurse's table	C	2							x	x	b	x	0	
35 Functional bed	A	5	4	4	1	5			○	○		○	5	
36 Infant incubator	B	1			1	1			○	○		○	1	
37 Electrocoagulator	B	1	1	1	1	2			○	○		○	2	
38 Portable ultrasound	B	1		1		1			○	○		○	1	Italy
39 Colono fiberscope	C	1							x	x	g	x	0	
40 Fluorograph	C	1		1					○	x	g	x	0	Manufactured 1979
41 Laparoscope	C	1							x	x	g	x	0	
42 Massage table	C	1							x	x	b	x	0	
43 Prosector's table (table for anatomy)	C	1							x	x	g	x	0	
44 Traumatological & Orthopaedic operation table	C	1							x	x	g	x	0	
45 Biochemical analyzer	C	1							x	x	h	x	0	
46 Liquid's doser	C	1							x	x	c	x	0	
Ad Microscope		1	2	1		1			○	○		○	1	
Ad Electric drill		1			1				○	x	b	x	0	

C-3 Karatal Equipment		Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1977
2	Negatoscope	B	3	1	1	2	3			○	○		○	3	
3	Electrocardiograph permanent (6ch)	C	1			1				○	×	i	×	0	
4	Electrocardiograph transportable (tch)	B	3		2	1	3			○	○		○	3	
5	Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6	Fibrogastroscope	B	1		1		1			○	○		○	1	Manufactured 1990
7	Hemoglobinmeter (manual)	A	2					2		○	○		○	2	
8	Photoelectrocolorimeter	B	1	2		1	1			○	○		○	1	
9	Centrifuge	A	2	1	1	1	2			○	○		○	2	
10	Defibrillator	B	1		1		1			○	○		○	1	
11	Bed side monitors	B	1		1		1			○	○		○	1	
12	Office computer	A	1					1		○	○		○	1	
13	Operation table	A	1	2	1	1	1			○	○		○	1	
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15	Transportable shadeless operation lamp (w/battery)	A	2	2	1	1	2			○	○		○	2	
16	Electric suction pump	A	2	2	1	2	3			○	○		○	3	
17	Dental unit and treatment instrument set	A	1	○	○		1			○	○		○	1	
18	Hot air sterilizer	A	1	3		1	1			○	○		○	1	
19	Dental technical table	C	1	3	1					○	×	i	×	0	
20	Anesthesia apparatus	B	1	3	1	1	1			○	○		○	1	
21	Wheelchair	A	1					1		○	○		○	1	
22	Ambulance	B	1	1		1	1			○	○		○	1	Russia, 250,000km
23	X-ray apparatus transportable	C	1	1						×	×	d	×	0	
24	Spirogram	B	1					1		×	×	d	×	0	
25	Aquadistiller	C	1	1						×	×	d	×	0	
26	Respiratory equipment (Ventilator)	C	1	2		2				○	×	d	×	0	
27	Bandaging table	C	1							×	×	g	×	0	
28	Ultrasound frequency current treatment's apparatus	C	1	○						×	×	d	×	0	
29	Diadinamical current treatment's apparatus	C	1	○						×	×	d	×	0	
30	Set for the room of physical culture	A	1	○	○	○	1			○	○		○	1	
31	Gynecological chair	C	1	1						×	×	d	×	0	
32	Trolley for transportation	C	1	2						×	×	d	×	0	
33	Furniture (Surgical table)	C	2	14						×	×	d	×	0	
34	Nurse's table	C	2							×	×	b	×	0	
35	Functional bed	A	5	1	2	3	5			○	○		○	5	
36	Infant incubator	B	1			2	1			○	○		○	1	
37	Electrocoagulator	B	1			1	1			○	○		○	1	
38	Portable ultrasound	B	1		1		1			○	○		○	1	Manufactured 1989, Russia
39	Colono fiberscope	C	1							×	×	g	×	0	
40	Fluorograph	C	1		1					○	×	g	×	0	Manufactured 1979
41	Laparoscope	C	1							×	×	g	×	0	
42	Massage table	C	1							×	×	b	×	0	
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45	Biochemical analyzer	C	1							×	×	h	×	0	
46	Liquid's doser	C	1	2						×	×	a	×	0	

C-4 Kerboulak		Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic X-ray apparatus	B	1			1	1			○	○		○	1	Manufactured 1978
2	Negatoscope	B	3		1	2	3			○	○		○	3	
3	Electrocardiograph permanent (6ch)	C	1							×	×	i	×	0	
4	Electrocardiograph transportable (1ch)	B	3		1	1	2	1		○	○		○	3	Manufactured 1983
5	Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6	Fibrogastroscope	B	1					1		○	○		○	1	
7	Hemoglobinmeter (manual)	A	2					2		○	○		○	2	
8	Photoelectrocolorimeter	B	1		1		1			○	○		○	1	
9	Centrifuge	A	2		1	1	2			○	○		○	2	
10	Defibrillator	B	1					1		○	○		○	1	
11	Bed side monitors	B	1					1		○	○		○	1	
12	Office computer	A	1			1	1			○	○		○	1	
13	Operation table	A	1			1	1			○	○		○	1	
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1	Manufactured 1983
15	Transportable shadeless operation lamp (w/battery)	A	2		1	2	3			○	○		○	3	
16	Electric suction pump	A	2		1	2	3			○	○		○	3	
17	Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	Manufactured 1983
18	Hot air sterilizer	A	1	4	1	1	2			○	○		○	2	
19	Dental technical table	C	1	2		1				○	×	i	×	0	
20	Anesthesia apparatus	B	1		1		1			○	○		○	1	
21	Wheelchair	A	1					1		○	○		○	1	Manufactured 1970/81, 200 000/-
22	Ambulance	B	1		1	1	1			○	○		○	1	
23	X-ray apparatus transportable	C	1			1				○	×	g	×	0	
24	Spirogram	B	1					1		○	○		○	1	
25	Aquadistiller	C	1			1				○	×	g	×	0	
26	Respiratory equipment (Ventilator)	C	1			2				○	×	g	×	0	Manufactured 1983
27	Bandaging table	C	1							×	×	g	×	0	
28	Ultrasound frequency current treatment's apparatus	C	1	○						×	×	d	×	0	
29	Diadinamical current treatment's apparatus	C	1	○						×	×	d	×	0	
30	Set for the room of physical culture	A	1		○	○	1			○	○		○	1	
31	Gynecological chair	C	1	1						×	×	d	×	0	
32	Trolley for transportation	C	1	1						×	×	d	×	0	
33	Furniture (Surgical table)	C	2	5	2					×	×	d	×	0	
34	Nurse's table	C	2							×	×	b	×	0	
35	Functional bed	A	5	1	3	2	5			○	○		○	5	
36	Infant incubator	B	1			1	1			○	○		○	1	Manufactured 1987
37	Electrocoagulator	B	1		1		1			○	○		○	1	Manufactured 1987
38	Portable ultrasound	B	1					1		○	○		○	1	
39	Colono fiberoscope	C	1							×	×	g	×	0	
40	Fluorograph	C	1		1					○	×	g	×	0	Manufactured 1983
41	Laparoscope	C	1							×	×	g	×	0	
42	Massage table	C	1							×	×	b	×	0	
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45	Biochemical analyzer	C	1							×	×	h	×	0	
46	Liquid's doser	C	1							×	×	c	×	0	
Ad	Microscope		2	2		2	2			○	○		○	2	
Ad	Sterilizer		1			1	1			○	○		○	1	

G-5 Koksoui		Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1 Diagnostic X-ray apparatus	B	1		1		1				○	○		1	Manufactured 1980	
2 Negatoscope	B	3	2	2	1	3				○	○		3		
3 Electrocardiograph permanent (6ch)	C	1		1						○	×	i	0		
4 Electrocardiograph transportable (1ch)	B	3		1	2	3				○	○		3		
5 Apparatus of ultrasound examination	C	1								○	×	i	0		
6 Fibrogastroscope	B	1						1		○	○		1		
7 Hemoglobinmeter (manual)	A	2						2		○	○		2		
8 Photoelectrocolorimeter	B	1	1		1	1				○	○		1		
9 Centrifuge	A	2		2		2				○	○		2		
10 Defibrillator	B	1						1		○	○		1		
11 Bed side monitors	B	1						1		○	○		1		
12 Office computer	A	1						1		○	○		1		
13 Operation table	A	1	1		2	2				○	○		2	Manufactured 1972	
14 Big surgical set of instruments	A	1		○	○	1				○	○		1	Manufactured 1983	
15 Transportable shadeless operation lamp (w/battery)	A	2		1	2	3				○	○		3		
16 Electric suction pump	A	2	1	1	2	3				○	○		3		
17 Dental unit and treatment instrument set	A	1	○	○		1				○	○		1		
18 Hot air sterilizer	A	1	4		3	3				○	○		3		
19 Dental technical table	C	1	7	1	2					○	×	i	0		
20 Anesthesia apparatus	B	1		1		1				○	○		1		
21 Wheelchair	A	1						1		○	○		1		
22 Ambulance	B	1		1	1	1				○	○		1	Manufactured 1989, 300,000km	
23 X-ray apparatus transportable	C	1		1	1					○	×	g	0	Manufactured 1976	
24 Spirogram	B	1						1		○	○		1		
25 Aquadistiller	C	1		1						○	×	g	0		
26 Respiratory equipment (Ventilator)	C	1	2		1					○	×	d	0		
27 Bandaging table	C	1								×	×	g	0		
28 Ultrasound frequency current treatment's apparatus	C	1	○							×	×	d	0		
29 Diadinamical current treatment's apparatus	C	1	○							×	×	d	0		
30 Set for the room of physical culture	A	1		○	○	1				○	○		1		
31 Gynecological chair	C	1	1							×	×	d	0		
32 Trolley for transportation	C	1	4							×	×	d	0		
33 Furniture (Surgical table)	C	2	32							×	×	d	0		
34 Nurse's table	C	2								×	×	b	0		
35 Functional bed	A	5		4	1	5				○	○		5		
36 Infant incubator	B	1			1	1				○	○		1		
37 Electrocoagulator	B	1		1		1				○	○		1	Manufactured 1982, Russia	
38 Portable ultrasound	B	1			1	1				○	○		1		
39 Colono fiberscope	C	1								×	×	g	0		
40 Fluorograph	C	1		1						○	×	g	0	Manufactured 1980	
41 Laparoscope	C	1								×	×	g	0		
42 Massage table	C	1								×	×	b	0		
43 Prosector's table (table for anatomy)	C	1								×	×	g	0		
44 Traumatological & Orthopaedic operation table	C	1								×	×	g	0		
45 Biochemical analyzer	C	1								×	×	h	0		
46 Liquid's doser	C	1								×	×	c	0		
Ad X-ray for dental		1			1					○	×	g	0		
Ad Microscope		1	3	1		1				○	○		1		
Ad Sterilizer		1	4		1	1				○	○		1		

C-6 Panfilovsk	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1	1			○	○		○	1	Manufactured 1967	
2 Negatoscope	B	3		4	3			○	○		○	3	Manufactured 1982	
3 Electrocardiograph permanent (6ch)	C	1						×	×	i	×	0		
4 Electrocardiograph transportable (1ch)	B	3		2	2	1		○	○		○	3	Manufactured 1985	
5 Apparatus of ultrasound examination	C	1						○	×	i	×	0		
6 Fibrogastroscope	B	1		1	1			○	○		○	1	Manufactured 1985	
7 Hemoglobiometer (manual)	A	2		2	2			○	○		○	2		
8 Photoelectrocolorimeter	B	1	1			1		○	○		○	1		
9 Centrifuge	A	2		1	1	1		○	○		○	2	Manufactured 1977	
10 Defibrillator	B	1					1	○	○		○	1		
11 Bed side monitors	B	1			3	1		○	○		○	1	Manufactured 1985	
12 Office computer	A	1					1	○	○		○	1		
13 Operation table	A	1		4	1			○	○		○	1	Manufactured 1982	
14 Big surgical set of instruments	A	1		○	○	1		○	○		○	1		
15 Transportable shadeless operation lamp (w/battery)	A	2		1	1	2		○	○		○	2		
16 Electric suction pump	A	2	1	1	1	2		○	○		○	2	Manufactured 1985	
17 Dental unit and treatment instrument set	A	1		○	○	1		○	○		○	1		
18 Hot air sterilizer	A	1		1	1	1		○	○		○	1	Manufactured 1985	
19 Dental technical table	C	1	2					○	×	i	×	0		
20 Anesthesia apparatus	B	1	1	1		1		○	○		○	1	Manufactured 1987	
21 Wheelchair	A	1		1	1			○	○		○	1		
22 Ambulance	B	1	1	1		1		○	○		○	1	Manufactured 1985, 400,000km	
23 X-ray apparatus transportable	C	1						○	×	d	×	0		
24 Spirogram	B	1					1	○	○		○	1		
25 Aquadistiller	C	1						○	×	b	×	0		
26 Respiratory equipment (Ventilator)	C	1						○	×	g	×	0		
27 Bandaging table	C	1						○	×	d	×	0		
28 Ultrasound frequency current treatment's apparatus	C	1	○					○	×	d	×	0		
29 Diadinamical current treatment's apparatus	C	1	○					○	×	d	×	0		
30 Set for the room of physical culture	A	1		○		○	○	○	○		○	1		
31 Gynecological chair	C	1						○	×	d	×	0		
32 Trolley for transportation	C	1						○	×	d	×	0		
33 Furniture (Surgical table)	C	2						○	×	d	×	0		
34 Nurse's table	C	2						○	×	b	×	0		
35 Functional bed	A	5		6		5		○	○		○	5		
36 Infant incubator	B	1			1	1		○	○		○	1	Manufactured 1982	
37 Electrocoagulator	B	1		1		1		○	○		○	1		
38 Portable ultrasound	B	1			1	1		○	○		○	1	Manufactured 1985	
39 Colono fiberscope	C	1						×	×	g	×	0		
40 Fluorograph	C	1						○	×	g	×	0		
41 Laparoscope	C	1						×	×	g	×	0		
42 Massage table	C	1						○	×	b	×	0		
43 Prosector's table (table for anatomy)	C	1						×	×	g	×	0		
44 Traumatological & Orthopaedic operation table	C	1						×	×	g	×	0		
45 Biochemical analyzer	C	1						×	×	h	×	0		
46 Liquid's doser	C	1						○	×	c	×	0		
Ad Microscope		2		1		1	1	○	○		○	2		

C-7 Sarkand	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1985
2 Negatoscope	B	2		2		2	1		○	○		○	3	
3 Electrocardiograph permanent (6ch)	C	1							×	×	i	×	0	
4 Electrocardiograph transportable (1ch)	B	3	1	2		3			○	○		○	3	Manufactured 1980
5 Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6 Fibrogastroscope	B	1		1		1			○	○		○	1	Manufactured 1985, Russia
7 Hemoglobinmeter (manual)	A	2		2		2			○	○		○	2	
8 Photoelectrocolorimeter	B	1	1				1		○	○		○	1	
9 Centrifuge	A	2		3		2			○	○		○	2	
10 Defibrillator	B	1		1		1			○	○		○	1	Manufactured 1983
11 Bed side monitors	B	1		1		1			○	○		○	1	
12 Office computer	A	1						1	○	○		○	1	
13 Operation table	A	1		2		1			○	○		○	1	Manufactured 1977
14 Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15 Transportable shadeless operation lamp (w/battery)	A	2	1			1	1		○	○		○	2	
16 Electric suction pump	A	2		4		2			○	○		○	2	Manufactured 1987
17 Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	
18 Hot air sterilizer	A	1	1	2		1			○	○		○	1	Manufactured 1987
19 Dental technical table	C	1		2	3				○	×	i	×	0	
20 Anesthesia apparatus	B	1		1		1			○	○		○	1	
21 Wheelchair	A	1				1			○	○		○	1	
22 Ambulance	B	1	1	2	2	1			○	○		○	1	Manufactured 1979, 570,000km
23 X-ray apparatus transportable	C	1							○	×	d	×	0	
24 Spirogram	B	1						1	○	○		○	1	
25 Aquadistiller	C	1							○	×	b	×	0	
26 Respiratory equipment (Ventilator)	C	1							○	×	g	×	0	
27 Bandaging table	C	1							○	×	d	×	0	
28 Ultrasound frequency current treatment's apparatus	C	1	○						○	×	d	×	0	
29 Diadinamical current treatment's apparatus	C	1	○						○	×	d	×	0	
30 Set for the room of physical culture	A	1		○		○	○		○	○		○	1	
31 Gynecological chair	C	1							○	×	d	×	0	
32 Trolley for transportation	C	1							○	×	d	×	0	
33 Furniture (Surgical table)	C	2							○	×	d	×	0	
34 Nurse's table	C	2							○	×	b	×	0	
35 Functional bed	A	5		6		5			○	○		○	5	
36 Infant incubator	B	1	1	1		1			○	○		○	1	
37 Electrocoagulator	B	1			1	1			○	○		○	1	Manufactured 1981, Russia
38 Portable ultrasound	B	1			1	1			○	○		○	1	
39 Colonoscope	C	1			1				×	×	g	×	0	Manufactured 1982, Russia
40 Fluorograph	C	1							○	×	g	×	0	
41 Laparoscope	C	1							×	×	g	×	0	
42 Massage table	C	1							○	×	b	×	0	
43 Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44 Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45 Biochemical analyzer	C	1							×	×	h	×	0	
46 Liquid's doser	C	1							○	×	c	×	0	
Ad Microscope		2		1	1	2			○	○		○	2	Manufactured 1977

C-8 Taldykourgan		Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note	
				Existing Condition			Renewal	Addition	New							
				A	B	C										
1	Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1933	
2	Negatoscope	B	3		2	1	3			○	○		○	3		
3	Electrocardiograph permanent (6ch)	C	1							×	×	i	×	0		
4	Electrocardiograph transportable (1ch)	B	3		3		3			○	○		○	3		
5	Apparatus of ultrasound examination	C	1							○	×	i	×	0		
6	Fibrogastroscope	B	1			1	1			○	○		○	1	Manufactured 1933	
7	Hemoglobinometer (manual)	A	2						2	○	○		○	2		
8	Photoelectrocolorimeter	B	1	1	1		1			○	○		○	1		
9	Centrifuge	A	2	3	1	2	2			○	○		○	2		
10	Defibrillator	B	1		1		1			○	○		○	1		
11	Bed side monitors	B	1			2	2			○	○		○	2		
12	Office computer	A	1						1	○	○		○	1		
13	Operation table	A	1	2		2	1			○	○		○	1		
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1		
15	Transportable shadeless operation lamp (w/battery)	A	2	1	1	1	2			○	○		○	2		
16	Electric suction pump	A	2	3	1	2	3			○	○		○	3		
17	Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1		
18	Hot air sterilizer	A	1	5	1	1	2			○	○		○	2		
19	Dental technical table	C	1	2	2	1				○	×	i	×	0		Manufactured 1978~1985
20	Anesthesia apparatus	B	1	1	1		1			○	○		○	1		Manufactured 1933/1935
21	Wheelchair	A	1						1	○	○		○	1	Manufactured 1990/1996	
22	Ambulance	B	1	1	1		1			○	○		○	1		
23	X-ray apparatus transportable	C	1							○	×	g	×	0		
24	Spirogram	B	1						1	○	○		○	1		
25	Aquadistiller	C	1							○	×	g	×	0		
26	Respiratory equipment (Ventilator)	C	1	3	1					○	×	d	×	0		
27	Bandaging table	C	1							×	×	g	×	0		
28	Ultrasound frequency current treatment's apparatus	C	1	○						×	×	d	×	0		
29	Diadinamical current treatment's apparatus	C	1	○						×	×	d	×	0		
30	Set for the room of physical culture	A	1		○	○	1			○	○		○	1		
31	Gynecological chair	C	1	3						×	×	d	×	0		
32	Trolley for transportation	C	1	4						×	×	d	×	0		
33	Furniture (Surgical table)	C	2	19						×	×	d	×	0		
34	Nurse's table	C	2							×	×	b	×	0		
35	Functional bed	A	5	3	1	4	5			○	○		○	5		
36	Infant incubator	B	1			1	1			○	○		○	1	Manufactured 1977, Hungary	
37	Electrocoagulator	B	1	1	1		1			○	○		○	1		
38	Portable ultrasound	B	1		1		1			○	○		○	1	Manufactured 1986, Lietuva	
39	Colonos fiberscope	C	1							×	×	g	×	0		
40	Fluorograph	C	1		1					○	×	g	×	0	Manufactured 1933	
41	Laparoscope	C	1							×	×	g	×	0		
42	Massage table	C	1	3						×	×	b	×	0		
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0		
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0		
45	Biochemical analyzer	C	1							×	×	h	×	0		
46	Liquid's doser	C	1	1						×	×	a	×	0		
Ad	Microscope		1	2	1		1			○	○		○	1		
Ad	Colposcope		1			1				○	×	g	×	0		Manufactured 1977
Ad	Gastrointestinal fiberscope		1			1				○	×	g	×	0		Manufactured 1933

C-9 Balkhash		Equipment	Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note	
					Existing Condition			Renewal	Addition	New							
					A	B	C										
1	Diagnostic X-ray apparatus	B	1		1		1				○	○		○	1	Manufactured 1985	
2	Negatoscope	B	3		1	2	3				○	○		○	3		
3	Electrocardiograph permanent (6ch)	C	1								×	×	i	×	0		
4	Electrocardiograph transportable (1ch)	B	3		1	1	2	1			○	○		○	3		Manufactured 1983
5	Apparatus of ultrasound examination	C	1								○	×	i	×	0		
6	Fibrogastroscope set	B	1			1	1				○	○		○	1		
7	Hemoglobinmeter (manual)	A	2					2			○	○		○	2		
8	Photoelectrocolorimeter	B	1	1		1	1				○	○		○	1		
9	Centrifuge	A	2	1	1	1	2				○	○		○	2		
10	Defibrillator	B	1					1			○	○		○	1		
11	Bed side monitors	B	1					1			○	○		○	1		
12	Office computer	A	1					1			○	○		○	1		
13	Operation table	A	1	2		1	1				○	○		○	1		
14	Big surgical set of instruments	A	1		○	○	1				○	○		○	1		
15	Transportable shadeless operation lamp (w/battery)	A	2	1	1	1	2				○	○		○	2		
16	Electric suction pump	A	2		2		2				○	○		○	2		
17	Dental unit and treatment instrument set	A	1		○	○	1				○	○		○	1		
18	Hot air sterilizer	A	1	6		1	1				○	○		○	1		
19	Dental technical table	C	1	1		2					○	×	i	×	0	Manufactured 1976	
20	Anesthesia apparatus	B	1			1	1				○	○		○	1		
21	Wheelchair	A	1					1			○	○		○	1		
22	Ambulance	B	1	1		2	1				○	○		○	1	Manufactured 1996, Korea	
23	X-ray apparatus transportable	C	1	1	2						○	×	d	×	0		Manufactured 1990(1)/1985(2)
24	Spirogram	B	1					1			○	○		○	1		
25	Aquadistiller	C	1	1							×	×	a	×	0		
26	Respiratory equipment (Ventilator)	C	1	1		1					○	×	d	×	0		
27	Bandaging table	C	1								×	×	g	×	0		
28	Ultrasound frequency current treatment's apparatus	C	1	2							×	×	d	×	0		
29	Diadinamical current treatment's apparatus	C	1	1							×	×	d	×	0		
30	Set for the room of physical culture	A	1		○	○	1				○	○		○	1		
31	Gynecological chair	C	1	2							×	×	d	×	0		
32	Trolley for transportation	C	1	3							×	×	d	×	0		
33	Furniture (Surgical table)	C	2	25							×	×	d	×	0		
34	Nurse's table	C	2								×	×	b	×	0		
35	Functional bed	A	5		3		3	2			○	○		○	5		
36	Infant incubator	B	1		1		1				○	○		○	1	Manufactured 1982	
37	Electrocoagulator	B	1		1		1				○	○		○	1		
38	Portable ultrasound	B	1					1			○	○		○	1		
39	Colono fiberscope	C	1								×	×	g	×	0		
40	Fluorograph	C	1		1						○	×	g	×	0	Manufactured 1985	
41	Laparoscope	C	1								×	×	g	×	0		
42	Massage table	C	1								×	×	b	×	0		
43	Prosector's table (table for anatomy)	C	1								×	×	g	×	0		
44	Traumatological & Orthopaedic operation table	C	1								×	×	g	×	0		
45	Biochemical analyzer	C	1								×	×	h	×	0		
46	Liquid's doser	C	1								×	×	c	×	0		
Ad	Microscope		2	1	1	1	2				○	○		○	2		
Ad	Infant warmer		1		1						○	×	g	×	0		
Ad	Sterilizer		1	2		6	1				○	○		○	1		

C-10 Zhambyl		Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1986
2	Negatoscope	B	3		2		2	1		○	○		○	3	
3	Electrocardiograph permanent (6ch)	C	1							○	×	i	×	0	
4	Electrocardiograph transportable (1ch)	B	3	1		2	2	1		○	○		○	3	Manufactured 1987
5	Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6	Fibrogastroscope	B	1						1	○	○		○	1	
7	Hemoglobinmeter (manual)	A	2		2		2			○	○		○	2	
8	Photoelectrocolorimeter	B	1	1				1		○	○		○	1	
9	Centrifuge	A	2	3	2		2			○	○		○	2	Manufactured 1985
10	Defibrillator	B	1		1		1			○	○		○	1	Manufactured 1982
11	Bed side monitors	B	1		1		1			○	○		○	1	
12	Office computer	A	1						1	○	○		○	1	
13	Operation table	A	1		1		1			○	○		○	1	Manufactured 1977
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15	Transportable shadeless operation lamp (w/battery)	A	2		3		2			○	○		○	2	Manufactured 1989
16	Electric suction pump	A	2		3		2			○	○		○	2	Manufactured 1987
17	Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	
18	Hot air sterilizer	A	1	2	1		1			○	○		○	1	Manufactured 1982
19	Dental technical table	C	1	1	1	1				○	×	i	×	0	Manufactured 1989
20	Anesthesia apparatus	B	1		1	2	1			○	○		○	1	
21	Wheelchair	A	1		1		1			○	○		○	1	
22	Ambulance	B	1	1	2	2	1			○	○		○	1	Manufactured 1985, 470,000km
23	X-ray apparatus transportable	C	1							○	×	d	×	0	
24	Spirogram	B	1						1	○	○		○	1	
25	Aquadistiller	C	1							○	×	b	×	0	
26	Respiratory equipment (Ventilator)	C	1							○	×	g	×	0	
27	Bandaging table	C	1							○	×	d	×	0	
28	Ultrasound frequency current treatment's apparatus	C	1	○						○	×	d	×	0	
29	Diadinamical current treatment's apparatus	C	1	○						○	×	d	×	0	
30	Set for the room of physical culture	A	1		○	○		○		○	○		○	1	
31	Gynecological chair	C	1							○	×	d	×	0	
32	Trolley for transportation	C	1							○	×	d	×	0	
33	Furniture (Surgical table)	C	2							○	×	d	×	0	
34	Nurse's table	C	2							○	×	b	×	0	
35	Functional bed	A	5		5		5			○	○		○	5	
36	Infant incubator	B	1			1	1			○	○		○	1	
37	Electrocoagulator	B	1		1		1			○	○		○	1	Manufactured 1985
38	Portable ultrasound	B	1						1	○	○		○	1	
39	Colono fiberscope	C	1							○	×	g	×	0	
40	Fluorograph	C	1							○	×	g	×	0	
41	Laparoscope	C	1							×	×	g	×	0	
42	Massage table	C	1							○	×	b	×	0	
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45	Biochemical analyzer	C	1							×	×	h	×	0	
46	Liquid's doser	C	1							○	×	c	×	0	
Ad	Microscope			2		1	4	2		○	○		○	○	Manufactured 1985

C-11 III	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1	1				○	○	○	1	Manufactured 1982	
2 Negatoscope	B	3		2	3				○	○	○	3	Manufactured 1982	
3 Electrocardiograph permanent (6ch)	C	1							x	x	i	0		
4 Electrocardiograph transportable (1ch)	B	3	1	2	2	1			○	○	○	3	Manufactured 1977	
5 Apparatus of ultrasound examination	C	1							○	x	i	0		
6 Fibrogastroscope	B	1					1		○	○	○	1		
7 Hemoglobinmeter (manual)	A	2		1	1	1			○	○	○	2		
8 Photoelectrocolorimeter	B	1		1	1				○	○	○	1		
9 Centrifuge	A	2		1	1	1			○	○	○	2		
10 Defibrillator	B	1		1	1				○	○	○	1	Manufactured 1987, Poland	
11 Bed side monitors	B	1			1	1			○	○	○	1	Manufactured 1982	
12 Office computer	A	1					1		○	○	○	1		
13 Operation table	A	1		1	2	1			○	○	○	1	Manufactured 1977	
14 Big surgical set of instruments	A	1		○	○	1			○	○	○	1		
15 Transportable shadeless operation lamp (w/battery)	A	2		1	1	1			○	○	○	2	Manufactured 1982	
16 Electric suction pump	A	2		1	2				○	○	○	2	Manufactured 1982	
17 Dental unit and treatment instrument set	A	1		○	○	1			○	○	○	1		
18 Hot air sterilizer	A	1		1	1				○	○	○	1		
19 Dental technical table	C	1		1	2				○	x	i	0		
20 Anesthesia apparatus	B	1		2	1				○	○	○	1	Manufactured 1982	
21 Wheelchair	A	1		1	1				○	○	○	1		
22 Ambulance	B	1		2	1				○	○	○	1	Manufactured 1984, 380,000km	
23 X-ray apparatus transportable	C	1							○	x	d	0		
24 Spirogram	B	1					1		○	○	○	1		
25 Aquadistiller	C	1							○	x	b	0		
26 Respiratory equipment (Ventilator)	C	1							○	x	g	0		
27 Bandaging table	C	1							○	x	d	0		
28 Ultrasound frequency current treatment's apparatus	C	1	○						○	x	d	0		
29 Diadinamical current treatment's apparatus	C	1	○						○	x	d	0		
30 Set for the room of physical culture	A	1		○	○	○			○	○	○	1		
31 Gynecological chair	C	1							○	x	d	0		
32 Trolley for transportation	C	1							○	x	d	0		
33 Furniture (Surgical table)	C	2							○	x	d	0		
31 Nurse's table	C	2							○	x	b	0		
35 Functional bed	A	5		3	4	5			○	○	○	5		
36 Infant incubator	B	1		1	1				○	○	○	1	Manufactured 1987	
37 Electrocoagulator	B	1		2	1				○	○	○	1	Manufactured 1987	
38 Portable ultrasound	B	1	1			1			○	○	○	1	Manufactured 1990, Austria	
39 Colono fiberoscope	C	1							x	x	g	0		
40 Fluorograph	C	1							x	x	g	0		
41 Laparoscope	C	1							○	x	g	0		
42 Massage table	C	1							○	x	b	0		
43 Prosector's table (table for anatomy)	C	1							x	x	g	0		
44 Traumatological & Orthopaedic operation table	C	1							x	x	g	0		
45 Biochemical analyzer	C	1							x	x	h	0		
46 Liquid's doser	C	1							○	x	c	0		
Ad Microscope		2		2		2			○	○	○	2		

C-12 Kaskelen	Priority	Requested Quantity	Relation							Reason of Deletion	Decision	Quantity	Note		
			Existing Condition			Classification of Equipment			Necessity					Validity	
			A	B	C	Renewal	Addition	New							
1 Diagnostic X-ray apparatus	B	1		1			1			○	○		○	1	Manufactured 1987
2 Negatoscope	B	3		3			3			○	○		○	3	Manufactured 1980
3 Electrocardiograph permanent (6ch)	C	1								×	×		×	0	
4 Electrocardiograph transportable (1ch)	B	3	1	2	2		3			○	○		○	3	Manufactured 1986
5 Apparatus of ultrasound examination	C	1								×	×	i	×	0	
6 Fibrogastroscope	B	1						1		○	○		○	1	
7 Hemoglobinmeter (manual)	A	2		2			2			○	○		○	2	
8 Photoelectrocolorimeter	B	1			1		1			○	○		○	1	
9 Centrifuge	A	2		2			2			○	○		○	2	Manufactured 1986
10 Defibrillator	B	1		1	1		1			○	○		○	1	Manufactured 1987
11 Bed side monitors	B	1			1		1			○	○		○	1	
12 Office computer	A	1						1		○	○		○	1	
13 Operation table	A	1		1			1			○	○		○	1	Manufactured 1982
14 Big surgical set of instruments	A	1		○	○		1			○	○		○	1	
15 Transportable shadeless operation lamp (w/battery)	A	2		2			2			○	○		○	2	Manufactured 1985
16 Electric suction pump	A	2		2			2			○	○		○	2	Manufactured 1985
17 Dental unit and treatment instrument set	A	1		○	○		1			○	○		○	1	Manufactured 1985
18 Hot air sterilizer	A	1		1			1			○	○		○	1	Manufactured 1985
19 Dental technical table	C	1		2	4					○	×	i	×	0	
20 Anesthesia apparatus	B	1		1			1			○	○		○	1	Manufactured 1985
21 Wheelchair	A	1		1			1			○	○		○	1	Manufactured 1985
22 Ambulance	B	1	1	3			1			○	○		○	1	Manufactured 1985, 360,000km
23 X-ray apparatus transportable	C	1		1			1			○	×	d	×	0	
24 Spirogram	B	1						1		○	○		○	1	
25 Aquadistiller	C	1		1						○	×	b	×	0	
26 Respiratory equipment (Ventilator)	C	1								○	×	g	×	0	
27 Bandaging table	C	1								○	×	d	×	0	
28 Ultrasound frequency current treatment's apparatus	C	1	○							○	×	d	×	0	
29 Diadinamical current treatment's apparatus	C	1	○							○	×	d	×	0	
30 Set for the room of physical culture	A	1		○		○	○			○	○		○	1	
31 Gynecological chair	C	1								○	×	d	×	0	
32 Trolley for transportation	C	1								○	×	d	×	0	
33 Furniture (Surgical table)	C	2								○	×	d	×	0	
34 Nurse's table	C	2								○	×	b	×	0	
35 Functional bed	A	5		6			5			○	○		○	5	
36 Infant incubator	B	1	1				1			○	○		○	1	Manufactured 1987
37 Electrocoagulator	B	1			2		1			○	○		○	1	Manufactured 1985
38 Portable ultrasound	B	1						1		○	○		○	1	
39 Colono fiberscope	C	1								○	×	g	×	0	
40 Fluorograph	C	1								○	×	g	×	0	
41 Laparoscope	C	1								×	×	g	×	0	
42 Massage table	C	1								○	×	b	×	0	
43 Prosector's table (table for anatomy)	C	1								×	×	g	×	0	
44 Traumatological & Orthopaedic operation table	C	1								×	×	g	×	0	
45 Biochemical analyzer	C	1								×	×	h	×	0	
46 Liquid's doser	C	1								○	×	c	×	0	
Ad Microscope		1		1			1			○	○		○	1	

C-13 Raimbek	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1		1	1			○	○		○	1	Manufactured 1982	
2 Negatoscope	B	3		2	2	1		○	○		○	3	Manufactured 1982	
3 Electrocardiograph permanent (6ch)	C	1						×	×	i	×	0		
4 Electrocardiograph transportable (1ch)	B	3		2	2	1		○	○		○	3	Manufactured 1987	
5 Apparatus of ultrasound examination	C	1						○	×	i	×	0		
6 Fibrogastroscope	B	1			2	1		○	○		○	1	Manufactured 1987, Russia	
7 Hemoglobinmeter (manual)	A	2		2	2			○	○		○	2		
8 Photoelectrocolorimeter	B	1		1	1			○	○		○	1	Manufactured 1989	
9 Centrifuge	A	2	1	1	1	1		○	○		○	2	Manufactured 1986	
10 Defibrillator	B	1			1	1		○	○		○	1		
11 Bed side monitors	B	1			1	1		○	○		○	1		
12 Office computer	A	1					1	○	○		○	1		
13 Operation table	A	1		2	1			○	○		○	1		
14 Big surgical set of instruments	A	1		○	○	1		○	○		○	1		
15 Transportable shadeless operation lamp (w/battery)	A	2		1	1	2		○	○		○	2	Manufactured 1985	
16 Electric suction pump	A	2		3	2			○	○		○	2	Manufactured 1987	
17 Dental unit and treatment instrument set	A	1		○	○	1		○	○		○	1		
18 Hot air sterilizer	A	1		1	1			○	○		○	1		
19 Dental technical table	C	1		1	1			○	×	i	×	0	Manufactured 1985	
20 Anesthesia apparatus	B	1		1	1			○	○		○	1	Manufactured 1983	
21 Wheelchair	A	1		1	1			○	○		○	1		
22 Ambulance	B	1	1	1	2	1		○	○		○	1	Manufactured 1983, 350,000km	
23 X-ray apparatus transportable	C	1						○	×	d	×	0		
24 Spirogram	B	1					1	○	○		○	1		
25 Aquadistiller	C	1						○	×	b	×	0		
26 Respiratory equipment (Ventilator)	C	1						○	×	g	×	0		
27 Bandaging table	C	1						○	×	d	×	0		
28 Ultrasound frequency current treatment's apparatus	C	1	○					○	×	d	×	0		
29 Diadinamical current treatment's apparatus	C	1	○					○	×	d	×	0		
30 Set for the room of physical culture	A	1		○	○	○	○	○	○		○	1		
31 Gynecological chair	C	1						○	×	d	×	0		
32 Trolley for transportation	C	1						○	×	d	×	0		
33 Furniture (Surgical table)	C	2						○	×	d	×	0		
34 Nurse's table	C	2						○	×	b	×	0		
35 Functional bed	A	5		6	5			○	○		○	5		
36 Infant incubator	B	1			2	1		○	○		○	1		
37 Electrocoagulator	B	1			1	1		○	○		○	1		
38 Portable ultrasound	B	1					1	○	○		○	1		
39 Colono fiberscope	C	1						○	×	g	×	0		
40 Fluorograph	C	1						○	×	g	×	0		
41 Laparoscope	C	1						×	×	g	×	0		
42 Massage table	C	1						○	×	b	×	0		
43 Prosector's table (table for anatomy)	C	1						×	×	g	×	0		
44 Traumatological & Orthopaedic operation table	C	1						×	×	g	×	0		
45 Biochemical analyzer	C	1						×	×	h	×	0		
46 Liquid's doser	C	1						○	×	c	×	0		
Ad Microscope		2		2	2			○	○		○	2	Manufactured 1982	

C-14 Talgar		Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1982
2	Negatoscope	B	3		2		2	1		○	○		○	3	Manufactured 1980
3	Electrocardiograph permanent (6ch)	C	1							○	×	i	×	0	
4	Electrocardiograph transportable (1ch)	B	3	1	2	2	2	1		○	○		○	3	Manufactured 1987
5	Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6	Fibrogastroscope	B	1		1		1			○	○		○	1	Manufactured 1987, Russia
7	Hemoglobinmeter (manual)	A	2		2		2			○	○		○	2	
8	Photoelectrocolorimeter	B	1	1				1		○	○		○	1	
9	Centrifuge	A	2	1	1		2			○	○		○	2	Manufactured 1985
10	Defibrillator	B	1		1		1			○	○		○	1	
11	Bed side monitors	B	1		1		1			○	○		○	1	
12	Office computer	A	1					1		○	○		○	1	
13	Operation table	A	1		1	1	1			○	○		○	1	
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15	Transportable shadeless operation lamp (w/battery)	A	2		1	1	2			○	○		○	2	
16	Electric suction pump	A	2		5		2			○	○		○	2	Manufactured 1985
17	Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	
18	Hot air sterilizer	A	1		4		1			○	○		○	1	Manufactured 1977
19	Dental technical table	C	1		1	2				○	×	i	×	0	Manufactured 1987
20	Anesthesia apparatus	B	1		1	1	1			○	○		○	1	Manufactured 1987
21	Wheelchair	A	1			2	1			○	○		○	1	
22	Ambulance	B	1	1	3	2	1			○	○		○	1	Manufactured 1989, 480,000km
23	X-ray apparatus transportable	C	1							○	×	d	×	0	
24	Spirogram	B	1					1		○	○		○	1	
25	Aquadistiller	C	1					1		○	×	b	×	0	
26	Respiratory equipment (Ventilator)	C	1							○	×	g	×	0	
27	Bandaging table	C	1							○	×	d	×	0	
28	Ultrasound frequency current treatment's apparatus	C	1	○						○	×	d	×	0	
29	Diadynamical current treatment's apparatus	C	1	○						○	×	d	×	0	
30	Set for the room of physical culture	A	1		○		○	○		○	○		○	1	
31	Gynecological chair	C	1							○	×	d	×	0	
32	Trolley for transportation	C	1							○	×	d	×	0	
33	Furniture (Surgical table)	C	2							○	×	d	×	0	
34	Nurse's table	C	2							○	×	b	×	0	
35	Functional bed	A	5		6		5			○	○		○	5	
36	Infant incubator	B	1			1	1			○	○		○	1	
37	Electrocoagulator	B	1		1		1			○	○		○	1	Manufactured 1985
38	Portable ultrasound	B	1					1		○	○		○	1	
39	Colono fiberoptic	C	1							○	×	g	×	0	
40	Fluorograph	C	1							○	×	g	×	0	
41	Laparoscope	C	1							×	×	g	×	0	
42	Massage table	C	1							○	×	b	×	0	
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45	Biochemical analyzer	C	1							×	×	h	×	0	
46	Liquid's doser	C	1							○	×	c	×	0	
Ad	Microscope		2		1	1	2			○	○		○	2	Manufactured 1982

C-15 Uigur		Priority	Requested Quantity	Relation			Classification of equipment			Necessity	Validity	Reason of deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic X-ray apparatus	B	1		1		1			○	○		○	1	Manufactured 1983
2	Negatoscope	B	3		2	1	3			○	○		○	3	
3	Electrocardiograph permanent (6ch)	C	1		1					○	×	i	×	0	
4	Electrocardiograph transportable (1ch)	B	3		1	1	2	1		○	○		○	3	
5	Apparatus of ultrasound examination	C	1			1				○	×	i	×	0	Manufactured 1985
6	Fibrogastroscope	B	1		1		1			○	○		○	1	Manufactured 1983, Russia
7	Hemoglobinmeter (manual)	A	2					2		○	○		○	2	
8	Photoelectrocolorimeter	B	1		1		1			○	○		○	1	
9	Centrifuge	A	2		1	1	2			○	○		○	2	
10	Defibrillator	B	1					1		○	○		○	1	
11	Bed side monitors	B	1					1		○	○		○	1	
12	Office computer	A	1					1		○	○		○	1	
13	Operation table	A	1	1	1	1	2			○	○		○	2	
14	Big surgical set of instruments	A	1		○	○	1			○	○		○	1	Manufactured 1984
15	Transportable shadeless operation lamp (w/battery)	A	2	2	1	1	2			○	○		○	2	
16	Electric suction pump	A	2	3		2	2			○	○		○	2	
17	Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	Manufactured 1984
18	Hot air sterilizer	A	1	4		1	1			○	○		○	1	
19	Dental technical table	C	1	1	1	3				○	×	i	×	0	
20	Anesthesia apparatus	B	1			1	1			○	○		○	1	Manufactured 1984
21	Wheelchair	A	1					1		○	○		○	1	
22	Ambulance	B	1		1		1			○	○		○	1	Manufactured 1992, 120,000km
23	X-ray apparatus transportable	C	1							×	×	g	×	0	
24	Spirogram	B	1					1		○	○		○	1	
25	Aquadistiller	C	1	1						×	×	a	×	0	
26	Respiratory equipment (Ventilator)	C	1	1						×	×	a	×	0	
27	Bandaging table	C	1							×	×	g	×	0	
28	Ultrasound frequency current treatment's apparatus	C	1	○						×	×	d	×	0	
29	Diadinamical current treatment's apparatus	C	1	○						×	×	d	×	0	
30	Set for the room of physical culture	A	1		○	○	1			○	○		○	1	
31	Gynecological chair	C	1	1						×	×	d	×	0	
32	Trolley for transportation	C	1	4						×	×	d	×	0	
33	Furniture (Surgical table)	C	2	16						×	×	d	×	0	
34	Nurse's table	C	2							×	×	b	×	0	
35	Functional bed	A	5		4		4	1		○	○		○	5	
36	Infant incubator	B	1					1		○	○		○	1	
37	Electrocoagulator	B	1		1		1			○	○		○	1	
38	Portable ultrasound	B	1		1		1			○	○		○	1	
39	Colono fiberscope	C	1	1						×	×	a	×	0	
40	Fluorograph	C	1			1				○	×	g	×	0	Manufactured 1983
41	Laparoscope	C	1							×	×	g	×	0	
42	Massage table	C	1							×	×	b	×	0	
43	Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44	Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45	Biochemical analyzer	C	1							×	×	h	×	0	
46	Liquid's doser	C	1							×	×	c	×	0	
Ad	Microscope		1	2		1	1			○	○		○	1	
Ad	Infant Warmer		1			1				○	×	g	×	0	

C-16 Enbekshi-kazak	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
			Existing Condition			Renewal	Addition	New						
			A	B	C									
1 Diagnostic X-ray apparatus	B	1			1	1			○	○		○	1	Manufactured 1981
2 Negatoscope	B	3		2		2	1		○	○		○	3	
3 Electrocardiograph permanent (6ch)	C	1							○	×	i	×	0	
4 Electrocardiograph transportable (1ch)	B	3	1	2		2	1		○	○		○	3	Manufactured 1985
5 Apparatus of ultrasound examination	C	1							○	×	i	×	0	
6 Fibrogastroscope	B	1					1		○	○		○	1	
7 Hemoglobinometer (manual)	A	2		2		2			○	○		○	2	
8 Photoelectrocolorimeter	B	1		1		1			○	○		○	1	
9 Centrifuge	A	2	1	1		1	1		○	○		○	2	Manufactured 1985
10 Defibrillator	B	1		1		1			○	○		○	1	
11 Bed side monitors	B	1			1	1			○	○		○	1	
12 Office computer	A	1					1		○	○		○	1	
13 Operation table	A	1		1		1			○	○		○	1	Manufactured 1979
14 Big surgical set of instruments	A	1		○	○	1			○	○		○	1	
15 Transportable shadeless operation lamp (w/battery)	A	2		1		1	1		○	○		○	2	Manufactured 1984
16 Electric suction pump	A	2		3		2			○	○		○	2	Manufactured 1985
17 Dental unit and treatment instrument set	A	1		○	○	1			○	○		○	1	
18 Hot air sterilizer	A	1		2	1	1			○	○		○	1	Manufactured 1982
19 Dental technical table	C	1		2	1				○	×	i	×	0	
20 Anesthesia apparatus	B	1	1						○	×		×	0	Manufactured 1990
21 Wheelchair	A	1			1	1			○	○		○	1	
22 Ambulance	B	1	2	2		1			○	○		○	1	Manufactured 1990, 270,000km
23 X-ray apparatus transportable	C	1							○	×	d	×	0	
24 Spirogram	B	1					1		○	○		○	1	
25 Aquadistiller	C	1							○	×	b	×	0	
26 Respiratory equipment (Ventilator)	C	1							○	×	g	×	0	
27 Bandaging table	C	1							○	×	d	×	0	
28 Ultrasound frequency current treatment's apparatus	C	1	○						○	×	d	×	0	
29 Diadinamical current treatment's apparatus	C	1	○						○	×	d	×	0	
30 Set for the room of physical culture	A	1		○		○			○	○		○	1	
31 Gynecological chair	C	1							○	×	d	×	0	
32 Trolley for transportation	C	1							○	×	d	×	0	
33 Furniture (Surgical table)	C	2							○	×	d	×	0	
34 Nurse's table	C	2							○	×	b	×	0	
35 Functional bed	A	5		6		5			○	○		○	5	
36 Infant incubator	B	1	1		1	1			○	○		○	1	Manufactured 1996, Italian aid
37 Electrocoagulator	B	1			1	1			○	○		○	1	
38 Portable ultrasound	B	1					1		○	○		○	1	
39 Colono fiberscope	C	1							○	×	g	×	0	
40 Fluorograph	C	1							○	×	g	×	0	
41 Laparoscope	C	1							×	×	g	×	0	
42 Massage table	C	1							○	×	b	×	0	
43 Prosector's table (table for anatomy)	C	1							×	×	g	×	0	
44 Traumatological & Orthopaedic operation table	C	1							×	×	g	×	0	
45 Biochemical analyzer	C	1							×	×	h	×	0	
46 Liquid's doser	C	1							○	×	c	×	0	
Ad Microscope		1		1		1			○	○		○	1	Manufactured 1987

Table 7 Evaluation (Almaty Regional Hospital No.1)

Almaty Regional No.1		Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Laparoscope and instrument for surgery	B	1				1			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	Operation 550/year
2	Cystoscope and instrument for urological surgery	B	1			1	1			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	Operation 126/year
3	Bronchofiberscope	B	1					1		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	
4	Hemodialysis unit for single patient with water system	B	1			1	1			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	Manufactured 1990, existing capacity of water treatment 8 patients
5	Ambulance	B	1			1	1			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	

Table 8 Evaluation (Almaty Regional Hospital No.2)

Almaty Regional No.2		Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Laparoscope and instrument for surgery	B	1					1		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	Operation 468/year
2	Bronchofiberscope	B	1					1		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	
3	Ambulance	B	1			1	1			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	1	

Table 9 Evaluation (FAPs)

FAPs	Equipment	Priority	Requested Quantity	Relation			Classification of Equipment			Necessity	Validity	Reason of Deletion	Decision	Quantity	Note
				Existing Condition			Renewal	Addition	New						
				A	B	C									
1	Diagnostic set	A	320						320	○	○		○	320	
2	Sphygmomanometer, table top type	C	320							○	×	c	×	0	
3	Sphygmomanometer, aneroid type	A	320						320	○	○		○	320	
4	Stethoscope	A	320						320	○	○		○	320	
6	Resuscitation set, child and adult	C	320							×	×	a	×	0	
6	Oxygen inhalation set	C	320							×	×	a	×	0	
7	Suture instrument set	B	320						320	○	○		○	320	
8	Fetus stethoscope	A	320						320	○	○		○	320	
9	Instrument bag	A	320						320	○	○		○	320	
10	Mouth Gag	A	320						320	○	○		○	320	
11	Tounge Forceps	A	320						320	○	○		○	320	
12	Air way	A	320						320	○	○		○	320	
13	Tourniquet Belt	A	320						320	○	○		○	320	

(1) Hemodialysis unit

Current state of hemodialysis treatment at the first regional hospital

- ① At present, the hospital conducts hemodialysis treatment of patients requiring regular hemodialysis as well as emergency cases on Tuesdays through Saturdays. It accepts emergency treatment on Sundays. On Mondays, treatment is not provided due to equipment maintenance.
- ② In April 1991, five hemodialysis units made in Ukraine (in 1989) were delivered to the hospital and installed in its hemodialysis treatment room. The treatment room is also provided with five beds and a compact water treatment system (capable of treating water for 8 persons per day).
- ③ Four out of five units have been operated in relatively good condition due to weekly adjustment by the hospital's maintenance staff. On the other hand, one unit requires maintenance a few times per week, not suitable for regular use, and is primarily used for emergency treatment.
- ④ In 1997, the four units in good condition treated a total of approximately 1,000 patients (4 units x 5 days/week x 50 weeks). The remaining one unit, however, treated only 70 patients compared to its desirable capacity of 250.
- ⑤ In 1997, 10 patients received regular hemodialysis treatment at the hospital, twice per week each, and 70 patients received emergency treatment. Thus, the hospital provided hemodialysis treatment for a total of 1,070 patients (10 regular patients x twice/week x 50 weeks/year, plus 70 emergency patients). At present, it has referred a total of 180 emergency patients to other institution.
- ⑥ In other words, the hospital should be able to treat 1,250 patients per year (5 units x 5 days/week x 50 weeks/year) if all the units are maintained in good condition. In 1997, however, one unit required frequent adjustment and actual treatment was limited to 1,070 patients, and 180 patients were referred to the Republic of Kazakhstan Scientific Centre of Surgery (having hemodialysis units for 11 beds).

Evaluation results

Evaluation indicates that there are strong needs for additional units, which are sufficiently justified. However, it has been determined that four units will suffice to meet demand, compared to five units requested.

Basis of determination

- ① The existing five units, made in the same year, are expected to require more frequent adjustment in future (in fact, one unit requires adjustment at a rate of several times per week) and will be able to treat less patients. It is not avoidable even if necessary repair is done, as they have been used for nine years; they will require more maintenance or unserviceable in due course. In addition, the water treatment system is subject to frequent repair.
- ② Meanwhile, patients requiring hemodialysis treatment have been growing at a rate of 6% annually.
- ③ Each treatment requires \$50. At present, the hospital maintains approximately six-month stock of expandable supplies for hemodialysis treatment, amounting to 480 sets of dialyzers and blood circuit tubes, indicating that they are replenished smoothly.
- ④ The number of patients who received hemodialysis treatment in 1997 (including those referred to other institution) and their forecast in the next three years are shown below:

1997 (actual): $1,070 + 180 = 1,250$

1998 (forecast): $1,250 \times 1.06 = 1,325$

1999 (forecast): $1,325 \times 1.06 = 1,404$

2000 (forecast): $1,404 \times 1.06 = 1,488$

Thus, to maintain the capacity to treat the total number of patients in 1997 without a help of other facility, the hospital is required to replace four units, which are estimated as follows:

- ① Newly supplied equipment can be operated for 6-7 days per week during the first few years, without much adjustment (say, once every other week), so that the capacity will be 1,300 patients per year (4 units x 6.5 days/week x 50 weeks). It will mostly cover the number of patients expected in the near future (3 units will fall far below estimated demand (975 patients per year)).
- ② At the same time, the hospital will likely face the situation where the growing number of patients will exceed its own capacity and needs to be prepared to deal with it by securing outside service or other means.

Additional remarks

An I.C.U room adjacent to the hemodialysis treatment room will be used to accommodate the water treatment system.

(2) Plasma Phoresis Apparatus

- ① Plasmapheresis (plasma exchange) is the process of separating blood taken out of a human body into blood plasma and cells, mixing blood cells with fluid, and returning the mixture into the body. It is designed to eliminate or reduce pathogenic substances contained in the plasma and thereby check development of a disease.
- ② An plasmapheresis apparatus is capable of automatically performing separation of blood plasma and cells as well as infusion of the mixture into a body, which have previously been done manually. As the use of the apparatus brings collection of blood and infusion of the mixture into a single process and reduces time required for separation of blood, medical staff can reduce workload, patients can be relieved from stress, and infection rates can be lowered.
- ③ Patients suitable for plasmapheresis include acute lever failure, multiple organ failure, acute exacerbation of autoallergic diseases (SLE, serious adynamia, malignant rheumatism), acute drug poisoning, febris septica, and adult respiratory distress syndrome (ARDS).

Factors related to introduction of plasmapheresis at the Aksai Children's Hospital

- ① The Aksai Children's Hospital is one of top referral, national children's hospitals in the country.
- ② The hospital accepts patients requiring plasmapheresis under referral.
- ③ The hospital has physicians who can perform plasmapheresis.
- ④ Plasmapheresis for adult patients is currently conducted at Municipal Hospital No.12.

Current state of the Aksai Children's Hospital and expected results from the plasmapheresis apparatus

- ① Plasmapheresis is currently performed for less than 3 patients per week, and collection of blood and centrifugal separation are carried out manually.

- ② If a plasmapheresis apparatus is introduced to the Aksai hospital, it will be primary used for treatment of acute exacerbation of autoallergic diseases, mainly SLE, while emergency cases will account for small portions.
- ③ The number of patients will increase as they will be referred from all over the country.

Result of evaluation

At present, the introduction of a plasmapheresis apparatus is difficult to justify for the following reasons, and thus it is not included in the project:

- ① The diseases expected for plasmapheresis at the hospital can be effectively handled by prevention of infection.
- ② The apparatus uses expensive expandable supplies (around 20,000 yen per treatment) which neither the hospital nor the patient can afford.

(3) Possible purchase of a mini-bus

A bus owned by the hospital has already run more than 400,000km and has been deteriorating significantly due to high speed running over a long distance and poor road conditions. As a result, its operating distance is limited to a 150km radius of Almaty. The purchase of a new bus is expected to meet the objective of the project - the improvement of the levels of local medical service, it will be considered under the project.

(4) Possible purchase of ambulances

As the range of service by ambulances of the hospitals can reach a distance of 100 - 400km, and they mostly run on road in poor conditions as they are sent the areas remote from arterial roads, their conditions are generally dilapidated. Also, the general lack of the means of transport requires the ambulances to transport patients from a village hospital or clinic to a Central District Hospitals or from a Central District Hospital to a Regional Hospital or a special hospital in Almaty. Table 10 summarizes the current state and operating record of ambulances of the hospitals. Clearly, their running distance has mostly reached an upper limit for vehicle's durability, and serviceable vehicles are relatively small in number compared to the current fleet recorded.

- ① Due to the shortage of vehicles, it is difficult to handle emergency cases quickly:
 - C-2, 3, 4, 5, 8, 9, and 15
- ② Vehicles are dilapidated severely to require urgent replacement:
 - C-1, 6, 7, 10, 11, 12, 13, 14, 16, the Aksai, and the first and second Regional Hospitals

Table 10 Current State of Ambulance Fleet

	No of existing ambulance	No of usable	No of annual dispatch (1000)	Daily no of dispatch / each	Average time of each dispatch	Estimated no of dispatch	No of new survey	Total of existing	Country of origin	Procured year	Total distance (km)	Existing condition
C-1 Akkol C.D.R.	2	2	4,140	6	2.6	4,000	2	1	Russia	1984	350,000	B
								2	Russia	1982	400,000	nearly scrap
C-2 Akou	1	1	5,400	15	1.6	6,570	2	1	Russia	1988	437,000	C
C-3 Karatal	2	2	10,230	11	2.6	12,000	3	1	Russia	1900	110,000	A
								2	Russia	1965	250,000	C
C-4 Kaskoulak	2	2	7,000	10	2.6	10,200	3	1	Russia	1901	100,000	B
								2	Russia	1980	300,000	C
C-5 Kolesoi	2	2	8,500	12	1.6	10,950	3	1	Russia	1904	100,000	B
								2	Russia	1980	300,000	C
C-6 Panflovsk	3	3	17,406	16	1	18,300	3	1	Russia	1965	250,000	B
								2	Russia	1985	400,000	B
								3	Russia	1985	400,000	nearly scrap
C-7 Sarkaul	5	4	18,712	13	1.4	20,580	4	1	Russia	1901	112,000	A
								2	Russia	1901	112,000	A
								3	Russia	1985	570,000	C
								4	Russia	1985	570,000	nearly scrap
								5	Russia	1985	570,000	nearly scrap
C-8 Talhykourgan	2	2	10,251	14	1.6	12,300	3	1	Russia	1906	96,000	A
								2	Russia	1900	250,000	B
C-9 Balkhash	3	1	2,700	8	2	6,570	2	1	Korea	1966	50,000	A
								2	Russia	1983	350,000	scrap
								3	Russia	1983	350,000	scrap
C-10 Zhanbyl	5	4	9,350	7	1.6	11,230	3	1	Russia	1902	23,000	A
								2	Russia	1985	470,000	C
								3	Russia	1985	470,000	C
								4	Russia	1985	470,000	nearly scrap
								5	Russia	1985	470,000	scrap
C-11 Ii	2	2	6,623	10	1.2	7,208	2	1	Russia	1984	290,000	B
								2	Russia	1984	380,000	C
C-12 Kaskelen	4	4	20,305	14	1	22,430	4	1	Russia	1900	31,000	A
								2	Russia	1965	380,000	C
								3	Russia	1965	380,000	C
								4	Russia	1965	380,000	nearly scrap
C-13 Reinbek	2	2	7,368	10	1.2	8,100	2	1	Russia	1968	350,000	B
								2	Russia	1968	350,000	C
C-14 Talgar	5	4	17,311	10	1.2	19,075	4	1	Russia	1901	70,000	A
								2	Russia	1901	70,000	A
								3	Russia	1985	450,000	C
								4	Russia	1985	450,000	nearly scrap
								5	Russia	1985	450,000	nearly scrap
C-15 Uigur	1	1	4,265	12	1.3	5,840	2	1	Russia	1980	280,000	B
C-16 Falekshi-kazak	4	3	8,500	8	1.6	10,200	3	1	Russia	1900	27,000	A
								2	Russia	1964	490,000	C
								3	Russia	1964	480,000	nearly scrap
								4	Russia	1964	480,000	scrap

Table 11 Equipment List (AKSAI Children's Hospital)

	DESCRIPTION	Specificaion	Qty
1	ENDOSCOPY DEPARTMENT		
A-1-1	Gastrointestinal fiberscope pediatric set	Consisting of: fiber gastroscope (1), electrosurgical unit (1), light source unit (1), aspirator (1), cart (1)	1
A-1-2	Endoscopic cabinet	Opening 48cm	1
2	UROLOGY DEPARTMENT		
A-2-1	Cysto-urethroscope pediatric	Telescope: 0° dia.: 1.9mmΦ, telescope: 30° dia.: 1.9mmΦ, cyato-urethroscope telescope:7Fr,9Fr	1
A-2-2	Cysto-urethro fiberscope	Inner dia.: 3.6Fr, sight direction:0° , sight angle:65° , outer dia.:7.5Fr	1
A-2-3	Resectoscope	Telescope 12° , working element set, resectoscope, with inner tube	1
A-2-4	Ureteral stone dislodger	Size: 2.5Fr, length: 120cm	1
A-2-5	Urethral bougie set, curved w/o channel	Bent : 9Fr~22.5Fr	1
A-2-6	Endoscopic and procoscope table	Head handle manipulation, tabletop : 60x170cm	1
A-2-7	Electrohydraulic system	Frequency setting: 4-stage, pulse voltage: max. 1900V	1
A-2-8	High frequency electrosurgical unit	Cut mode: High hrmonics 300W, coagulation mode: high harmonics 120W	1
A-2-9	Urethrotomy knife set	Telescope: 0° dia.: 1.9mmΦ, outer tube: 10Fr, with working element set	1
A-2-10	Portable coagulator	Output: 15W	1
A-2-11	Urodynamic monitor	Consisting of: Main unit (including CRT display and printer) (1), voiding stand (1), catheter automatic liquid suction unit (1)	1
A-2-12	Endoscopic suction pump set	Flow rate : 0~1,000ml/min., pressure : 0~200mgHigh with suction	1
A-2-13	Light source with light cable	Lamp: halogen 250W, light adjustment: 3-stage step	1
3	ENT DEPARTMENT		
A-3-1	Dual channel audiometer	Built-in 2-inch speaker for audibility test on infant/children	1
A-3-2	Laryngoscope set	4 blades	1
A-3-3	Laryngo microsurgery instrument set	Clamp for laryngoscope and other (22 types)	1
A-3-4	E.N.T. unit	Table for Instrument set, Chair, Lighting, Instrument set	1
4	OPHTHALMOLOGY DEPARTMENT		
A-4-1	Fundus camera	Mydriatic type; photographing method: 35mm camera, observation light source: 12V 75W halogen lamp, photo light source: 300W xenon discharge tube	1
A-4-2	Chair-mounted unit	Trial lenses, 35 sets, with visual acuity examination device	1
A-4-3	Slit lamp	Slit lighting; halogen lamp 60W, overall magnification; 10-25	1
A-4-4	Diagnostic and treatment set	Lens meter and others (21 types)	1
5	ICU DEPARTMENT		
A-5-1	Electrocardiograph 1ch	Input impedance; 20MΩ or over, with rechargeable battery	1
A-5-2	Electrocardiograph 6 ch	Induction; Standard 12 induction (6ch), portable type, monochrome LCD with backlight, thermal printer, with rechargeable battery	1
A-5-3	Defibrillator	Electrocardiograph (1ch), Portable type, CRTmonitor, thermal printer, chargeable battery	1
A-5-4	Infusion pump	Irrigator stand, injection rate; 1~99.9ml/hour, accuracy: ±10%	1
A-5-5	Ultrasonic nebulator	Aerosol particle size; 5-micron or smaller possible	4
A-5-6	Bedside monitor	CRT monitor, thermal printer, measurement items; electrocardiogram, respiration, NIBP, SaO2, body temperature	4
A-5-7	Ventilator adult	Respiration mode: CMV/IDV, ventilation rate 100~1,000ml, Rate of breathing: 6-40/min., with alarms	1
A-5-8	Ventilator infant	Application: immature baby, newly born baby, infant, respiration mode, CMV/IDV, ventilation rate 0~999ml/min., with alarms	1

6 REHABILITATION DEPARTMENT			
A-6-1	Ankle & leg exerciser	Weight type	1
A-6-2	Lower limb extension	Material: steel, sheet, vinyl leather	1
A-6-3	Ankle exercise sandal	Spring type	3
A-6-4	Restractor	φD78=φ18Turning radius: 90-330mm	1
A-6-5	Quadriceps	Material: steel, sheet, vinyl leather, 12 weights	1
A-6-6	Rowing machine	Hydraulic type	1
A-6-7	Exercise stairs	L type, with handrail	1
A-6-8	Curb and ramp	Upper slope covered by rubber	1
A-6-9	Rotary wrist machine	Vertical adjustment allowance: 710mm, weight balance type	1
A-6-10	Shoulder wheel	Maximum turning radius: 1340mm	1
A-6-11	Wrist roll	Holding section width: 4 stages	1
A-6-12	Wrist rotator	Support base adjustment width: 60mm	1
A-6-13	Shoulder ladder (curb)	Warp type	1
A-6-14	Shoulder ladder (strait)	Linear type	1
A-6-15	Curved back board exerciser	Weight: 1Kg x 16	1
A-6-16	Transcutaneous	Output: 4ch x 2 (2 persons), LED: frequency/ampere/error indication	1
A-6-17	Interferential therapy unit	For single person, suction, hyperthermia, LED	1
A-6-18	Treadmill	Self-driven, material: steel, running surface; angle adjustable	1
A-6-19	Ortho trac, portable	Power-operated, for two persons (simultaneous pulling of C-spine and L-spine), 1 bed	1
A-6-20	Perceptual motor training set	4 types	4
7 CCS DEPARTMENT			
A-7-1	High pressure steam sterilizer	Inner volume: 590 l or more, type: for electricity	1
A-7-2	High pressure liquid steam sterilizer	Inner volume: 160 l or more, type: for electricity	1
A-7-3	Ultrasonic cleaner set	Consisting of ultrasonic cleaner (1), boiling tank (1), pre-soaking tank (1), drying tank (1), draining board (1)	1
A-7-4	Hot air sterilizer	Inner volume: Approx.300	1
A-7-5	Warm distilling apparatus	Water intake: 10 l/h	1
8 DENTAL DEPARTMENT			
A-8-1	Dental x-ray unit	Consisting of: Dental x-ray unit(1), x-ray film developer (1)	1
A-8-2	Laboratory lathe	Rotating speed: 0~7,000RPM (Approx.)	1
A-8-3	Crown preparation kit fg	FC type	1
A-8-4	Dental unit	Consisting of: Dental treatment unit (1), compressor (1), dental stool (1), casting apparatus for dental technician	1
9 Physiology			
A-9-1	Spirometer	Flow measurement range: 0~20 l/s, LCD indication, with thermal printer	1
A-9-2	Ultrasound linear scanner	Monitor: 9-inch or more (monochrome), printer; monochrome, scanning method; linear/convex	1
A-9-3	Electrocardiograph 1ch	Input impedance; 20MΩ or over, with rechargeable battery	1
A-9-4	Electrocardiograph 6ch	Induction; Standard 12 induction (6ch), portable type, monochrome LCD with backlight, thermal printer, with rechargeable battery	1
A-9-5	Electroencephalograph	Automatic control type, 18ch, cart, display, printer	1
A-9-6	Electro myograph	Evoked potential measurable, CRT monitor, built-in thermal printer, with cart	1

10 X-RAY DEPARTMENT			
A-10-1	Universal general x-ray unit	Tube voltage: 40~125kV, tube current : 10~500mA, bucky table, with stand	1
A-10-2	Portable x-ray diagnostic unit	Inverter type, tube voltage: 40~120kV, tube current : 100mA	1
A-10-3	X-ray film illuminator	For two half sizes, wall fit type	3
A-10-4	Protective apron	0.35 mmPb	6
A-10-5	X-ray tv system	Control system: inverter type, short-time rating: 500mH, monitor: 12-inch or larger	1
A-10-6	Automatic film processor	Processing time: 120 sec or less, film size; 10x10~35x43cm	1
11 PHARMACY DEPARTMENT			
A-11-1	Prescription counter	Consisting of: Main dispensing counter: 3,600(W)x1,500(D), side dispensing counter : 2,400(W)x750(D)	2
A-11-2	Refrigerator	300 l or more	1
A-11-3	Autoclave	Bottle: volume of 400cc x 170pcs or more, for electricity	1
A-11-4	Electric analytical balance	Balance: Approx.500g, reciprocal sensitivity: 0.001g	1
12 LABORATORY DEPARTMENT			
A-12-1	Analyzer glucose	Range of measurement: 20~800mg/dl	1
A-12-2	Centrifuge	Dedicated for test tubes, maximum speed 4000rpm or more, desktop type	1
A-12-3	Hamatocrit centrifuge	For capillary/15ml tube, maximum speed automatic switched (capillaryly 12000rpm, tube 4000rpm)	1
A-12-4	Blood cell analyzer	Measurement items: 8, processing capacity, 60 specimen/hour or more, sample volume: whole blood 150 μ or less, with printer	1
A-12-5	Spectrophotometer	Range of frequency: 330-900nm, automatic zero point adjustment	1
A-12-6	Deep freezer	-40°C, 450 l or over	1
A-12-7	Electric analytical balance	Balance: Approx.500g, reciprocal sensitivity: 0.001g	1
A-12-8	Laboratory microscope (mono)	Minor type	5
13 OPERATING DEPARTMENT			
A-13-1	Anesthesia apparatus	Flow meter; O ₂ , NO ₂ , artificial respirator; CMV, one-time ventilation volume; 100-900ml, respiration rate; 6-40 times/min., with alarms	3
A-13-2	Operating table	Power-operated, hydraulic type, table top: 50x190cm(Approx.), lifting, vertical/horizontal displacement, back plate slidable	2
A-13-3	Electric suction unit	Vacuum pump; 200W, suction pin size: 3000cc x 2	3
A-13-4	Operating table	Hydraulic type, table top: 45x190cm(Approx.), vertical/horizontal displacement possible	1
A-13-5	Gastrectomy instrument set	Replaceable blade, scalpel, handle and other (51 types)	1
A-13-6	Cholecystotomy instrument set	Replaceable blade, scalpel, handle and other (32 types)	1
A-13-7	Standard plastic surgery set	Hegar mayoneedle holder and other (28 types)	2
A-13-8	Nephrectomy instrument set	Towel forceps and other (52 types)	5
A-13-9	Prostalomy instrument set	Replaceable blade and other (56 types)	5
A-13-10	Appendectomy instrument set	Towel forceps and other (16 types)	3
A-13-11	Mosquito hemostatic forceps	12.5cm	100
A-13-12	Kocher hemostatic forceps	14.5cm straight	100
A-13-13	Pean hemostatic forceps	14.5cm straight	100
A-13-14	Kelly hemostatic forceps	14cm	100
A-13-15	Hegar mayo needle holder	20cm	20
A-13-16	Standard operating scissors	14cm	20
A-13-17	Operating instrument set	Replaceable blade, scalpel, handle and other (47 types)	2
A-13-18	Langenbeck periosteal		20
A-13-19	Venotomy instrument set	Flat retractor and other (13 types)	4
A-13-20	Solid state bipolar coagulator unit	Output: 15W	3

A-13-21	Electric bone drill unit	hadpiece, motor separate type, rotating speed : 18,000RPM(Approx.)	1
A-13-22	Cancellous bone screw set	Screw 15mm (L.) and other (23 types)	1
A-13-23	Screw driver	Plus	5
A-13-24	Depth gauge	2.6mm	10
A-13-25	Langenbeck bone holding forceps	21cm	5
A-13-26	Farabeuf-Jambotte bone holding forceps	26cm	10
A-13-27	Rongeur forceps	22cm	10
A-13-28	Still-lure rongeur	23cm	10
A-13-29	Liston bone cutting forceps	17cm	20
A-13-30	Arthroplastic chisel gouge & osteotomy set discontinued	19 set	1
A-13-31	Nylon hammer	26cm	4
A-13-32	Conzett goniometer	Stainless steel 36.5cm	10
A-13-33	Pin cutter	31.5cm	10
A-13-34	Hand-surgery operating set	Esmarch rubber band and other (70 types)	1
A-13-35	Spinal cord traction frame	Lifting: 185-260cm	2
A-13-36	Dematome	Maximum exfoliation area 20x10cm	2
A-13-37	Metal work tool set	Tinman's shears	1
A-13-38	Rollator (large)	Chrome plated pipe : 75~95cm (11)	10
A-13-39	Rollator (small)	Chrome plated pipe : 55~65cm (11)	10
A-13-40	X-ray film illuminator	For 3 half, wall fit type	2
A-13-41	UV hand washing apparatus	for 2 persons	1
A-13-42	UV disinfection lamp	Mobile type (with casters), bactericidal lamp	3
A-13-43	Operating ceiling lights	Main light: 8, max. luminous intensity 100,000lx (distance 1m), sub-light: 4, max. luminous intensity 60,000lx (distance 1m)	2
14 OTHERS			
A-14-1	Ambulance	Displacement: Approx.2,000cc, gasoline, left steering, with emergency treatment kit	1
A-14-2	Minibus	Displacement: Approx.2,000cc, gasoline, left steering, 15 persons	
A-14-3	Portable ultrasound	Monitor: 5-inch (monochrome) or more, monochrome printer; scanning system : linear electronic scanning	1

THERAPY DEPARTMENT

Table 12 Equipment List (Medical College)

Code	Equipment	Specification	Qty
M-1-1	CPR training mannequin adult	With artificial respiration/cardiac compression practice devices	3
M-1-2	Resuscitation bag adult	Silicon-made, autoclave possible	3
M-1-3	Patient bed with position changing function	3-crank, gatch bed	3
M-1-4	Blood sedimentation measurement unit	Stainless steel, 10-piece, back panel, with rubber plugs	10
M-1-5	Gastric tube 10FG	Fr 16*1,200mm	10
M-1-6	Duodenal tube 12FG	Einhorn, olive tips	10
M-1-7	Electrocardiograph 1ch	Recording channel 1, time constant 3.2 sec. or more, recording speed 25.55mm/s	2
M-1-8	Bedpan	Insertion type	5
M-1-9	Graduated measuring Cylinder 250ml	Glass, 250ml	2
M-1-10	Graduated measuring Cylinder 500ml	Glass, 500ml	2
M-1-11	Graduated measuring Cylinder 1000ml	Glass, 1,000ml	2
M-1-12	Urinometer	Urinometer, glass (large)	6

PEDIATRIC DEPARTMENT

M-2-1	Stethoscope for baby	Doctor type	16
M-2-2	Cuff for child	Cuff for child (narrow type)	4
M-2-3	CPR training mannequin, infant	With artificial respiration/cardiac compression practice devices	3
M-2-4	Resuscitation bag for child	Silicon-made, safety valve and locking mechanism, autoclave possible	3
M-2-5	Resuscitation bag for newborn	Silicon-made, safety valve and locking mechanism, autoclave possible	3
M-2-6	Gastric tube 6FG	Fr 10*1,910mm	50
M-2-7	Nasal catheter for newborn		10
M-2-8	Baby bed	Steel table, acrylic cage	3
M-2-9	Mannequin infant	Soft chloothene, size 50cm	3

SURGICAL DEPARTMENT

M-3-1	Electric suction unit	Suction pressure 500mmHg	1
M-3-2	Set for surgical instrument	Tweezers and other (13 items)	1
M-3-3	Suture scissors (straight)	140mm (straight)	12
M-3-4	Suture scissors (curved)	140mm (bent)	12
M-3-5	Dressing scissors	140mm	6
M-3-6	Suture needle (straight)	#1 ~ #6	12
M-3-7	Suture needle (angle)	#1 ~ #10	12
M-3-8	Needle holder (straight)	200mm (straight)	6
M-3-9	Needle holder (angle)	200mm (bent)	6

E.N.T. DEPARTMENT

M-4-1	Othoscope	Troltsch's 1-3	2
M-4-2	Model of respiratory organ	Throat, pharynx, right bronchi, left, upper lower lobe	1
M-4-3	Nasal forceps Haltmann adult	170mm, for adult	12
M-4-4	Nasal forceps Haltmann child	170mm, for child	12
M-4-5	Larynx tube	16Fr, without cuff, with 30Fr cuff	20
M-4-6	Funnel for ear check	Troltsch's 1-3	20
M-4-7	Larynx syringe	Glass, pharynx medicine injector	10
M-4-8	Larynx mirrors	Fixed handle type	20
M-4-9	Supatula	Plate type, stainless steel	10
M-4-10	Desk light	Light for reflection	2

LABORATORY DEPARTMENT

M-5-1	Balance for centrifuge tubes with thermostat	250ML, 500g, cylindrical type, inner dia. 60mm, depth 80mm	4
M-5-2	Paster's oven	Max. temp. 1000°C, inner dimensions : 120x140x120mm	4
M-5-3	Hemoglobinometer	With square tubes	12
M-5-4	Photoelectrocolorimeter	Range of measurement: absorbance 0~2, analog display, min. 1ML	1
M-5-5	Noise & vibration meter	Range of measurement; 20~8kHz	2
M-5-6	Microscope, monocular	Overall magnification : 40~400, object lens : x4, x10, x40, monocular, with reflection mirror	20
M-5-7	Chemical balance	200G, 0.01G	1

DENTISTRY

M-6-1	Dental unit w/air compressor	Dental unit, patient chair, compressor	2
M-6-2	Set of treatment equipment for dentist	Probe and other (89 items)	2
M-6-3	Electric Oven	Max. temp. 999°C, inner dimensions : 115x18x90mm	1
M-6-4	Laboratory lathe	Grinding and cutting of artificial tooth, rotating speed : 1,500~3,000 RPM	2
M-6-5	Dental autoclave desk top	Disinfection temperature : 121~132°C, heater capacity 1.2kW	1

OBSTETRIC

M-7-1	Set of obstetric equipment	Towel clamp 1300mm and other (16 items)	1
M-7-2	Body-height measuring rod	Height : 1,000~2,000mm, Weight 100kg	2
M-7-3	Infant weight scale (manual)	Balance 10kg, reciprocal sensibility 1g	2
M-7-4	Dressing scissors	140mm	2
M-7-5	Needle holder, straight	200mm (straight)	2
M-7-6	Needle holder, angle	200mm (bent)	2
M-7-7	Model of delivery training	Desktop type, leather embryo	1

ANATOMY DEPARTMENT

M-8-1	Whole Body model (male, female)	Actual size, 100 segments, 175*60*60	1
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NURSING DEPARTMENT

M-9-1	Boiling sterilizer (small)	Electric boiling sterilizer, with pipe heater	12
M-9-2	Case kettle (medium)	Portable sterilizer (case only), medium size	6
M-9-3	Case kettle (small)	Portable sterilizer (case only), small size	6
M-9-4	Anatomy forceps w/o teeth	185mm	36
M-9-5	Anatomy forceps (small) w/o teeth	145mm	36
M-9-6	Needle	Luer lock type	500
M-9-7	Surgical smooth forceps	145mm	12
M-9-8	Mouth gag	Frankel 150mm	6
M-9-9	Tangue forceps	170mm	10
M-9-10	Oxygen inhaler	Oxygen mask, nasal canula, small pressure reducing valve, oxygen cylinder	2
M-9-11	Glass Gane's syringe	Luer lock, 2ML, 5ML, 10ML, 20ML	12
M-9-12	Oxygen supply unit w/Oxygen mask	Oxygen mask, with hose, nasal canula	2
M-9-13	Blood pressure manometer desk top w/ cuff	Mercury type, 300mmHg	12
M-9-14	Blood pressure manometer, aneroid type w/ cuff	Meter type	12
M-9-15	Stethoscope	Compound type, for high/low temperature	12
M-9-16	Kidney type basin	Kidney type basin small/large	24
M-9-17	Square type basin	Square basin small/large	24
M-9-18	Foley catheter 16FG	Silicon, Fr16, 3-way, 30cc	12
M-9-19	Pad for the prevention of bed sore	Filling pad to protect bed sore	10
M-9-20	Autoclave desk top	High pressure steam, with dry	10
M-9-21	Gastric tube 30FG	Fr30*1,200mm	12
M-9-22	Duodenal tube 12FG	Einhorn, olive tips	12
M-9-23	Wheel chair	24 inch, large wheel, one-touch brake	4
M-9-24	Forearm model for intravenous injection	Fitting type, with display and cover	24
M-9-25	Model hip for bolus injection training	Fitting type, with display and cover	12
M-9-26	Instrument set for FAPs	hemodynamometer, stethoscope and other (Total 10 items)	20

GENERAL

M-10-1	Video system	TV, video, mask	2
M-10-2	Video library for medical	Russian language	1
M-10-3	Copy machine	A3, B4, A4, B5, copying speed 15 sheets/min.	2
M-10-4	OHP	Projection lens: F280~320mm, rate of magnification 5.7 times (2M)	2
M-10-5	Direct projector	Projection lens, halogen lamp 24V, 200W, manual focus adjuster	1
M-10-6	Printing machine	Printer, cutter, binder, and other	2
M-10-7	Slide projector	100-0mm zoom lens, auto-focusing, rotary magazine, etc.	3
M-10-8	Screen	Stand type, 116x116cm	3
M-10-9	PC computer set	memory 16Mb, CPU 128Mb, hard disk 1.2Gb, 15-inch color monitor	2
M-10-10	Video camera set	8mm	1
M-10-11	35mm camera set	Focusing	1

Table 13 Equipment List (Central District Hospitals)

Code	Equipment	Specification	Qty
CD-1	Diagnostic X-ray apparatus	Tube voltage: 40~125kV, tube current: 10~550mA, bucky table, with stand	16
CD-2	Negatoscope	For 1 half size, wall fit type	48
CD-3	Electrocardiograph transportable (1ch)	Input impedance; 20MΩ or over, with rechargeable battery	48
CD-4	Fibrogastroscope	Consisting of: fiber gastroscope (1), light source unit (1), suction unit (1)	16
CD-5	Hemoglobinmeter (manual)	Pipet and other set for manual method	32
CD-6	Photoelectrocolorimeter	Filter: glass filter 420, 470, 530, 620, 660nm	16
CD-7	Centrifuge	Dedicated for test tube, max. rotating speed 4000rpm or over, desktop type	32
CD-8	Defibrillator	1ch electrocardiograph, portable type, CRT monitor, thermal printer, with rechargeable battery	16
CD-9	Bed side monitors	CRT monitor, thermal printer, measuring items; cardiograph, respiration, NIBP, SaO ₂ , body temperature	17
CD-10	Office computer	CPU: Pentium 166MHz, HDD: 1.2Gb, FDD:3.5-inch, monitor:15 inch, color, laser (monochrome) printer	16
CD-11	Operation table	Hydraulic type, table top: 45x190cm, vertical and horizontal displacement possible	18
CD-12	Big surgical set of instruments	4-7 sets including east delivery set	16
CD-13	Transportable shadeless operation lamp (w/battery)	Stand type casters, 4-light type, with battery, 50000Lux or more	34
CD-14	Electric suction pump	Vacuum pump; 65W, suction pin size; 3000cc x1, 500cc x 1	36
CD-15	Dental unit and treatment instrument set	Consisting of: dental unit (1), compressor (1), instrument set (1), dental material set (1)	16
CD-16	Hot air sterilizer	Inner volume: Approx.150 l	21
CD-17	Anesthesia apparatus	Flow meter: O ₂ , NO ₂ , artificial respirator; CMV, one time ventilation: 100~900ml, No. of respiration; 6-40/min., with alarms	16
CD-18	Wheelchair	Frame: steel chrome plating, brake; lever type, major wheel; 20 inch dia. or over	16
CD-19	Ambulance	Displacement: Approx.2,000cc, gasoline, left steering, with emergency treatment kit	16
CD-20	Spirogram	Range of flow measurement: 0-20l/s, LCD, with thermal printer	16
CD-21	Set for the room of physical culture	Consisting of: shoulder wheel, wrist roll, rotary wrist machine, portable parallel bars, wall bars, posture exerciser, multi-frame, bicycle trainer, mat platform	16
CD-22	Functional bed	Bed side rail, mattress, irrigator	80
CD-23	Infant incubator	Control system: automatic/manual, range of temperature setting: 35.0~37.5°C, hood and irrigator	16
CD-24	Electrocoagulator	Output:15W	17
CD-25	Portable ultrasound	Monitor:5 inch (monochrome) or larger, monochrome printer, scanning system: linear electronic scanning	16
CD-26	Microscope	Mirror type	24
CD-27	Sterilizer	Drum storage capacity: 3 27-cm drums, water supply: manually by using bucket	3

Table 14 Distribution of Equipment

Hospital	Quantity																Total Quantity	Place
	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12	C-13	C-14	C-15	C-16		
	Alakol	Aksou	Karatai	Kerboulak	Koksou	Panfilovsk	Sarkard	Taldykourgan	Balkhasb	Zhambyl	Uli	Kaskolen	Raimbek	Talgar	Uigur	Enbekshi-kazak		
1	Diagnostic X-ray apparatus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Radiology
2	Negatoscope	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	48	Radiology, Operation room
3	Electrocardiograph transportable (Ich)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	48	Physiological Lab.
4	Fibrogastroscope	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Physiological Lab.
5	Hemoglobinmeter (manual)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	32	Clinical Lab.
6	Photoelectrocolorimeter	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Clinical Lab.
7	Centrifuge	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	32	Clinical Lab.
8	Defibrillator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	I.C.U.
9	Bed side monitors	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	17	I.C.U.
10	Office computer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Administration
11	Operation table	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	18	Operating room
12	Big surgical set of instruments	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Operating room
13	Transportable shadeless operation lamp (w/battery)	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	34	Operating room
14	Electric suction pump	2	2	3	3	3	2	2	3	2	2	2	2	2	2	2	36	Operating room
15	Dental unit and treatment instrument set	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Dentistry
16	Hot air sterilizer	2	1	1	2	3	1	1	2	1	1	1	1	1	1	1	21	Clinical Lab.
17	Anesthesia apparatus	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	16	Operating room
18	Wheelchair	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Ward
19	Ambulance	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Emergency
20	Spirogram	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Physiological Lab.
21	Set for the room of physical culture	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Rehabilitation
22	Functional bed	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	80	I.C.U.
23	Infant incubator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Obstetrics
24	Electrocoagulator	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	17	Operating room
25	Portable ultrasound	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	Physiological Lab.
26	Microscope	1	1	0	2	1	2	2	1	2	2	2	1	2	2	1	24	Clinical Lab.
27	Sterilizer	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3	C.C.S.

Table 15 Equipment List (Almaty Regional Hospital No.1)

Code	Equipment	Specification	Qty
R-1-1	Laparoscope and instrument for surgery	Consisting of: End vision camera (1), light source, insuffrator unit (1), 20-inch monitor (1), high harmonic generator (1), machine table (1), laparoscope and instrument for surgery (1)	1
R-1-2	Cystoscope and instrument for urological surgery	Consisting of cystourethroscope (1), electrosurgical unit (1), uro pump set (1), light source unit (1), urethrotomy knife set (1)	1
R-1-3	Bronchofiberscope	Telescope: 30° dia. 5.5mm, branchi tube, branchi clamp (3) with light source unit	1
R-1-4	Hemodialysis unit for single patient with water system	Dialysis machine set for one person (4), Reverse osmosis for five person (1), Water softener system (1)	1
R-1-5	Ambulance	Displacement : Approx. 2,000 cc, gasoline, left steering, with emergency treatment kit	1

Table 16 Equipment List (Almaty Regional Hospital No.2)

Code	Equipment	Specification	Qty
R-2-1	Laparoscope and instrument for surgery	Consisting of: End vision camera (1), light source, insuffrator unit (1), 20-inch monitor (1), high harmonic generator (1), machine table (1), laparoscope and instrument for surgery (1)	1
R-2-2	Bronchofiberscope	Telescope: 30° dia. 5.5mm, branchi tube, branchi clamp (3) with light source unit	1
R-2-3	Ambulance	Displacement : Approx. 2,000 cc, gasoline, left steering, with emergency treatment kit	1

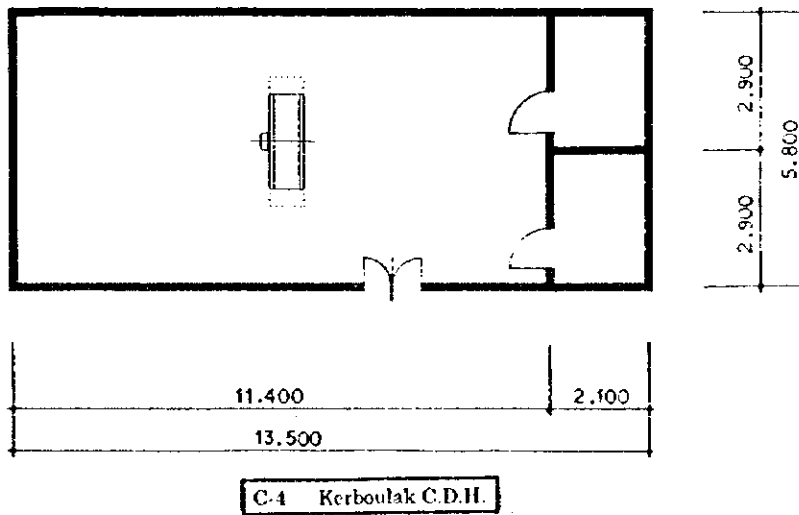
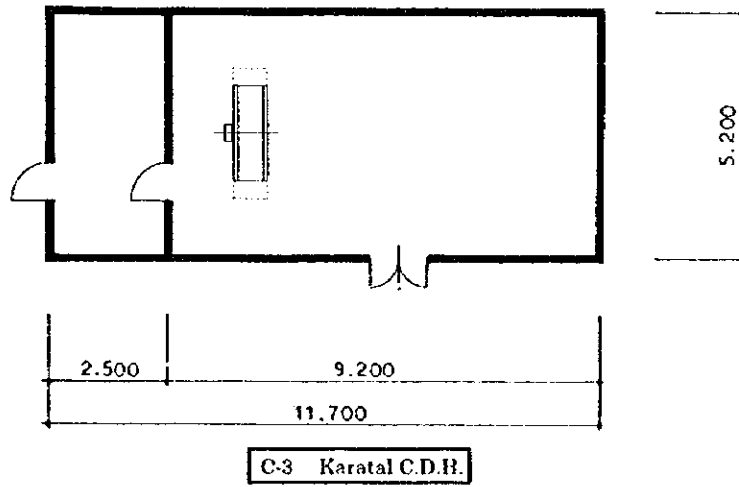
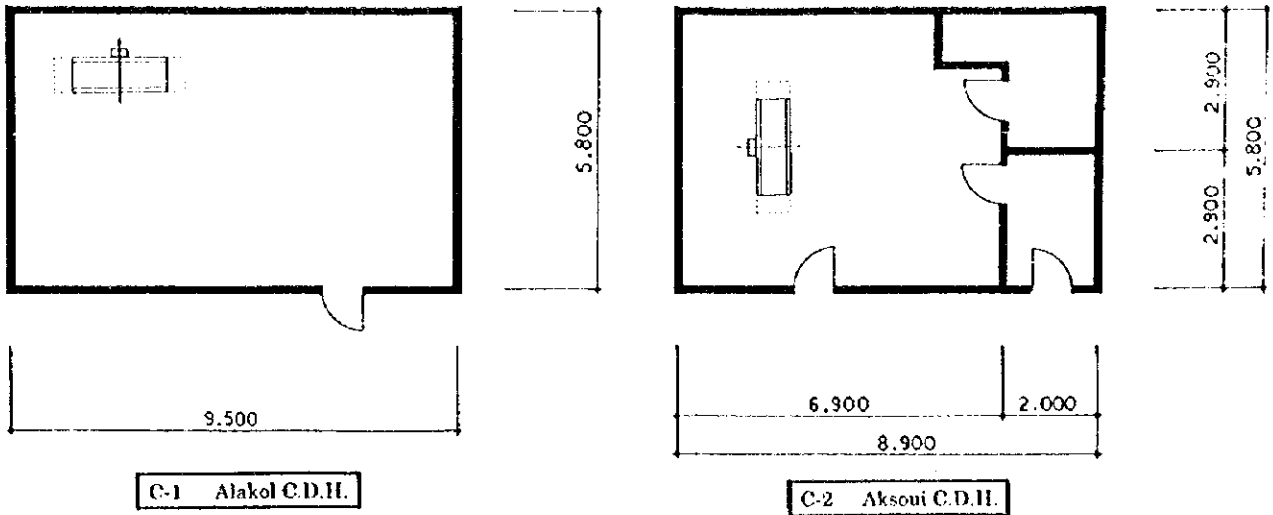
FAPs

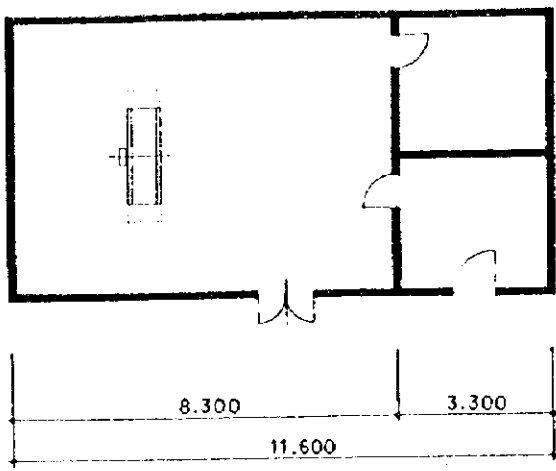
Table 17 Equipment List (FAPs)

	Equipment	Specification	Qty
F-1	Diagnostic set	Supatula, pen light, clinical thermometer	320
F-2	Sphygmomanometer, aneroid type	Meter type	320
F-3	Stethoscope	Double head, doctor type	320
F-4	Suture instrument set	Suture and other	320
F-5	Fetus stethoscope	Fetus stethoscope	320
F-6	Instrument bag	Box type	320
F-7	Mouth Gag	Emergency use	320
F-8	Tounge Forceps	Emergency use	320
F-9	Air way	Emergency use	320
F-10	Tourniquet Belt	Emergency use	320

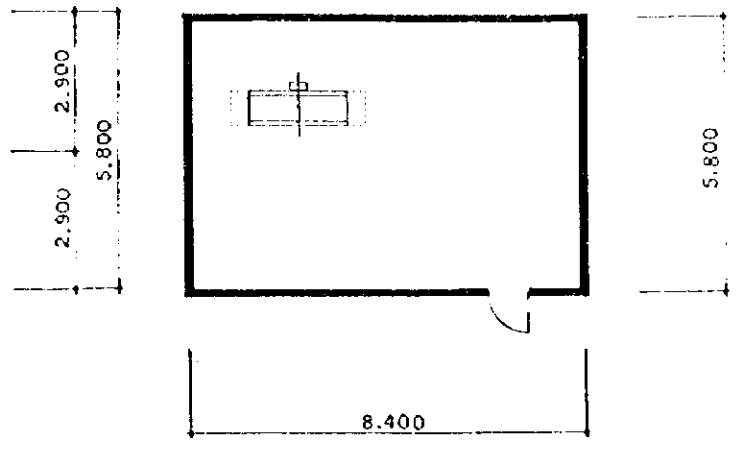
Figure 2 Layout Plan

Diagnostic X-ray

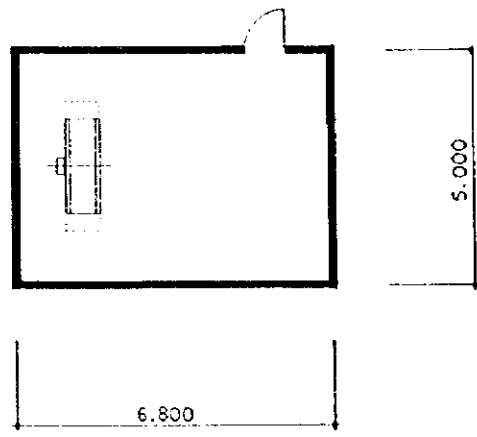




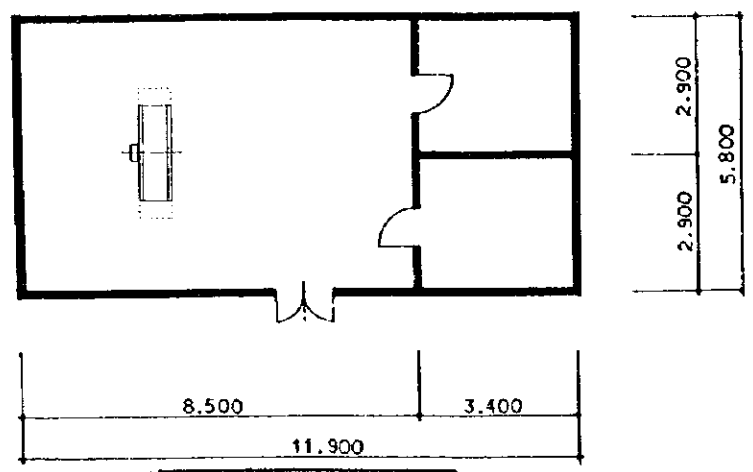
C-5 Koksoui C.D.H.



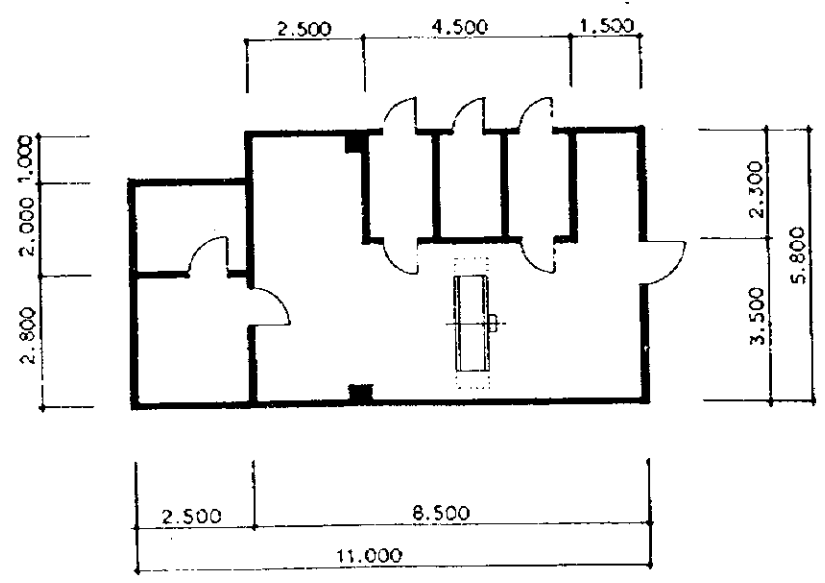
C-6 Panfilovsk C.D.H.



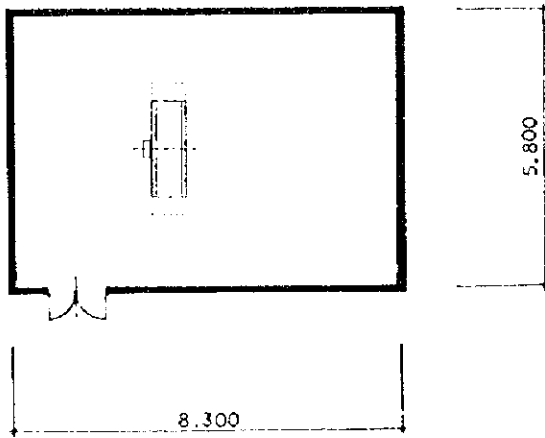
C-7 Sarkand C.D.H.



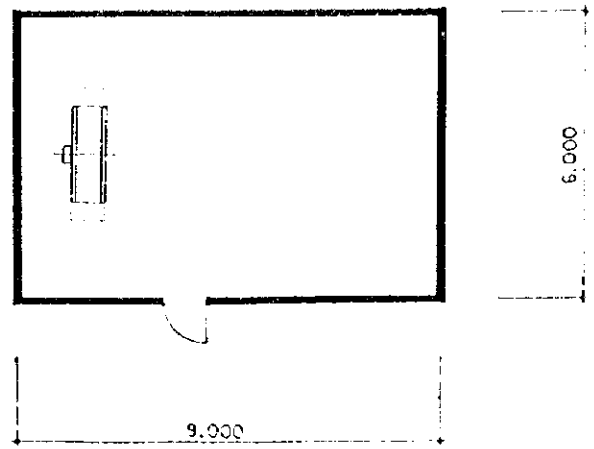
C-8 Taldykourgan C.D.H.



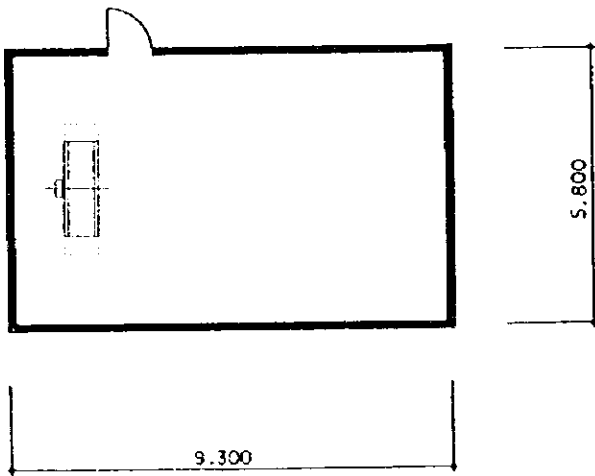
C-9 Balkhash C.D.H.



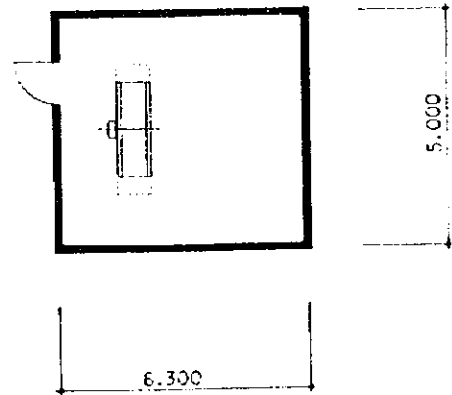
C-10 Zhambyl C.D.H.



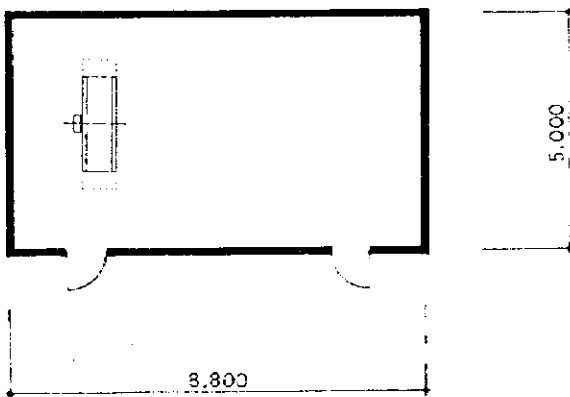
C-11 III C.D.H.



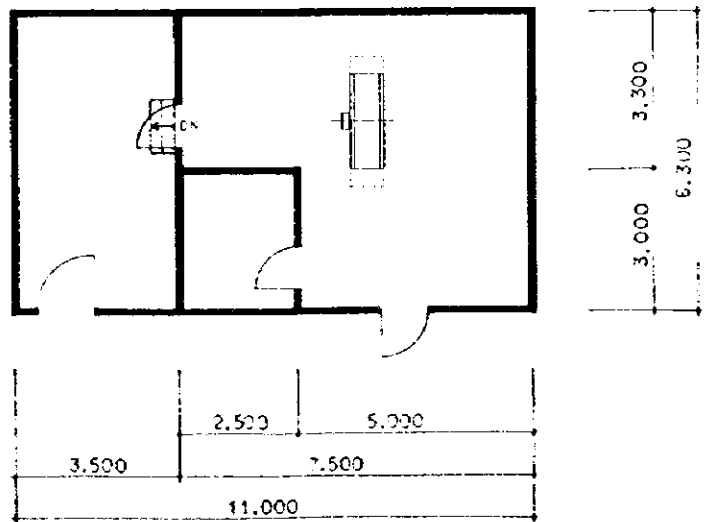
C-12 Kaskelen C.D.H.



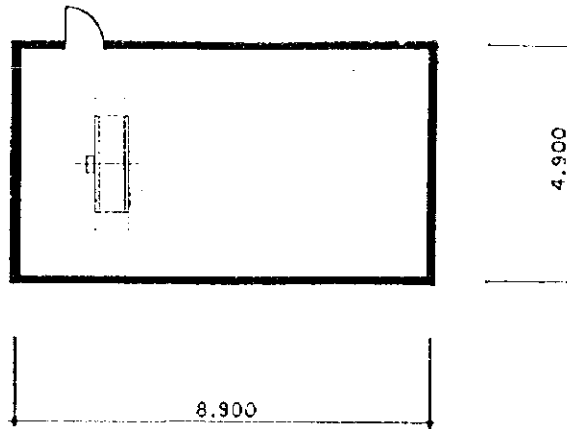
C-13 Raimbek C.D.H.



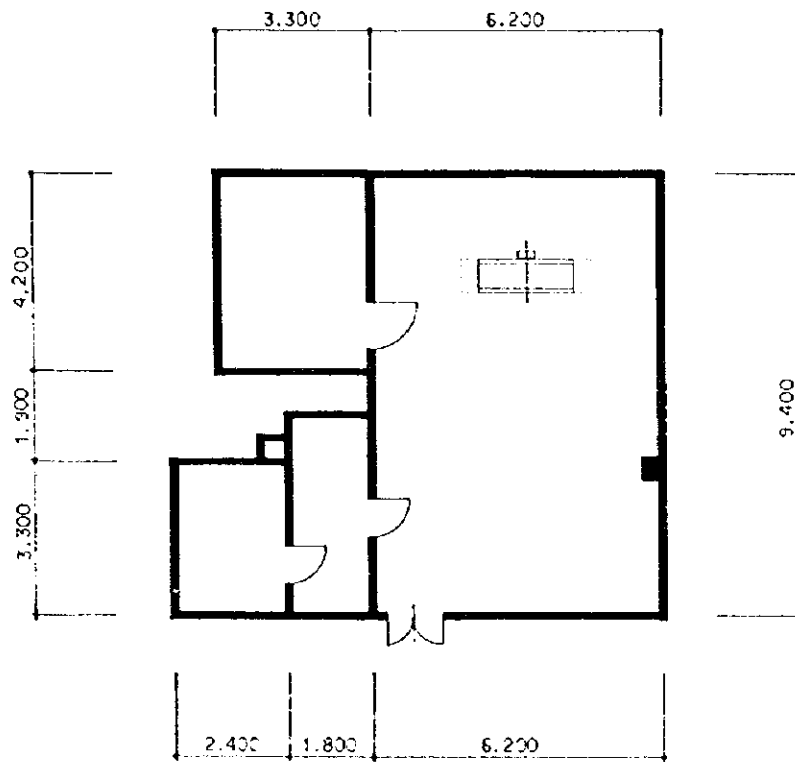
C-14 Talgar C.D.H.



C-15 Uigur C.D.H.



C-16 Enbekshi-kazak C.D.H.



A AKSAI Children's Hospital