

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT
FOR
IMPROVEMENT OF MEDICAL EQUIPMENT IN DIAKOV
HOSPITAL
IN
TAJIKISTAN**

OCTOBER, 2004

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
INTERNATIONAL TECHNO CENTER CO., LTD.**

GM
JR
04-256

Preface

In response to a request from the Government of the Republic of Tajikistan, the Government of Japan decided to conduct a basic design study on the Project for Improvement of Medical Equipment in Diakov Hospital and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Tajikistan a study team from June 8 to July 10, 2004.

The team held discussions with the officials concerned of the Government of Tajikistan, 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 Tajikistan 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 Tajikistan for their close cooperation extended to the teams.

October, 2004

Seiji Kojima
Vice President
Japan International Cooperation Agency

October, 2004

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Improvement of Medical Equipment in Diakov Hospital in the Republic of Tajikistan.

This study was conducted by International Techno Center Co., Ltd., under a contract to JICA, during the period from May, 2004 to November, 2004. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Tajikistan 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.

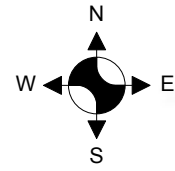
Very truly yours,

Kazuhiro Abe
Project Manager,
Basic design study team on the Project for
Improvement of Medical Equipment in
Diakov Hospital in Tajikistan

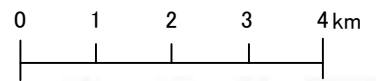
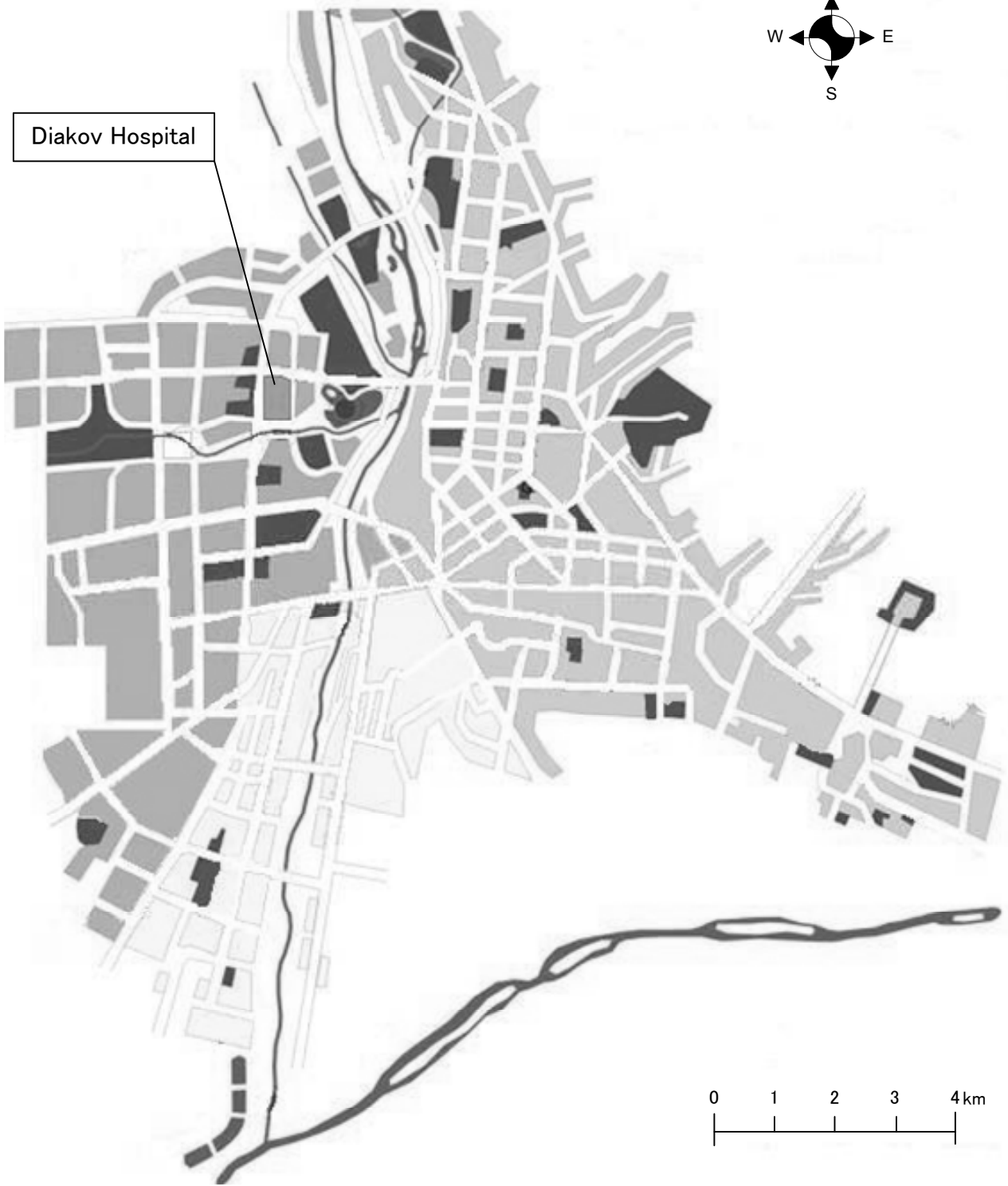
Tajikistan



Dushanbe



Diakov Hospital



List of Figures & Tables

No.	Title	Page
Figure 2-1	NO.9 X-Ray Room	20
Figure 2-2	NO.12 X-Ray Room	21
Figure 2-3	Emergency Reception, CT Room	22
Figure 2-4	Pediatric Unit BF (NO.9 & 11)	23
Figure 2-5	Pediatric Unit 1F (NO.9 & 11)	24
Figure 2-6	Pediatric Unit 2F (NO.9 & 11)	25
Figure 2-7	Pediatric Unit 3F (NO.9 & 11)	26
Figure 2-8	NO.2 Building 1F, 2F	27
Figure 2-9	NO.4 Building 1F, 2F	28
Figure 2-10	NO.8 Building 1F, 2F	29
Figure 2-11	NO.15 Building 1F, 2F & 3F	30
Table 2-1	Departments to be covered by the project	5
Table 2-2	Examination results	
Table 2-3	Expenditure in Diakov Hospital	14
Table 3-1	Effects of implementation of the project and improvements in the current situation	40

Abbreviations

ADB	Asian Development Bank
A/P	Authorization to Pay
B/A	Banking Arrangement
B/L	Bill of Lading
CIF	Cost, Insurance and Freight
CIS	Commonwealth of Independent States
E/N	Exchange of Notes
GDP	Gross Domestic Product
ICU	Intensive Care Unit
IMR	Infant Mortality Rate
ISO	International Organization for Standardization
JIS	Japan Industrial Standards
JICA	Japan International Cooperation Agency
PRSP	Poverty Reduction Strategic Paper
UNICEF	United Nations Children's Fund
U5MR	Under 5 Mortality Rate
WHO	World Health Organization

Summary

Summary

The Republic of Tajikistan (to be referred to as “Tajikistan”) is situated at the southeastern corner of the Central Asian region, which contains five countries. It is a landlocked country, surrounded by Uzbekistan, Kyrgyzstan, Afghanistan and China. The country has a total population of approximately 6.297 million, and occupies an area of approximately 143,100 km². It is a mountainous country, with ninety percent of its land in the Pamir Mountains. It has more than 25,000 rivers and as many as 1,300 lakes, and ranks third in the world in terms of the hydraulic power generation. The walls of Nurek Dam are 300 m tall, the highest in the world among all earth-fill dams. The climate varies widely, due to large differences in elevations. Temperature fluctuations between days and nights, as well as those between summer and winter are also considerable.

Tajikistan became independent of the former Soviet Union in September 1991. The civil war between the Communists and the anti-government forces that erupted in the following year and lasted until 1997 claimed more than 50,000 lives, and created refugees, whose number exceeded 160,000. The entire peace process did not end until 1997, when a presidential election was held. A full-scale post-independence economic reform was initiated in 2000.

Consequently, the country’s revenues currently account for less than 15% of its GDP in spite of the fact that its external debt represents nearly 100% of the GDP. This poses an enormous obstacle for external debt reduction efforts. Debt repayments amount to between 40% and 50% of the national budget. As a result, social security, health care, education and government employees’ salaries are squeezed. Expenditures for health and medical care, in particular, represented only 3.4% of the GDP in 2001, placing Tajikistan at the lowest among the Central Asian countries. A 2001 survey found that 83% of the nation’s total population lived below the poverty line.

In this situation, the country initiated a full-scale poverty reduction program under the Poverty Reduction Strategy Paper (PRSP), which was approved by the congress in June 2003. PRSP aims to reduce poverty to 60% by 2015 (with part of the plan to be completed in 2010) with aids from the Asian Development Bank (ADB).

Nevertheless, the country’s fiscal situation has shown no improvement so far, and its health care budget is less than adequate. Although buildings, facilities and medical equipment at medical institutions have all grown very old, a budget shortage has kept them from being replaced. Furthermore, pharmaceutical products are in seriously short supply, and providing adequate health care services to the poor is especially difficult. As a consequence, the Under 5 Mortality Rate (U5MR) in the 2001 health indicators of Tajikistan stood at 72 per 1,000 live births, a high number compared with Uzbekistan’s 68 and Kyrgyzstan’s 61, two neighboring countries. Respiratory illnesses, infections and parasitic infections claim the lives of young people at nearly three times the average rates found among the members of the WHO European regional office. Improving health care services to children younger than 15, who represent approximately 40% of the country’s total population, is therefore an urgently needed task.

Faced with this situation, the government of Tajikistan initiated the Project for Improvement of Medical Equipment in Diakov Hospital, which is aimed at improving the health care services at the nationally-run Diakov Hospital. The hospital plays a central role in the field of pediatric health care. The Tajikistani government requested the Japanese government for a grant aid to purchase medical equipment that is needed to implement this plan.

The Japanese government sent to Tajikistan a safety verification study team in June 2002. Based on the results of the study, Japan sent a project formation study team in March 2003 and determined that four sectors, including the health sector, to be the core areas to receive the aid. A preliminary study team, sent in February 2004, confirmed the positioning of this project in relation to the PRSP. The team also examined the current status of the facility at the hospital, as well as the necessity for and appropriateness of upgrading its equipment.

The preliminary study discovered that a substantial proportion of the equipment at the institution is unusable, due to their extreme age, and that part of the hospital's pediatric health care services are hampered because of the near impossibility of upgrading or replacing such equipment.

Based on mentioned above, in response to the request of the Tajikistani government, the Japanese government made a decision to conduct a basic design study for the project. A basic design study team was sent to Tajikistan by the Japan International Cooperation Agency (JICA) and spent time there between June 8, 2004 and July 10, 2004. The team conducted some additional work in Japan upon their return. The team then took the study results back to Tajikistan and presented its explanation of draft basic design over a period between October 5, 2004 and October 16, 2004. Based on the results of the preliminary study and those of the basic design study, it was confirmed that the grant of this project would be directed at the pediatric departments at Diakov Hospital, which is the core institution in the pediatric health care field of Tajikistan. The objective of the project is to enhance pediatric health care services by upgrading and supplementing the basic diagnostic and treatment equipment that has either become obsolete or is in short supply, and implement the sharing of such equipment to the maximum extent possible.

Key facts about Diakov Hospital (as of 2004), which is the recipient of the grant, are as follows:

Location	City of Dushanbe
Number of Beds	1,120 (541 in Pediatric Depts.)
Total Number of Employees	1,291
Number of in-patients per year	23,465
Number of out-patients per year	77,625
Number of surgeries per year	2,946
Annual operating budget	692,000 somoni (Approx. ¥25 million)

This project was designed in accordance with the following policies:

- (1) The main part of the equipment procurement will be basic equipment with high frequency of use and high levels of urgency, which will be selected by taking into consideration such factors as the treatment system and the number of patients in the pediatric departments at the hospital.
- (2) Sharing of equipment is encouraged to the maximum extent possible in light of the hospital's management condition and its maintenance budget, cast against the backdrop of the stringent fiscal condition faced by Tajikistan.
- (3) With respect to the purchase of some new types of equipment, the equipment selection will be made by ensuring that the equipment is compatible with the technical skill levels of medical professionals who will use such equipment and the patient demand for the equipment.
- (4) Equipment specifications will have to be commensurate with the technical skill levels of the medical professionals at the hospital.
- (5) An equipment layout will be designed to achieve effective and efficient diagnoses and treatment at each of the pediatric treatment departments by taking into consideration the facility environment of the hospital.
- (6) A voltage regulator will be attached to all electrical devices because of wide voltage fluctuations at the hospital during the winter.

Based on the foregoing, the following major types of equipment will be procured by this project for each pediatric department:

Department	Equipment
Pediatric Reception	Ambu Bag, Examination Light, Examination Table(Low), Scale (Weight/Height)/Adult, Sphygmomanometer, Stethoscope, Thermometer, Stretcher, Wheel Chair
Emergency Reception	Ambu Bag, Examination Light, Examination Table(Low), Scale (Weight/Height)/Adult, Sphygmomanometer, Stethoscope, Thermometer, Stretcher, Wheel Chair
Operation Theater	Patient Monitor, Suction Unit, Autoclave Vertical, Anesthesia Apparatus, Defibrillator, Operation Table, General, Operation Light, Instrument Table
Central Laboratory	Refrigerator ,Autoclave Vertical, Blood Cell Counter/Manual, Electrical Balance, Water Bath, Microscope/Binocular, Photo-electro Calorimeter,
Radiology	CT Scanner, Dark Room Equipment Set , X-Ray Apparatus Mobile & X-Ray Apparatus General and Fluoroscopy with X-Ray Shield Apron,
Pathological Laboratory	Microscope, Binocular, Microtome, Paraffin Bath, Tissue Processor, Water Distiller
Ophthalmology	Examination Light, Patient Monitor, Refrigerator, Laundry Machine, Anesthesia Apparatus, Stretcher, Wheel Chair, Operation Table/Ophthalmology,

Department	Equipment
ENT	Operation Table/ENT, Operation Light, Hot Air Sterilizer, Instrument Table , ENT surgery set
Traumatology	Patient Monitor, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Thermometer, Stretcher, Wheel Chair, Bed, Orthopedic, Suction Unit/General
Neurosurgery	Patient Monitor, Suction Unit/General, Suction Unit/Operation, Infusion Pump, Syringe Pump, Bed, Pediatric, Hot Air Sterilizer
Treatment/Diagnosis	ECG, Colonoscop, Gastroscope, Disinfector/Endoscope, Ultrasound Scanner/Doppler, Ultrasound Scanner/General
Septic Surgery	Examination Light, Oxygen Concentrator/ General, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Bed/Orthopedic, Bed/Pediatric, Suction Unit/General
Urology	Examination Light, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Suction Unit/General, X-ray Film Viewer/General
Thoraco-abdominal Surgery	Ambu Bag, Examination Light, Nebulizer, Oxygen Concentrator/ General, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Thermometer, Suction Unit/General
Maxillofacial Surgery	Ambu Bag, Examination Light, Patient Monitor, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Suction Unit/General Instrument Cabinet
Infant Surgery	Examination Light, Infant Cot, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Suction Unit, General , X-ray Film Viewer/General
Pediatric ICU	Infant Incubator, Infant Warmer, Oxygen Concentrator/ General, Patient Monitor, Pulse Oximeter, Ventilator, Refrigerator, Laundry Machine
Quarantine	Ambu Bag, Nebulizer, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Wheel Chair Suction Unit/General
Pediatric Neurology	Ambu Bag, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Suction Unit/General, X-ray Film Viewer/General
Neonatology	Infant Cot, Infant Incubator, Infant Warmer, Nebulizer, Oxygen Concentrator/ General, Phototherapy Unit, Sphygmomanometer, Stethoscope
Infant Pediatric Section	Infant Cot, Infant Incubator, Infant Warmer, Nebulizer, Oxygen Concentrator/ General, Refrigerator, Sphygmomanometer, Stethoscope

Department	Equipment
ICU	Infant Cot, Infant Incubator, Infant Warmer, Nebulizer, Oxygen Concentrator/ General, Ventilator, Refrigerator, Sphygmomanometer, Stethoscope
Hematology	Ambu Bag, Oxygen Concentrator/ General, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Thermometer, Suction Unit/General, X-ray Film Viewer/General
Cardio-rheumatology	Oxygen Concentrator/ General, Refrigerator, Laundry Machine, Sphygmomanometer, Stethoscope, Thermometer, Suction Unit/General ECG, X-ray Film Viewer/General
Pulmonology	Oxygen Concentrator/ General, Refrigerator, Laundry Machine, Nebulizer, Sphygmomanometer, Stethoscope, Thermometer, Suction Unit/General
Pump Room	Pump

Sharing was used as a criterion of equipment selection with respect to diagnostic devices that had an especially large number of requests. However, equipment has been operated separately by the extremely compartmentalized departments for over 40 years. Stationing some pieces of equipment in one or multiple locations for sharing is understood by the hospital management as a concept but it will be the first time that the hospital will actually have equipment that is shared. To educate and provide guidance to the hospital staff regarding the sharing of equipment in such an environment is believed to be an effective support tool that ensures the efficient use of the procured equipment in the future. Consequently, the soft component of this project will be of a type that consists of direct support by Japanese consultants. The support will consist mainly of workshops and guidance on the routine control of shared equipment.

Based on the foregoing, the project is estimated to take 11 months to implement, and involve a total expenditure of ¥480.07 million in total (consisting of ¥480.5 million to be borne by Japan and ¥220 thousand to be borne by Tajikistan).

The following effects are expected to result from the implementation of this project:

1) Direct effects

i. By replacing and supplementing the existing equipment that is either obsolete or in shortage, this project will allow the hospital to regain its originally-intended diagnostic function. Increased accuracy of diagnoses will help improve both the quality and quantity of health care services offered by the pediatric section of the hospital.

ii. Sharing of equipment that is procured in this project will render the quantities of supplies and replacement parts that are required by such equipment to be kept to the minimum, and enable the hospital to be managed in an efficient and smooth manner.

2) Indirect effects

As the result of the equipment procurement in this project, the number of patient referrals from lower-level medical institutions in the city of Dushanbe, which the hospital is assigned to, will increase as they seek more exact diagnoses or better treatment. The health care referral system in the area will thus be enhanced, the infant mortality rate will decrease, and the child referral system throughout the Republic of Tajikistan will be strengthened.

Because of these expected effects, the project will play an important role in the enhancement of child health care services in Tajikistan, and contribute toward the attainment of long- and medium-term goals in the health field of Tajikistan. The direct beneficiaries will be children all over Tajikistan (numbering approximately 3 million). The annual total budget of the hospital, its operating and maintenance budget and the operating and maintenance budget for the equipment to be procured in this project are as follows. The budget request submitted by the hospital to the ministry of health of Tajikistan for 2005 shows a 26% increase. It is believed that the operating and maintenance expense needed for the equipment to be procured in this project is tenable in comparison with the growth of the hospital's annual budget.

	Somoni (Japanese Yen Equivalent)
Total 2004 Budget (Actual)	692,908 (¥25,288,000)
Total 2005 Budget (Projected)	872,908 (¥31,385,000)
Growth of Total Annual Budget (2004/2005)	26%
Operating and Maintenance Budget for Existing Equipment	157,890 (¥5,800,000)
Operating and Maintenance Cost of Procured Equipment	132,000 (¥4,800,000)
Percentage of the Total Annual Budget	15%

The heads of departments at the hospital also serve as instructors who provide post-graduate training of doctors and other medical professionals. As for the operating and maintenance system, the operating and maintenance budget is expected to be increased and maintenance contracts are planned to be signed with manufacturers' representatives. The medical equipment to be procured in this project can thus be expected to be used effectively. Regarding environmental considerations, none of the equipment included in this project exerts any negative impact on the environment. Nonetheless, the hospital intends to create a manual on the disposal of medical wastes in the future.

Based on the study results described above, this project is believed to be justified as a grant aid program for Japan.

Attention must be paid to the following points to ensure the smooth implementation of the project, as well as the effective and sustained use of the procured equipment:

i. Further improvement of hospital management in the market economy

The recipient hospital of this project is not subject to the plan to streamline medical institutions that Tajikistan is currently implementing as part of its health care reform. However, various reforms are needed in order to achieve high utility with the sharing of the equipment through the implementation of this project, due to the fact that the hospital is a colossal medical institution with multiple specialized departments. Such reforms may include reorganization of the hospital, streamlining of departments, efficient use of human resources, enhancement of the financial control system, and improvement of patient services. Construction of a system that is competitive in a market economy is desired.

ii. Ensuring Stable Fiscal Sources for Health Care

The recipient hospital of this project adopted a patient co-payment system in June 2004. Nevertheless, the health and medical care expenditures continue to face a stringent condition. For this reason, a fee-based treatment system is hoped to be put in place so as to establish an important source of revenue with an eye toward patient service improvements. Such improvements would include evening and weekend treatment services and private bedrooms, which would secure stable sources of revenue.

**BASIC DESIGN STUDY ON THE PROJECT
FOR
IMPROVEMENT OF THE MEDICAL EQUIPMENT FOR DIAKOV
HOSPITAL
IN
TAJKISTAN**

CONTENTS

Preface

Letter of Transmittal

Location Map/Perspective

List of Figures & Tables

Abbreviations

Summary

Chapter 1 Background of the Project ----- 1

Chapter 2 Contents of the Project ----- 3

2-1 Basic Concept of the Project ----- 3

2-2 Basic Design of the Requested Japanese Assistance ----- 3

2-2-1 Design Policy ----- 3

2-2-2 Basic Plan (Equipment Plan) ----- 5

2-2-3 Basic Design Drawing ----- 20

2-2-4 Implementation Plan ----- 31

2-2-4-1 Implementation Policy ----- 31

2-2-4-2 Implementation Conditions ----- 31

2-2-4-3 Scope of Works ----- 31

2-2-4-4 Consultant Supervision ----- 32

2-2-4-5 Procurement Plan ----- 33

2-2-4-6 Quality Control Plan ----- 34

2-2-4-7 Implementation Schedule ----- 34

2-3 Obligations of Recipient Country ----- 35

2-4	Project Operation Plan	-----	36
2-4-1	Maintenance Cost	-----	36
2-4-2	Project Cost	-----	38
2-5	Other Relevant Issues	-----	39

Chapter 3	Project Evaluation and Recommendations	-----	41
3-1	Project Effect	-----	41
3-2	Recommendations	-----	42

【Appendices】

1. Member List of the Study Team
2. Study Schedule
3. List of the Parties Concerned in the Recipient Country
4. Minutes of Discussion
5. Reference

Chapter 1 Background of the Project

Chapter 1 Background of the Project

Tajikistan has been moving toward democratization and a market economy since the completion of the peace process in 2000. However, the country has numerous problems in the health care field, such as deterioration in the quality of medical services, due to its chronic fiscal deficit.

Tajikistan is a country with a young population. Nearly 40 percent of its total population is younger than 15. The country's mortality rate among children has remained high. The infant mortality rate per 1,000 live births is 53 (2001, UNICEF), and the under 5 mortality rate per 1,000 live births is 72 (2001, UNICEF). Nutritional deficiencies, iodine and iron deficiencies, as well as respiratory ailment, pose serious problems. Improved pediatric medical services are therefore strongly desired.

Faced with this situation, the government of Tajikistan initiated the Project for Improvement of Medical Equipment in Diakov Hospital, which is aimed at improving the health care services at the nationally-run Diakov Hospital. The hospital plays a central role in the field of pediatric health care. The Tajikistani government requested the Japanese government for a grant aid to purchase medical equipment that is needed to implement this plan.

The Japanese government sent to Tajikistan a safety verification study team in June 2002. Based on the results of the study, Japan sent a project formation study team in March 2003 and determined that four sectors, including the health sector, to be the core areas to receive the aid. A preliminary study team, sent in February 2004, confirmed the positioning of this project in relation to the Poverty Reduction Strategy Paper. The team also examined the current status of the facility at the hospital, as well as the necessity for and appropriateness of upgrading its equipment. The study discovered that a substantial proportion of the equipment at the institution is unusable, due to their extreme age, and that some of the hospital's pediatric health care services are hampered, due to the near impossibility of upgrading or replacing such equipment.

For this reason, the Japanese government made a decision to conduct a basic design study for the project in response to the request of the Tajikistani government. A basic design study team, sent to Tajikistan by the Japan International Cooperation Agency (JICA) between June 8, 2004 and July 10, 2004, did additional work back in Japan upon

their return. The team took the study results back to Tajikistan and made a presentation of its explanation of draft basic design between October 4, 2004 and October 15, 2004. Based on the results of the preliminary study and those of the basic design study, the project targets to strengthen child health care services by focusing on the basic child health care services at Diakov Hospital, which will be the recipient of the medical equipment enhancement of this project. The enhancement includes upgrading and expansion of basic diagnostic and treatment equipment that has either become obsolete or is in shortage, and efficiently using such equipment with sharing to the maximum extent possible.

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

Tajikistan won independence from the former Soviet Union in 1991. The civil war that raged the country over the ensuing five-year period led to a dismal fiscal condition and increased the population of the poor. 2001 Statistics reveal that 83% of the country's population live below the poverty line, making Tajikistan the poorest among the CIS countries. Currently, Tajikistan is fighting poverty under a full-scale poverty reduction policy that runs till 2015.

Nevertheless, the country's fiscal situation has shown no improvement so far, and its health care budget has been drastically cut. Although buildings, facilities and medical equipment at medical institutions have all grown very old, upgrading them is fiscally very difficult. Shortages of pharmaceutical products are also serious, and providing adequate health care services to the poor is especially difficult.

Tajikistan's 2001 health indicators reveal a U5MR of 72 per 1,000 live births, a high number compared with 68 in Uzbekistan and 61 in Kyrgyzstan, two neighboring countries. Respiratory illnesses, infections and parasitic infections claim the lives of young people at nearly three times the average rates in the WHO European region. This is yet another reason why improving health care services to children younger than 15, who represent approximately 40% of the total population, is an urgently needed task.

Diakov Hospital plays a central role in the field of pediatric health care. The object of the project is to enhance pediatric health care field of Tajikistan by providing support to Diakov Hospital. The project will furnish basic medical equipment.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

(1) Basic Policy

This project aims to boost child health care services in Tajikistan by providing support to Diakov Hospital.

The major part of the equipment that the hospital requested was for basic treatment. Although the request included some types of equipment to be newly added, much was for upgrading or replacement of existing equipment. A substantial part of the request for equipment, however, was duplicated by multiple departments. This was due to the fact that the system that was built in the days of the ruling by the former Soviet Union continues to live on and that the health care departments are compartmentalized as a result. Regarding this issue, improvements are hoped to be made in the flow of treatment activities so that adjacent departments share medical equipment to achieve better efficiency, in addition to acquiring enhanced equipment. Discussions were held with hospital personnel during the on-site study on the specifics of this idea, and the hospital's willingness to take an active role in improving its treatment efficiency was confirmed. Consequently, the project will base its equipment plan on the policy of making multiple departments share the use of treatment equipment to the maximum extent possible so as to help the hospital realize its goal of improving its efficiency.

(2) Consideration of Natural Environmental Conditions

Tajikistan has a continental inland climate with wide fluctuations in temperatures from season to season and at different elevations. Dushanbe, where the hospital is located, has an elevation of 850 m. According to climate statistics taken in 2003, the winter-time temperature in December averaged 3.4° C with the lowest dipping to -12.6° C. In summer time, July temperatures averaged 27.6° C and peaked at 40.5° C. However, the winter climate is even harsher in the neighboring countries through which the procured equipment will be transported. Transport between December and March should therefore be avoided.

(3) Consideration of Socio-Economic Conditions

In Tajikistan, economic conditions continue to be harsh with the country's external debt repayment accounting for as much as 40% to 50% of its national budget. Needless to say, budget allocations to social security, health care and education are compressed. In particular, the ratio of the country's expenditures for health care to its GDP is the lowest in Central Asia. In view of such a dire fiscal condition for health care, the equipment plan will be designed to ensure that the project implementation places as small a burden on the maintenance budget of the hospital as possible.

(4) Consideration of Procurement

As a general rule, equipment procurement under Japan's Grant Aid Scheme requires that products that are bought be manufactured in either the country to which the grant aid is given or Japan. At present, one company that plans to manufacture medical equipment is in the process of filing an application with the ministry of health of Tajikistan for manufacturing approval. If and when this application is approved, the company will be considered for a source of procurement for this project. With respect to equipment that requires maintenance services to be provided by a manufacturer's representative, we will not consider any products if their manufacturers do not have a representative in Tajikistan or in any of its neighboring countries (Uzbekistan, Kazafstan, Kyrgyzstan, and Moscow, Russia) for procurement even if the products are made in Japan. When there is no Japanese product available or only a very limited number of Japanese products is available, products that are made in third countries and have a representative in either Tajikistan or a neighboring country will be considered. Equipment will be selected from among products of manufacturers that have the ability to stably supply maintenance services, as well as replacement parts and consumable items.

(5) Management and Maintenance Capabilities of the Executing Agency

In this project, enhancement of basic medical equipment is planned to be accomplished mainly with upgrading and replacement of existing equipment. For this reason, there should not be any problem with the skills of the medical professionals at the hospitals to operate such equipment. Nevertheless, adequate technical guidance on not only how to use the equipment but also everyday inspections will be provided to the individuals who will use the equipment in each of the clinical departments, as well as the maintenance personnel upon installation of the equipment. This should prevent initial breakdowns, which often result from inexperienced handling of new equipment, and prolong the useful life of the equipment.

(6) Grades and Specifications of the Equipment

The grades and the specifications of the equipment to be procured in this project will have to be basic and suitable for the technical levels of the medical professionals at the hospital. Moreover, products will be chosen on the basis of the domestic availability of consumable items that are required by such products so that the maintenance burden subsequent to the granting of the equipment will be minimal. There is one manufacturer's representative that is located in Tajikistan that handles consumable items similar to those that will be required by the equipment to be procured in this project. However, it takes six months (from order to receipt) to have the consumable items for the products that are sold by this company shipped from their manufacturers. For this reason, the equipment to be procured in this plan will include six months' supply of consumable items to cover the initial six months of use. Results of an on-site study found voltage fluctuations at the hospitals to be within $\pm 10\%$ of the standard 220 V. The locals, however, informed us that voltage fluctuations during winter are greater than during summer time, when the on-site study was conducted. An AVR (automatic voltage regulator) will be attached to medical equipment that is susceptible to the impact of voltage fluctuations.

(7) Implementation Schedule

The project will be implemented in a single year. In view of the winter time natural conditions described above, the project schedule will be established in such a way as to have the inland transport and installation of the equipment at the hospital completed before the arrival of winter.

2-2-2 Basic Plan (Equipment Plan)

This project aims to boost child health care services by procuring basic medical equipment that is needed by the departments which provide basic child health care services at Diakov Hospital.

The departments to be encompassed by this project are listed in Table 2-1. Of the total of 25 departments, 22 departments specialize in child health care services. The other three departments (Central Laboratory, Radiology Department and Pathological Laboratory) provide services to both adult and child patients.

Table 2-1 Basic Plan (Equipment Plan)

1	Treatment/Diagnosis	14	Cardio-rheumatology
2	Septic Surgery	15	Pulmonology
3	Urology	16	Ophthalmology
4	Thoraco-abdominal Surgery	17	ENT
5	Maxillofacial Surgery	18	Traumatology
6	Infect Surgery	19	Neurosurgery
7	Pediatric ICU	20	Pediatric Reception
8	Quarantine	21	Emergency Reception
9	Pediatric Neurology	22	Operation Theater
10	Neonatology	23	Central Laboratory
11	Infant Pediatric Section	24	Radiology
12	ICU	25	Pathological Laboratory
13	Hematology		

As Table 2-1 shows, these departments are highly compartmentalized. While this project will upgrade and replace the existing medical equipment to suit the current maintenance capabilities of the hospital, the equipment will be procured in such a way as to achieve maximum centralization and sharing to reap the greatest effects.

Discussions were held with each of the departments under the basic strategies described above, and by using an equipment list prepared by the requesting departments. The current status was analyzed using the following evaluation criteria and the final equipment list was compiled.

1. Equipment that is necessary for diagnosis and treatment in child health care.
2. Evaluation of the possibility of equipment sharing in the departmental and functional frameworks
3. Evaluation of equipment, based on maintenance cost
4. Evaluation of an appropriate quantity
5. Evaluation of Benefits

1. Equipment that is necessary for diagnosis and treatment in child health care

Based on the study of individual departments and discussions held with departmental personnel, equipment that was determined to be used strictly in diagnosis and treatment of adult patients, as well as other equipment which was considered to be incompatible with the roles and functions of the hospital or the levels of health care provided in Tajikistan were excluded from this project.

2. Evaluation of the possibility of equipment sharing in the departmental and functional frameworks

Nineteen separate buildings comprise this hospital. Nine of these buildings, consisting of four that are occupied entirely by child health care service departments and five that are shared with adult health care services, house the departments that are covered by this project. Possibility of centralization and sharing described above was examined at each of the nine buildings and individual floors of the buildings whenever sharing was believed to be both necessary and feasible for clinical and space-related reasons.

3. Evaluation of equipment, based on maintenance cost

The maintenance budget of the hospital has been increasing yearly but is still very stringent. For this reason, equipment that is costly to maintain and equipment whose consumable items are difficult to procure were eliminated from the list of the equipment to be procured for this project on the ground that continued use of such equipment would not be guaranteed. Even though the project will only upgrade and replace existing equipment for the most part, an increase in maintenance cost is an inevitable consequence of the equipment procurement. We presented to the Tajikistan side our rough calculations of an estimated increase in the maintenance cost that would result from equipment enhancement of this project. The Tajikistani government promised to set aside a budget for this increment that will ensue the procurement.

Of the 114 items of equipment that were confirmed as requested by the hospital in the preliminary study, 24 items were eliminated in the evaluation process leading to 3 above.

On the other hand, 16 items were identified to be necessary additions to the equipment to be procured in this project even though such items were not part of the initial request. The decision was made by considering the objective of the project and the current situation of the requesting departments. With the addition of these items, the project now lists 106 items of equipment to be procured.

Based on an analysis of the on-site study conclusions, the results of evaluation with respect to 4. Evaluation of an appropriate quantity, and 5. Evaluation of Benefits are shown in Table 2-2.

The following describes the conclusions of the analysis performed in Japan on the major types of equipment:

1. Resuscitation Set

Ambu Bag and Incubation set, which were included in the initial request, were combined to make a resuscitation kit, which is a basic device that is necessary for the resuscitation of patients. One set each will be furnished to the 14 basic health care departments. In addition, two sets each will be furnished to Pediatric Reception, Emergency Reception and Pediatric ICU, where the set is used frequently.

3. Examination Table, Tall

One dilapidated examination table in each of the six treatment rooms in the Emergency Reception will be replaced. The Emergency Reception is manned by 6 doctors and 12 nurses around the clock and visited by more than 3,500 patients annually. The tables will be waist high so that they can be used also to perform procedures.

4. Examination Table, Low

One low examination table will be installed in each of the six examination rooms of the Pediatric Reception and two examination rooms of the Emergency Reception for a total of eight tables. All other examination tables that were included in the request were eliminated from this project.

5. Infant Cot

The hospital sees an average of 4,881 patients younger than 5 annually. Patients younger than one year number 976. In particular, patients between the ages of zero and two months average 163 annually. On average, 14 patients are admitted to the hospital to receive treatment every month. Their average hospital stay is about 14 days. This means that about eight infant cots are required. A total of eight cots will be supplied by the project, with the Infant Surgery and Neonatology Departments receiving two cots each and the Infant Pediatric Section receiving four cots.

6. Infant Incubator

The Pediatric ICU and the ICU, where patients in critical conditions who require temperature controls are treated, will each receive four infant incubators. In addition, the Infant Pediatric Section and the Neonatology Department will each receive two infant incubators. The Infant Surgery Department is removed from the equipment

procurement list as the department is expected to share other departments' infant incubators.

7. Infant Warmer

Similarly to the preceding item, the Pediatric ICU, the ICU, the Infant Pediatric Section and the Neonatology Department will each receive two infant warmers.

8. Nebulizer

The Septic Surgery Department and Infant Pediatric Section, where more than 1,500 patients of acute respiratory diseases are treated annually, will each receive one nebulizer for a total of six.

9. Oxygen Concentrator, General

A low manufacturing capacity of an oxygen manufacturing plant in Tajikistan makes it difficult for the hospital to secure a stable supply of oxygen. In light of this situation, the oxygen inhalation sets that were included in the hospital's request are included in this project as oxygen concentrators. This was an item that was requested by a number of departments. Sharing of the equipment on each floor of the buildings is encouraged. In the surgical departments, one unit will be installed on each of the first and the second floors of Building 9, and four units will be installed in the Pediatric ICU on the third floor. In the internal medicine departments, which have a large number of patients with respiratory diseases, two units will be installed in the Neonatology Department on the first floor of Building 11. On the second floor of the building, two units will be placed in the Infant Pediatric Section, one unit in the Hematology Department, and two units in the ICU. On the third floor of the building, two units will be installed in the Pulmonology Department, and one unit in the Cardio-rheumatology Department.

10. Patient Monitor

The name of the equipment included in the hospital's request was cardiac monitors. We changed the name to patient monitors. A total of 18 patient monitors, consisting of nine monitors used to control patient's cardiograph, respiration and body temperature during operations, and nine units for post-operative control, will be furnished. Each of the nine monitors to be used for controls during operations will be installed in the Operation Theater and the operations rooms in the surgical departments. For post-operative controls, four units will be installed in the Pediatric ICU, three units in the ICU, and two in the post-operating rooms in the Neurosurgery Department.

11. Pulse Oximeter

Four units will be installed in the Pediatric ICU, and three in the ICU.

As for the number of beds in the ICU, the Pediatric ICU has 20 beds (4 beds per room x 4 rooms, 2 beds per room x 2 rooms) and the ICU has 12 beds (4 beds per room x 3 rooms). However, not every ICU patient at the hospital requires a patient monitor or a pulse oximeter. Therefore, the quantity of patient monitors (No. 10) and that of pulse oximeters (No. 11) were determined on the basis of one unit for every four beds.

In the Pediatric ICU, patient monitors will be installed in the two rooms (2 beds per room), where post-operative controls will be exercised on especially young patients, and pulse oximeters will be installed in the other four rooms (4 beds per room). Both types of equipment can be moved among beds and thus used in all six rooms. The ICU will have one unit of both types of equipment in each of the rooms (4 beds per room). Similarly to the sharing of equipment in the Pediatric ICU, the equipment will be shared as needed among the three rooms so as to meet the needs of patients in each room.

12. Phototherapy Unit

Two units each will be installed in the Neonatology Department and the Infant Pediatric Section, and one unit in the ICU.

13. Ventilator

Three units in the ICU, four units in the Pediatric ICU and two units in the post-operating rooms in the Neurosurgery Department will be installed for a total of nine units.

14. Refrigerator

One unit each in the 15 treatment departments, ICU, Pediatric ICU and the Emergency Reception for a total of 18 units, plus two units in the Central Laboratory for a grand total of 20 units will be installed. In each of the treatment departments, the refrigerators will be used to store milk and pharmaceuticals. In the ICU, Pediatric ICU, Emergency Reception, and Central Laboratory, the refrigerators will be used for the storage of pharmaceuticals and reagents.

15. Laundry Machine

The water supply system and electrical facilities all over the hospital are dilapidated and the quality of water supplied to the hospital is poor. For these reasons, a large laundry machine cannot be installed at a central location. Consequently, one unit will be installed in each of the 15 treatment departments, including the Ophthalmology Department and ENT Department, as well as the Pediatric ICU and ICU for a total of 17 units.

16. Scale (Weight/Height), Adult

One weight/height scale for adults (children over the age of 9) will be provided to each of the 14 basic treatment departments, not including the Ophthalmology and ENT Departments. In addition, six scales will be provided to the Pediatric Reception for a total of 20 scales.

17. Scale (Weight/Height), Infant

One weight/height scale for infants will be provided to each of the 13 treatment departments, in addition to six scales to the Pediatric Reception (with six examination rooms) for a total of 19 scales.

19. Stethoscope

Three stethoscopes will be provided to each of the 14 basic treatment departments, not including the Ophthalmology and ENT Departments, in addition to the ICU for a total

of 45 stethoscopes. In addition, four stethoscopes will be furnished to the Emergency Reception, six to the Pediatric Reception and four to Pediatric ICU for a total of 14 stethoscopes, raising the grand total to 59. Nurses in each department, including those on duty, will share these stethoscopes (at the rate of one stethoscope for approximately every four of the 214 pediatric nurses).

20. Thermometer

Six thermometers each will be furnished to Pediatric Reception (six examination rooms), Emergency Reception (two examination rooms + one treatment room), four to each of the 14 basic treatment departments and the Pediatric ICU, and three to the ICU for a total of 75 (or one thermometer for approximately every seven beds out of 541 beds in the pediatric department).

21. Stretcher

One stretcher will be furnished to each of the three floors in Building 9 and those in Building 11 for a total of 6. In addition, Ophthalmology Department, ENT Department, Traumatology Department and Neurosurgery Department, all of which are separated by floors, will be provided with one stretcher each for a total of four. The Emergency Reception and the Pediatric Reception will be provided with two stretchers each for a total of four. The grand total of 14 stretchers will be shared on a floor-by-floor basis.

22. Wheel Chair

Similarly to stretchers, one wheel chair will be furnished to each of the three floors in Building 9 and those in Building 11, in addition to the Quarantine Department (the basement of Building 11), Ophthalmology Department, ENT Department, Traumatology Department and Neurosurgery Department. Additionally, two wheel chairs each will be furnished to the Emergency Reception and the Pediatric Reception for a total of 15. This total of 15 wheel chairs will be shared on a floor-by-floor basis.

23. Bed, Orthopedic

The equipment name was changed to “bed, orthopedic” from “functional bed,” which had been in the hospital’s request. A total of ten orthopedic beds will be provided, and installed in two post-operative observation rooms in the Emergency Reception, four patient rooms in the Traumatology Department, and four patient rooms in the Septic Surgery Department for post-operative patients, including orthopedic surgery patients.

24. Bed, Pediatric

Four beds each will be placed in the four patient rooms of the Neurosurgery Department, the Pediatric ICU and the ICU for post-operative intensive care.

25. Infusion Pump

A total of ten infusion pumps will be furnished, consisting of four each in the Pediatric ICU and the ICU, and two in the Neurosurgery Department. All requests from any other department have been eliminated from the equipment procurement list of this project.

27. Suction Unit, Operation

A total of 21 units will be furnished, consisting of one unit each to the 15 basic treatment departments with the exception of the Ophthalmology Department, and two units each to the Emergency Reception, the ICU and the Pediatric ICU.

28. Suction Unit, General

A total of 9 units will be furnished, consisting of four units to the Operation Theater, and one unit each to the Ophthalmology Department, the ENT Department, the Traumatology Department, Neurosurgery Department and the Maxillofacial Surgery Department.

29. Instrument Cabinet

A total of ten cabinets will be installed, consisting of one cabinet in each of the nine operating rooms of the Operation Theater and the surgical departments, and one cabinet in the Emergency Reception.

33. ECG

A total of five units will be installed, consisting of three in the diagnostic and treatment department, and one each in the Emergency Reception and Cardio-rheumatology Department.

36. Autoclave, Table Top

Although a total of nine units had been requested by various departments in the hospital's request, a total of two units, consisting of one unit each to the Emergency Reception and the Hematology Department, will be provided for sterilization of bone marrow centesis devices. All others have been slashed from the equipment procurement list of this project.

37. Autoclave, Operation

One unit that had been originally requested by the Emergency Reception has been eliminated. A total of eight units are furnished to the other surgical departments.

38. Autoclave, Laboratory

Three units had been requested by the Central Laboratory. In light of the total volume of sterilization and the space available for equipment installation, a total of two units will be provided.

39. Laparoscope

The initial request was for two units but one will be provided and kept in the Operation Theater to meet the sanitation needs following surgeries.

40. Bronchoscope, Fiber, 41. Bronchoscope, Rigid

The initial request did not distinguish between soft and rigid types. It was determined, however, that both types are needed considering the types of treatment provided at the hospital. As a result, one unit each will be provided.

47. X-Ray Film Viewer, General

A total of 29 units will be provided, with each of the six examination rooms of the Pediatric Reception receiving one unit, the Emergency Reception and the Radiology Department receiving three units each, and 17 other treatment departments receiving one unit each.

51. Defibrillator

The initial request was for eight units. It was determined, however, that sharing of a smaller number of units would be more appropriate. A total of six units will therefore be installed with one in each of the two operating rooms in Building 9, the operating rooms of the Emergency Reception, Traumatology Department, and Neurosurgery Department, and the Pediatric ICU, which have a large number of cardiac arrest patients, and ventricular fibrillation patients in particular.

53. Operation Table, General

A total of four units will be furnished by adding one unit to the operating room in the Emergency Reception.

64. Bone Marrow Aspiration Set

Two sets will be provided because devices need to be sterilized every time the equipment is used.

67. Orthopedic Surgical Set

Two sets will be furnished by eliminating one of the originally-requested orthopedic surgical sets in Building 9.

68. Surgical Set

One set is furnished to each of the operating rooms in the Operation Theater and the Traumatology Department.

75. Ophthalmoscope

The initial request came only from the Ophthalmology Department. However, a total of six ophthalmoscopes will be furnished by including the Emergency Reception and the Neurosurgery Department, where ophthalmoscopes are needed for the examination of patients' pupils, and giving each department two ophthalmoscopes.

98. CT Scanner

A CT scanner was in use at the Diakov Hospital until the late 1980s prior to the country's independence. The scanner broke down in the early 1990s and has since been hauled out.

Outside the hospital, one other scanner was operative in Tajikistan, at the national diagnostic center. However, it too broke down and has not been repaired. In spite of this situation, there are no problems with the technology levels. One scanner will be installed in the Emergency Reception and shared by the entire hospital.

99. Dark Room Equipment Set

A total of three sets will be provided, with one set placed in each of the radiology room of the Emergency Reception and the dark rooms in Building 9 and Building 11.

101. X-Ray Apparatus Mobile with X-Ray Shield Apron

The initial request contained a request for this apparatus from 17 treatment departments. However, a total of four units will be provided, with each to be shared on the first, second and third floors of Building 9 and the Traumatology Department in Building 4.

103/104. Generator A.B

Power blackouts occur at the hospital roughly once a month during summer and twice a month during winter. Power is restored in approximately two hours. However, the timing of such blackouts is not predictable. The need for an emergency generator is thus recognized as a countermeasure to ensure the safety of operations and artificial respirator use.

Building 9 (Pediatric Surgery), the Emergency Reception building, and Building 11 (Pediatric Internal Medicine) will therefore be given a generator. A generator having the generation capacity of 60 kV will be installed in the buildings that house surgical departments and a generator having the generation capacity of 30 kV will be placed in the internal medicine-related building. Electrical work to connect the generators will be the responsibility of the hospital.

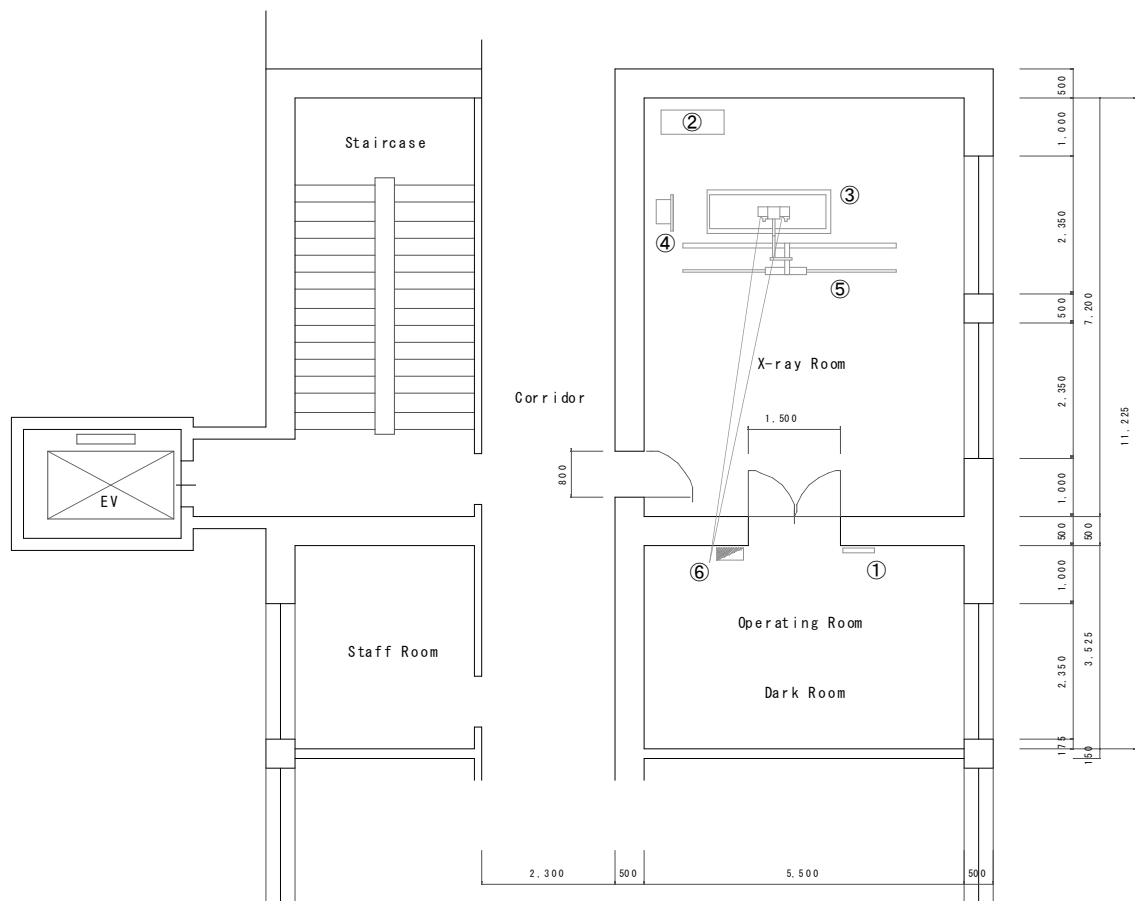
105. Circulation Pump

Water is supplied from the city water facilities. Water is compressed in the Pump House and delivered to buildings. Two storage pumps in the Pump House broke down and were hauled out. As a result, water pressure is too weak to carry water to the second and upper floors of buildings. Toilets and wash rooms in the operating rooms are not usable. Two storage pumps will therefore be provided. The connection work will be the responsibility of the hospital.

Table 2-2 Examination results

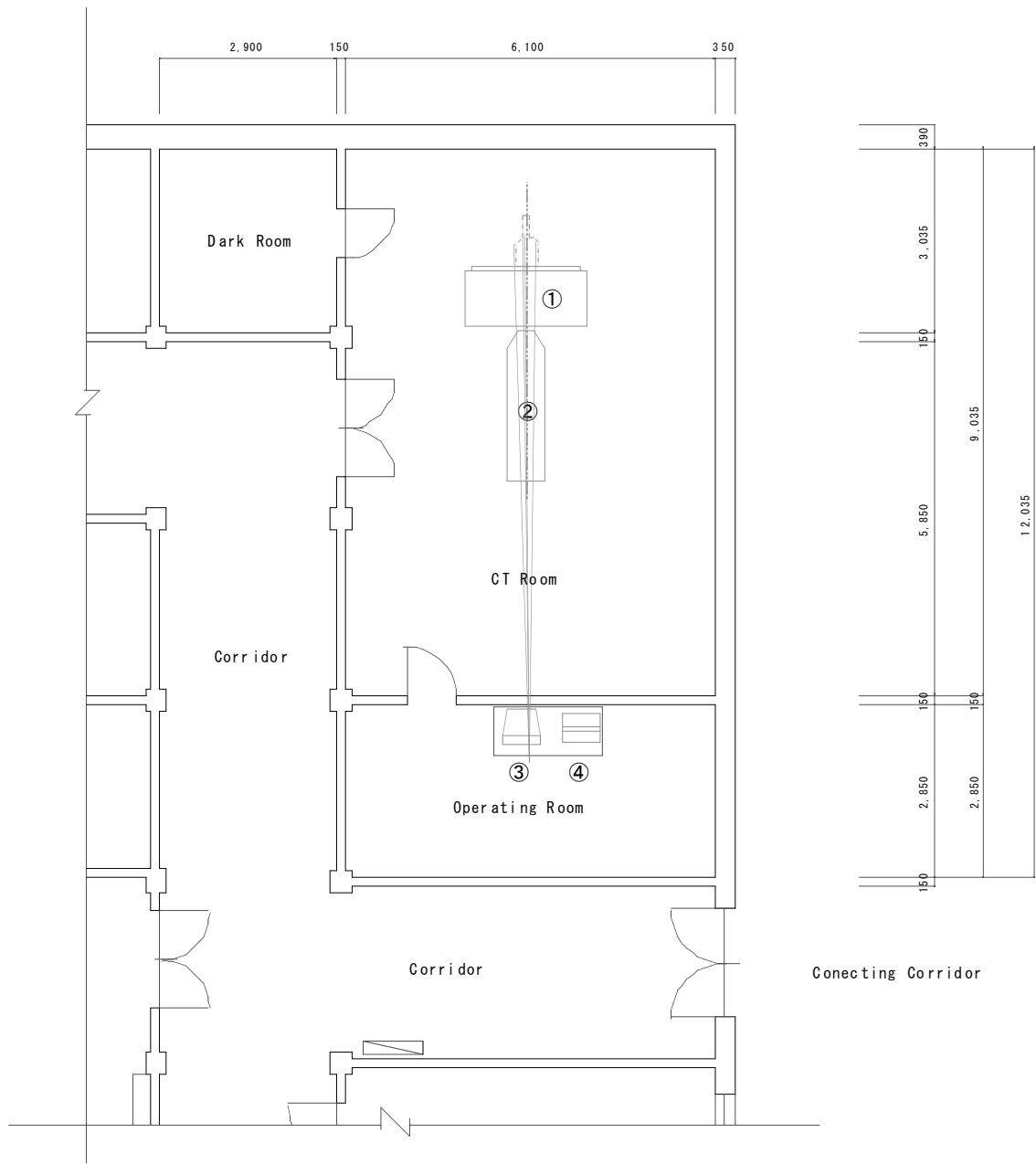
Preliminary Study					Basic Design																																																				
Request		Process for Equipment Selection			新規検討	Process for Equipment Selection			Result of Examination	Basic Design (Minutes)			New NO.	Final List																																											
NO.	Equipment	Process1	Process2	Process3		Process1	Process2	Process3		NO.	Equipment	Q*TY			Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32										
		Needed for Pediatric Services	Sharing	Maintenance	Equipment	Needed for Pediatric Services	Sharing	Maintenance																																																	
30	ECG	○	Physiology	○	△				Sharing	24	ECG	8	33	ECG	5	1																																									
31	Electric Coagulation Unit	○	Operation		○				No.27 Electro Surgical Unit																																																
32	Electrolyte Analyser	×	Laboratory		—				Delete																																																
33	Electrical Balance	○	Laboratory	○					No.21 Electrical Balance	25	Electrical Balance	2	80	Electrical Balance	2																																										
34	Elizarov (for Bone Surgery)	×	Operation		—				Delete																																																
35	Endoscope with Video Monitor	×	Treatment		—				Delete																																																
						Electro Myiograph	△	Diagnosis	Delete																																																
						Electro Surgical Unit	○	Operation	○	Addition	27	Electro Surgical Unit	8	52	Electro Surgical Unit	8																																									
						ENT Diagnose Set	△	Diagnosis	○	Addition	28	ENT Diagnose Set	1	95	ENT Diagnose Set	1																																									
36	ENT Surgery Set	○	Operation		○				ENT surgery set	29	ENT surgery set	1	65	ENT surgery set	1																																										
37	Esophagoscope	×	Treatment		—				Delete																																																
38	Extracorporeal Shock Wave Lithotripsy	×	Treatment		—				Delete																																																
						Ergometer	○	Diagnosis	△	No.103	Ergometer	1	32	Ergometer	1																																										
						Examination Light	○	Diagnosis	△	Addition	31	Examination Light	18	2	Examination Light	18	6	4																																							
						Examination Table	○	Diagnosis	○	Addition	32	Examination Table	17	3	Examination Table, Tall	6		6																																							
						Flask Press		Treatment	○	Addition	33	Flask Press	1																																												
39	Fibrogastroscope	○	Treatment		△				No.35 Gastroscope																																																
40	Fibromirrors	×	Treatment		—				Delete																																																
41	Functional Bed	△	Furniture	○	○				Functional Bed	34	Functional Bed	6	23	Bed, Orthopedic	10		2																																								
										35	Gastroscope	1	43	Gastroscope	1																																										
42	Generator	△	Facility		○				No. 106																																																
43	Hb-Meter	×	Laboratory		—				Delete																																																
44	Ht-Meter with centrifuge	×	Laboratory		—				Delete																																																
						Height Scale adult		Diagnosis	○	Addition	36	Height Scale adult	1																																												
						High Frequency Massage		Treatment	○	Addition	37	High Frequency Massage	1	96	Low Frequency Therapy Unit	1																																									
						Hot Air Oven		Others	○	Addition	38	Hot Air Oven	8	62	Hot Air Sterilizer	8		3																																							
						Incubator Laboratory		Treatment	○	Addition	39	Incubator Laboratory	2	81	Incubator, Laboratory	2																																									
						Infant Cot (Movable)		Furniture	○	Addition	40	Infant Cot (Movable)	8	5	Infant Cot	8																																									
45	Ice Box (Portable)	×	Laboratory		—				Delete																																																
46	Immunoglobulin Analyser	×	Laboratory		—				Delete																																																
47	Infant Incubator	△	Treatment	○	△					41	Infant Incubator	14	6	Infant Incubator	12																																										
48	Infant Incubator for Surgical Patients	△	Treatment	○	△				To No.41																																																
49	Infant Cot (Movable)	○	Furniture		○				To No.40																																																

2-2-3 Basic Design Drawing



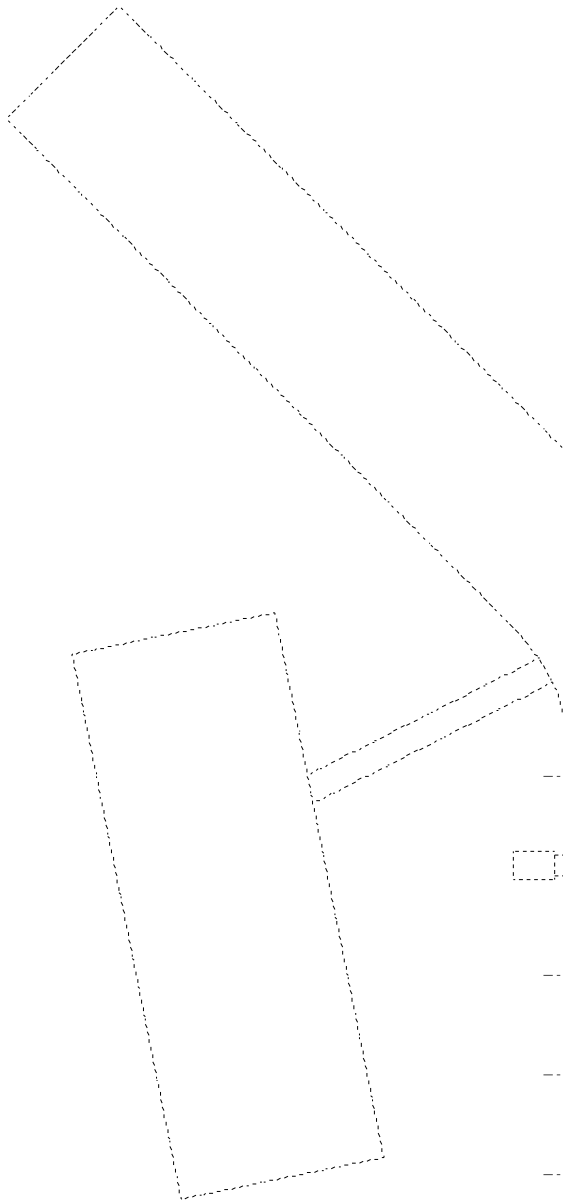
- ① X-Ray Controller
- ② Generator
- ③ Bucky Table
- ④ Bucky Stand
- ⑤ X-Ray Tube Support
- ⑥ Distribution Board

Figure 2-1 NO.9 X-Ray Room



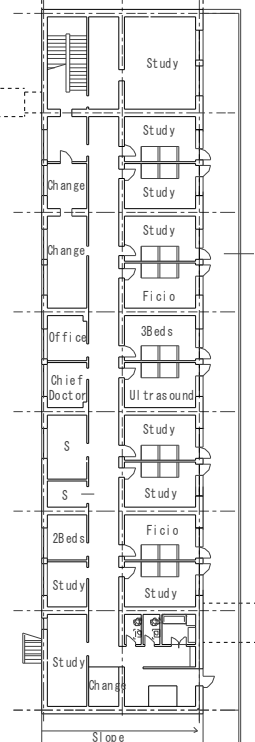
- ① Main Unit
- ② Table
- ③ Controller
- ④ Patient Monitor

Figure 2-3 Emergency Reception, CT Room

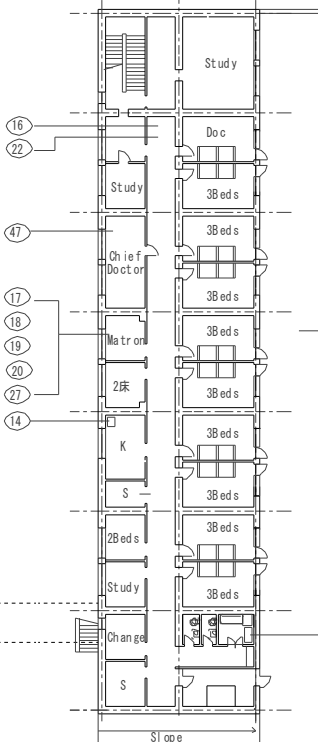


No. 9-A Treatment/Diagnosis

680.000m²



No. 11-A Quarantine



Quarantine Equipment LIST			
1	Resuscitation Set		1
8	Neblizer	70w	1
14	Refrigerator	1Kw	1
15	Laundry Machine	1Kw	1
16	Scale (Weight/Height), Adult		1
17	Scale (Weight/Height), Infant		1
18	Sphygmomanometer A (0-14y)		2
19	Stethoscope		3
20	Thermometer		4
22	Wheel Chair		1
27	Suction Unit, General	0.5kw	1
47	X-ray Film Viewer, General	0.1kw	1

Figure 2-4 Pediatric Ward BF PLAN(No. 9, No. 11) S=1:500

NO. 9-1A Urology

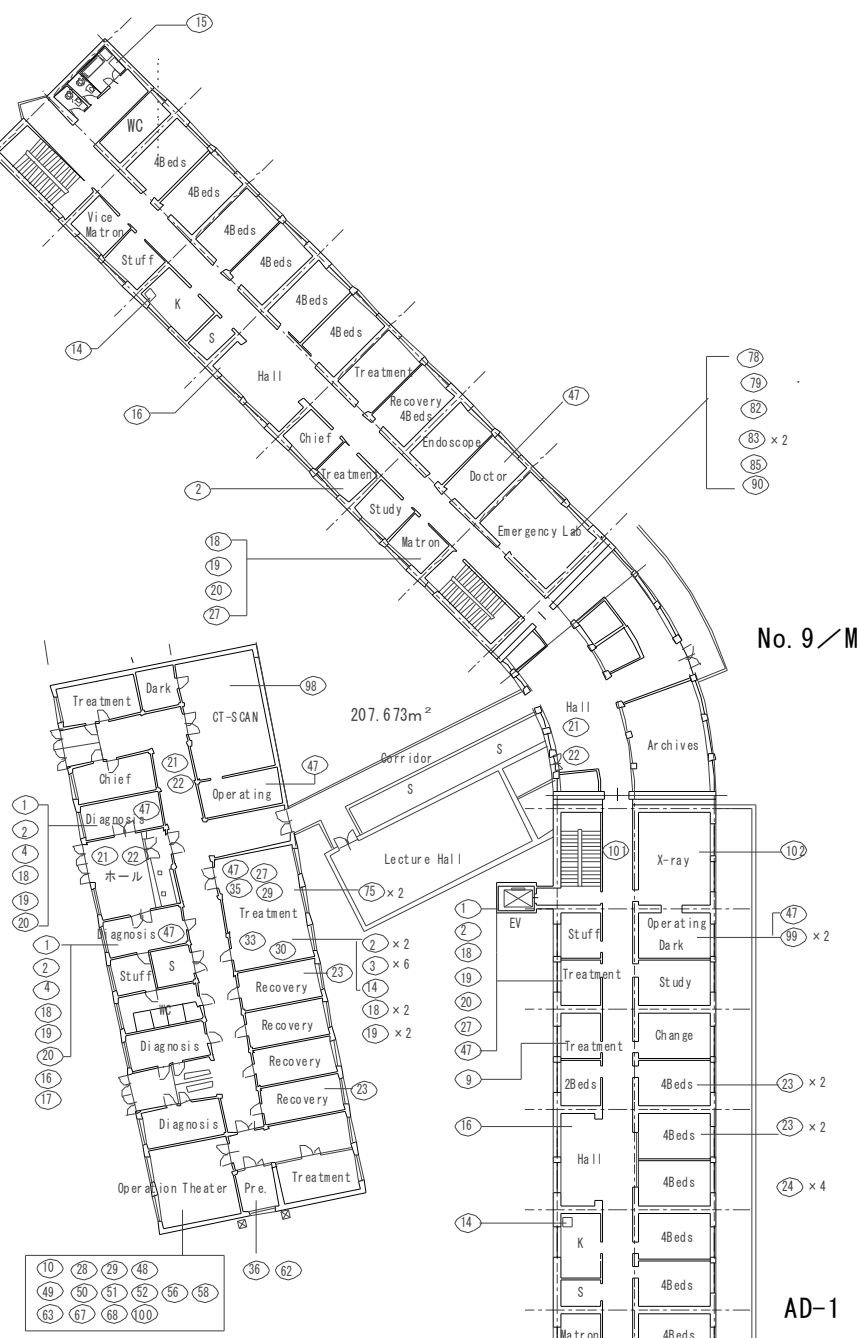
1,594.330m²

2	Examination Light	60w		1
14	Refrigerator	1kw	F	1
15	Washing Machine	1kw	E	1
16	Scale (Weight/Height), Adult			1
18	Sphygmomanometer D (2y-14y)			2
19	Stethoscope			3
27	Suction Unit, General	0.5kw		1
48	X-ray Film Viewer, General	0.1kw		1
79	Thermometer			4

48	X-ray Film Viewer, General	0.1kw		3
100	CT Scanner	90kw	3Φ 4w	1
101	Dark Room Equipment Set			3
104	X-ray Apparatus, General and Fluoroscopy 50kV 3Φ 4w			2

10	Patient Monitor	0.1kw		4
28	Suction Unit, Operation	0.5kw		4
29	Instrument Cabinet			4
37	Autoclave Vertical, Operation	2kw		3
39	Laparoscope	1kw		1
40	Cysto-Urethroscope with Video Monitor	1kw		1
49	Air-conditioner	4kw	F	3
50	X-ray Film Viewer, Operation	0.1kw		4
51	Anesthesia Apparatus	50w		4
52	Defibrillator	0.5kw		3
53	Operation Table, General	0.1kw		3
54	Electro-Surgical Unit	0.8kw		1
57	Operation Table, Orthopedics	0.4kw		4
59	Operation Light	0.4kw		4
63	Hot Air Sterilizer	2.5kw		3
64	Instrument Table			4
70	Orthopedic Surgical Set			1
71	Surgical Set			5
102	X-ray Apparatus C-arm with Apron	3kw		1
109	AVR B	1KV		2
110	AVR C	2KV		2

1	Resuscitation Set			2
2	Examination Light	60w		4
3	Examination Table, Low			6
4	Examination Table, High			6
14	Refrigerator	1kw		1
18	Sphygmomanometer A (0-14y)			4
19	Stethoscope			4
21	Stretcher			2
22	Wheel Chair			2
23	Bed			2
27	Suction Unit, General	0.5kw		2
29	Instrument Cabinet			1
33	ECG	0.2kw		1
30	Instrument Trolley			2
36	Autoclave Table Top	2kw		1
48	X-ray Film Viewer, General	0.1kw		3
78	Ophthalmoscope			4
79	Thermometer			6



E-1 Emergency Reception

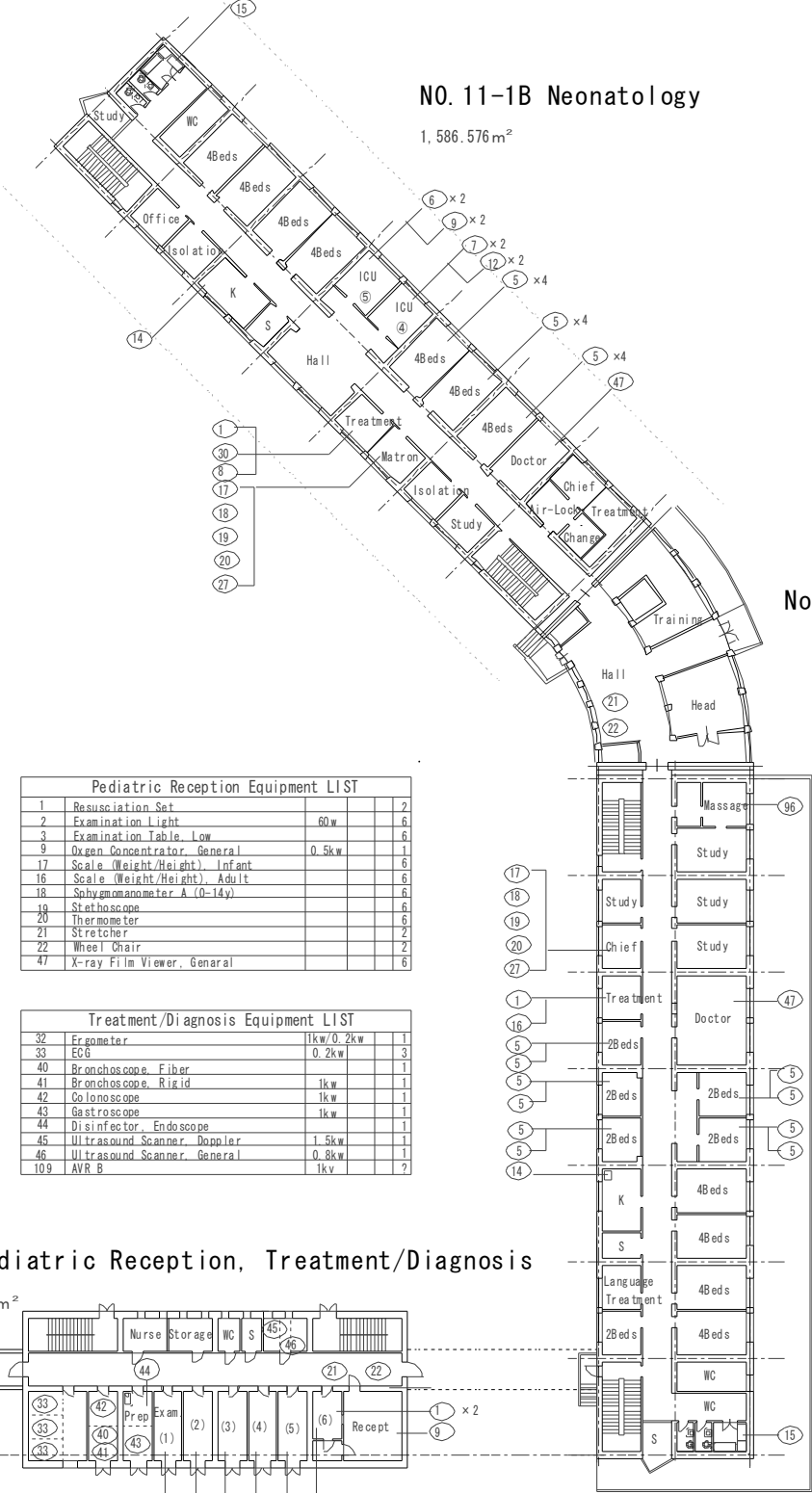
1	Resuscitation Set			1
2	Examination Light	60w		1
9	Oxygen Concentrator, General	0.5kw		1
14	Refrigerator	1kw		1
15	Washing Machine	1kw		1
16	Scale (Weight/Height), Adult			1
18	Sphygmomanometer D (2y-14y)			2
19	Stethoscope			3
23	Bed			4
24	Bed, Pediatric			4
27	Suction Unit, General	0.5kw		1
48	X-ray Film Viewer, General	0.1kw		1
79	Thermometer			4

NO. 9-A-1 Septic Surgery

NO. 11-1B Neonatology

1,586.576m²

1	Resuscitation Set			1
5	Infant Cot			8
6	Infant Incubator	0.6kw		2
7	Infant Warmer	0.7kw		2
8	Neublizer	70w		1
9	Oxygen Concentrator, General	0.5kw		2
12	Phototherapy Unit	0.3kw		2
14	Refrigerator	1kw		1
15	Washing Machine	1kw		1
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer B (0-2m)			2
19	Stethoscope			3
20	Thermometer			4
26	Syringe Pump	50w		2
27	Suction Unit, General	0.5kw		1
30	Instrument Trolley			1
48	X-ray Film Viewer, General	0.1kw		1



No. 9/M

No. 11/M

AD-1 Pediatric Reception, Treatment/Diagnosis

408.702m²

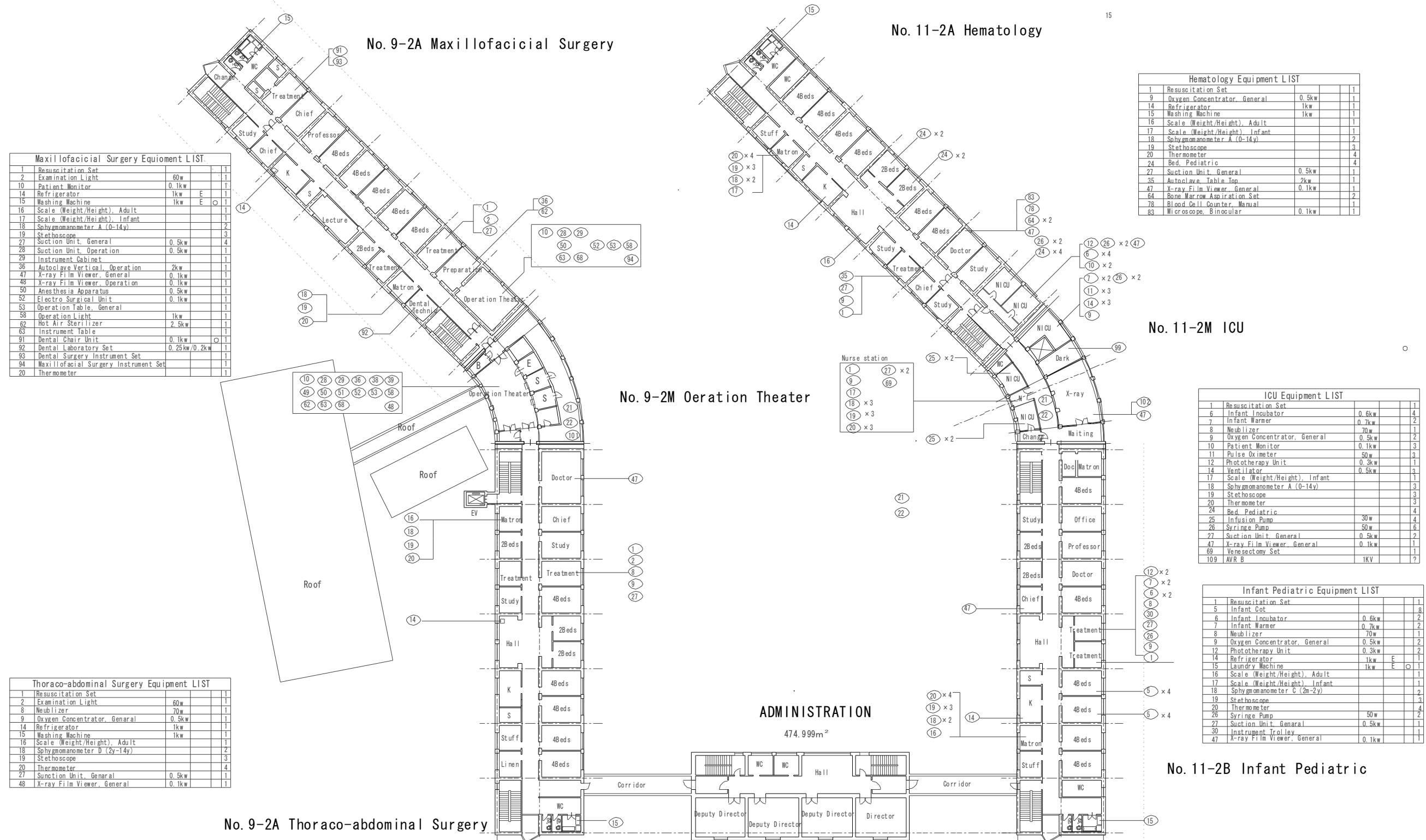
1	Resuscitation Set			2
2	Examination Light	60w		6
3	Examination Table, Low			6
9	Oxygen Concentrator, General	0.5kw		1
17	Scale (Weight/Height), Infant			6
16	Scale (Weight/Height), Adult			6
18	Sphygmomanometer A (0-14y)			6
19	Stethoscope			6
20	Thermometer			6
21	Stretcher			2
22	Wheel Chair			2
47	X-ray Film Viewer, General			6

32	Ergometer	1kw/0.2kw		1
33	ECG	0.2kw		3
40	Bronchoscope, Fiber			1
41	Bronchoscope, Rigid	1kw		1
42	Colonoscope	1kw		1
43	Gastroscope	1kw		1
44	Disinfectant, Endoscope	1.5kw		1
45	Ultrasound Scanner, Doppler	0.8kw		1
46	Ultrasound Scanner, General	1kw		1
109	AVR B			2

1	Resuscitation Set			1
5	Infant Cot			10
14	Refrigerator	1kw		1
15	Washing Machine	1kw		1
16	Scale (Weight/Height), Adult			1
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer A (0-14y)			2
19	Stethoscope			3
20	Thermometer			4
27	Suction Unit, General	0.5kw		1
47	X-ray Film Viewer, General	0.1kw		1
96	Low Frequency Therapy Unit	50w		1
106	AVR B	1kw		2

NO. 11-1A Pediatric Neurology

Figure 2-5 Pediatric Ward 1F PLAN(No. 9, No. 11) S=1:500



Maxillofacial Surgery Equipment LIST

1	Resuscitation Set			1
2	Examination Light	60w		1
10	Patient Monitor	0.1kw		1
14	Refrigerator	1kw	E	1
15	Washing Machine	1kw	E	1
16	Scale (Weight/Height), Adult			1
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer A (0-14y)			2
19	Stethoscope			3
27	Suction Unit, General	0.5kw		4
28	Suction Unit, Operation	0.5kw		1
29	Instrument Cabinet			1
36	Autoclave Vertical, Operation	2kw		1
47	X-ray Film Viewer, General	0.1kw		1
48	X-ray Film Viewer, Operation	0.1kw		1
50	Anesthesia Apparatus	0.5kw		1
52	Electro Surgical Unit	0.1kw		1
53	Operation Table, General			1
58	Operation Light	1kw		1
62	Hot Air Sterilizer	2.5kw		1
63	Instrument Table			1
91	Dental Chair Unit	0.1kw		1
92	Dental Laboratory Set	0.25kw/0.2kw		1
93	Dental Surgery Instrument Set			1
94	Maxillofacial Surgery Instrument Set			1
20	Thermometer			1

Hematology Equipment LIST

1	Resuscitation Set			1
9	Oxygen Concentrator, General	0.5kw		1
14	Refrigerator	1kw		1
15	Washing Machine	1kw		1
16	Scale (Weight/Height), Adult			1
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer A (0-14y)			2
19	Stethoscope			3
20	Thermometer			4
24	Bed, Pediatric			4
27	Suction Unit, General	0.5kw		1
35	Autoclave, Table Top	2kw		1
47	X-ray Film Viewer, General	0.1kw		1
64	Bone Marrow Aspiration Set			2
78	Blood Cell Counter, Manual			1
83	Microscope, Binocular	0.1kw		1

ICU Equipment LIST

1	Resuscitation Set			1
6	Infant Incubator	0.6kw		4
7	Infant Warmer	0.3kw		2
8	Neubulizer	70w		1
9	Oxygen Concentrator, General	0.5kw		2
10	Patient Monitor	0.1kw		3
11	Pulse Oximeter	50w		3
12	Phototherapy Unit	0.3kw		1
14	Ventilator	0.5kw		4
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer A (0-14y)			3
19	Stethoscope			3
20	Thermometer			3
24	Bed, Pediatric			4
25	Infusion Pump	30w		4
26	Syringe Pump	50w		6
27	Suction Unit, General	0.5kw		2
47	X-ray Film Viewer, General	0.1kw		1
69	Venectomy Set			1
109	AVR B	1KV		?

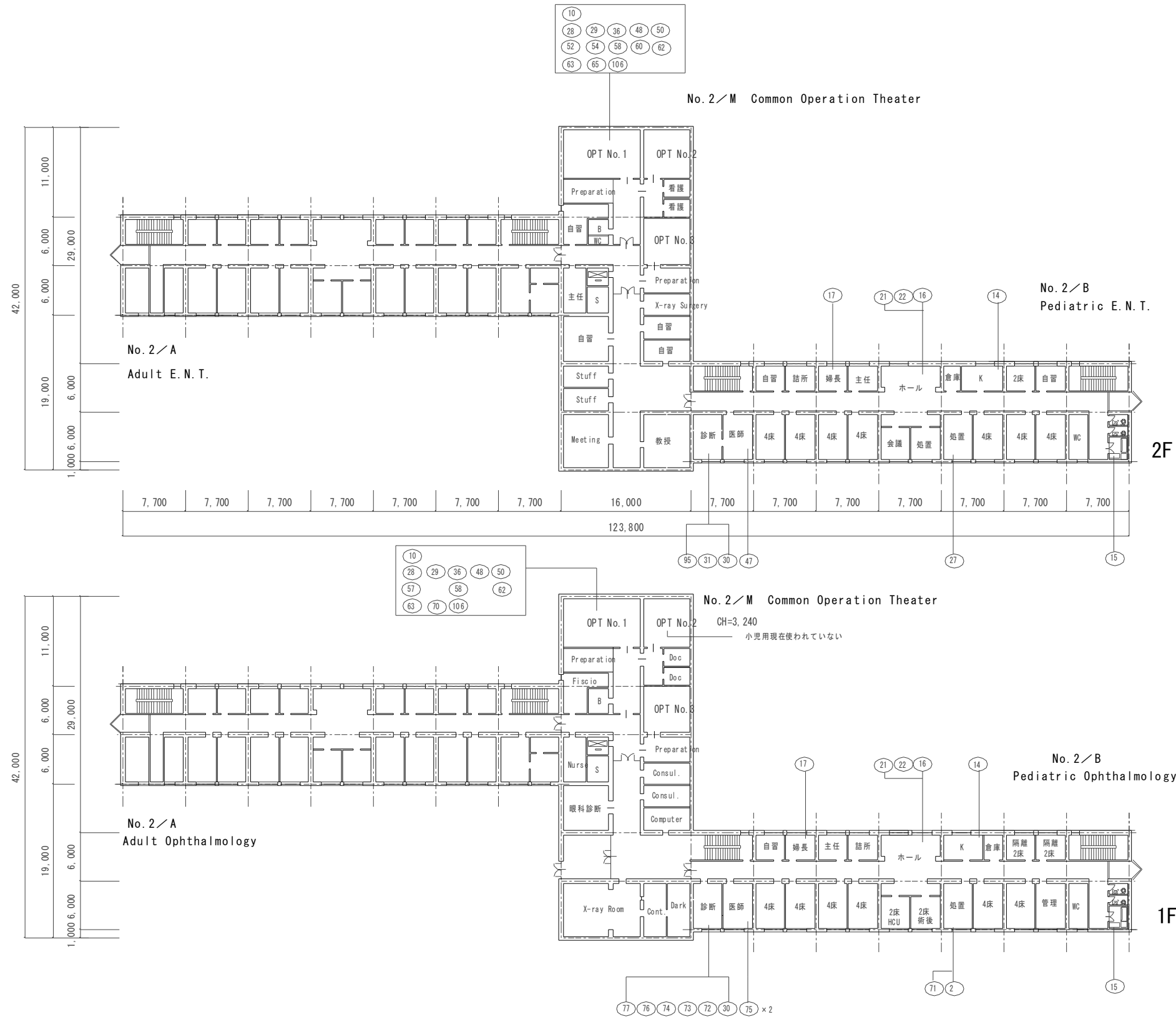
Infant Pediatric Equipment LIST

1	Resuscitation Set			1
5	Infant Cot			8
6	Infant Incubator	0.6kw		2
7	Infant Warmer	0.3kw		2
8	Neubulizer	70w		1
9	Oxygen Concentrator, General	0.5kw		2
12	Phototherapy Unit	0.3kw		2
14	Refrigerator	1kw	E	1
15	Laundry Machine	1kw	E	1
16	Scale (Weight/Height), Adult			1
17	Scale (Weight/Height), Infant			1
18	Sphygmomanometer C (2n-2y)			2
19	Stethoscope			3
20	Thermometer			4
26	Syringe Pump	50w		2
27	Suction Unit, General	0.5kw		1
30	Instrument Trolley			1
47	X-ray Film Viewer, General	0.1kw		1

Thoraco-abdominal Surgery Equipment LIST

1	Resuscitation Set			1
2	Examination Light	60w		1
8	Neubulizer	70w		1
9	Oxygen Concentrator, General	0.5kw		1
14	Refrigerator	1kw		1
15	Washing Machine	1kw		1
16	Scale (Weight/Height), Adult			1
18	Sphygmomanometer D (2y-14y)			2
19	Stethoscope			3
20	Thermometer			4
27	Suction Unit, General	0.5kw		1
48	X-ray Film Viewer, General	0.1kw		1

Figure 2-6 Pediatric Ward 2F PLAN (No. 9, No. 11) S=1:500



No.	Equipment Name	Power	Qty
10	Patient Monitor	0.1kw	1
14	Refrigerator	1kw	1
15	Washing Machine	1kw	1
16	Scale (Weight/Height) Adult		1
17	Scale (Weight/Height) Infant		1
21	Stretcher		1
22	Wheel Chair		1
27	Suction Unit, General	0.5kw	1
28	Suction Unit, Operation	0.5kw	1
29	Instrument Cabinet		1
30	Instrument Trolley		1
31	Audiometer	40w	1
36	Autoclave Vertical, Operation	2kw	1
47	X-ray Film Viewer, General	0.1kw	1
48	X-ray Film Viewer, Operation	0.1kw	1
50	Anesthesia Apparatus	50w	1
52	Electro Surgical Unit	0.1kw	1
54	Operation Table, ENT		1
58	Operation Light	1kw	1
60	Operation Microscope, ENT	0.4kw	1
62	Hot Air Sterilizer	2.5kw	1
63	Instrument Table		1
65	ENT Surgery Set		1
95	ENT Diagnose Set	0.2kw/0.2kw/0.2kw	1
106	AVR A	0.5kv	1

No.	Equipment Name	Power	Qty
2	Examination Light	60w	1
10	Patient Monitor	0.1kw	1
14	Refrigerator	1kw	1
15	Washing Machine	1kw	1
16	Scale (Weight/Height) Adult		1
17	Scale (Weight/Height) Infant		1
21	Stretcher		1
22	Wheel Chair		1
28	Suction Unit, Operation	0.5kw	1
29	Instrument Cabinet		1
30	Instrument Trolley		1
36	Autoclave Vertical, Operation	2kw	1
48	X-ray Film Viewer, Operation	0.1kw	1
50	Anesthesia Apparatus	50w	1
57	Operation Table, Ophthalmology	1kw	1
58	Operation Light	1kw	1
59	Operation Microscope, Orthopedics	0.4kw	1
62	Hot Air Sterilizer	2.5kw	1
63	Instrument Table		1
70	Diaternity Unit	30w	1
71	Hand Magnet		1
72	Lens Meter	20w	1
73	Lens Set		1
74	Ophthalmic Examination Unit	1kw	1
75	Ophthalmoscope		2
76	Refract Meter	0.3kw	1
77	Tonometer	0.8kw	1
106	AVR A	0.5kv	1
106	AVR C	2kv	2

Figure 2-8 No.2 Building 1F・2F PLAN S=1:500

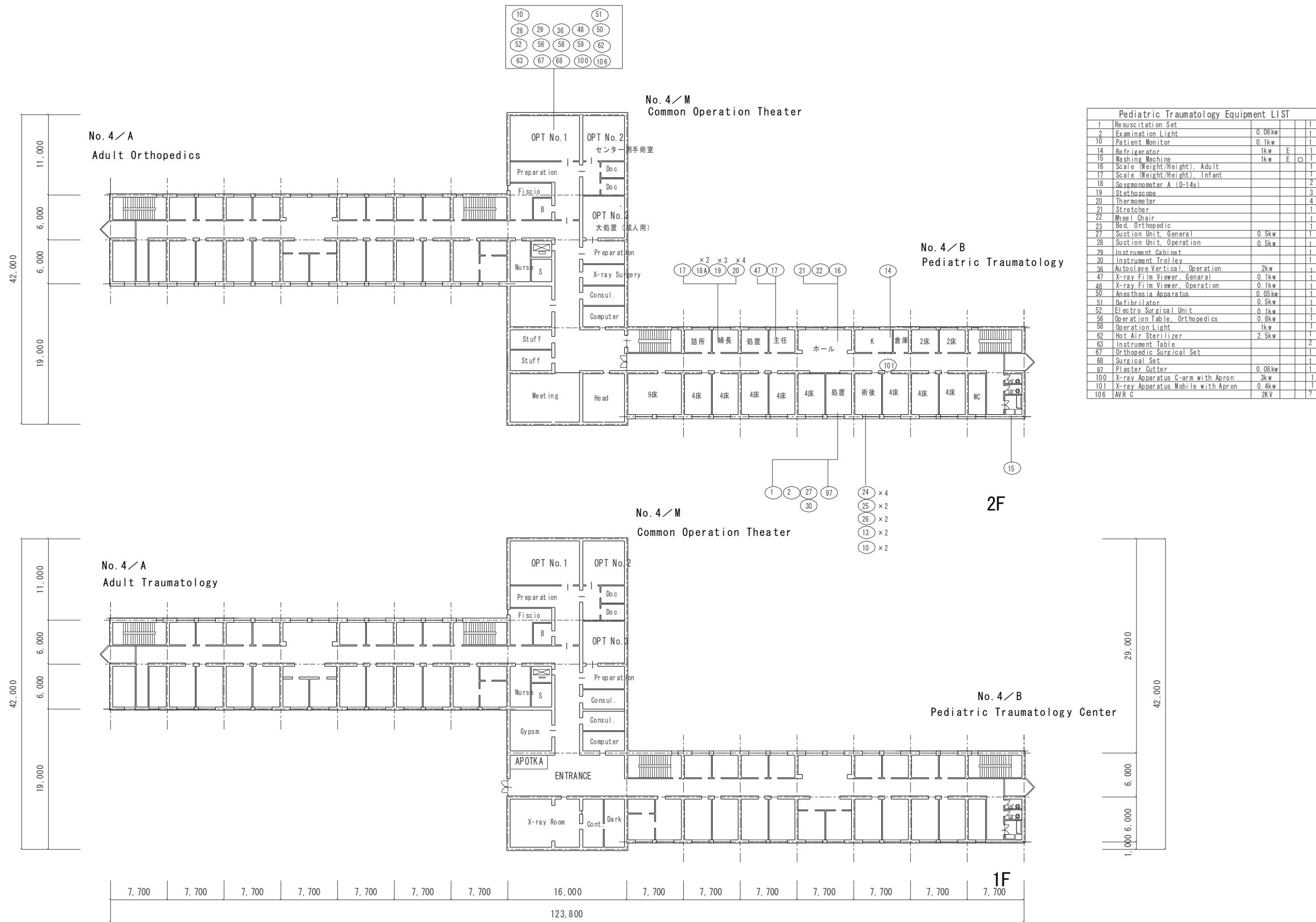


Figure 2-9 No. 4 1F・2F PLAN S=1:500

Pediatric Neurosurgery Equipment			
1	Resuscitation Set		1
2	Examination Light	0.06kw	1
10	Patient Monitor	0.1kw	3
13	Ventilator	0.5kw	2
14	Refrigerator	1kw	E 1
15	Washing Machine	1kw	E 4
16	Scale (Weight/Height), Adult		1
17	Scale (Weight/Height), Infant		1
18	Sphygmometer A (0-14y)		2
19	Stethoscope		3
20	Thermometer		4
21	Stretcher		1
23	Wheel Chair		1
24	Bed, Pediatric		4
25	Infusion Pump	0.03kw	2
26	Syringe Pump	0.05kw	2
27	Suction Unit, General	0.5kw	1
28	Suction Unit, Operation	0.5kw	1
29	Instrument Cabinet		1
36	Autoclave Vertical, Operation	2kw	1
47	X-ray Film Viewer, General	0.1kw	1
48	X-ray Film Viewer, Operation	0.1kw	1
50	Anesthesia Apparatus	0.05kw	1
51	Defibrillator	0.5kw	1
52	Electro Surgical Unit	0.1kw	1
55	Operation Table, Neurosurgery	0.8kw	1
58	Operation Light	1kw	2
61	Operation Microscope, Neurosurgery	0.4kw	1
62	Hot Air Sterilizer	2.5kw	1
63	Instrument Table		1
66	Neurosurgery Set		1
75	Ophthalmoscope		2
106	AVR A	0.5KV	?
106	AVR B	1KV	?
106	AVR C	2KV	?

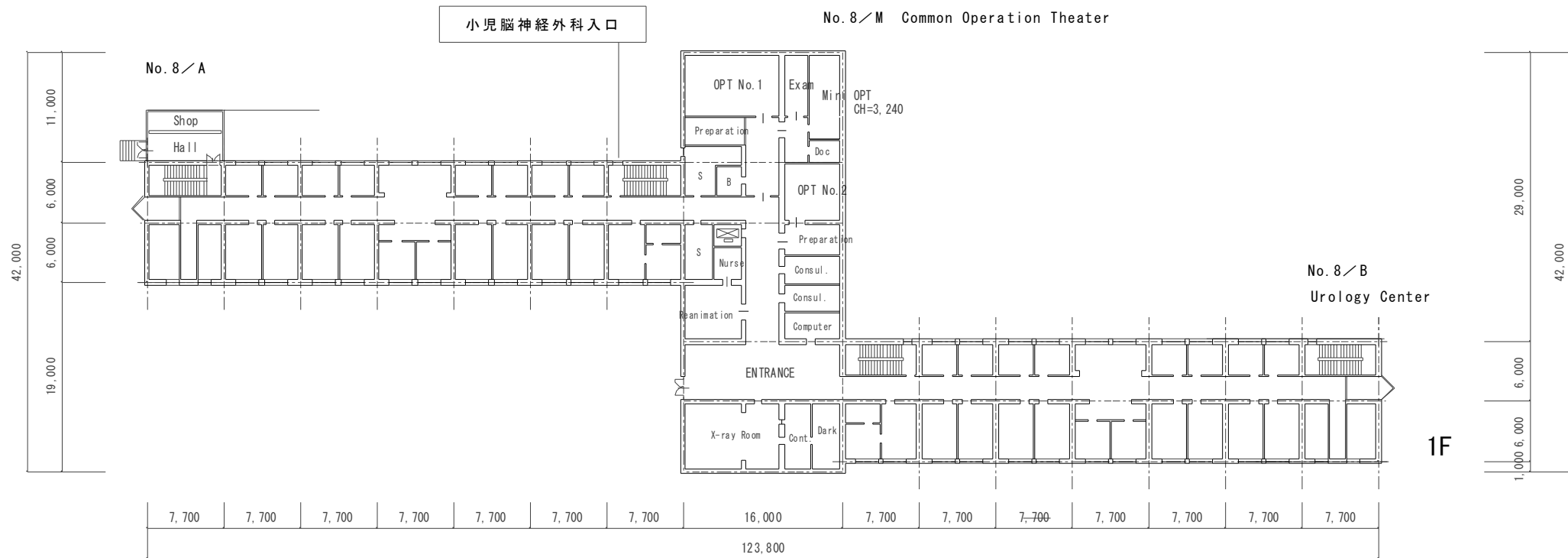
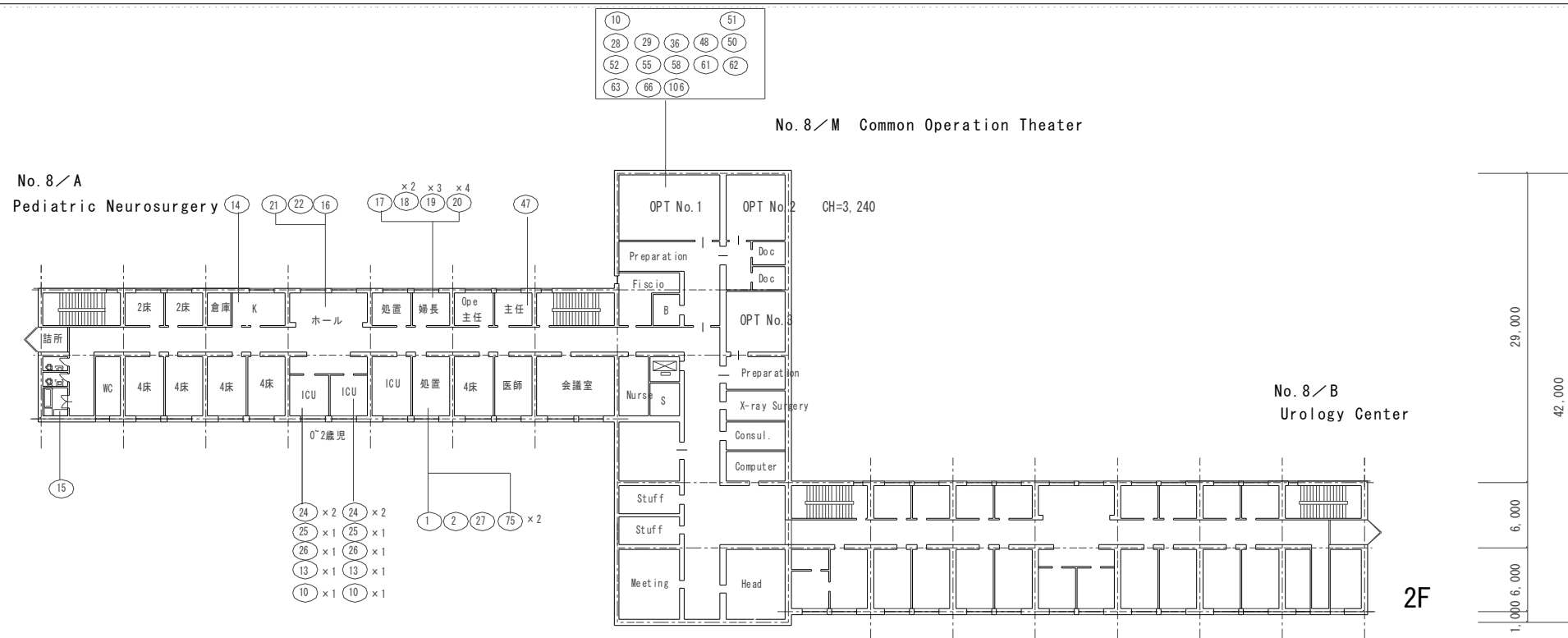
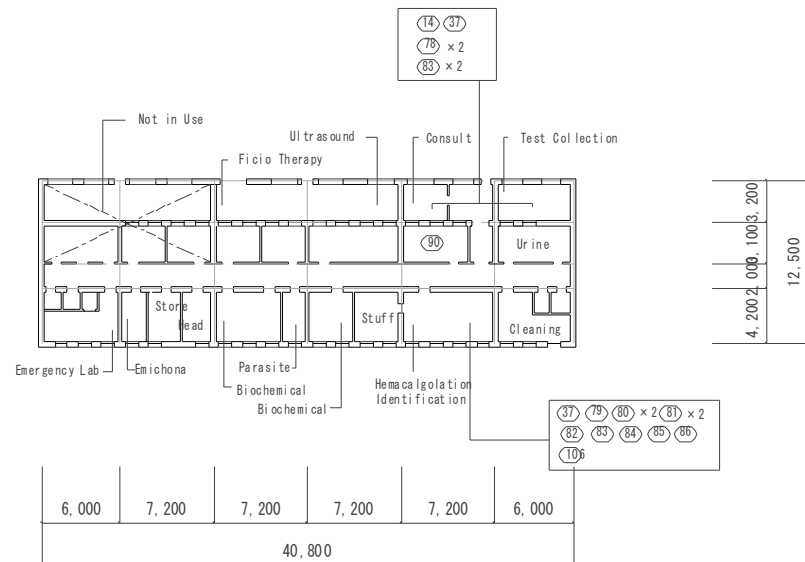


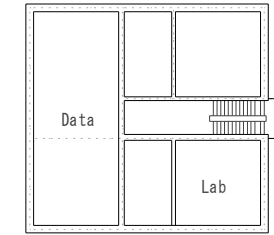
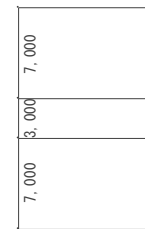
Figure 2-10 No. 8 1F・2F PLAN S=1:500

Central Laboratory Equipment LIST				
14	Refrigerator	1kw		2
37	Autoclave Vertical Laboratory	2kw		2
78	Blood Cell Counter Manual			2
79	Centrifuge Laboratory	0.6kw		1
80	Electrical Balance	0.02kw		2
81	Incubator Laboratory	0.6kw		2
82	Micro Pipette Set	0.1kw		2
83	Microscope Binocular	1kw		3
84	Photo-electro Calorimeter	0.05kw		1
85	Spectrophotometer	0.2kw		1
86	Water Bath	1.1kw		1
90	Water Distiller	3kw		1
106	AVR B	1kv		?

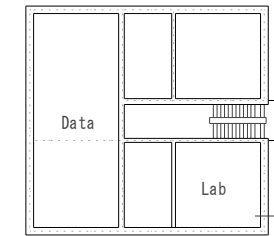
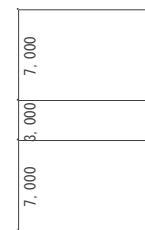
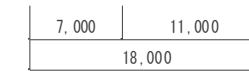


No. 28 Central Laboratory

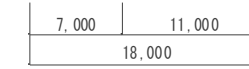
No. 28 Central Laboratory 1F PLAN S=1:500



3F PLAN



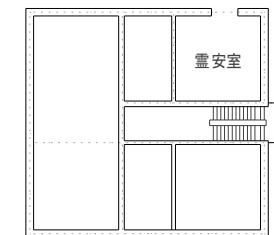
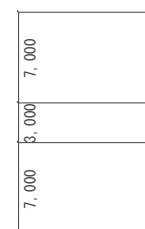
2F PLAN



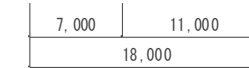
Pathological Laboratory Equipment LIST				
83	Microscope Binocular	0.1kw		
87	Microtome			
88	Paraffin Bath	0.5kw		
89	Tissue Processor	0.5kw		
90	Water Distiller	3kw		



7.0-7'



1F PLAN



No. 15 Pathological Laboratory PLAN

Figure 2-11 No. 15 1F · 2F · 3F PLAN

S=1:500

2-2-4 Implementation Plan

2-2-4-1 Implementation Policy

This project will require approval by a cabinet meeting of the Japanese government in accordance with the framework of grant aid cooperation of the Japanese government, and will be implemented after the Exchange of Notes (E/N) concerning the project between the Japanese and the Tajikistani governments. After the conclusion of the E/N between the two governments, a Japanese consultant company recommended by JICA will conclude a consultant agreement with the Ministry of Health of Tajikistan in accordance with the procedures of Japanese grant aid cooperation. The agreement will come to effect upon approval of the Japanese government. The consultant will implement duties related to tender and supervision of procurement on the basis of the agreement. The procurement of equipment is implemented by Japanese corporate companies selected by tender; they will conclude agreements with the Ministry of Health of Tajikistan, and these agreements will also come into effect upon approval of the Japanese government. The Japanese companies will be responsible for the procurement, carriage and installation of the necessary equipment; the provision of technical training concerning the operation and maintenance of individual equipment; and the drawing up of manuals and other technical documents required for the maintenance of the equipment after the procurement, together with a list of manufactures and their agents.

2-2-4-2 Implementation Conditions

When medical equipment is imported to Tajikistan in the form of a grant aid, customs duty alone are waived when the equipment is accompanied by (1) a supply contract, (2) the bill of landing (B/L), (3) an invoice, (4) a packing list and (5) certificate of the country of origin, a quality assurance document, or a Tajikistan import registration document (GOST STANDARD registration number), all of which must be translated to Russian. It is therefore necessary for the Tajikistani government to make arrangements for a waiver of the customs clearance fees (custom procedure/0.15% of the CIF price) and that of the value added tax (Valuable Add Tax/20% of the CIF price) in this project.

2-2-4-3 Scope of Works

(1) Japanese government

- i. Procurement of the planned equipment
- ii. Marine transportation and land transportation to the hospital
- iii. Installation and placement of the equipment

- iv. A trial run of the procured equipment, and technical training on operation, routine inspections and maintenance

(2) Tajikistani government

- i. Providing information and data necessary for the transport, installation and placement of the equipment
- ii. Acquisition of approvals necessary to import the equipment (duty waiver, import license, and importing of medical equipment)
- iii. Improvement of the sites where the procured equipment is planned to be installed.
- iv. Securing the locations for unloading of the procured equipment
- v. Providing sites for the storage of the equipment prior to its installation and placement
- vi. Securing the transportation route for the procured equipment
- vii. Removal of existing equipment and repairs to the rooms following the equipment removal

2-2-4-4 Consultant Supervision

Following the implementation of duties related to the tender to select contractors to procure equipment, the consultant will ensure the smooth progress of the procurement and other duties. The main points in the supervision of procurement are the confirmation of consistency between the equipment to be procured and the list in the contract; inspection of products before shipping and the state of their packing; confirmation of sea and land transportation/customs clearance; and final inspection at the site. As for the inspection before shipping, the consultant will confirm whether there is any gap between the content of shipping and the content of the contract, and conduct, via a third-party organization, a general inspection of the contents of shipping and packing. The consultant will make constant efforts to keep himself informed as to the progress of individual schedules, provide appropriate advice/guidance to organizations on the Tajikistan side in charge of the project and the contractors responsible for the procurement of equipment, and report the progress of project to the responsible organizations of two countries from time to time. The consultant will conduct spot supervision.

After performing the tendering-related services to select an equipment procurement company, the consultant supervises the procurement to ensure that equipment

procurement and other work progress smoothly. The key components of procurement supervision include the verification of a consistency between the equipment procured and its description in the agreement, inspection of the products and packing conditions prior to shipping, confirmation of the marine and land transportation/customs clearance status, and the final inspection and receiving of the goods in Tajikistan. Regarding pre-shipping inspections, the consultant ensures that there is no discrepancy between the shipment contents and their descriptions in the agreement whereas a third party organization also inspects the entire shipment and packing contents. The consultant continually strives to stay informed of the progress of each process, provides the Tajikistani implementing organization and the equipment procurement company with appropriate advice and guidance, and furnishes a report of the progress to the relevant organizations in both countries. The consultant performs spot checks.

2-2-4-5 Procurement Plan

(1) Procurement Sources

The equipment that is planned to be procured in this project will be chosen from among the Japanese and Tajikistani manufacturers. Japanese products that require maintenance by a manufacturer's representative may be considered only on condition that their manufacturers have a representative in either Tajikistan or one of its neighboring countries, namely Uzbekistan, Kazakhstan, Kyrgyzstan, or Russia (Moscow). In the event that the manufacturers of Japanese products that are considered for procurement do not have a representative in these countries, products of third-country manufacturers who have representatives in this region are added to the list of products that are considered for procurement.

(2) Transportation Route

Equipment to be shipped from Japan will be packed in containers and shipped from the port of Yokohama for Bandar Abbas, Iran by boat. From Bandar Abbas, the equipment will be transported by truck to Dushanbe, the capital city, via Turkmenistan and Uzbekistan. After all shipments clear the customs, they will be transported by truck to the hospital. The total time requirement is approximately 45 days.

Products to be procured from third countries will be gathered at the port of Hamburg, Germany, and transported by truck to Dushanbe, the capital city, through Poland, Belarus, Russia, Kazakhstan, and Uzbekistan. After all shipments clear the customs,

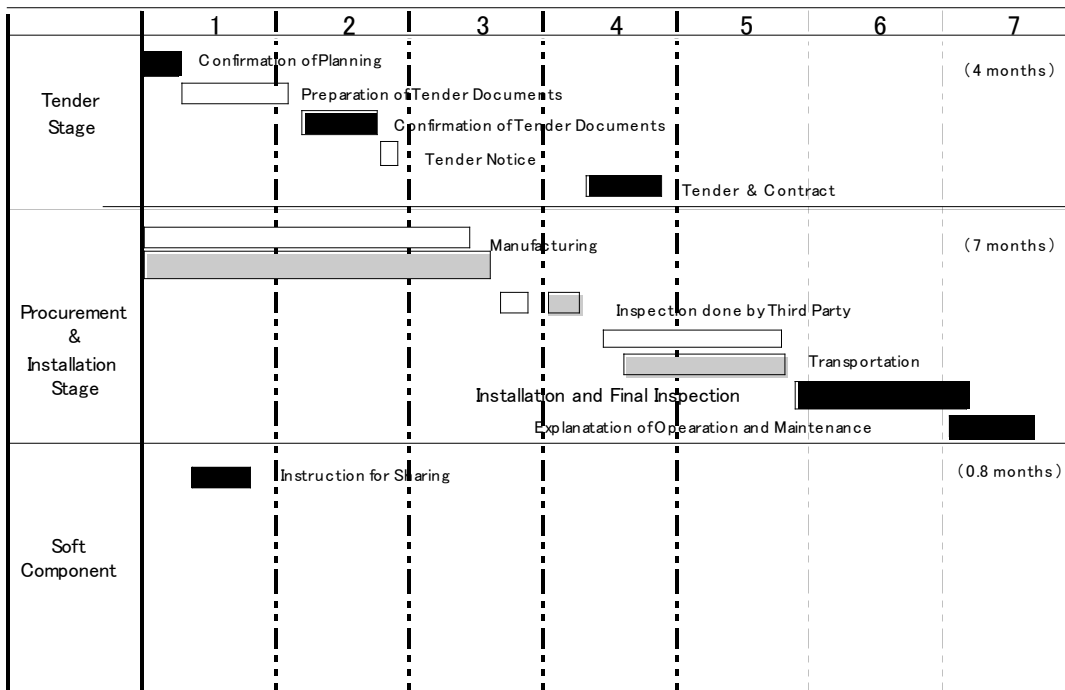
they will be transported by truck to the hospital. The total time requirement is approximately 45 days.

2-2-4-6 Quality Control Plan

No custom-ordered equipment will be permitted for medical equipment to be procured in this project. Selections will be made from among the products that are already available on the market and have been sold to medical institutions in various countries. Furthermore, Japanese products must meet the JIS standards and European and American products must meet international manufacturing standards, such as ISO. As for equipment that requires consumable items, versatile devices that can use consumable items that are available in Tajikistan will be chosen even if they are not the consumable items that are specified by the devices' manufacturers.

2-2-4-7 Implementation Schedule

The implementation schedule of this plan is broken down to three stages, consisting of the tendering-related work, equipment procurement/installation work, and the soft component. The time line from the execution of an E/N till the project completion is shown in the following diagram of the implementation schedule:



2-3 Obligations of Recipient Country

The responsibilities of the Tajikistan side in the implementation of this project are as shown in 2-4-3 Implementation Segmentation/Procurement and Installation Segmentation. This project represents the first general grant aid to be received by Tajikistan. Consequently, adequate explanations will have to be given regarding their responsibilities too.

(1) Various arrangements that are necessary for the smooth customs clearance and domestic transportation of the procured equipment within Tajikistan.

- Acquisition of approval for waiver of customs clearance fees and levies.
- Acquisition of approval for waiver of value added tax
- Acquisition of an import license.
- Acquisition of approval by the Ministry of Health of Tajikistan for importing medical equipment.

(2) Waiver of customs and other various taxes for the equipment procurement company and its employees.

(3) Assurance of convenience and safety to Japanese citizens involved with this project.

(4) Arrangement of the Banking Arrangements (B/A) and both payment of Authorization to Pay (A/P) advising commission and payment commission.

(5) Offer of personnel and a budget (including a maintenance budget) necessary for the efficient implementation of this project.

(6) Acquisition of any other approval that is needed for the implementation of this project.

(7) Disclosure of any other information and data that are needed.

Prior to the installation of the equipment procured in this project, the Tajikistan side will have to (1) remove the existing equipment, (2) secure the passageway for the equipment to be brought in and adequate space for its installation, and (3) improve the site where equipment is scheduled to be installed at its own cost.

2-4 Project Operation Plan

Diakov Hospital is a huge complex. The child health care service departments, which will be the recipient of the grant provided by this project, has two full-time technicians (one in charge of electrical maintenance and the other in charge of machinery) to maintain the hospital facilities. Prior to the independence in 1991, a public corporation that was specialized in medical equipment maintained all pieces of equipment throughout the hospital. After the independence, the public corporation is engaged to maintain only old-fashioned X-ray machines that were made in the former Soviet Union. The plan is to sign maintenance contracts with representatives of medical equipment manufacturers once this project is implemented.

2-4-1 Maintenance Cost

The operating budget of the hospital, which is the recipient of this project aid, is appropriated by the ministry of finance and provided through the ministry of health. Fiscal years run from January to December in Tajikistan. Nationally-run medical institutions submit their budget requests for the upcoming year in October.

Operating budgets of medical institutions in this country are rooted in the system that was built during the Soviet rule. In this system, a request is submitted for a budget amount that is commensurate with the size of the institution and the number of its employees. Table 2-2 shows the operating expense of Diakov Hospital over a five-year period between 1999 and 2003, together with its 2004 actual figures and 2005 projections.

The operating budgets of the hospital for the first two years following the end of the civil war in 1999 were lower than the requested amounts. Appropriation for the operating expense, however, has been increasing since 2002 even though it continues to be below the requested amounts. In 2004, an operating expense appropriation that roughly matches the requested amount is expected to be approved, raising the budget to three times the 1999 level. In 2005, the budget is projected to be four times as high as it was in 1999.

Table 2-2 Diakov Hospital Operating Budget (In somoni: \$1 = 3 somoni)

	Actual Budget		Proposed	Balance
1999	217,487 Somoni	100%	261,854 Somoni	44,367 Somoni
	7,938,000 Yen		9,558,000 Yen	-1,620,000 Yen
2000	148,500 Somoni	68%	347,054 Somoni	198,554 Somoni
	5,420,000 Yen		12,667,000 Yen	-7,247,000 Yen
2001	165,457 Somoni	76%	335,075 Somoni	169,618 Somoni
	6,039,000 Yen		12,230,000 Yen	-6,190,000 Yen
2002	241,100 Somoni	111%	283,735 Somoni	42,635 Somoni
	8,800,000 Yen		10,356,000 Yen	-1,556,000 Yen
2003	254,450 Somoni	117%	361,219 Somoni	106,769 Somoni
	9,287,000 Yen		13,184,000 Yen	-3,897,000 Yen
2004 (Estimated)	692,908 Somoni	319%	692,908 Somoni	0
	25,291,000 Yen		25,291,000 Yen	0
2005 (Estimated)	872,908 Somoni	401%	872,908 Somoni	0
	31,861,000 Yen		31,861,000 Yen	0

The annual maintenance cost for the equipment that is planned to be procured in this project (the cost of X-ray films, their development and fixing solution, recording paper, gel, etc.) is estimated at approximately 132,000 somoni (approximately ¥4.8 million) in total. In addition, a budget of approximately 137,000 somoni (approximately ¥5.0 million) is required to replace CT scanner tubes once every other year.

The (projected) annual maintenance budget of 872,908 somoni (approximately ¥31.8 million) in 2005 includes a budget of 157,890 somoni (approximately ¥5.8 million) for the purchase of consumable items and replacement parts, including those that will be used for medical equipment to be procured in this project. Furthermore, the government has approved the appropriation of 150,000 somoni (approximately ¥5.5 million) from 2005 onward as a supplemental budget for the hospital to subsidize the purchase of CT scanner tubes in the event that this project materializes.

The hospital's budget size is gradually increasing, helped by the adoption of a patient co-payment system in 2003. The cost of maintaining the procured equipment after the project implementation listed above is thus believed to be well within the range that is affordable.

To use an example of another institution, the nationally-run cardiovascular center, which received an OPEC aid for medical equipment, had a budget of 230,940 somoni (approximately ¥8.4 million) before its equipment was enhanced. The institution's budget grew to 386,619 somoni (approximately ¥14.1 million), a 67% increase, as consideration was given to the necessity to maintain the equipment that was received.

Appropriation of a budget by the Tajikistani government for the proper maintenance of critically needed medical equipment is believed to be possible once Diakov Hospital, which is the recipient of this project aid, receives such equipment.

The Ministry of Health of Tajikistan believes it is possible to collect a co-payment from patients who take CT scanner tests and are capable of paying for their medical treatment under a patient co-payment system, which is currently in the process of being introduced. The ministry hopes to apply the co-payment revenue toward a hospital's CT scanner tubes replacement budget in combination with the budget that is appropriated by the ministry of health. The ministry is examining the possibility of imposing a tariff on laboratory tests on the assumption that the tubes will be replaced two years after the equipment is put in use, and that the demand for CT scanner tests among patients who are capable of paying for their treatment will be 1,000 patients per year. At present, each patient who needs a CT scanner test must travel to neighboring Uzbekistan by spending as much as \$2,000, including the cost of travel and lodging. Considering this situation, the ministry's policy is viewed as a realistic and feasible self-help effort.

The total cost of implementing the project is estimated at roughly ¥480.7 million. Based on the assumptions described in (3), the breakdown of the costs to be borne by Japan and Tajikistan is estimated as follows. The estimated project cost does not automatically indicate the maximum amount of the aid that is specified in the E/N.

2-4-2 Project Cost

(1) Expenses borne by Japan

Contents	Estimated Cost
Equipment	448.6
Consulting Fee	31.9
Total	480.5

(2) Expenses borne by Tajikistan

Contents	Expense
Removal of X-Ray Machine at Radiology Dept. 1	\$500
Removal of X-Ray Machine at Radiology Dept. 1	\$500
Removal of X-Ray Machine at Infant Surgery	\$500
Removal of X-Ray Machine at Traumatology	\$500
Total	\$2,000

(3) Pricing Assumptions

- i. Time of calculation: November 2004
- ii. Foreign exchange rate: US\$1=¥110.08, 1 Euro = ¥134.59
- iii. Project period: 11 Months
- iv. Method of placing orders: Either a single lump order or divided orders
- v. Others: To be implemented in accordance with the scheme of grant aid cooperation of the Japanese government

2-5 Other Relevant Issues

The systems in use in the medical institutions in Tajikistan were inherited from the days when the country was under the rules of the former Soviet Union. The institutions tend to be massive, hold a large number of beds and employ a large pool of medical workers. Furthermore, treatment departments are extremely compartmentalized. Against such a backdrop, the initial request that was submitted by the hospital contained numerous duplicate requests from various departments as each department individually listed the equipment that it needed without giving consideration to the frequency of use or the limited size of the maintenance budget.

One of the important policies for the equipment selection in this project is the concept of sharing of the diagnostic machines that were requested in large quantities. Centralization and sharing of medical equipment should help improve treatment efficiency through sharing of diagnostic data, and efficiency improvements of the entire hospital budget through scheduled and efficient purchasing of consumable items. Toward that goal, a new method must be established for joint control of medical equipment by multiple departments, which is a departure from the current method of separate controls by individual departments.

For over 40 years, the extremely compartmentalized departments have exercised controls over not only medical equipment but also treatment in a self-contained mode. It will be the first time that the hospital will face the challenge of making multiple departments share one medical device in the course of providing clinical services. During our discussions with the hospital personnel at the time of our on-site study, the hospital management understood the importance of sharing the equipment, and expressed their desire to move energetically toward that goal. However, support regarding specific methods must be provided in the form of a soft component so as to ensure that what they understood as a concept will actually be put into practice. Education of the hospital staff regarding the sharing concept and specific methods of sharing is believed to be an extremely important support tool to ensure that the procured equipment will be used effectively and continuously.

For these reasons, the soft component of this project will be of a type that consists of direct support by Japanese consultants. The support will consist mainly of workshops and guidance on the routine control of shared equipment, as well as the 1) creation of an equipment sharing manual, 2) creation of an equipment use log, and 3) equipment sharing workshops.

Chapter 3 Project Evaluation and Recommendations

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

Table 3-1 shows the effects and the degrees of improvement to be achieved by the implementation of this project.

Table 3-1 Effects of implementation of the project and improvements in the current situation

Present situation and problems	Relevant measures to be taken in the project (work covered by the grant)	Project effect and extent of implementation
<p>The hospital that is the recipient of aid in this project plays a central role as a tertiary medical facility in diagnosing and treating various diseases of children, who account for approximately 40% of the total population of Tajikistan.</p> <p>A stagnant economic condition has strained the fiscal conditions for health and medical care and medical facilities lack adequate operating budgets. In particular, the inability of hospitals to replace their obsolete basic medical equipment has hindered them from providing even basic health care services.</p>	<p>The project will furnish basic medical equipment that needs to be replaced or supplemented in each of the diagnostic and treatment departments of the hospital.</p> <p>The quantities of such equipment to be procured will be set at a level that allows the equipment to be maintained within a limited maintenance budget by making departments share the use of the procured equipment as much as possible.</p> <p>Equipment planned to be procured: 106 pieces of equipment</p>	<p>When the equipment procurement at the hospital is complete, the diagnostic and treatment departments in the pediatric section will be strengthened, and the diagnostic and treatment services of pediatric health care in all parts of Tajikistan will be enhanced.</p> <p>Furthermore, it will become possible to offer better quality health care services in all parts of Tajikistan when the hospital becomes fully functional as the top referral hospital and meets the needs of children in the area.</p> <p>The following indices will be used to measure the improvement in diagnostic and treatment functions of the hospital, following the implementation of this project:</p> <ul style="list-style-type: none"> - Number of outpatients - Number of inpatients - Number of CT scanner examinations - Number of endoscope examinations

Based on these, the effects that are expected to be achieved by the implementation of this project are identified as follows:

1) Direct effects

i. By replacing and supplementing the existing equipment that is either obsolete or in shortage, this project will allow the hospital to regain its originally-intended diagnostic function. Increased accuracy of diagnoses will help improve both the quality and quantity of health care services offered by the pediatric section of the hospital.

ii. Sharing of equipment that is procured in this project will render the quantities of supplies and replacement parts that are required by such equipment to be kept to the minimum, and enable the hospital to be managed in an efficient and smooth manner.

2) Indirect effects

As the result of the equipment procurement in this project, the number of patient referrals from lower-level medical institutions in the city of Dushanbe, which the hospital is assigned to, will increase as they seek more exact diagnoses or better treatment. The health care referral system in the area will thus be enhanced, the infant mortality rate will decrease, and the child referral system throughout the Republic of Tajikistan will be strengthened.

ii. Child health care services throughout the Republic of Tajikistan will be strengthened. As the result of the equipment procurement, the functions of the hospital will be enhanced, which will help strengthen the child health care referral system throughout the country.

3-2 Recommendations

(1) Tasks and Recommendations

The tasks that the Republic of Tajikistan should tackle and our recommendations are as follows:

i. Further improvement of hospital management in the market economy

The recipient hospital of this project is not part of the Health Sector Reform, and there is no plan for mergers with other medical institutions. However, it is a colossal medical institution with multiple specialized departments. For this reason, various improvements are needed so that the equipment that will be shared as the result of the implementation of this project will be used efficiently. Such improvements may include reorganization of the hospital, integration and closure of departments, efficient use of human resources, enhancement of the financial control system, and improvement of patient services. Construction of a system that is competitive in a market economy is desired.

ii. Ensuring Stable Fiscal Sources for Health Care

The recipient hospital of this project adopted a patient co-payment system in June 2004. Nevertheless, the health and medical care expenditures continue to face a stringent condition. For this reason, a fee-based treatment system is hoped to be put in place so as to establish an important source of revenue with an eye toward patient service

improvements. Such improvements would include evening and weekend treatment services and private bedrooms, which would secure stable sources of revenue.

(2) Coordination with Other Donors

Implementation of the project is fully feasible under the current system of the hospital. However, cooperating with other technical aid programs in the field of child and maternal health care that are backed by other international organizations, such as the WHO, is believed to contribute to the enhancement of the health of children in Tajikistan and achieve even greater effects.

【Appendices】

- 1. Member List of the Study Team**
- 2. Study Schedule**
- 3. List of the Parties Concerned in the Recipient Country**
- 4. Minutes of Discussion**
- 5. Reference**

1. Member List of the Study Team

(1) Basic Design Study (June 8 to July 10, 2004)

Ms. Ako Muto	Team Leader Second Project Management Division Grant Aid Management Department Japan International Cooperation Agency
Prof. Iwao Takakura	Technical Advisor Professor Emeritus, Tokai University
Mr. Kazuhiro Abe	Project Manager International Techno Center, Co., Ltd.
Mr. Shigetaka Tojo	Equipment Planner/Procurement & Cost Planner International Techno Center, Co., Ltd.
Mr. Yasuo Horigome	Facility Planner/Procurement & Cost Planner International Techno Center, Co., Ltd.
Ms. Masako Matsuda	Interpreter (Russian) International Techno Center, Co., Ltd.

(2)Explanation of Draft Report (October 5 to October 16, 2004)

Ms. Kae Yanagisawa	Team Leader Resident Representative Uzbekistan Office Japan International Cooperation Agency
Prof. Iwao Takakura	Technical Advisor Professor Emeritus, Tokai University
Mr. Kazuhiro Abe	Project Manager International Techno Center, Co., Ltd.
Mr. Shigetaka Tojo	Equipment Planner/Procurement & Cost Planner International Techno Center, Co., Ltd.
Mr. Yasuo Horigome	Facility Planner/Procurement & Cost Planner International Techno Center, Co., Ltd.
Ms. Masako Matsuda	Interpreter (Russian) International Techno Center, Co., Ltd.

2. Study Schedule

(1) Basic Design Study

Date		Team Leader:Ako Muto	Project Manager/Operation & Maintenance Planner	Equipment Planner/Cost & Procurement Planner	Facility Planner/Cost & Procurement Planner	Interpreter
		Iwao Takakura : Technical Advisor	Kazuhiro Abe	Shigetaka Tojo	Yasuo Horigome	Msako Matsuda
			33 days	33 days	33 days	33 days
1	8-Jun	tue	Tokyo→Inchon →Inchon→Tashkent			
2	9-Jun	wed	0930 JICA Uzbekistan			
			11.00 Japanese Embassy, Uzbekistan			
3	10-Jun	thu	Tashkent→Samarkand	15.00 Local Supplier		
			Samarkand→Dushanbe	Tashkent→Almaty →Almaty→Dushanbe		
4	11-Jun	fri	09.30 Ministry of Health of Tajikistan			
			11.30 Japanese Embassy, Tajikistan			
			14.00 Diakov Hospital			
5	12-Jun	sat	09.00 Diakov Hospital			
6	13-Jun	sun	Internal Meeting			
7	14-Jun	mon	9.00 Diakov Hospital			
			17.00 Minister, Ministry of Health of Tajikistan	14.00 Diakov Hospital	Same as PM	
8	15-Jun	tue	9.00 Diakov Hospital			
9	16-Jun	wed	9.00 Diakov Hospital			
10	17-Jun	thu	9.00 Diakov Hospital			
11	18-Jun	fri	Dushanbe→Samara→Frankfurt→Munich→	9.00 Diakov Hospital		
12	19-Jun	sat	→Tokyo	9.00 Diakov Hospital		
13	20-Jun	sun	10.00 Ministry of Health of Tajikistan			
14	21-Jun	mon	9.00 Diakov Hospital			
			10.00 Hart Center	Diakov Hospital	Same as PM	Same as PM
15	22-Jun	tue	9.00 Diakov Hospital			
16	23-Jun	wed	10.00 Electrical Company	9.00 Diakov Hospital		
			13.30 Water Company			
			10.00 Local Agent	9.00 Diakov Hospital		
17	24-Jun	thu	14.00 Diakov Hospital	9.00 Diakov Hospital		
			16.00 Equipment Manufacturer	Diakov Hospital	Same as PM	
18	25-Jun	fri	9.00 Diakov Hospital			
			10.00 Gynaecology Center NO.1			
			9.00 Diakov Hospital			
19	26-Jun	sat	14.00 Medical Supplier	14.00 Diakov Hospital		
20	27-Jun	sun	Internal Meeting			
21	28-Jun	mon	Internal Meeting/Diakov Hospital			
22	29-Jun	tue	Tokyo→Inchon→Tashkent	9.00 Diakov Hospital		
23	30-Jun	wed	Tashkent→Dushanbe	9.00 Diakov Hospital		
24	1-Jul	thu	10.00 Ministry of Health of Tajikistan			
			14.00 Diakov Hospital			
25	2-Jul	fri	09.00 Diakov Hospital			
26	3-Jul	sat	Internal Meeting			
27	4-Jul	sun	Internal Meeting			
28	5-Jul	mon	11.00 Signature of Minutes of Discussion			
			14.00 Workshop in Diakov Hospital			
			17.00 Japanese Embassy, Tajikistan			
29	6-Jul	tue	Dushanbe→Tashkent	Dushanbe 8.50 →Almaty 12.20		
30	7-Jul	wed	JICA Uzbekistan	Local Supplier in Almaty		
			JICA Uzbekistan	Almaty 11.55 →Tashkent 1.45 , JICA Embassy		
31	8-Jul	thu	15.00 Japanese Embassy, Uzbekistan			
			17.00 JICA Uzbekistan			
			Tashkent→			
32	9-Jul	fri	Inchon→Tokyo	10.00 Emergency Center in Tashkent		
			14.00 Equipment Supplier			
			Tashkent→			
33	10-Jul	sat	Inchon→Tokyo			

(2)Explanation of Draft Report

Date	Team Leader		Techincal Advisor		Project Manager/Operation & Maintenance Planner		Equipment Planner/Cost & Procurement Planner		Facility Planner/Cost & Procurement Planner		Interpreter		
	Kae Yanagisawa 8days		Iwao Takakura 12days		Kazuhiro Abe 12days		Shigetaka Togo 12days		Yasuo Horigome 12days		Msako Matsuda 12days		
1	5-Oct	火	Tokyo13:10 →Inchon16:00										
2	6-Oct	水	Inchon17:30 →Tashkent21:10				Inchon17:50 →Almaty22:20						
			12:00JICA Uzbekistan				Almaty04:35 →Dushanbe04:10						
			Tashkent15:00 →Khujand19:00				9:00Diakov Hospital						
3	7-Oct	木	Khujand20:25 →Dushanbe21:30				9:00Diakov Hospital						
							15:00Ministry of Health of Tajikistan						
							17:00Japanese Embassy, Tajikistan						
4	8-Oct	金	9:00 Diakov Hospital										
5	9-Oct	土	9:00 Diakov Hospital										
6	10-Oct	日	Tashkent→Khujand		Internal Meeting							Khujand→Dushanbe	
7	11-Oct	月	10:00 Diakov Hospital						Diakov Hospital		Sama as PM		
8	12-Oct	火	10:00 Signature of Minutes of Discussion										
9	13-Oct	水	13:00 Diakov Hospital				Diakov Hospital		Sama as PM				
			Dushanbe→Khujand		Khujand→Tashkent		Diakov Hospital		Diakov Hospital		Sama as PM		
10	14-Oct	木	14:00 Diakov Hospital										
			15:00 Japanese Embassy, Tajikistan										
			Dushanbe21:00 → Khujand22:00										
			Khujand23:00 → Tashkent02:30										
11	15-Oct	金	15:30 JICA Uzbekistan										
			17:00 Japanese Embassy, Uzbekistan										
			Tashkent22:30 →										
12	16-Oct	土	Inchon9:30										
			Inchon10:40 →Tokyo12:50										

3. List of the Parties Concerned in the Recipient Country

Ministry of Health of Tajikistan

Faizulloev Nusratullo Falzulloevich	Minister of Health
Файзуллоев Нусратулло Файзуллоевич	Министр здравоохранения
Abumuslim A. Temurov	First Deputy Minister of Health
Абумуслим А. Темуров	Первый заместитель министра здравоохранения
Tumanova Guljakhon Abdulfatоеvna	Chief of the Development of International Relations
Туманова Гулджохон Абдулфатоевна	Начальник отдела Международных связей
Ghafur Khodsamurodov	Chief Specialist of МОН
Гафир Ходсамуродов	Главный специалист министерства здравоохранения
Makhbuba Sheralieva	Project coordinator
Махбуба Шералиева	Координатор проекта

Ministry of Foreign Affairs

Narzullo Nazarov	Chief, Asian and Africa Department
Нарзулло Назаров	Начальник Управления Азии и Африки Министерства иностранных дел
Mirzosharif Asomuginovich Djanonov	Second Secretary, Asian and Africa Department
Мирзошариф Асомудинович Джалолов	2-ой секретарь Управления Азии и Африки Министерства иностранных дел
Umarbaeva Gulchckhra Legal Department	Legal Department
Умарбаева Гулчкхра	Юрист Управления

Diakov Hospital

Salimov Nusratullo Faizulloevich	Chief doctor
Салимов Нусратулло Файзуллоевич	Главный врач
Pirou Abdullo Pirovich	Chief doctor

Пироу Абдулло Пирович Amirshoev Sherali Temurovich Амиршоев Щерали Темурович	Главный врач First deputy of chief doctor on treatment issues Заместитель главного врача по лечебной части
Shekhov Abrukarim Jalolovich Шехов Абрукарим Джалолович	Deputy of chief doctor Зам. гл. врача по детств
Manonov Saforeveck Turaevic Манонов Сафоребек Тураевич	Deputy of chief doctor Зам. гл. врача по организационно-методической части
Jumaeva Guliora Джумаева Гульнора	Chief Accountant Главный Бухгалтер
Kurbanova Kanoat Курбанова Каноат	Deputy of chief doctor for personnel Зам. гл. врача по кадрам
Sharifov Shakir Orifovich Шарифов Шакир Орифович	Chief, Septic Surgery Зав. дет. инфек-бокс. отд.
Khasanova Dibovar Mursaidovnav Хасанова Дибовар Мурсаидовна	Chief, Pediatric Neurology Зав. дет. неврол. отд.
Bakhramova Rano Sovanovna Бахрамова Рано Совановна	Chief, Infant Pediatric Зав. дет. неонатол. отд.
Rakhimov Rajimjon Atamurodovich Рахимов Ражимжон Атамуродович	Chief, Neonatology Зав. отд. груд. Возраста
Khodjaeva Nikzana Nazarbekovna Ходжаева Никзана Назарбековна Shamsulloev Ismotuelo Saifulloevich Шамсуллоев Исмотуело Сайфуллоев	Chief, Hematology Зав. дет. гемот. отд. Chief, Pediatric ICU Зав. отд. интенсивной терапии
Sharipov Fatkhudin Saidovich Шарипов Фатхудин Сайдович	Chief, Cardiorheumatology Зав. дет. кардиоревмот. От

Saotsev Ikrom Davlatovich Саъоцев Икром Давлатович	Chief, Pulmonology Зав. дет. пульмот. Отд
Nabiev Zoir Narzulloovich Набиев Зойр Нарзуллович	Chief, Pediatric Surgery ICU Зав. дет. реан. отд.(анестезиология и экспресс-лабо)
Dadojanov Yuldrsh Tukhtaevich Дадоджанов Юлдрш Тухтаевич	Chief, Treatment/Diagnosis Зав. лечебно-диагностическим отд.
Karimova Malika Kamilovna Каримова Малика Камиловна	Chief, Urology Зав. дет. урол. отд.
Safarov Abdullo Safarovich Сафаров Абдулло Сафарович	Chief, Septic Surgery Зав. дет. гнойным отд.
Khojaev Saidakhmad Ходжаев Сайдахмад	Chief, Thoracoabdominal Surgery Зав. дет. торакоабд. отд.
Abdurakhimov Nbdullo Khasanovich Абдурахимов Нбдулло Хасанович	Chief, Maxillofacial Surgery Зав. дет. челюстно-лицевым хир.отд
Magdumov Dilshod Rakhmonkhodshatvic Магдумов Дилшод Рахмонходшаевич	Chief, Neurosurgery Зав. дет. груд. отд.
Sherali Sultono Шерали Султонов	Chief, Emergency Surgery Зав. экстренной хирургией
Yatimov Pirmurod Kurbonovich Ятимов Пирмурод Курбонович	Chief, Central Laboratry Зав. центральной лабораторией
Rakhimov Rakhmab Negmatovich Рахимов Рахмаб Негматович	Chief, Neurosurgery Зав. дет. нейр. отд.
Sijotkhonov Sokhid Amirkhonovich Сижотхонов Сохиб Амирхонович	Chief, Radiology Зав. рентг. отд.

Saburov Murod Rasulovich Chief, Traumatology
Сабуров Мурод Расулович Зав. дет. травм. отд.

Norbaeva Markhamat Ashurovna Chief, Ophthalmology
Норбаева Мархамат Ашуровна Зав. дет. глаз. Отд

Shamsidinov Babonazar Nasridinovich Chief, ENT
Шамсидинов Бабоназар Насридинович Зав. отд. дет. ЛОР

Rakhmatova Tulinora Chief, Pathology
Рахматова Тульнора Старший лаборант

Demeova Nataeva Pathologist
Демеова Натаева Лаборант

Embassy of Japan, Tajikistan

Koichi Miyoshi Charge' d Affairs
Yoshiyuki Watanabe Second Secretary
Koji Ohno Third Secretary

Embassy of Japan, Uzbekistan

Akio Kawato Ambassador (July, 2004)
Yuichi Kusumoto Ambassador (October, 2004)
Hiroshi Takahashi Minister
Miyuki Hayashi Third Secretary
Hiroko Kitamura Third Secretary

Japan International Cooperation Agency, Tajikistan Office

Mr. Usmon Rakhmonov Officer

Japan International Cooperation Agency, Uzbekistan Office

Kae Yanagisawa Resident Representative
Etsuko Sugiyama Project Formulation Advisor
SABITOVA Rano Health Consultant

4. Minutes of Discussion

(1) Basic Design Study

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT
IN DIAKOV HOSPITAL IN THE REPUBLIC OF TAJIKISTAN

In response to a request from the Government of the Republic of Tajikistan (hereinafter referred to as "Tajikistan"), the Government of Japan decided to conduct a Basic Design Study on the Project for Improvement of Medical Equipment in Diakov Hospital (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Tajikistan the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Ms. Ako MUTO, Health Team, Project Management Group 3, Grant Aid Management Department, JICA and is scheduled to stay in the country from June 10 to July 6, 2004.

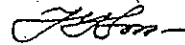
The Team held discussions with the officials concerned of the Government of Tajikistan and conducted a field survey in the study area.

After discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Dushanbe, 5 July, 2004

武藤 亜子

Ako Muto
Leader
Basic Design Study Team
Japan International Cooperation Agency
Japan



Nusratullo Faizulloevich Faizulloev
Minister
Ministry of Health
Republic of Tajikistan



Nusratullo Faizulloevich Salimov
Chief Doctor, Diakov Hospital
Republic of Tajikistan

Witnessed by





N. NAZAROV

Sherali Saidomirovich Djononov
The Head of Legal Department
Ministry of Foreign Affairs
Republic of Tajikistan

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve basic child health care services at Diakov Hospital.

2. Project site

The site of the Project is in Dushanbe, Tajikistan.

3. Responsible and Implementing Agency

The Responsible Agency is Ministry of Health and the Implementing Agency is Diakov Hospital. The organization chart is attached as Annex-1.

4. Items requested by Tajikistan Side

After discussions with the Team, the items described in Annex-2 were requested by the Tajikistan side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval. However, the final components of the Project will be decided after further studies in Japan.

5. Japan's Grant Aid Scheme

5-1 The Tajikistan side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-3 and Annex-4.

5-2 The Tajikistan side will take the necessary measures, as described in Annex-5, for smooth implementation of the Project, as a condition for the Japanese Grant Aid.

6. Schedule of the Study

6-1 JICA will prepare the draft report in English and dispatch the Team in order to explain its contents around the August 2004.

6-2 In case that the contents of the report is accepted in principle by the Tajikistan side, JICA will complete the Basic Design Study Report and send it to Tajikistan around November, 2004.

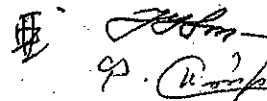

7. Other relevant issues

7-1 Scope of the Project

Both sides confirmed that the scope of the Project was to support the pediatric sections including pediatric surgery and other related departments of Diakov Hospital.

7-2 Centralization of the equipment

The Team strongly recommended centralization of some of the equipment and Tajikistan side promised to utilize them in recommended way.


P. 

A.C.

7-3 Necessary preparations by the Tajikistan side

The Tajikistan side agreed to complete the followings before October 2005;

- A.Repair of targeted buildings such as floor, wall, ceiling, toilet, elevator, and so on.
- B.X-ray protection work
- C.Removal of existing equipment which will be replaced by the equipment procured under the Project
- D.Repair of existing water pump
- E.Electrical wiring system for emergency reception, building No.9 (operation theatre, ICU), and building No.11 (ICU, new born)

7-4 Tajikistan side requested further training either in Japan or in Tajikistan for proper operation of equipment to be procured under the Project. The Team took note and would convey the request to the Government of Japan.

7-5 After discussion with the Minister of Health, it was proposed that Dr. Nusratullo Faizulloevich Salimov be the Project manager and the Team agreed.

7-6 Both sides confirmed that the specification of equipment and the other technical information shall not be released before the tender to be held in the implementation stage of the Project.

Annex-1 Organization Chart

Annex-2 Requested Equipment List

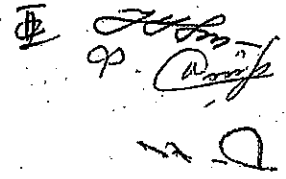
Annex-3 Japan's Grant Aid Scheme

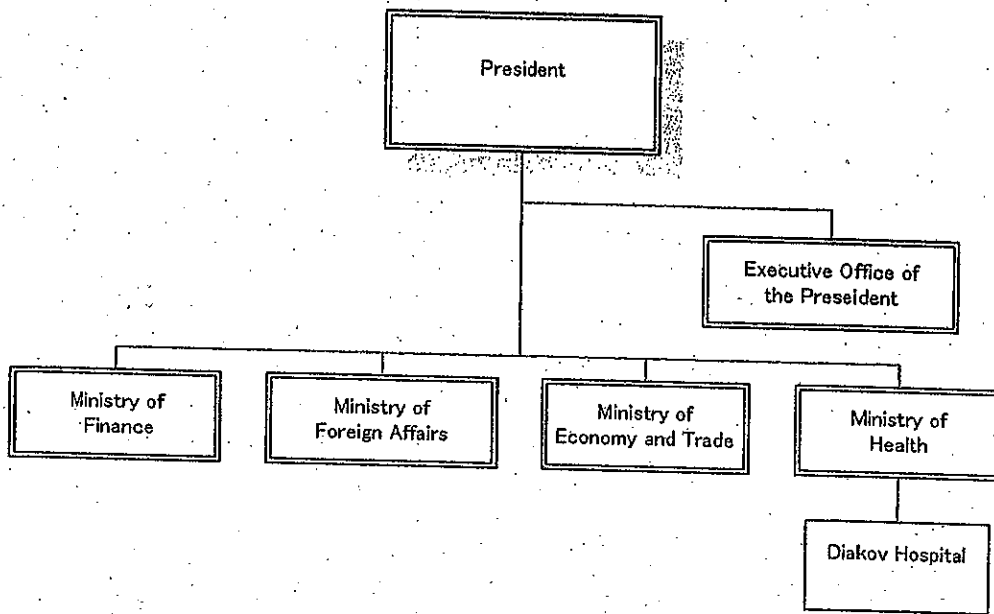
Annex-4 Flow Chart of Japan's Grant Aid Procedures

Annex-5 Major Undertakings to be taken by Each Government

Annex-6 Letter of the preparation for the proper maintenance cost of equipment procured by the Project

Annex-7 Letter which appoints Dr. Nusratullo Faizulloevich Salimov as the Project manager in the Tajikistan Side

Handwritten signature and initials in the bottom right corner of the page.



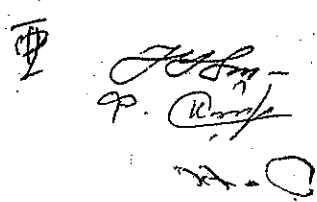
Handwritten signature and initials:
P. Chirp
m-d

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Air Conditioner	3																														
2 Ambu Bag	7					1			1	1	1	1										3									
3 Anesthesia Appratus	9				1											1	1	1	1		2										
4 Audiometer	1															1	1	1	1			4									
5 Autoclave Table top	9					1	1			1	1	1				1				2	1										
6 Autoclave Vertical Laboratory	3						1																2								
7 Autoclave Vertical Operation	9				1											1	1	1	1		1	3									
8 Bed Child	4						1																								
9 Blood Cell Counter, Manual	4						1						1											2							
10 Bone Marrow Aspiration Set	1												1											2							
11 Broncoscope	1	1																													
12 Cardiac Monitor	16				1		4					3				1	1	1	1			4									
13 Centrifuge for Laboratory	2						1																								
14 Colonoscope	1	1																													
15 Cric Surgery Unit	1															1															
16 CT Scanner	1															1															
17 Cysto-Urethoro scope with Video Monitor	1																														
18 Dark Room Equipment set	2																					1									
19 Defibrillator	8				1											1	1	1	1					2							
20 Dental Chair Unit	1				1																										
21 Dental Surgery instrument set	1				1																										
22 Diathermy Unit	1																														
23 Disinfecter for Endscope	1	1																													
24 ECG	8	3				1	1					1	1									1									
25 Electrical Balance	2																														
26 Electro Myiograph	1																														
27 Electro Surgical Unit	8				1					1																					
28 ENT Diagnose Set	1															1	1	1				4									
29 ENT surgery set	1																1														
30 Ergometer	1	1															1														
31 Examination Light	18			2	2		2					3				1															
32 Examination Table	17	4	1	2	2																6	2									
33 Flask Press	1					1																6	2								
34 Functional Bed	6			4																											
35 Gastroscope	1	1																				2									
36 Height Scale adult	1																														
37 High Frequency Massage	1																														
38 Hot Air Oven	6				1																										
39 Incubator Laboratory	2															1	1	1	1			3									
40 Infant Cot (Movable)	8																														
41 Infant Incubator	14					2	4			2	4																				
42 Infant Warmer	8					2				2	2	4																			
43 Infusion pump	11			2	2					1	2	2																			
44 Instrument Cabinet	23		1	1	1	2				1	1	2	1			1	1	1	1	1		4	4								
45 Instrument Table (Mayo)	9				1																										
46 Instrument Trolley	27		2	2			2			1	1	1	1	2	1	1	2	1	1	1		6	4								
47 Intubation set	2																														
48 Kataract surgery set	1																														
49 Keratometer	1																														
50 Laboratory Lathe	1				1																										
51 Laparoscope	1			1																											
52 Laryngoscope	20			2		1	2			1	2	2		2	2			2				4									
53 Lens Meter	1																														
54 Lens set	1																														
55 Magnet	1																														
56 Maxillofacial Surgery Instrument Set	1				1																										
57 Micro Moter	1				1																										
58 Micro Pipette set	3																														
59 Microscope, Binocular	7						2						1																		
60 Microtome	1																														
61 Nebulizer	6			1							1	1			1		1														
62 Neurosurgery set	1																														
63 Operation Light	9				1																										
64 Operation Microscope	3																														
65 Operation Table	3				1																										
66 Operation Table ENT	1																														
67 Operation Table Neurosurgery	1																														
68 Operation Table Ophthalmology	1																														
69 Operation Table, Orthopedics	2																														
70 Ophthalmoscope	2																														
71 Orthopedic Surgical Set	3																														
72 Oxygen Head Box	4				2																										
73 Oxygen Inhalation Set	10		1	1			2	1			1		1	1																	
74 Parafin Bath	1																														
75 Parafin Stainer Automatic	1																														
76 Photo-electro calorimeter	1																														
77 Phototherapy Unit	2																														
78 Plaster Cutter	1																														

[Handwritten signature]
[Handwritten initials]
 A.D.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
79 Puls oximeter	6							4							1	1																		
80 Refract meter	1																																	
81 Refrigerator	11	1		1		1		1		1	1				1			1																
82 Sacle (Weight)	14	1				1		1		1	1	1	1	1	1							6	1	2										
83 Scale (Height)	11	1									1		1	1	1							6												
84 Slit lamp	1																					6												
85 Spectrophotometer	2							1									1																	
86 Sphyngomanometer	42	2	2			2	4	2	2	2	2	4	2	2	2				2	1				1										
87 Spirometer	1																					10	2											
88 Sterilizing Drum	12				1								1																					
89 Stethoscope	54	3	3	3		3	4	3	3	3	3	3	3	3	3			1	1		2		6											
90 Stretcher	13																					10	4											
91 Suction Unit	21	1	1	1	1	1	2	1	1	2	1	2	1	1	1			1	1	1	2	2					1	1	1	1	1	1		
92 Suction Unit Operation	8				1																	2												
93 Surgical Set	5																1	1	1	1												3		
94 Syringe pump	3						1																									4		
95 Thermometer	21	1	1	1		1	2	1	1	1	1	1	1																					
96 Tonometer	1																					6	1											
97 Ultrasound Scanner Doppler	1	1															1																	
98 Ultrasound Scanner General Purpose	1	1																																
99 Vacuum Suction Toothe brush	1				1																													
100 Venesection Set	1											1																						
101 Ventilator	3						4					1																						
102 Water Bath	1											3																						
103 Water Distiller	3																															1		
104 Wheel Chair	11						1																	2										
105 X-Ray Apparatus (General and Florescopy)	2																			1	2	2					1	1	1	1	1	1		
106 X-Ray Apparatus C-arm with X-Ray Shield Apron	2																								2									
107 X-Ray Apparatus Mobile with X-Ray Shield Apron	4																			1			1											
108 X-ray Film Viewer	29	1	1	1	1	1	2	1	1	1	1	1								1												1	1	1
109 X-ray Film Viewer Operation	9				1																	1	2	1	6	2						3		
110 Generator	Building 9 and 11 and emergency Reception															1	1	1	1			4												
111 Washing machine	17		1	1	1	1	1	1	1	1	1	1																						
112 Circulation Pump	1																																	

1 Treatment/Diagnosis	9/BF/A	Лечебно-диагностическое отд.
2 Septic Surgery	9/1F/A	Дет. хир. гнойное отд.
3 Urology	9/1F/B	Дет. хир. урол. отд.
4 Thoracoabdominal Surgery	9/2F/A	Дет. хир. торако отд.
5 Maxillofacial Surgery	9/2F/B	ДЧЛХО
6 Infant Surgery	9/3F/A	Дет. хир. груд. отд.
7 Pediatric ICU	9/3F/B	Дет. реан. отд.
8 Quarantine	11/BF/A	ДСО(инфек.-бок.)
9 Pediatric Neurology	11/1F/A	ДНО
10 Neonatology	11/1F/B	ДСО(неонатол.)
11 Infant Pediatric Section	11/2F/A	ДСО(отд. груд.)
12 ICU	11/2F/M	Отд. интенс. терапии
13 Hematology	11/2F/B	ДСО(гематол.)
14 Cardiorhematology	11/3F/A	ДСО(кардиоревмат.)
15 Pulmonology	11/3F/B	ДСО(пульмон.)
16 Ophthalmology	2/1F/B	ДГО
17 ENT	2/2F/B	ДЛОП
18 Traumatology	4/2F/B	Дет. травмат. отд.
19 Neurosurgery	8/2F/A	Дет. нейр. отд.
20 Pediatric Reception	Admi	Дет. сом. приемный покой
21 Emergency Reception	E/R	Дет. хир. приемный покой и экс. хирургия
22 Operation Theater	9/2F/M, 3F/M, E/R	Дет. опер. блок
23 Central Laboratory	C/Lab	Цен. лабо
24 Radiology	E/R, 9/1F/A, 11/2F/M	Рентген. отд.
25 Pathology Lab.	15	Патолого-анат. отд.
26		1 этаж 9 корпуса
27		2 этаж 9 корпуса
28		3 этаж 9 корпуса
29		1 этаж 11 корпуса
30		2 этаж 11 корпуса
31		3 этаж 11 корпуса



 P. R. ...

Japan's Grant Aid

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

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

Application (request made by a recipient country)

Study (Basic Design Study conducted by JICA)

Appraisal & Approval (appraisal by the Government of Japan and approval by the Cabinet of Japan)

Determination of Implementation (Exchange of Notes between both Governments)

Implementation (implementation of the Project).

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request. If necessary, JICA sends a Preliminary Study Team to the recipient country to confirm the contents of the request.

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

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study Report prepared by JICA and the results are then submitted to the cabinet for approval.

Fourthly, the project approved by the cabinet becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in preparing contracts and so on.

2. Basic Design Study

(1) Contents of the Study

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

JICA
P. Wang
A-C.

- a) Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation,
- b) Evaluation of the appropriateness of the Project for the Grant Aid Scheme from a technical, social and economical point of view,
- c) Confirmation of items agreed on by the both parties concerning a basic concept of the Project,
- d) Preparation of a basic design of the Project,
- e) Estimation of cost of the Project,

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

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

(2) Selection of Consultants

For smooth implementation of the study, JICA uses (a) registered consultant firm(s). JICA selects (a) firm(s) based on proposals submitted by the interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to a recipient country to also work in the Project's implementation after Exchange of Notes, in order to maintain technical consistency between the Basic Design and detailed Design.

3. Japan's Grant Aid Scheme

(1) Exchange of Notes (E/N)

Japan's Grant Aid is extend in accordance with the Notes exchanged by the two Government concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid etc., are confirmed.

(2) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding a contract with (a) consulting firm(s) and (a) contractor(s) and final payment to them must be completed.

JICA
P. *[Signature]* *[Stamp]*
M.O.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(5) Undertakings Required to the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

- a) To secure land necessary for the sites of the project, and to clear, level and reclaim the land prior to commencement for the construction,
- b) To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the installation work in case the installation of the equipment,
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

J. H. M.
P. C. M.
W. J.

(6) Proper Use

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

(7) Re-export

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

(8) Banking Arrangement (B/A)

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

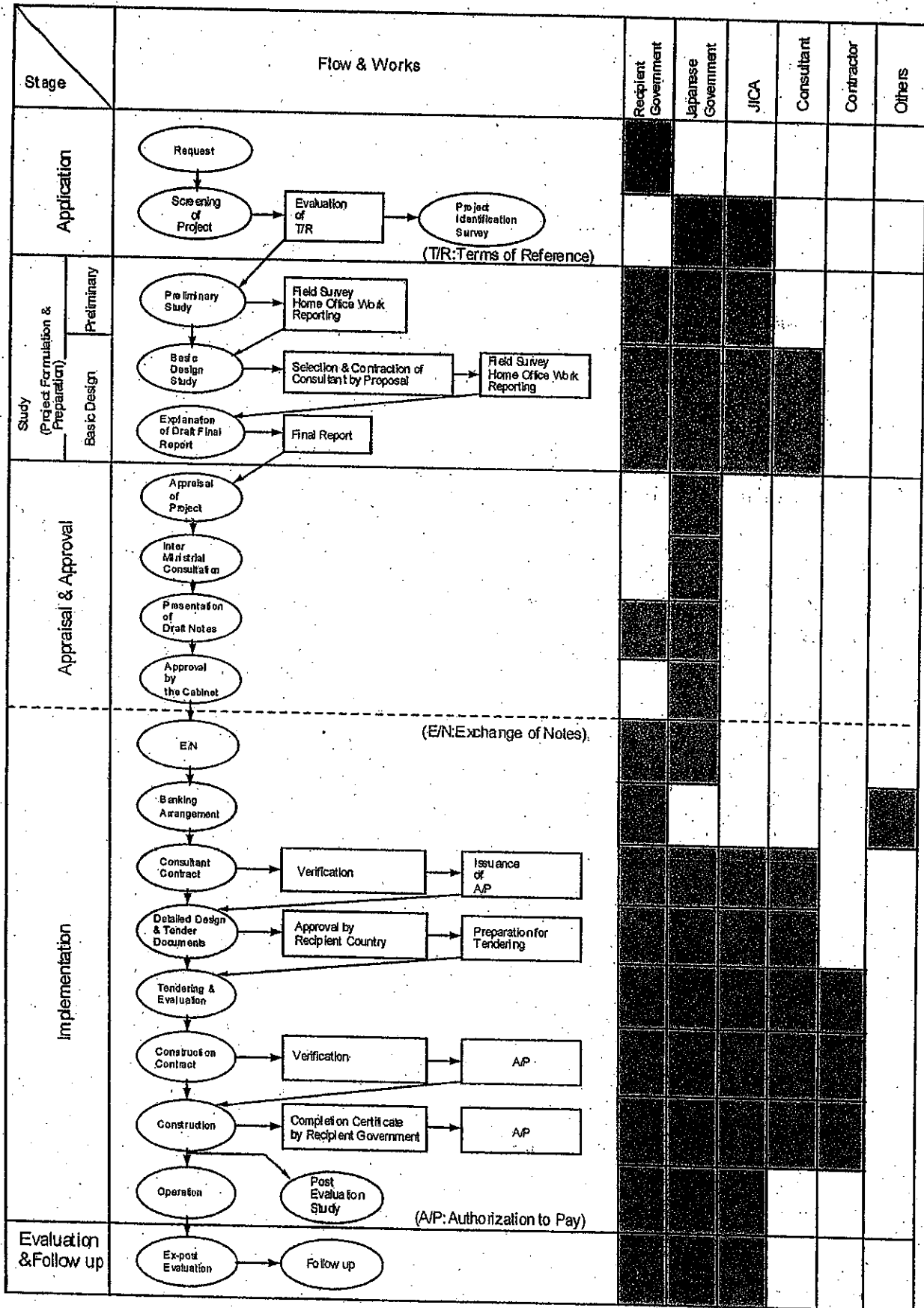
b) The payments will be made when payment requests are presented by the bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

J. H. M.
9. *W. H. K.*
D - O

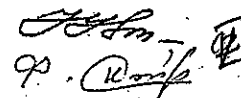
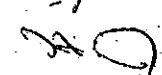
Flow Chart of Japan's Grant Aid Procedures



Handwritten signatures and initials:
 JICA
 op. [Signature]
 [Initials]

Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract.		●
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●


 P. R. Singh




аз/от « 03 » 07. с. 2004 г. № 11/102-1056

Департамент безвозмездного
финансового сотрудничества ЛСА
г-же Муто Ако

Уважаемая госпожа Муто Ако!

Министерство здравоохранения Республики Таджикистан свидетельствует своё уважение и признательность за сотрудничество в области здравоохранения и подтверждает, что руководителем проекта оснащения медицинским оборудованием РКБ им. Дьякова остается Салимов Нусратулло Файзуллоевич.

С уважением,

МИНИСТР

Н.ФАЙЗУЛЛОЕВ



аз/от « 03 » 07. с. 2004 г. № 11/101-1057

Департамент безвозмездного
финансового сотрудничества ЛСА
г-же Муто Ако

Уважаемая госпожа Муто Ако!

Министерство здравоохранения Республики Таджикистан свидетельствует своё уважение и признательность за сотрудничество в области здравоохранения и доводит до Вашего сведения, что Министерство здравоохранения Республики Таджикистан обязуется взять на себя техническое обслуживание компьютерного томографа, предоставленного ЛСА по проекту оснащения медицинским оборудованием РКБ им. Дьякова.

С уважением,

МИНИСТР

Н.ФАЙЗУЛЛОЕВ

9.0.07
57.0.07

(2)Explanation of Draft Report

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT
IN DIAKOV HOSPITAL IN THE REPUBLIC OF TAJIKISTAN
(EXPLANATION ON DRAFT REPORT)

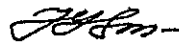
In June 2004, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on The Project for Improvement of Medical Equipment in Diakov Hospital (hereinafter referred to as "the Project") to the Republic of Tajikistan (hereinafter referred to as "Tajikistan"), and through discussion, field survey, and technical examination of the study results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Government of Tajikistan on the components of the draft report, JICA sent to Tajikistan the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Ms. Kae YANAGISAWA, Resident Representative, JICA Uzbekistan office, Japan International cooperation Agency, and is scheduled to stay in the country from 6 October to 15 October, 2004.

Dushanbe, 12 October, 2004



Kae Yanagisawa
Leader
Basic Design Study Team
Japan International Cooperation Agency
Japan



Nusratullo Faizulloevich Faizulloev
Minister
Ministry of Health
Republic of Tajikistan



Nusratullo Faizulloevich Salimov
Project Manager
Republic of Tajikistan

Witnessed by



Mirzosharif Asomuginovich Djanonov
Second Secretary
Department of Asia and Africa
Ministry of Foreign Affairs
Republic of Tajikistan

ATTACHMENT

1. Components of the Draft Report

The Government of Tajikistan agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid scheme

The Tajikistan side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Tajikistan as explained by the Team and described in Annex-3, 4 and 5 of the Minutes of Discussions signed by both parties on July 5, 2004.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Tajikistan by December, 2004.

4. Other relevant issues

4-1 After discussions with the Team, the items described in Annex-1 were finally requested by the Tajikistan side.

4-2 The Tajikistan side agreed to allocate enough budgets to operate the equipment including CT Scanner supplied by the Project, and to cover the provision of spare parts, consumables and periodical maintenance contracts as shown in Annex-2.

4-3 The Tajikistan side agreed to secure infrastructure such as electricity, central piping and water supply and drainage etc. and to complete the followings before October 2005;

A. Repair of targeted buildings such as floor, wall, ceiling, toilet, elevator, and so on.

B. X-ray protection work

C. Removal of existing equipment which will be replaced by the equipment procured under the Project

D. Electrical wiring system

1) Installation of new switches(300kva) in the substations (No.1384 and 1386).

2) Installation of new cable (160 square millimeters) from each substation (No.1384 and 1386) to the targeted buildings (No.9 and Emergency, Administration building and No.11).

3) Installation of new electrical distribution boards and switch boxes.

4) Installation of new wiring system with outlets for emergency power supply according to the requirement of Japanese side.

4-4 The Team strongly recommended centralization of some of the equipment and suggested the training for operating centralized system is included as a component of this Project. Tajikistan side basically agreed to carry out the idea.



4-5 The Tajikistan side agreed to submit annual report including the following indicators which will be implemented as the results of this Project to Embassy of Japan in Tajikistan and JICA Uzbekistan Office.

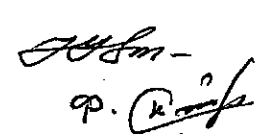
- A. Number of Outpatients
- B. Number of Inpatients
- C. Number of Operations
- D. Number of CT Scanner examination
- E. Number of X-Ray examination
- F. Number of Ultrasound Scanner examination
- G. Number of Endoscopic examination

4-6 Tajikistan side requested further training either in Japan or in Tajikistan for proper operation of equipment to be procured under the Project. The Team took note and would convey the request to the Government of Japan.

4-7 Both sides confirmed that the equipment specifications and the other technical information shall not be released before the tender to be held in the implementation stage of the Project.

Annex-1: Lists of the equipment

Annex-2: Letter of the preparation for the proper maintenance cost of equipment procured by the Project



ANNEX-I Equipment List

No.	Equipment	Total
1	Resusciation Set	20
2	Examination Light	18
3	Examination Table, Tall	6
4	Examination Table, Low	8
5	Infant Cot	8
6	Infant Incubator	12
7	Infant Warmer	8
8	Nebulizer	6
9	Oxygen Concentrator, General	16
10	Patient Monitor	18
11	Pulse Oximeter	7
12	Phototherapy Unit	5
13	Ventilator	9
14	Refrigerator	20
15	Laundry Machine	17
16	Scale (Weight/Height), Adult	20
17	Scale (Weight/Height), Infant	19
18	Sphygmomanometer	47
19	Stethoscope	59
20	Thermometer	75
21	Stretcher	14
22	Wheel Chair	15
23	Bed, Orthopedic	10
24	Bed, Pediatric	16
25	Infusion Pump	10
26	Syringe Pump	16
27	Suction Unit, General	21
28	Suction Unit, Operation	9
29	Instrument Cabinet	10
30	Instrument Trolley	8
31	Audiometer	1
32	Ergometer	1
33	ECG	5
34	Spirometer	1
35	Autoclave, Table Top	2
36	Autoclave Vertical, Operation	8
37	Autoclave Vertical, Laboratory	2
38	Laparoscope	1
39	Cysto-Urethroscope with Video Monitor	1
40	Bronchoscope, Fiber	1
41	Bronchoscope, Rigid	1
42	Colonoscope	1
43	Gastroscope	1
44	Disinfector, Endoscope	1
45	Ultrasound Scanner, Doppler	1
46	Ultrasound Scanner, General	1
47	X-ray Film Viewer, General	29
48	X-ray Film Viewer, Operation	9
49	Air Conditioner	3
50	Anesthesia Apparatus	9
51	Defibrillator	6
52	Electro Surgical Unit	8
53	Operation Table, General	4
54	Operation Table, ENT	1
55	Operation Table, Neurosurgery	1

No.	Equipment	Total
56	Operation Table, Orthopedics	2
57	Operation Table, Ophthalmology	1
58	Operation Light	9
59	Operation Microscope, Orthopedics	1
60	Operation Microscope, ENT	1
61	Operation Microscope, Neurosurgery	1
62	Hot Air Sterilizer	8
63	Instrument Table	9
64	Bone Marrow Aspiration Set	2
65	ENT surgery set	1
66	Neurosurgery Set	1
67	Orthopedic Surgical Set	2
68	Surgical Set	5
69	Venesectomy Set	1
70	Diathermy Unit	1
71	Hand Magnet	1
72	Lens Meter	1
73	Lens Set	1
74	Ophthalmic Examination Unit	1
75	Ophthalmoscope	6
76	Refract Meter	1
77	Tonometer	1
78	Blood Cell Counter, Manual	4
79	Centrifuge, Laboratory	2
80	Electrical Balance	2
81	Incubator, Laboratory	2
82	Micro Pipette Set	3
83	Microscope, Binocular	7
84	Photo-electro Calorimeter	1
85	Spectrophotometer	2
86	Water Bath	1
87	Microtome	1
88	Paraffin Bath	1
89	Tissue Processor	1
90	Water Distiller	3
91	Dental Chair Unit	1
92	Dental Laboratory Set	1
93	Dental Surgery Instrument Set	1
94	Maxillofacial Surgery Instrument Set	1
95	ENT Diagnose Set	1
96	Low Frequency Therapy Unit	1
97	Plaster Cutter	1
98	CT Scanner	1
99	Dark Room Equipment Set	3
100	X-Ray Apparatus C-arm with X-Ray Shield Apron	2
101	X-Ray Apparatus Mobile with X-Ray Shield Apron	4
102	X-Ray Apparatus, General and Fluoroscopy	2
103	Generator A	1
104	Generator B	1
105	Circulation Pump	2
106	AVR	26

KJ

P. W. J.



аз/от « 12 » 10 с. 2004 г. № 11/153-1580

Японское агентство
международного сотрудничества
Главе Представительства JICA в
Узбекистане
госпоже Каэ Янагисава

Уважаемая г-жа Каэ Янагисава!

Министерство здравоохранения Республики Таджикистан выражает свое уважение и признательность Правительству Японии за предоставление гранта для приобретения оборудования, предназначенного детской службе Республиканской больницы им. Дьякова и доводит до Вашего сведения, что Министерство берет на себя обязательства по обеспечению бюджета на содержание и техническое обслуживание предоставляемого оборудования на каждый год.

Относительно компьютерного томографа, Министерство здравоохранения приложит все усилия для осуществления мер по обеспечению ежегодного бюджета на его содержание, техническое обслуживание и закупку трубки, требующей периодической замены.

В целях осуществления надлежащего содержания и технического обслуживания данного оборудования в срочном порядке планируется заключение контрактов с сервисными агентствами медицинское оборудования на сервисное обслуживание.

С уважением,



Н. ФАЙЗУЛЛОВ

5. Reference

- | | | |
|--|--------------------------|------|
| Public Investment Program
And Technical Assistance Program
2001-2003 | Government of Tajikistan | 2001 |
| Joint Staff Assessment of the Poverty
Reduction Strategy Paper | WB/IMF | 2002 |