Table 4 Equipment Planned for the Project

List of Equipment Planned

Item No.	Description	Q'ty Planned
Children Hospital No. 1		
X-ray Department		
1-X-1	X-ray stationary unit for X-ray scopy and X-ray graphy	1
1-X-2	X-ray film processor, automatic	1
1-X-4	Electrocardiograph (ECG), 6-ch	1
1-X-91	X-ray film development set	1
1-X-92	X-ray protective apron	2
1-X-93	Ultrasound unit, portable with Linear and Convex probe	1
1-X-94	X-ray mobile unit	1
Reanimation Department (ICU)		
1-ICU-1	Ventilator for infant (Newborn)	3
1-ICU-2	Resuscitation table for newborn warming (Infant warmer)	3
1-ICU-3	Ultrasonic nebulizer	2
1-ICU-4	Neonatal monitor	6
1-ICU-5	Suction unit	3
1-ICU-6	Infant incubator	3
1-ICU-7 (1)	Infusion pump	4
1-ICU-7 (2)	Syringe pump	2
1-ICU-8	Weighing scale for newborn	1
1-ICU-9	Refrigerator for reagent, test materials & blood	1
1-ICU-91	Oxygen supply unit	1
1-ICU-92	Pulse oxymeter	2
Neurology Department		
1-NE-1	Electroencephalograph (EEG), 18-ch	1
1-NE-2	Weighing scale for newborn	1
1-NE-3	Electromyograph (EMG)	1
1-NE-5	Suction unit	3
Perinatal Rehabilitation Department		
1-PE-1	Weighing scale for newborn	1
1-PE-2	Infant incubator	2
1-PE-3	Nebulizer	3
1-PE-4 (1)	Infusion pump	1
1-PE-4 (2)	Syringe pump	3
1-PE-5	Suction unit	3
1-PE-91	Phototherapy unit	2
Infant - Pediatric Department		
1-NB-1	Weighing scale for newborn	1
1-NB-2	Sphygmomanometer	2
1-NB-3	Nebulizer	3
1-NB-4 (1)	Infusion pump	3
1-NB-4 (2)	Syringe pump	1
1-NB-5	Suction unit	3
1-NB-6	Infant incubator	2
Family Planning Department		
1-FP-1	Microscope, binocular	1
1-FP-2	Obstetric / Gynaecology examination chair	1
1-FP-3	Obstetric / Gynaecology instrument set	2
Clinical Laboratory Department		
1-CL-1	Blood cell counter	1
1-CL-2	Biochemical analyzer	1
1-CL-3	Electrolyte analyzer (Na, K, Cl / Ca)	1

List of Equipment Planned

Item No.	Description	Q'ty Planned
1-CL-4	Spectrophotometer	1
1-CL-5	Microscope, binocular	2
1-CL-6	Electronic analytical balance	1
1-CL-7	Blood gas analyzer	1
1-CL-8	pH-meter	1
1-CL-9	Bilirubin analyzer	1
1-CL-10	Coagulometer, semi-automatic	1
1-CL-91	Magnetic stirrer, with heater	2
1-CL-92	Roller for test tube	2
1-CL-93	Micropipette	10
1-CL-94	Pipette washer	1
1-CL-95	Glassware washer	1
1-CL-96 (1)	Centrifuge (General)	1
1-CL-96 (2)	Centrifuge (Hematocrit)	1
Laundry Department		
1-LD-1 (1)	Washing machine, 30kg	2
1-LD-1 (2)	Extractor (Laundry)	2
1-LD-1 (3)	Drying machine (Laundry)	2
1-LD-2	Ironing machine (Laundry) with table 150cm width	1
Polyclinic No. 5		
1-PC-1 (1)	Dental unit with chair and air-compressor	1
1-PC-1 (2)	Dental instrument set	1
1-PC-2 (1)	ENT chair unit	1
1-PC-2 (2)	ENT instrument set	1
1-PC-3 (1)	Ophthalmology chair mounted unit	1
1-PC-3 (2)	Ophthalmology lenses diagnostic set	1
1-PC-3 (3)	Ophthalmology instrument set	1
1-PC-4	Electrocardiograph (ECG), 6-ch	1
General Hospital Equipment & Others		
1-G-1	General diagnostic set	6
1-G-2	Ambulance	1

List of Equipment Planned

Item No.	Description	Q'ty Planned
Children Hospital No. 2		
X-ray Department		
2-X-1	CT Scanner	1
2-X-3	X-ray stationary unit for X-ray scopy and X-ray graphy	1
2-X-12	X-ray unit, general graphy	1
2-X-4	X-ray mobile unit	2
2-X-5	X-ray film processor, automatic	1
2-X-6 (1)	X-ray film illuminator (1 film)	2
2-X-6 (2)	X-ray film illuminator (3 films)	2
2-X-6 (3)	X-ray film illuminator (6 films x 2 steps, mobile)	1
2-X-7	X-ray protective apron	6
2-X-8	X-ray cassette loading desk	1
2-X-9	X-ray film storage box	1
2-X-10	Ultrasound stationary unit with color doppler unit	1
2-X-11	Ultrasound unit, portable with Linear and Convex probe	1
2-X-91	X-ray film development set	1
Reanimation Department (ICU)		
2-ICU-1	Ventilator for infant (Newborn)	2
2-ICU-2	Ventilator for children and adult	3
2-ICU-3	Ultrasonic nebulizer	6
2-ICU-4 (1)	Patient monitor	9
2-ICU-4 (2)	Neonatal monitor	1
2-ICU-5	Infant incubator	3
2-ICU-7	Functional Reanimation Bed (ICU bed)	9
2-ICU-8	Defibrillator with cart	2
2-ICU-9 (1)	Infusion pump	9
2-ICU-9 (2)	Syringe pump	3
2-ICU-10	Oxygen supply unit	3
2-ICU-11	Weighing scale for newborn	1
2-ICU-12	Weighing scale	1
2-ICU-13	Sphygmomanometer	2
2-ICU-14	Laryngoscope set for child with ambu bag	9
2-ICU-15	Blood haemosorbtion unit (Pump)	1
2-ICU-17	Suction unit	6
2-ICU-21	Refrigerator for reagent, test materials & blood	2
2-ICU-92	Pulse oxymeter	2
Ophthalmology Department		
2-EY-1	Ophthalmoscope, handy unit	4
2-EY-2	Slit lamp	2
2-EY-4	Autorefractokeratometer	1
2-EY-6	Ophthalmology lenses diagnostic set	2
2-EY-7	Fundus camera for stereoscopy eye examination	1
2-EY-9	Ophthalmo-chromoscope	1
2-EY-10	Ultrasound apparatus for ophthalmology	1
2-EY-11	Ophthalmology chair mounted unit	1
2-EY-12	Filed analyzer	1
Function Diagnostic Examination Department		
2-EX-2	Electromyograph (EMG)	1
2-EX-3	Weighing scale	1
2-EX-5	Spiroanalyzer	1
2-EX-6	Electroencephalograph (EEG), 18-ch	1

List of Equipment Planned

Item No.	Description	Q'ty Planned
2-EX-7	Electrocardiograph (ECG), 6-ch	1
2-EX-8	Electrocardiograph (ECG), 1-ch	1
Endoscopic Department		
2-ES-1	Fiber-gastroscope pediatric set	1
2-ES-2	Fiber-colonoscope pediatric set	1
2-ES-3	Fiber-bronchoscope pediatric set	1
2-ES-5	Fiber-duodenoscope	1
2-ES-6	Tracoscope	1
2-ES-7	Universal light source for fiberscope	3
2-ES-8	Endoscopic suction pump	3
2-ES-9	Electrosurgical unit for endoscopy	2
2-ES-10	Endoscope cleaning set	2
2-ES-11	Ultrasonic washing unit, table top for endoscopic tools	1
2-ES-12	Anaesthesia apparatus	1
Surgical / Urology Department		
2-SG-1	Suction unit	5
2-SG-2	Operation lamp, mobile with battery	5
2-SG-3	Cysto-urethrofiberscope	1
2-SG-7	Ultrasonic nebulizer	1
2-SG-8	Infant incubator	1
2-SG-9	Oxygen tent	2
2-SG-14	Puncture needle set (10 pcs./set)	2
2-SG-17	Oesophagus boogie set	1
2-SG-91	Treatment table	1
Orthopaedy / Traumatology Department		
2-OR-1	Arthroscope set	1
2-OR-2 (1)	Functional traumatology bed, for adult	5
2-OR-2 (2)	Functional traumatology bed, for child	5
2-OR-9	Nebulizer	1
2-OR-11	Infant incubator	1
2-OR-91	Treatment table	1
Operation Department		
2-OP-1	Anaesthesia apparatus with ventilator	5
2-OP-2	Operation table, universal type	4
2-OP-3	Operation table for orthopaedic	1
2-OP-4	Electrosurgical unit	3
2-OP-6	Laparoscope set for operation, with monitor / video system	1
2-OP-7	X-ray mobile unit, for operation (C-arm, TV)	1
2-OP-8	Operation microscope for ophthalmology	2
2-OP-9	Ophthalmic surgery and microsurgery instrument set	2
2-OP-11	Electrosurgical unit (for Ophthalmic Operation)	2
2-OP-13	Suction unit (3 lit. x 2 btls) for Operation Room	5
2-OP-14	Operation lamp, mobile with battery	5
2-OP-15	Operation light, ceiling type	3
2-OP-16	Instrument set, Surgery instrument set for major operation	2
2-OP-17	Instrument set, Surgery instrument set for pediatric	2
2-OP-18	Instrument set, Surgery instrument set for new-born	2
2-OP-19	Hot air sterilizer	2
2-OP-20	Instrument set, Urology instrument set	2
2-OP-21	Cysto-urethroscope set, rigid type	1
2-OP-22	Instrument set, Microsurgery operation	1

List of Equipment Planned

Item No.	Description	Q'ty Planned
2-OP-42	Instrument set, Traumatology (Orthopaedic) instrument set	1
2-OP-43	Instrument set, Traumatology (Orthopaedic) instrument set for child	2
2-OP-44	Operation microscope for neurosurgery operations	1
2-OP-45	Instrument set for operations on spinal cord (trauma and scholiasts)	1
2-OP-46	Instrument set, Neurosurgery instrument set	1
2-OP-47	Binocular loupe glass with fiber optic	1
2-OP-48	Instrument set for hip-pelvis operation of child with inborn dislocations	1
2-OP-50	Instrument table	5
2-OP-51	Bone drilling, cutting and treatment unit	2
2-OP-52	Instrument set for operation on tendons	1
2-OP-67	Goniometer	1
2-OP-68	UV hand washing apparatus	3
2-OP-69	UV disinfection lamp, mobile	2
2-OP-70	X-ray film illuminator (1 film)	2
2-OP-71	Bix holder (Dressing drum stand)	10
2-OP-72	Dermatorm	2
2-OP-91	Patient monitor	5
2-OP-92	High pressure steam sterilizer (200 lit.) with water softener	2
Cardiohematology Department		
2-CH-1	Puncture needle set (10 pcs./set)	2
2-CH-3	Weighing scale for newborn	1
2-CH-4	Weighing scale	1
2-CH-5	Stethoscope for infant	3
2-CH-6	Sphygmomanometer	3
2-CH-8	Infant incubator	1
2-CH-9	Functional bed (Gatch type)	10
2-CH-91	Pulse oxymeter	2
2-CH-92	Patient monitor	1
E.N.T Department		
2-ENT-1	ENT instrument set	2
2-ENT-2	Audiometer for children	1
2-ENT-3	Electrosurgical unit	1
2-ENT-4	Instrument Set, Microsurgery instrument set for larynx operation	2
2-ENT-5	Fiber-Rhino-Laryngoscope set	1
2-ENT-7	ENT suction unit	3
2-ENT-10	Operation microscope, for ENT	1
2-ENT-11	Laryngoscope, ceiling set	1
2-ENT-12	Operation table, universal type	1
2-ENT-13	Anaesthesia apparatus	1
2-ENT-14	Ultrasonic nebulizer	1
2-ENT-15	Autoclave, desk top type	1
2-ENT-91	ENT chair unit	2
Dental Department		
2-OD-1	Dental unit with chair and air-compressor	1
2-OD-2	Dental instrument set	1
2-OD-6	Autoclave, desk top type	1
Physiotherapy & Rehabilitation Department		
2-RH-1	Ultrahigh frequency current treatment apparatus (Shortwave 0 - 50W)	2
2-RH-3	Electric analgesia and TENS therapy unit	2
2-RH-7	Low frequency alternating magnetic therapy unit	1
2-RH-8	UV treatment unit (whole body)	2

List of Equipment Planned

Item No.	Description	Q'ty Planned
2-RH-9	Ultrasound wave therapy treatment unit	2
2-RH-10	Ultrasonic nebulizer	2
2-RH-14	Hydro bubbler bath	1
2-RH-24	Treadmill	1
Clinical Laboratory Department		
2-CL-1	Biochemical analyzer	1
2-CL-2	Spectrophotometer	1
2-CL-3 (1)	Centrifuge (General)	2
2-CL-3 (2)	Centrifuge (Hematocrit)	2
2-CL-4	Water distiller, 10 lit./h	1
2-CL-5	Hot air sterilizer	2
2-CL-6 (1)	Microscope, binocular	5
2-CL-6 (2)	Microscope, fluorescent	1
2-CL-8	Electronic analytical balance	1
2-CL-9	Refrigerator for reagent, test materials & blood	2
2-CL-10	Blood cell counter	1
2-CL-12	Electrolyte analyzer (Na, K, Cl / Ca)	1
2-CL-13	Blood gas analyzer	1
2-CL-14	Electrophoresis with densitometer electronic	1
2-CL-17	Refractometer	1
2-CL-19	Water bath, thermostat type	2
2-CL-21	Fume hood	1
2-CL-22	Coagulometer, semi-automatic	1
2-CL-23	Automatic urine analyzer	1
2-CL-91	Magnetic stirrer, with heater	2
2-CL-92	Roller for test tube	2
2-CL-93	Micropipette	10
2-CL-94	Pipette washer	1
2-CL-95	Glassware washer	1
Pharmacy Department		
2-PH-1	Prescription counter	2
2-PH-2	Refrigerator for reagent, test materials & blood	1
2-PH-4	Electronic analytical balance	1
2-PH-91	Water distiller, 10 lit./h	1
2-PH-92	Rack for reagent	1
Sterilization Department		
2-ST-2	High pressure steam sterilizer (400 lit.) with water softener	2
2-ST-3	Hot air sterilizer	2
2-ST-4	Ultrasonic washing machine for instrument	1
2-ST-91	Bottle sterilizer (100 lit)	1
Emergency Reception - Diagnostic Department		
2-EM-1	Ultrasonic nebulizer	1
2-EM-2	Anaesthesia apparatus with ventilator	1
2-EM-3	Suction unit	1
2-EM-4	Weighing scale for newborn	1
2-EM-5	Sphygmomanometer (Aneroid type)	1
2-EM-6	Puncture needle set (10 pcs./set)	2
2-EM-7	Stethoscope for infant	5
2-EM-9	Infant incubator	1
General Hospital Equipment & Others		
2-G-1	General diagnostic set	15

List of Equipment Planned

Item No.	Description	Q'ty Planned
2-G-2	Refrigerator for drugs for nurse post at wards	12
2-G-4	Ambulance	1
2-G-8	Air conditioner	6
2-G-91	Stretcher	5
2-G-92	Wheel chair	5
Laundry Department		
2-LD-1	Washing machine, 30kg	2
2-LD-3	Extractor (Laundry)	2
2-LD-4	Electric boiler (Hot water)	1
2-LD-5	Drying machine (Laundry)	2
2-LD-6	Ironing machine (Laundry) with table 150cm width	1
Kitchen		
2-KT-3	Electric boiler, (Hot water, 100lit.)	1
2-KT-7	Refrigerating cabinet (500 lit.)	3

List of Equipment Planned

Item No.	Description	Q'ty Planned
Children's Infectious Diseases Hospital		
X-ray Department		
3-X-1	X-ray stationary unit for X-ray scopy and X-ray graphy	1
3-X-2	X-ray film processor, automatic	1
3-X-3	X-ray mobile unit	1
3-X-91	X-ray film development set	1
3-X-92	X-ray protective apron	2
3-X-93	Ultrasound unit, portable with Linear and Convex probe	1
Reanimation Department (ICU)		
3-ICU-1 (1)	Ventilator for infant (Newborn)	2
3-ICU-1 (2)	Ventilator for child and adult	1
3-ICU-3	Ultrasonic nebulizer	3
3-ICU-4	Patient monitor	9
3-ICU-6	Infant incubator	1
3-ICU-8 (1)	Infusion pump	7
3-ICU-8 (2)	Syringe pump	2
3-ICU-9	Oxygen supply unit	1
3-ICU-10	Weighing scale for newborn	1
3-ICU-11	Sphygmomanometer (Aneroid type)	2
3-ICU-12	Laryngoscope set for child with ambu bag	3
3-ICU-13	Blood hemosorbtion unit (Pump)	1
3-ICU-15	Refrigerator for reagent, test materials & blood	1
3-ICU-91	Suction unit	2
3-ICU-93	Pulse oxymeter	1
Function Diagnostic Examination Department		
3-EX-2	Weighing scale for newborn	1
3-EX-4	Spiroanalyzer	1
3-EX-5	Electrocardiograph (ECG), 1-ch	1
3-EX-91	Electrocardiograph (ECG), 6-ch	1
3-EX-92	Electroencephalograph (EEG), 18-ch	1
Endoscopy Department		
3-ES-1	Endoscope cleaning set	2
3-ES-2	Ultrasonic washing unit, table top for endoscopic tools	1
IIF : Intestinal Infectious Disease Department		
3-IIF-1	Weighing scale for newborn	1
3-IIF-2	Weighing Scale	1
3-IIF-3	Sphygmomanometer	3
3-IIF-4	Ultrasonic nebulizer	2
3-IIF-5 (1)	Infusion pump	3
3-IIF-5 (2)	Syringe pump	1
VIF : Virus Infectious Disease Department		
3-VIF-1	Weighing scale for newborn	1
3-VIF-2	Weighing scale	1
3-VIF-3	Sphygmomanometer	3
3-VIF-4	Ultrasonic nebulizer	2
3-VIF-5 (1)	Infusion pump	3
3-VIF-5 (2)	Syringe pump	1
AIF : Aerial Infectious Disease Department		
3-AIF-1	Weighing scale for newborn	1
3-AIF-2	Weighing scale	1
3-AIF-3	Sphygmomanometer	3

List of Equipment Planned

Item No.	Description	Q'ty Planned
3-AIF-4	Ultrasonic nebulizer	2
3-AIF-5 (1)	Infusion pump	3
3-AIF-5 (2)	Syringe pump	1
Clinical Laboratory Department		
3-CL-1	Blood cell counter	1
3-CL-2	Biochemical analyzer	1
3-CL-3	Electrolyte analyzer (Na, K, Cl, or Ca)	1
3-CL-5	Spectrophotometer	1
3-CL-6	Microscope, binocular	2
3-CL-7	Electronic analytical balance	1
3-CL-8	Blood gas analyzer	1
3-CL-9	pH-meter	1
3-CL-10	Coagulometer, semi-automatic	1
3-CL-12	Refractometer, handy unit (express)	1
3-CL-14	Fume hood	1
3-CL-91	Magnetic stirrer, with heater	2
3-CL-92	Roller for test tube	2
3-CL-93	Micropipette	10
3-CL-94	Pipette washer	1
3-CL-95	Glassware washer	1
3-CL-96 (1)	Centrifuge (General)	1
3-CL-96 (2)	Centrifuge (Hematocrit)	1
Bacteriology Laboratory		
3-CLB-1	Colony counter	1
3-CLB-3	pH-meter	1
3-CLB-6	Microscope, stereoscope (x50)	1
3-CLB-91	Autoclave, vertical type	1
3-CLB-93	Microscope, binocular	1
Sterilization Department		
3-ST-1	High pressure steam sterilizer (200 lit.) with water softener	1
3-ST-2	Hot air sterilizer	1
3-ST-3	Ultrasonic washing unit, table top	1
Emergency Reception - Diagnostic Department		
3-EM-1	Weighing scale for newborn	1
3-EM-2	Sphygmomanometer (Aneroid type)	1
3-EM-3	Weighing Scale	1
General Hospital Equipment & Othere		
3-G-1	General diagnostic set	6

(4) Specifications of Main Equipment

A summary of the specifications, objective and quantity of each item of equipment that has been selected according to the policy on scope and grade is show in the following table.

Table 5 Specification for Main Equipment

Specifications of Major Equipment

NO.	Description	Specification	Purpose of use	Q'ty
2	Ambulance	Engine : 4,500cc approx. Size : 4,890 (L) x 1,940 (W)mm approx. Type : 4WD Left handle, Stretcher or Transport Infant Incubator	Patient transportation between hospitals.	2
3	Anesthesia Apparatus	Anesthesia Apparatus Main unit : Mobile with flowmeter uint, CO2 absorber BP meter & top shelf for monitoring equipment Flowmeter : O2 --- 0.1~10lit./min. N2O - 0.5~10it./min.	Necessary for the general anesthesia using inhalation anesthesic.	2
4	Anesthesia Apparatus with Ventilator	Anesthesia Apparatus Main unit : Mobile with flowmeter uint, CO2 absorber BP meter & top shelf for monitoring equipment Flowmeter : O2 --- 0.1~10lit./min. N2O - 0.5~10it./min. Anesthesia Ventilator Main unit : With circuit pressure meter, hinged control unit and bellows system. Minute volume : 1 ~20lit./min. Breathing frequency : 5~40times/min. Alarm	Necessary for the general anesthesia using inhalation anesthesic. Combining the function of ventilator it can be used also as auxiliary to the intravenous anesthesia.	6
12	Biochemical Analyzer	No. of analytical items : Max. 32 Cycle time : 180 tests / h. Sample volume : 2-30 μl Reagent volume : 10-400 μl Total volume : 250 μl/ test	As multipurpose equipment, this can be used not only for a biochemical test, but also for general examination. It is economical and effective for minimizing a sample. This also can be done for an emergency test.	3
14	Blood Cell Counter	Measurement : 8 parameters or more Cycle time : 60 tests / h. Sample volume : 20 μl / 50 μl Built-in Recorder	Screening of Ptient Blood	3
17	Bottle Sterilizer	Type : Free-standing single door cabinet type Door : Swing type Capacity : 100 lit. approx. Built-in electric steam generator	This should be used for sterilization of general circulation goods, cold and warm liquid in open vessel.	1
23	Cycto-Urethroscope	Telescope : Direction of view : 12° , 70° , 30° Outer dia. : approx. 4mm Working length : approx. 280mm Autoclavable	Rigid type scope. This is used for examination, diagnosis and operation of urethra and urinary bladder.	1
24	Defibrillator	12 Lead, with ECG Output : 3~360J. Monitor : 5~5.5inchi Battery : Bult-in Power souce : AC/DC	An equipment used to recover the rythm intrinsical to the heart, flowing endermically DC current into the ventricle which fibrillates most frequently leading to cardiac standstill. Essential equipment in any general hospitals.	2
32	Electroencepharograph (EEG), 18-ch	Number of channels : Total 18 channels + 2 marker channels Recording speed : 5, 20, 30, 120mm/sec Number of electrodes : 32 Automatic measurement : Programable. Display : A large LCD and LED	This is used as a support diagnosis instrument to check how the funcion of the central nervous system is for cases such as cerebral blood vessel disorder, injury of the head, brain tumor and epilepsy.	3
38	Electorosurgical Unit	Outoput : Cutting, Coagulation, Blend,Bipolar Output indication : Digital indcation Cutting : 0~350 W Coagulation : 0~130 W Blend : 0~250 W Bipolar : 50 W	An essential tool for operating room, that is used when dissecting the living structure of patients in an operation, when performing hemostatic dissection and for coagulation.	4

Specifications of Major Equipment

NO.	Description	Specification	Purpose of use	Q'ty
45	Extractor (Laundry)	Capacity : 25 KG/ LOAD Cylinder : 660㎜Φ X 300㎜L Cylinder volune : 0.10㎥ Speed : Extract 1,250 R.P.M.	This is used for drying linen such as sheets, towels and medical clothes. A small type with capacity of 30 kg should be selected.	4
46	Fiber-Bronchoscope, Pediatric Set	View angle : 120° Observation depth : approx.3~50㎜ Distal end outer diameter : approx.4.9㎜ Bending angle : approx.UP180° / DOWN130° Soft part outer diameter : approx. 5㎜ Working length : approx. 550㎜	Used in thoracic surgery, internal medicine and otorhinolaryngology for diagnosis and observation of bronchial lesions and removal of matter.	1
47	Fiber-Colonoscope, Pediatric Set	View angle : 120° Observation depth : approx.3~100㎜ Distal end outer diameter : approx.11.2㎜ Bending angle : approx.UP180° / DOWN180° Soft part outer diameter : approx. 11.3㎜	Used for diagnosis and treatment during and after operation, and mainly for direct observation of bile duct and for removal of choledocholith.	1
49	Fiber-Gastroscope, Pediatric Set	View angle : 120° Observation depth : approx.3~50㎜ Distal end outer diameter : approx. 5.3㎜ Bending angle : approx. UP180° ,DOWN180° Working lengt : approx. 925㎜	Used for examination of upper gastrointestinal tract, resection of polyps, hemostasis, and removal of foreign matter.	1
65	High Pressure Steam Steriliz (200 lit.)	Control : microprocessor Sterilizing method : by steam Cycle indication : LED Temperature indication : digital Interior capacity : approx. 200 lit. Safety : when the door opens and closes	Using for sterilization of operating tools and instrument.	3
66	High Pressure Steam Steriliz (400 lit.)	Control : microprocessor Sterilizing method : by steam Cycle indication : LED Temperature indication : digital Interior capacity : approx. 400 lit. Safety : when the door opens and closes	Using for sterilization of operating tools and instrument.	2
71	Instrument Set, Surgical	Operating scissors : str. blunt & blunt Tissue forceps, Dressing forceps, Kocher hemostatic forceps, Mayo-hegar needle holder, Nakahara's aneurism needle, Langebeck retractor, Flexible spatula, Abdominal retractor	Operation tools which can be used for general surgery operation will be arranged.	1 lot
85	Laparoscope Set for Operation with TV/Video System	View angle : approx. 70° Imagesize : 40㎜ diameter Working length : approx. 290㎜ Outer diameter : approx. 5㎜ With monitor	Used in internal medicine and gynecology - obstetrics for diagnosis and surgical operation on intraperitoneal lesion .	1
98	Operation Lamp, ceiling type	Lamp housing (Main) : approx. 75cm dia. 8 bulbs or more (Auxiliary): approx. 60cm dia. 5 bulbs Light source : Halogen bulb Light intensity (Main) : 140,000 lux. (Auxiliary): 100,000 lux. Color temperature : 4,000 ± 250K	This is an indispensable appliance for the operation room. Specification should be selected one combined with a hanging-ype main lamp and a support lamp which can be used even in case of big operation.	3
103	Operation Table, Universal Type	Dimensions : 1,800 X52㎜ approx. Height adjustable : 780㎜ to 1,100㎜ Trendelenburg : 45° Lateral tilt : 30° both sides Back section : 90° up and 40° down Gear manual controlled	Desirable is to adopt such operating table as can allow for general surgery in large operating rooms and enable to hold most confortable posture for the patients.	10

Specifications of Major Equipment

NO.	Description	Specification	Purpose of use	Q'ty
112	Patient Monitor	Mesurement mode : ECG, Resp. Body Temp. BP Display : CRT or TFT Recorder : Built-in	Monitoring for physical function of ECG, Respiratory, Body Temperature, Blood Pressure, etc.	24
145	Ultrasound Stationary Unit, with Color Doppler Unit	Indication mode : B, M. B/M, B with Color doppler function Monitor : 12 inches or larger Scanning technique : electronic convex, electronic linear, sector	General ultrasound examination and cardiac examination using color doppler function.	5
151	Ventilator for Infant	Mode : CPAP, CMV, PTV, SIMV, Alarm test Tidal volume : 1~125 or 126-250BPM I: E ration : 9.9:1to 1:9.9 O2 blender : 21~100% O2±3% Display : Digital Alarm : No air and no oxygen, no battery, etc.	Assisting in spontaneous breathing or for forced, controlled respiration of an infant.	7
169	X-Ray Stationary Unit, X-ray scopy and graphy	X-ray generator : 640mA or equivalent Remote control type R/F table TV monitor system X-ray tube	General X-ray graphy and fluoroscopy examination of body, skeleton, head, chest, abdomen, and soft tissues, etc.	3
170	X-Ray Unit	X-ray generator : 500mA or equivalent Remote control type R/F table TV monitor system X-ray tube	General X-ray graphy unit	1
200	CT Scanner	Scan method : Herical (Spiral) R/R type 2.0MHU Scan time : 0.6, 1.0, 2, 3, 4 sec. X-ray generator : 125kV, 50 - 200mA, 800mAs Detector : Xenon gas	Computed tomography imaging can be possible. Usefull for diagnosis.	1

Chapter 3 Implementation Plan

Chapter 3 Implementation Plan

3-1 Implementation Plan

3-1-1 Implementation Concept

The Project will be officially implemented following the signing of the Exchange of Notes (E/N) between the Japanese and Kazakhstan governments in accordance with the Japan's grant aid scheme. A Japanese consulting firm will be selected by the Kazakhstan side to implement the Project and the task of planning the equipment will begin. Following the completion of the tendering process, the selected Japanese trading firm will be placed in charge of procuring and installing the equipment. All contracts pertaining to equipment procurement and the consultant agreement will be approved and enforced by the government of Japan.

The following points will be taken into consideration in preparing the project implementation plan and the project will be implemented in accordance with the Japan's grant aid scheme.

(1) The implementation process will be reviewed by both the Japanese and Kazakhstan sides; and the scope of works to be shouldered by both sides and the period in which each process will be implemented will be decided. In order to avoid complications arising from the works carried out by both sides, the implementation period of each process and the project completion period will be adjusted.

(2) The trading firm that will be implementing the project will carry out an on-site survey within two months prior to the delivery of the equipment to the project site, in order to reduce the implementation period to a minimum. It will be responsible for setting up the route by which the equipment and materials will be delivered to the project sites, establishing the installation sites, confirming the existence of electricity and drainage facilities, preparing the equipment delivery schedule, and other administrative duties.

(3) Since the targeted project sites include three hospitals and five facilities, it is expected that a lengthy installation period will be required; and in anticipation of the possibility that the work may extend into mid-winter which will make the foundation concrete work difficult, several teams of technicians responsible for installing the equipment will be set up.

(4) In order to avoid delays in the construction work stemming from budgetary measures of the Kazakhstan government, an accurate estimation of the installation costs of the X-ray equipment and the renovation materials for the laundry room which will be provided by the Kazakhstan government will be provided after the type of equipment that will be procured under the Project has been decided. The aim is to expedite the budgetary measures of the Kazakhstan government.

(5) A training and guidance seminar on the operation procedures of major items of equipment and on periodic maintenance measures for the technicians on the Kazakhstan side will be carried out by the manufacturers.

(6) The manufacturers or a technicians from the officially designated sales agents of the medical equipment which has been procured from a third country and which requires maintenance and repair work, will be responsible for installing and providing guidance on the operation procedures of the equipment at each facility targeted by the Project.

(7) Guidance on the installation and operation of equipment procured from Japan will be carried out by Japanese engineers in the fields of electronic medical equipment, general medical equipment, etc.

3-1-2 Implementation Conditions

In view of the fact that the medical facilities targeted by the Project are in actual operation, a delivery schedule, the route by which the equipment will be carried into the facilities, storage area, etc. will be confirmed and the procedure by which the equipment will be installed will be discussed and coordinated with each project facility, in order to avoid disrupting their daily operations. In particular, the installation of new equipment will entail the removal of the existing equipment. Therefore, the period in which this work will be

carried out will be thoroughly discussed in order to avoid a large time gap between the removal of the existing equipment and the installation of the new; and thereby avoid disturbing diagnostic and treatment activities.

3-1-3 Scope of Works

The scope of works required for the Project will be divided and implemented respectively by the Japanese and Kazakhstan sides as shown below.

Table 6 Division of the Scope of Works

Contents of the Works	Japanese side	Kazakhstan side
1. Secure of the project site		○
2. Payment of B/A commission to the Japanese exchange bank		○
3. Tax exemption, customs clearance		○
4. Secure of the safety and entry / departure immigration formalities for the project related Japanese personnel sent to Kazakhstan		○
5.Equipment: Procurement Oc ean transport Internal transport Installation work Test operation / adjustment Guidance on equipment use	 ○ ○ ○ ○ ○ ○	
6. Apply and secure all the licenses needed to execute the Project		○
7. Secure the appropriate budget and personnel required for the effective operation and maintenance of the Project		○
8. Effective operations and maintenance of the equipment provided under the grant aid		○
9. Responsible for all the costs incurred in the installation of facilities and equipment not included in the grant aid and for the delivery, installation, and set up of such equipment		○
10. To coordinate and resolve all problems concerning third parties during the execution of the Project at the project site		○

3-1-4 Consultant Supervision

(1) Implementing Agency

The following four parties will be responsible for implementing the Project.

1) Project implementation agency

The Ministry of Health will be the supervising government body and the three hospitals targeted by the Project will be the implementing agency of the Project.

2) Consultant

The Project will be implemented under the Japan's grant-aid. Therefore, under this scheme, the Japanese consulting firm will be responsible for detailed design, the tender, officially supervising each phase of the Project's implementation, providing advice, carrying out adjustments, and other tasks that will ensure the Project's uninterrupted implementation, in accordance with the agreement signed between the implementing agency of the Kazakhstan and the Japanese consulting firm.

Specific term of reference of the consultant is as follows.

- Detailed design

  Compile the tender documents for equipment procurement (conditions of the tender, specifications of the equipment, budget)
- Expedite the tender and procurement contracts

  Establish the procurement contract procedure, prepare the procurement contract, study the content of the installation work of the equipment, select the firm responsible for equipment procurement (public announcement of the tender, carry out the tender and tender evaluations, contract negotiations, and witness the signing of the contract).
- Inspection and approval for the documents

  Inspect and approve the equipment specification documents, implementation drawings, and implementation plans submitted by the procurement firm.
- Report on Implementation Conditions

  Prepare a progress report on the facilities for the government of Japan and relevant parties
- Cooperate in the procedure of obtaining payment approval

  Study the content of the shipping bill, etc. and assist in the process.
- Administrative duties of the consultant related to project implementation

  Attend to each task during the project implementation stage from the start of the work to its completion.

3) Equipment procurement firm

The task of procuring the equipment will be carried out by the Japanese firm (trading firm) that was selected in the tender. Based on the contract signed with the Kazakhstan side, the Japanese firm will be responsible for the manufacture, supply, shipment, installation, etc. of the equipment; and the equipment will be handed over

to the Kazakhstan side after the firm has provided guidance on the operational procedure and maintenance of the equipment.

4) Japan International Cooperation Agency (JICA)

JICA will supervise the Japanese consultant and equipment procurement companies to ensure that the project is implemented according to the Japanese grant aid system. In addition, it will hold deliberations with the relevant parties in the Project as the need arises, in order to promote its implementation.

(2) Detailed Design and Supervision

In accordance with the agreement exchanged between the Japanese consulting firm and the Kazakhstan side, the consultant will be responsible for implementing of detailed design and supervising of the Project. Detailed design entails confirming detailed equipment specifications based on the basic design of the Project, obtaining documents on specifications, compiling the essential points of the tender, and tender documents based on the equipment procurement contract.

The supervision of the Project entails confirming whether the procurement company has carried out their work according to the contract, ensuring that the conditions of the contract are adequately executed, and providing official guidance, advice, and coordination in order to expedite the project s implementation. The consulting services are summarized below.

1) Implementing the design stage

Prepare the tender documents, the tender, and compile the contract

2) Tender stage

Pre-qualification of the tenderers, conduct the tender, evaluate the contents of the tender, oversee the signing of the contract

3) Supervision stage

Supervision (inspect and approve the equipment specification documents by the procurement firm, the loading of equipment, ocean transport, supervise the inland transport, supervise the installation of the equipment, supervise the construction work to be carried out by the Kazakhstan side), compile a progress report on the project's implementation, issue verification documents, etc. (The consultant will be responsible for overseeing the completion of the equipment's installation, confirming that the conditions of the contract have been fulfilled, and for witnessing

the handing-over of the equipment to the Kazakhstan side. The implementation stage of the Project will be officially completed when the consultant receives official confirmation for completion of services from the Kazakhstan side.)

In addition to the tasks summarized above, the consultant will be responsible for reporting the progress of the Project, payment procedures, and project completion and its handing-over of the equipment to the Kazakhstan side to relevant personnel of government of Japan.

(3) Personnel Plan

The following consultant personnel will be assigned to implementing the detailed design and supervision of the Project.

1) Project manager : 1 person

The project manager will supervise the whole consulting operation.

2) Medical equipment : 1 person

The persons in charge of medical equipment plan will analyze the planned equipment and make out specifications.

3) Interpreter : 1 person

The interpreter will interpret during the tender and completion stages.

3-1-5 Procurement Plan

(1) Equipment Procurement

Equipment which will be included in the procurement plan will meet the following three conditions: ① Manufactures have their liaison offices or local sales agents in the Kazakhstan, and have advantage for maintenance, ② There is no existing Japanese product in the market, or the specification is not meet with Japanese, ③ Spare parts, consumables, etc. are easy to obtain. These items will be procured from a third country such as the United States or Europe. Other factors such as reliable delivery and equipment cost will be considered in the procurement of other equipment.

Table 7 Equipment to be Procured by a Third Country

Equipment	Expected Country of Procurement
Biochemical Analyzer	Europe
Blood Cell Counter	Europe
Blood Gas Analyzer	Europe or USA
Electrolyte Analyzer (Na, K, Cl / Ca)	Europe or USA
Coagluometer, Semi-automatic	Europe
Water Distiller, 10 lit./h.	Europe
Ventilator for Infant	Europe or USA
Ventilator for Child and Adult	Europe or USA
Anesthesia Apparatus	Europe or USA
Anesthesia Apparatus with Ventilator	Europe or USA
Endoscopic Equipment	Europe

(2) Delivery of Equipment

Equipment procured in Japan will be shipped to Renun or Shanghai ports in China, transported by railway via Almaty City to Astana. Equipment procured from a third country will be shipped from a major port in Europe (Hamburg in Germany, etc.) or the United States and transported by railway via Russia to the Project sites.

In order to avoid breakage, damage, or theft, the equipment will be shipped in containers earmarked for each site at Renun or Hamburg ports.

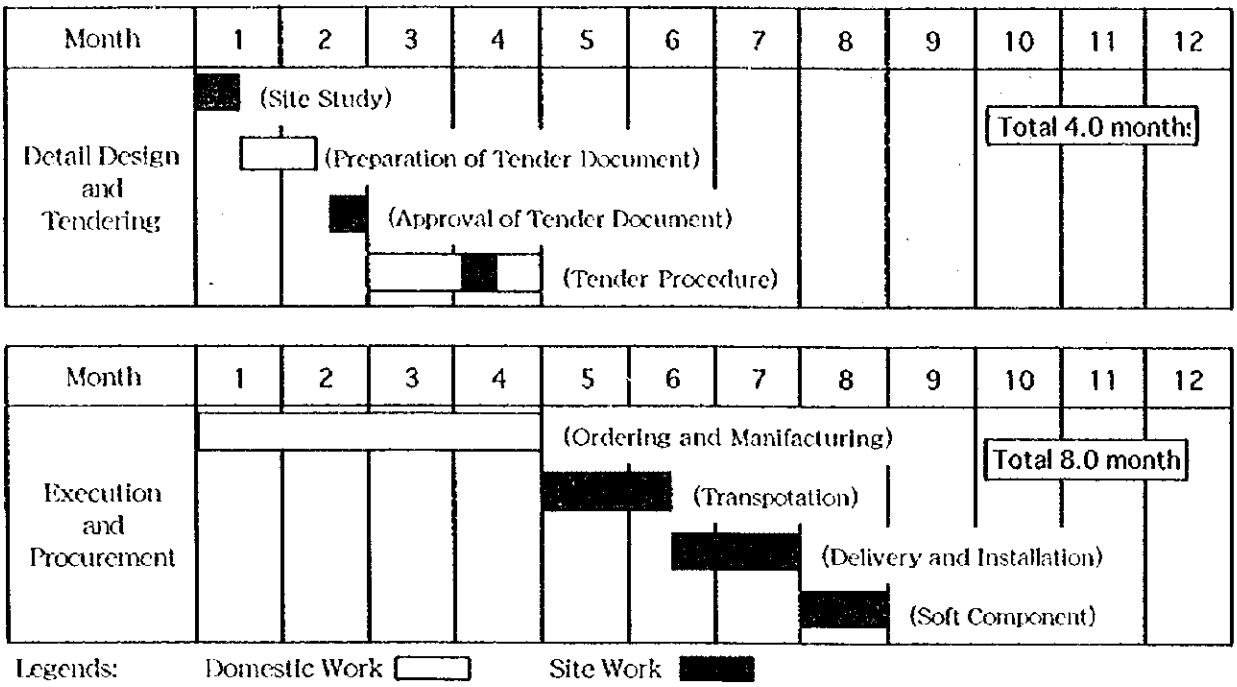
3-1-6 Implementation Schedule

(1) Implementation Schedule

Following the signing of the E/N by the both governments, tender documents will be prepared, and tender and contract on the equipment procurement and installation will be carried out. After the varification by the government of Japan, the Project will be implemented.

The implementation schedule shown in below will be carried out in accordance with Japan's grant aid scheme.

Table 8 Project Implementation Schedule



(2) Project Implementation Period

The Project implementation schedule is shown below.

1) Preparation of detailed design and tender documents

Based on the basic design study report, the consultant will confirm the final contents of the Project, and prepare the tender documents. This process is expected to take about 2.0 months.

2) Tender

Following the Project plan and tender documents prepared by the above-mentioned process, the consultant will conduct the tender for equipment procurement and installation, and general tender will be conducted in the presence of relevant parties. This process is expected to take about 2.0 months.

3) Equipment procurement and installation

After the signing of contract on equipment procurement and installation, the trading firm will begin to procure the equipment (order, manufacturing and transportation), following the verification by the government of Japan. The process of the procurement is expected to take about 5.5 months and installation is expected to take about 1.5 months.

4) Soft Component

This Project will be applied Soft Component to support the sumooth implementation of the clinical laboratory during the procurement process and after the installation of equipment. The period of the Soft Component after installation will expected to take 1.0 month.

3-1-7 Obligation of Recipient Country

The scope of the tasks which will be carried out by the Kazakhstan side in order to implement the Project are summarized below.

1) The Kazakhstan side will be responsible for providing an temporary office will be provided at the health facility site during the Project's implementation.
2) The Kazakhstan side will provide facilities prior to the installation of the Project equipment (electricity, water supply, drainage, and other facilities) and will remove the existing equipment from the installation sites that are planned for the new equipment.
3) The Kazakhstan side will help expedite the unloading, customs clearance, and inland transport of the equipment in Kazakhstan.
4) The Kazakhstan side will be responsible for the exemption of custom duties and all other tariffs and taxes for the Japanese personnel who will be responsible for carrying out project related work in Kazakhstan.
5) The Kazakhstan side will be responsible for providing safe and expeditious passage for all equipment brought in for the Project and for Japanese personnel arriving in Kazakhstan to carry out project related work.
6) The Kazakhstan side will be responsible for paying the foreign exchange handling fees of the Japanese bank.
   - Banking Arrangement (B/A) fees
   - Handling fees for Authorization to Pay (A/P)
7) The Kazakhstan side will be responsible for allocating a budget to cover personnel costs and for effectively implementing the Project (including the maintenance costs for the equipment provided by the Project).
8) The Kazakhstan side will periodically inform the government of Japan on the effective maintenance and use of the equipment provided by the Project.

9) The Kazakhstan side will be responsible for meeting all costs required for implementing the Project that will not be covered under the Japan's grant aid scheme.

3-2 Project Cost Estimation for the Kazakhstan Side

It is estimated that the Project cost for the Kazakhstan side is 5,500,000 Japanese Yen (US$46,800) when this project is implemented by Japan's grant aid. A cost breakdown is shown in the following table.

Table 9 Project Cost for the Kazakhstan Side

Activities	Contents	Amount
1. Utility Facility Costs	Installation cost of primary electricity facility	800,000 yen
	Installation cost of tap water and drainage facilities	600,000 yen
2. Repair Costs	Construction of interior finishing	1,500,000 yen
3. Incidental Installation Cost	CT scanner and X-ray stationary unit	2,500,000 yen
4. LicenceFormalities	Vehicle Registration Commission (2 units)	100,000 yen
Total		5,500,000 yen

3-3 Maintenance and Management Plan

(1) Maintenance Plan

The objective of the Project is to mainly replace existing depreciated equipment and to supply equipment which is lacking. Maintenance and replacement problems are not foreseen in the operations and technical maintenance of the equipment following its provision by the Project.

(2) Maintenance Budget

The provision of spare parts, consumables, and maintenance costs (increased amount) that are needed to operate the medical equipment that will be provided by the Project are shown in the table below.

Table 10 Estimated Operational and Maintenance Costs for the Project

Facility	Increased Amount	
Children Hospital No.1	1,126,000 yen	US$ 9,500
Children Hospital No.2	6,418,000 yen	US$54,000
(CT scanner)	(3,570,000yen)	(US$ 3,000)
Children s Infectious Diseases Hospital	1,109,000yen	US$ 9,500
Total:	8,653,000yen	US$ 73,000

Chapter 4 Project Evaluation and Recommendation

Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

4-1-1 Benefits

(1) Direct Benefits

1) Improvement of diagnosis and treatment services

By renewing and replacement of equipment, which is getting too old, insufficient and inadequate use such as adult use equipment, diagnosis can be improved in terms of correctness and promptness. Waiting loss time is shorten and treatment can be directly towards to the affected part.

2) Improvement of technical quality of medical staffs

Adequate number of the instrument enables not only medical staffs and also medical student who needs bed side training at hospital to practice with advanced and modern equipment. This will motivate those who care for medical progress. Hence, total quality of medical technology can be improved.

3) Integration of effective medical service system

Integration of central laboratory and operation room where needs system gives opportunity of speedy, simplified and systematic work, and cutting down on expenses. It will lead discover of disease in early stage and enable to treat before severe condition. Furthermore, hospital stay will be shortened and patient rotation will be up, so that hospital can expect an increase of revenue.

(2) Indirect Benefits

Improvement of the child medical services functionally as top referral hospital in the northern Kazakhstan region can let the patient relieve from the burden physcally and economically such as the transportation to Almaty.

Moreover, this Project will contribute the improvement of medical conditions in Kazakhstan, due to the establishment of child medical system and child medical services in the northern Kazakhstan region.

4-1-2 Appropriateness of the Project

Kazakhstan is satisfied with conditions to establish the medical system such as infrastructure, public security, high educational level which has continued since the period of former Soviet regime. However, it is difficult to renewal the medical facilities and equipment and to realize the modernization, due to the insufficient budget by the economic stagnation.

Improvement of the medical services will be realized by the implementation of the Project under the Japan's grant aid. The renewal of the equipment little by little using the limited self-budget of the hospitals is not enough to achieve the medical services. From the aspect of eficiency of total works flows, parcial replacement of the equipment is ineffective than total renewal of it, for instance, diagnostic examination of automatic system. In addition, efficiency of the medical services and rotation of the inpatients will be increased, and the income of the hospital will be expected to improve.

Provision of the equipment to be the top referral hospitals will enable to treat the urgently serious disease and patient who has been cared long time without implementation of diagnostic. Provision of the equipment in the medical sector is a core concept of BHN, will contribute the improvement of the "Quality of Life (QoL) " for residents in the recipient region. Hence, implemention of this Project through Japan's grant aid is fully appropriate.

4-2 Recommendation

The objectives of the Project are to strengthen the medical service system in the recipient region, and to contribute improvement of the BHN of the residents. To accomplish the objective, lack of medical equipment will be provided to the recipient hospitals. Therefore, it has been concluded that implementing this Project through Japan's grant aid is fully appropriate. However, implementation of the Project smoothly and effectively, there is an implement the following countermeasures by the Kazakhstan side.

(1) Allocation of Budget

At present, each children hospitals have enough budget to manage. However, Astana city has a global urban renewal project as a capital and has a fluid side in organization and structure in the government. In addition, there is a possibility for economic weakness by fluctuation of foreign exchange. An annual maintenance budget for the Project should be provided by Astana city for each hospitals.

(2) Establishment of Hospital Function

The children hospitals has functional partial responsibility for top referral hospital of child care and is subdivided in numbers of departments in a hospital. In according to the Project, hospitals can strengthen each function and specialty. Each hospitals need to draw up targets and program such as diagnosis flow and treatment system.

(3) Needs for Monitoring

In order to clarify the effectiveness and problem after execution of the Project, monitoring is required for operational conditions, frequency of maintenance of the equipment and budgeting expectation. This can lead a self-evaluation and a guide into the strategy for the future management.

(4) Maintenance Contract

Some of the equipment of the Project need service for maintenance by the local agents technically. Maintenance contract with the local agents is helpful for this equipment and its long-term operation.

Appendix

Appendix 1. Members of the Study Team

Name	Position	Organization
(1) Dr. Kazuo HIKITA	Team leader (B/D)	Paediatrician, M.D. Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan Ministry of Health and Welfare
(2) Dr. Kunihiko HIRABAYASHI	Team leader (D/F)	Sergeon, M.D. Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan Ministry of Health and Welfare
(3) Mr. Makoto IMAMURA	Project coordinator (B/D)	First Project Study Division, Grant Aid Project Study Department, Japan International Cooperation Agency (JICA)
(4) Ms. Keiko SANO	Project coordinator (D/F)	Overseas Offices General Management Division, General Affairs Department, Japan International Cooperation Agency (JICA)
(5) Mr. Norito NAITO	Project Manager	System Science Consultants Inc.
(6) Mr. Naoyuki YAZAWA	Equipment Planner I	System Science Consultants Inc.
(7) Ms. Keiko NAMIKI	Equipment Planner II	System Science Consultants Inc.
(8) Mr. Akihiro HAYAHARA	Facility Planner	System Science Consultants Inc.
(9) Mr. Hiroyuki KIMURA	Cost and Procurement Planner	System Science Consultants Inc.
(10) Mr. Yukichi GOTO	Interpreter	System Science Consultants Inc.

Appendix 2. Survey Schedule (1 / 2)

Basic Design Study

	Date		Official Member	Consultant / Project Manager	Equipment Planner (I)	Equipment Planner (II)	Facility Planner	Procurement / Cost Estimation	Interpreter
1	3.28	Sun	Narita → Frankfurt (JL401)	Narita → Frankfurt (LH710)	↔			↔	↔ (with Chief Consultant)
2	3.29	Mon	Frankfurt → Almaty (LH648)	Frankfurt → Almaty (LH648)	↔			↔	↔
3	3.30	Tue	Embassy of Japan Ministry of Health Aksai Children Hospital / Almaty City Diagnostic Center	↔	↔			↔	↔
4	3.31	Wed	Almaty → Astana Agency for Strategic Planning and Reform, Regional Health Department, City Health Department	↔	↔			↔	↔
5	4.1	Thu	Children Hospital (No.1)	↔	↔			↔	↔
6	4.2	Fri	Children Hospital (No.2) & Infectious Hospital	↔	↔			↔	↔
7	4.3	Sat	Documentation & Meeting	↔	↔			↔	↔
8	4.4	Sun	Documentation & Meeting	↔	↔			↔	Translation
9	4.5	Mon	Survey of Health Facilities	↔	↔			↔	↔
10	4.6	Tue	Survey of Project Sites / Health Facilities Ministry of Health	↔	↔			↔	↔
11	4.7	Wed	Discussion with Ministry of Health, Regional/City Health Department	↔	↔	Narita → Frankfurt		↔	↔
12	4.8	Thu	Signing on "Minutes of Meeting" (MOH)	↔	↔	Frankfurt → Almaty		↔	↔
13	4.9	Fri	Astana → Alamty Report to Embassy of Japan	↔	↔	Meet with Team Embassy of Japan		Astana → Alamty Report to Embassy of Japan	↔
14	4.10	Sat	Almaty → Frankfurt → Narita	Documentation & Meeting	↔	↔		Documentation & Meeting	Translation
15	4.11	Sun	Av. Narita	Documentation & Meeting	↔	↔		Documentation & Meeting	↔
16	4.12	Mon		World Bank	Distributor / Agent	World Bank		Distributor / Agent	↔ (with Chief Consultant)
17	4.13	Tue		UNICEF	Almaty City Diagnostic Center	UNICEF		Almaty City Diagnostic Center	↔
18	4.14	Wed		WHO Almaty → Astana	Distributor / Agent Almaty → Astana	↔		Transportation Research Almaty → Astana	↔
19	4.15	Thu		Project Site	↔	↔		Project Site	↔
20	4.16	Fri		Central Laboratory AIDS Center Project Site	↔	↔		Project Site	↔
21	4.17	Sat		Project Site	↔	↔	Narita → Frankfurt	Project Site	↔
22	4.18	Sun		Documentation & Meeting	↔	↔	Frankfurt → Almaty	Documentation & Meeting	Translation
23	4.19	Mon		Project Site	↔	↔	Almaty → Astana Meet with Team	Project Site	↔
24	4.20	Tue		Project Site	↔	↔	↔	↔	↔
25	4.21	Wed		Akemora GH 2nd Maternity Center Railway Hospital	↔	↔	↔	↔	↔
26	4.22	Thu		ASPR	Project Site	ASPR	Project Site	Marketing Research	↔ (with Chief Consultant)
27	4.23	Fri		International Organization / Other Doners	Astana → Almaty	Preparation of Specification	Construction Company	Preparation of Procurement Plan	↔
28	4.24	Sat		Project Site	Almaty → Frankfurt	Project Site	↔	↔	Translation
29	4.25	Sun		Documentation & Meeting	Frankfurt → Narita	Documentation & Meeting	↔	↔	↔
30	4.26	Mon		Astana City Health Department	Av. Narita	Astana City Health Department	Material Research	Marketing Research	↔ (with Chief Consultant)
31	4.27	Tue		Astana City Health Department		↔	Infrastructure Research	Marketing Research	↔
32	4.28	Wed		Astana City Health Department		↔	Infrastructure Research	Preparation of Specification	↔
33	4.29	Thu		Astana City Health Department		↔	Environment Research	Medtechservice	↔
34	4.30	Fri		Wrap-Up Meeting at Astana		↔	↔	↔	↔
35	5.1	Sat		Astana → Almaty		↔	↔	↔	↔
36	5.2	Sun		Documentation & Meeting		↔	↔	↔	Translation
37	5.3	Mon		Report to Ministry of Health / Embassy of Japan		↔	Distributor/Agent	Transporter Forwarder	↔ (with Chief Consultant)
38	5.4	Tue		Almaty → Frankfurt (LH647)		↔	↔	↔	↔
39	5.5	Wed		Frankfurt → Narita (LH710)		↔	↔	↔	↔
40	5.6	Thu		Av. Narita		↔	↔	↔	↔

Appendix 2. Survey Schedule (2/ 2)

Explanation of Draft Final Report

	Date		Official Member	Consultant / Project Manager	Equipment Planner (I)	Equipment Planner (II)	Procurement / Cost Estimation	Interpreter
1	8.8	Sun	Narita → Frankfurt	〃	〃	〃	〃	〃
2	8.9	Mon	Frankfurt → Almaty	〃	〃	〃	〃	〃
3	8.10	Tue	Embassy of Japan, Aksai Children Hospital, Almaty City National Moternal and Children Health Care Center	〃	〃	〃	〃	〃
4	8.11	Wed	Almaty → Astana Agency for Strategic Planning & Reforms, Ministry of Health, City Hall	〃	〃	〃	〃	〃
5	8.12	Thu	Children Hospital No.2	〃	〃	〃	〃	〃
6	8.13	Fri	Children Hospital No.2	〃	〃	〃	〃	〃
7	8.14	Sat	Children Hospital No.2	〃	〃	〃	〃	〃
8	8.15	Sun	Documentation & Meeting	〃	〃	〃	〃	Transration
9	8.16	Mon	Health Committee, Astana City Hall, Agency, MOFA, Discussion of Minutes	〃	〃	〃	〃	〃
10	8.17	Tue	Children Hospital No.2 Signing on "Minutes of Discussion" (City Hall)	〃	〃	〃	〃	〃
11	8.18	Wed	Astana → Alamty Report to Embassy of Japan	〃	Children Hospital No.2 (Meeting for specification)	Astana → Alamty Report to Embassy of Japan	Children Hospital No.2 (Meeting for specification)	〃 (with Chief Consultant)
12	8.19	Thu	Almaty → Frankfurt	Almaty → Astana Agency for Strategic Planning & Reforms	〃	Almaty → Astana Children Hospital No.2	〃	〃
13	8.20	Fri	Frankfurt → Narita	Astana City Hall, Health Committee	〃	〃	〃	〃
14	8.21	Sat	Av. Narita	Children Hospital No.2	〃	〃	〃	〃
15	8.22	Sun		Documentation & Meeting	〃	〃	〃	Transration
16	8.23	Mon		Children Hospital No.2 Payment Center	Children Hospital No.2 (Meeting for specification)	Children Hospital No.2 Payment Center	Children Hospital No.2 (Meeting for specification)	〃 (with Chief Consultant)
17	8.24	Tue		Project Site Astana → Almaty	〃	〃	〃	〃
18	8.25	Wed		Report to Embassy of Japan	Institute of Surgery Marketing Research	World Bank, UNDP	Institute of Surgery Marketing Research	〃 (with Chief Consultant)
19	8.26	Thu		Almaty → Frankfurt Frankfurt → Narita	〃	〃	〃	〃
20	8.27	Fri		Av. Narita	〃	〃	〃	〃

Appendix 3. List of Party Concerned with the Study

HEALTH SECTOR

Ministry of Health, Education and Sports

Mr. Krymbek Y. KUSHERBAYEV	Minister
Mr. Aryn Y. MUKHTAROVICH	First Secretary Chief of Health and Education Sector

Health Committee

Dr. Aikan AKANOV	First Vice Chairman
Dr. Ivan IVASSIV	Chief of MCH Division

Astana City Health Department

Dr. Amangeldy JEKSEMBAEV	Director

Akmola Municipal Health Department

Dr. Sergei ORCHINNIKOV	Director

Astana National Health Services Payment Center

Mr. karshiga KULMUKANOV	Director

OTHER MINISTRIES

Agency for Strategic Planning and Reforms

Mr. Tomiichi INAGAKI JICA Expert	ODA Coordination senior Adviser
Mr. Erlan A. ARYNOV	Administration for Coordination of External Aid Chief of Administration

Ministry of Foreign Affair

Mr.Vadim P. ZVERKOV	Head of Dept. of International Economic Cooperation

ASTANA CITY

Astana City Children Hospitals

Dr. Sergey M. DEMOCHKIN	Children Hospital No.2	Director / Project Manager
Dr. Nadezhda M. PETUKHOVA	Children Hospital No.1	Director
Dr. Leonid S. KHVOCTOV	Children s Infectious Hospital	Director

Astana City Hall

Vice Mayor	Mr. Tolegen M. MUHAMEDJANOV
Vice Mayor	Mr. Nurlan Z. NIGMATULIN
Vice Mayor	Mr. Mamin A. UZAKPAEVICH

RESEMBLE HOSPITALS IN ALMATY

Almaty Regional Diagnosis Center

Dr. Serik MOLOLACHMETOV	Director
Dr. Jury V. GRUSHIN	CT & MRI Department

Republic Aksai Children Hospital

Dr. Gulinara KILIYRZAEBA	Vice Director

INTERNATIONAL AGENCIES

Ms. Natalia BEISENOVA	World Bank Operations Officer
Dr. Mourat USATAEV	WHO National Professional Officer
Mr. Richard DION	UNDP Program Coordinator
Mr. Issilbek Z. NURMANOV	UNDP Program Coordinator
Mr. Ekrem BIRERDINC	UNICEF Area Representative
Mr. Umit KARTOGLU	UNICEF Health Project Officer
Mr. Karlfried METZLER	GTZ Program Officer
Dr. Indira A. AITMAGAMBETOVA	USAID Project Management Specialist
Ms. Harriett P. DESTLER	USAID Program Officer

EMBASSY OF JAPAN

Mr. Hidekata MITSUHASHI	Ambassador
Mr. Akira TATEYAMA	Councilor
Mr. Atsushi SUDA	Second Secretary
Mr. Toru INOUE	Attache

Appendix 4. Minutes

MINUTES OF DISCUSSIONS ON THE BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT FOR CHILDREN HOSPITALS IN ASTANA CITY IN THE REPUBLIC OF KAZAKHSTAN

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

JICA sent to the Kazakhstan the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Dr. Kazuo HIKITA, Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health and Welfare, and is scheduled to stay in the country from 29 March to 4 May, 1999

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

In the course of 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.

Astana, April 8, 1999

Kazuo HIKITA
Leader
Basic Design Study Team
Japan International Cooperation Agency
Japan

Aryn Yerlan Mukhtarovich
First Deputy Minister
Ministry of Health, Education and Sport
The Republic of Kazakhstan

Muhamedjanov Tolegen Muhamedjanovich
Vice Major
Astana City Administration

Demochkin Sergey Michailovich
Chief Doctor and Chief Project Manager
City Children Hospital No2.

Yerlan A. Arinov
Head
External Aid Coordination
Agency on Strategic Planning and Reforms

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the quality and quantity of the medical services in the Children Hospitals in Astana City through the procurement of medical equipment.

2. Project sites

The sites of the Project are the City Children Hospital No.1, the City Children Hospital No.2 and City Children Infectious Diseases Hospital as described in ANNEX-I.

3. Responsible and Implementing Agency

3-1. Responsible Agency

Ministry of Health, Education and Sport
Agency on Strategic Planning and Reforms
Astana City Administration

3-2. Implementing Agency

Department of Health of Astana City
City Children Hospital No. 1
City Children Hospital No.2
City Children Infectious Diseases Hospital.

4. Items requested by the Government of Kazakhstan

After discussions with the Team, the items described in ANNEX-II were finally requested by Kazakhstan side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Kazakhstan side understands the Japan's Grant Aid Scheme explained by the Team, as described in ANNEX-III.

5-2. The Kazakhstan side will take the necessary measures, as described in ANNEX-IV, for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultants will proceed to further studies in Kazakhstan until May 4, 1999.

6-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in July 1999.

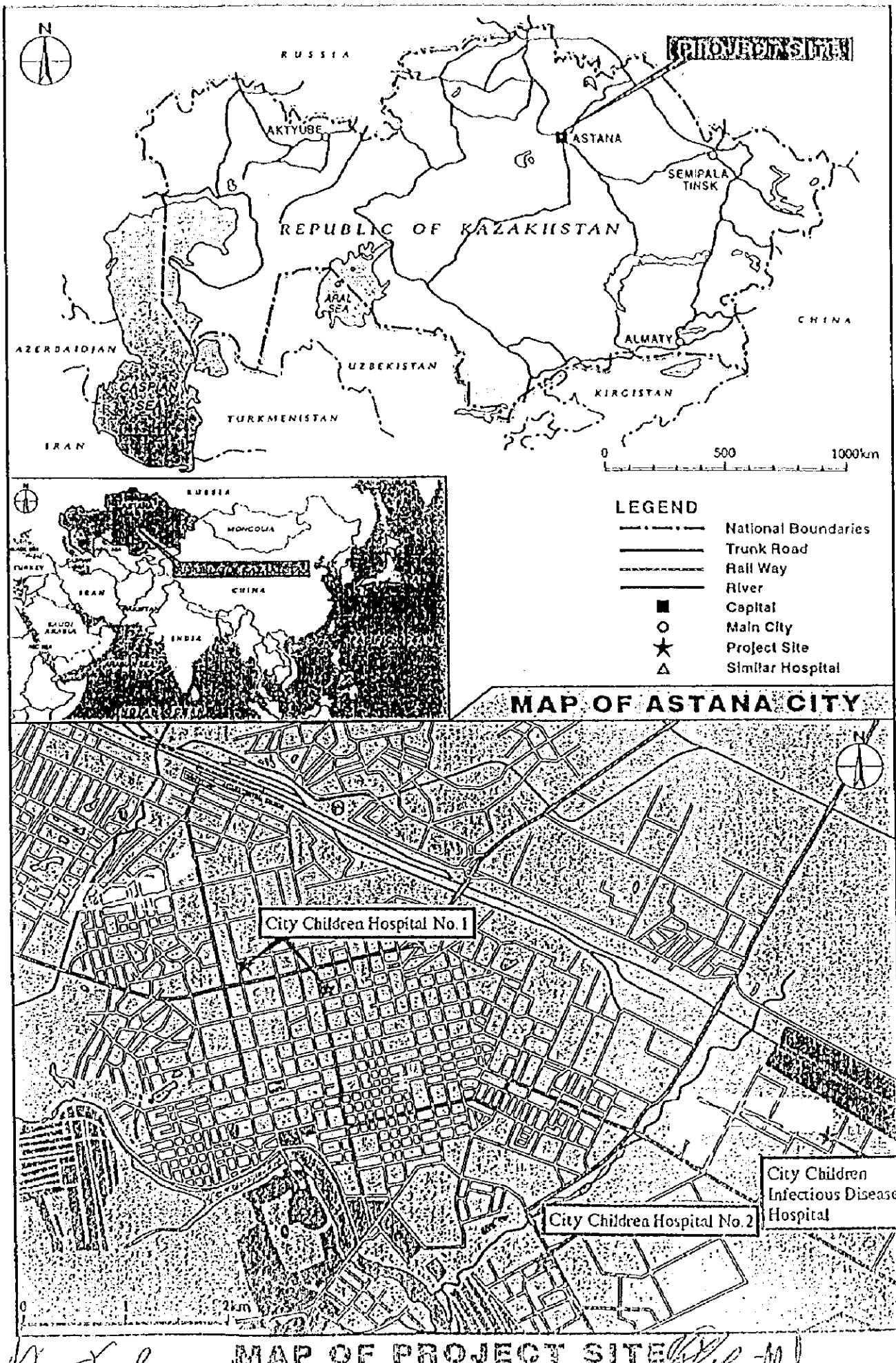
6-3. In case that the contents of the report is accepted in principle by the Government of Kazakhstan, JICA will complete the final report and send it to the Government of Kazakhstan by November 1999.

7. Other relevant issues

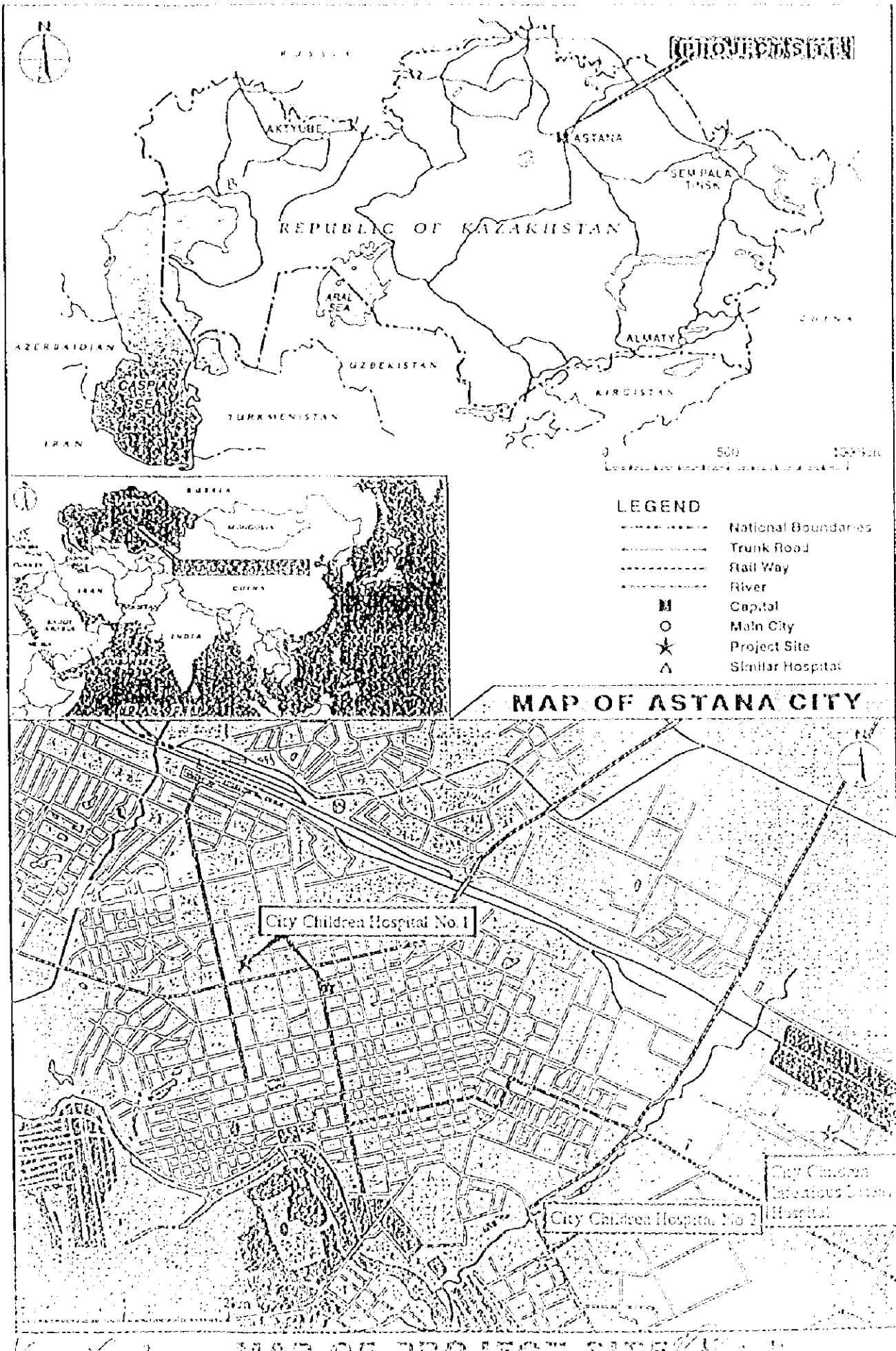
7-1. The Kazakhstan side assigned in ANNEX-II with their own priorities on the equipment.
A= 1st priority, B=2nd priority, C=3rd priority

7-2. The Kazakhstan side is required to secure and allocate the enough budged to operate and maintain properly and effectively the equipment of the Project.

7-3. The Kazakhstan side requested the consultant services for operation and maintenance on the equipment as one of the components of the Grant Aid.



MAP OF PROJECT SITE



MAP OF PROJECT SITE

ANNEX-III

Japan's Grant Aid Scheme

1. Grant Aid Procedures

1) Japan's Grant Aid Program is executed through 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 Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on 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, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

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

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

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

The Government of Japan requests the Government of 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 though they may fall outside of jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations in the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out the Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consulting firm(s) used for the Study which is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) What is Grant Aid ?

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

2) Exchange of Notes (E/N)

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

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

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

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

However the prime contractors, namely, consulting contracting 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.)

5) Necessity of "Verification"

The Government of 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 taxpayers.

6) Undertakings required of the Government of recipient country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:
a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
b) To provide facilities of the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
c) To secure buildings prior to the procurement 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 will 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.

7) "Proper Use"

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

8) "Re-export"

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

9) Banking Arrangements (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 a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

ANNEX-IV

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 and stay therein for the performance of their work		●
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		●

Requested Equipment List ANNEX - II

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept	No			
2	X	1	Computer Tomography Unit	1	A
2	X	2	NMR Tomograph with minimum 1.0 Tesla Magnetic Capacity with Synchronise	1	A/B
2	X	3	X-ray Stationary Unit with 2 X-ray Tubes with Digital Processing & Telemetry for X-ray Scopy and X-ray Graphy	1	A
2	X	4	X-ray Mobile Unit for X-ray examination at patient wards, operation rooms	3	A
2	X	5	Automatic Film Processor	2	A
2	X	6	X-ray Film Illuminator (420 x 540 x 95)	3	A
2	X		X-ray Film Illuminator (1140 x 540 x 95)	2	
2	X		X-ray Film Illuminator (2210 x 136[illegible] x 450. Mobile)	1	
2	X	7	Protective Apron	10	A
2	X	8	X-ray Cassette Loading Desk	1	B
2	X	9	Box for X-ray Film Storage	1	B
2	X	10	Ultrasound Stationary Unit with Probe Set : Convex, Linear, Sector and Special Probes with Color Doppler Unit	1	A
2	X	11	Portable Ultrasound Unit, Linear and Convex Probe	1	A
2	X	12	General X-ray Unit	1	A/B
2	ICU	1	Ventilator for Infant (new-born) and Child	2	A
2	ICU	2	Ventilator for Children and Adult	3	A
2	ICU	3	Ultrasonic Nebulator w/mask and tubes	6	A
2	ICU	4	Bedside Monitor (Breathing, Temperature, Pulse, ECG, O2 flow etc)	12	A
2	ICU	5	Infant Incubator	3	A
2	ICU	6	Plazmapheresis Unit for 1 patient w/centrifuge and timer (Platelet, WBC,TPE)	1	A
2	ICU	7	Functional Reanimation (Hi-Lo Gatch High Grade) Bed	10	A
2	ICU	8	Defibrillator with Cart	2	A
2	ICU	9	Infusion Pump	12	A
2	ICU	10	Oxygen Supply Unit w/mask & monitor	5	A
2	ICU	11	Electronic Balance for New-born 0-10kg	1	A
2	ICU	12	Electronic Balance for Adult (0-60kg)	3	A
2	ICU	13	Blood Pressure Tonometer (Electronic Type) Pediatric	10	A
2	ICU	14	Laryngoscope Set for Children and Adult	15	A
2	ICU	15	Blood Haemosorbtion Unit (Red Blood Cell)	1	B
2	ICU	16	UV Extracorporal Blood Disinfection	1	B
2	ICU	17	Electric Suction Unit	10	A
2	ICU	18	Clavicular Puncture Disposable Set	500	C
2	ICU	19	Peridual Puncture Disposable Set	200	B
2	ICU	20	Spinal Puncture Disposable Set	200	B/C
2	ICU	21	Blood Refrigerator, Big Capacity	2	A
2	EY	1	Ophthalmoscope Handy Unit (Electric)	4	A
2	EY	2	Slit Lamp	2	A
2	EY	3	Slit Lamp for new-born and children 2-3 years ages	1	A
2	EY	4	Autorefractokeratometer	1	A
2	EY	5	Pachymeter w/ Printer for Eye Ultrasound Examination	1	A
2	EY	6	Test Lenses Major Diagnostic Set with Refraction Spectacles	2	A
2	EY	7	Fundus Camera for Stereoscopy Eye Examination	1	A
2	EY	8	Ophthalmic Laser Therapy Unit	1	A
2	EY	9	Ophthalmo-chromoscope with Fiber Optic Light	2	A
2	EY	10	Ultrasound Apparatus for Ophthalmology (w/pen type probe)	1	B
2	EY	11	Ophthalmology Chair Mounted unit	1	A

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept	No			
2	EY	12	Field Analyzer w/40 MB HD, Stramer Tape Back-up, Video Eye Monitor, Stateac 2, Kidetic & Patient View	1	A
2	EX	1.	Echoencephaloscopy Unit 1 stationary + 1 portable (for exam at words)	2	A
2	EX	2	Electromyograph	1	B
2	EX	3	Electronic Balance for Adults	10	A
2	EX	4	Multichannel Cardioanalyzer (12 channels)	1	A
2	EX	5	Computer System for External Respiration (Spiroanalyzer)	1	A
2	EX	6	EEG (Electroencephalograph), 18 channels	1	A
2	EX	7	6-channel Electrocardiograph	1	A
2	EX	8	1-channel Electrocardiograph	1	A
2	EX	9.	Mingograph (ECG plus phonocardiography etc) Unit	1	A
2	ES	1	Fibergastroscope Pediatric set	2	A
2	ES	2	Fibercolonoscope Pediatric set	1	A
2	ES	3	Fiberbronchoscope Pediatric set	1	A
2	ES	4	Diagnostic Laparoscope w/monitor	1	A
2	ES	5	Duodenofiberscope	1	A
2	ES	6	Thoracoscope Pediatric Set	1	A
2	ES	7	Universal Light Source	5	A
2	ES	8	Endoscopic Suction Pump	5	A
2	ES	9	Electrosurgical Unit for Endoscopic Treatment, Coagulation etc.	3	A
2	ES	10	Endoscope Cleaning Unit (Cabinet)	5	A
2	ES	11	Ultrasonic Washing Unit for Endoscopic Tools	2	A
2	ES	12	Anaesthesia Apparatus with Ventilator for Child and Adult	1	A
2	SG	1	Surgery Suction Unit Portable	8	A
2	SG	2	Shadowless Operation Lamp Mobile Small	5	A
2	SG	3	Cystourethrofiberscope Diagnostic Set, Pediatric w/ Light Source	2	A
2	SG	4	Urodynamic Monitor	1	A
2	SG	5	Trolley for Patients Transportation	10	A
2	SG	6	Coagulator	2	A
2	SG	7	Ultrasonic Nebulator w/mask and tubes	1	A
2	SG	8	Infant Incubator	2	A
2	SG	9	Ozone Chamber	2	A
2	SG	10	Anaesthesia Apparatus with Ventilator for Child and Adult	1	A
2	SG	11	Ultrasonic Surgical Suction Unit	5	A
2	SG	12	Drain System for Abdominal Cavity Disposable	200	B/C
2	SG	13	Thoracic Drain System Disposable	50	B/C
2	SG	14	Kosirsky Bone Puncture Needle	10	A
2	SG	15	Osseeous-Marrow Drain Tube	100	B/C
2	SG	16	Intestines Intubation-Drain Tube	40	B/C
2	SG	17	Oesophgus Bougie Set	2	A
2	SG	18	Universal Operation Table	1	A
2	OR	1	Arthroscope Set with Instruments for 1-14 ages	1	A
2	OR	2	Functional Traumatology Bed	10	A
2	OR	3	Wheel Chair	10	A
2	OR	4	Binocular Loupe Glass	2	C
2	OR	5	Traumatology Rod Apparatus for 1-14 ages (for complicated bone fracture)	3	A
2	OR	6	Metal Work Tool Set	2	A
2	OR	7	Spinal Cord Traction Staple Set	10	A

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept	No.			
2	OR	8	Bone Electric Drilling unit	2	A
2	OR	9	Ultrasonic Nebulator w/mask and tubes	1	A
2	OR	10	Anaesthesia Apparatus with Ventilator for Child and Adult O2/N2O etc	1	A
2	OR	11	Infant Incubator	2	A
2	OR	12	Operation Table for Traumotology/Orthopaedy	1	A
2	OR	13	Laser Therapy Unit with different wave length	1	A
2	OP	1	Anaesthesia Apparatus with Ventilator for Child and Adult O2/N2O etc	5	A
2	OP	2	Operation Table Universal	4	A
2	OP	3	Electric Motor Operation Table for Orthopaedy	1	A
2	OP	4	Electric Scalpel	3	A
2	OP	5	Solid State Bipolar Coagulator	3	A
2	OP	6	Operational Laparoscope with Monitor/Endoscopy Video System	1	A
2	OP	7	Operation X-ray Mobile Unit	1	A
2	OP	8	Operational Microscope Binocular w/ Coaxial Light Source for Ophthalmology	2	A
2	OP	9	Ophthalmic Surgery and Microsurgery Instrument Set	2	A
2	OP	10	Operation Suture Materials for Eye Microsurgery (monofiber, lavsan etc)	1	A
2	OP	11	Coagulator for Eye Operation	1	A
2	OP	12	Eye Operation Scissors	20	A
2	OP	13	Surgery Electric Suction Unit	5	A
2	OP	14	Operating Light Portable Shadowless with Battery	5	A
2	OP	15	Operating Ceiling Lights	2	A
2	OP	16	Surgery Instrument Major Set	2	A
2	OP	17	Surgery Pediatric Instrument Set	2	A
2	OP	18	Surgery Instrument Set for New-born	2	A
2	OP	19	Hot Air Autoclave	6	A
2	OP	20	Urology Instrument Set	2	A
2	OP	21	Operational Cystourethroscope Set	1	A
2	OP	22	Microsurgery Instrument Set	1	A
2	OP	23	Equipment and Instruments for Cryosurgery (deep freeze surgery)	1	A
2	OP	24	Electrosurgery High Frequency Unit	5	A
2	OP	25	Suture Material (caetgut, nylon etc)	1	B
2	OP	26	Universal Suturing Apparatus with Clip Set	1	A
2	OP	27	Mosquito Hemostatic Forceps.	200	A
2	OP	28	Kocher Hemostatic Forceps	200	A
2	OP	29	Pean Hemostaic Forceps	200	A
2	OP	30	Kelly Hemostatic Forceps	200	A
2	OP	31	Needle Holder	100	A
2	OP	32	Suture Needle	1000	A
2	OP	33	Suture Scissors Straight	100	A
2	OP	34	Suture Scissors Curved	100	A
2	OP	35	Operating Knife Handle	20	A
2	OP	36	Operating knife Blade Disposable	1000	A
2	OP	37	Operating Scalpel	100	A
2	OP	38	Standard Operating Scissors	100	A
2	OP	39	Scissors for Angiooperations	20	A
2	OP	40	Surgical Tweezers 140mm	100	A
2	OP	41	Anatomy Twezers	100	A
2	OP	42	Traumatology (Orthopaedic) Instrument Set	1	A

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No.			
2	OP	43	Traumatology (Orthopaedic) Instrument Set for Child	2	A
2	OP	44	Operational Microscope for Neurosurgery Operations	1	A
2	OP	45	Instrument Set for Operations on Spinal Cord (Trauma and Scoliosys)	1	A
2	OP	46	Neurosurgery Instrument Set	1	A
2	OP	47	Binocular Loupe Glasss w/Fiber Optic	1	A
2	OP	48	Instrument Set for Hip-pelvis Operation of children with inborn dislocations	1	A
2	OP	49	Operational Surgery Laser Unit	1	C
2	OP	50	Table for Instruments (large)	5	A
2	OP	51	Bone Drilling, Cutting and Treatment Unit	2	A
2	OP	52	Instrument Set for Operation on Tendons	1	A
2	OP	53	Ultrasonic Suction Unit for Brain Operation	1	A
2	OP	54	Brain Drain System Disposable	100	A
2	OP	55	Spinal Cord Distractor Harrington Type for Scoliosys Operations	100	A
2	OP	56	Hip-pelvis Inborn Dislocations Fixator 5 different sizes	50	A
2	OP	57	Spinal Cord Traction Frame	10	A
2	OP	58	Metal Work Tool Set	2	A
2	OP	59	Cancellous Bone Screw Set	2	A
2	OP	60	Bone Fracture Fixing Plates for Children of Young Ages	50	A
2	OP	61	Intramedullar Bone Screw	100	A
2	OP	62	Bone Rod for Fracture Apparatus, different dia. 3mm-6mm	100	A
2	OP	63	Langenbeck Bone Holding Forceps	10	A
2	OP	64	Farabeuf-Lambotte Bone Holding Forceps	10	A
2	OP	65	Liston Bone Cutting Forceps	25	A
2	OP	66	Rongeur Forceps	10	A
2	OP	67	Gonzett Goniometer	5	A
2	OP	68	UV Hand Washing Apparatus	3	A
2	OP	69	UV Disinfection Lamp, Mobile	2	A
2	OP	70	X-ray Film Illuminator	2	A
2	OP	71	Bix Holder	10	A
2	OP	72	Dermatom	2	A
2	CH	1	Sternal Puncture Set for Infants Autoclavable	3	A
2	CH	2	Sternal Puncture Set for Children of Senior Age	3	A
2	CH	3	Electronic Balance for Newborn	1	A
2	CH	4	Electronic Balance for Adult	2	A
2	CH	5	Phonendoscope for Children	3	A
2	CH	6	Electronic Tonometer	3	A
2	CH	7	Urinal Catheter (male, female)	400	A
2	CH	8	Infant Incubator	1	B
2	CH	9	Functional Bed	10	A
2	CH	10	Aggregometer (Trombocyle etc Analyzer)	1	A
2	ENT	1	ENT Instrument Set	3	A
2	ENT	2	Diagnostic Audiometer for Children	1	A
2	ENT	3	ENT High Frequency Electrosurgical Unit	1	A
2	ENT	4	Microsurgery Instrument Set for Larynx Operation	2	A
2	ENT	5	Fiberlaryngoscope Set	1	A
2	ENT	6	Sinusoscope	1	A
2	ENT	7	ENT Suction Unit	3	A
2	ENT	8	ENT Criosurgery Unit	1	A
2	ENT	9	ENT Laser Surgery Unit	1	A
2	ENT	10	ENT Operational Microscope	1	A

Requested Equipment List ANNEX - II

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No			
2	ENT	11	Operational Laryngoscope Ceiling Set Kleinwasser	1	A
2	ENT	12	Universal Operation Table	1	A
2	ENT	13	Anaesthesia Apparatus with Ventilator for child and adults O2/N2O etc	1	A
2	ENT	14	Ultrasonic Inhaller Izomed type	1	A
2	ENT	15	Desk Top Autoclave	1	A
2	ENT	16	Air-Conditioner, Window Type	2	A
2	OD	1	Dental Unit with Chair and Air-compressor	1	A
2	OD	2	Set of Treatment Equipment for Dentist Diamond Type	1	A
2	OD	3	Tooth Filling Preparation Kit & Dental Material	1	A
2	OD	4	Electric Oven	1	C
2	OD	5	Laboratory Lathe	1	C
2	OD	6	Dental Autoclave Desk Top	1	A
2	RH	1	Ultrahigh Frequency Current Treatment Apparatus (27MHz/11.05m etc)	4	A
2	RH	2	Diadinamical Curernt Treatment Apparatus 200Hz	2	A
2	RH	3	Electric Analgesy and THENS Therapy Unit	2	A
2	RH	4	Artifical Electric Sleep Apparatus (Low Frequency Impulse Current 3-120 impulse/sec 100mA)	2	A
2	RH	5	Ultratone Frequency Treatment Apparatus (22KHz/4-5KV/up to 10Wt)	2	B
2	RH	6	Ultrahigh Frequency Electromagnetic Treatment (460MHz-65cm wave/2375MHz-12cm wave)	3	A
2	RH	7	Low Frequency Alternating Magnetic Therapy Unit	2	A
2	RH	8	UV Treatment Unit (Nasal, Pharynx, Wounds and Body)	2	A
2	RH	9	Ultrasound Wave Therapy Treatment Unit	2	A
2	RH	10	Ultrasound Inhaler Izomed Type	5	A
2	RH	11	Electric Massage Treatment Unit	5	A
2	RH	12	Laser Therapy Unit w/Different Wave Length	1	A
2	RH	13	Ortho Trac, Portable	3	A
2	RH	14	Hydro Bubbler Bath	1	A
2	RH	15	Ankle amd Leg Exersizer	1	A
2	RH	16	Lower Limb Extension	1	A
2	RH	17	Rowing Imitator	1	A
2	RH	18	Exercise Stairs	1	A
2	RH	19	Perceptial Motor Training Set	1	A
2	RH	20	Curb and Mill	1	A
2	RH	21	Rotary Shoulder & Elbow Apparatus (Pronatio and Supinnatio)	1	A
2	RH	22	Shoulder Wheel	1	A
2	RH	23	Wrist Roll	1	A
2	RH	24	Treadmill	1	A
2	CL	1	Biochemical Analyzer, Dry Test for Express Analysis w/reactives	1	A
2	CL	2	Spectrophotometer	1	B
2	CL	3	Laboratory Centrifuge (1000/2000/3000 rot/min for 10-20 probes for 10-20ml)	2	A
2	CL	4	Water Distillator	1	A
2	CL	5	Drying Cabinet w/Computer Control, 30 liters capa 40-250c	2	A
2	CL	6	Laboratory Microscope	10	A
2	CL	7	Osmometer, Automatic	1	C
2	CL	8	Electric Analytic Balance	1	A
2	CL	9	Refrigerator for Reagents and Test Materials with Regulated Temperature	2	A

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Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No.			
2	CL	10	Automatic Blood Cell Analyzer for 18 and more parameters w/reactives	1	A
2	CL	11	Laboratory AIDS Express-Tests	1	C
2	CL	12	Electrolyte Analyzer (K, Ca, Na, Cl, Mg) or reactives	1	B
2	CL	13	Blood Gas Analyzer	1	B
2	CL	14	Densitometer Electronic Handy Unit	1	A
2	CL	15	Coagulometer Electronic Handy Unit	1	C
2	CL	16	Hemoglobinmeter Electronic Handy Unit	1	C
2	CL	17	Refractometer Electronic Handy Unit (Express)	1	A
2	CL	18	Protrombinmeter Electronic Handy Unit (Express)	1	C
2	CL	19	Thermostat water Bath Type	2	A
2	CL	20	Analyzer Glucose Electronic Handy Unit (Express)	1	A
2	CL	21	Fume Hood	2	A
2	CL	22	Coagulometer, Automatic, 16 parameters	1	A
2	CL	23	Automatic Urine Analyzer	1	A
2	CL	24	Hemoglobinmeter	1	A
2	PH	1	Prescription Counter	2	A
2	PH	2	Refrigerator for Drugs	1	A
2	PH	3	Autoclave	1	A
2	PH	4	Electronic Analytical Balance	1	A
2	ST	1	Autoclave Vertical	2	A
2	ST	2	High Pressure Steam Sterilizer volume 400 liters or more	2	A
2	ST	3	Hot Air Sterilizaer 200 liters capacity	2	A
2	ST	4	Ultrasonic Washing Machine for Instruments etc.	2	A
2	ST	5	Anesthesia Appratus Washing Machine	1	A
2	EM	1	Ultrasonic Nebulator w/mask and tubes	1	A
2	EM	2	Anaesthesia Apparatus w/Ventilator for Child and Adult O2/N2O	1	A
2	EM	3	Surgery Suction Unit Portable	1	A
2	EM	4	Electronic Balance for Newborn	2	A
2	EM	5	Electronic Tonometer Pediatric	1	A
2	EM	6	Spinal Cord Puncture Needle	50	A
2	EM	7	Phonendoscope	5	A
2	EM	8	Urine Catheter	50	A
2	EM	9	Infant Incubator	1	A
2	G	1	General Diagnostic Set (Stethoscope, Sphygmomanometer, etc)	20	A
2	G	2	Refrigerator for Drugs for Nurse Post at Words	20	A
2	G	3	Ambulance (Minibus Type)	1	A
2	G	4	Ambulance (4-Wheel Drive Type) for Country Side Visits	1	B
2	G	5	Minibus Panel Van for Transportation of Drugs, Materials, Food or Patients	1	A
2	G	6	Computer with Printer	3	A
2	G	7	Copy Machine	3	B
2	G	8	Air Conditioner	10	A
2	G	9	Infusion Pump	12	A
2	LD	1	Washing Machine, 50 lit./15kg	2	A
2	LD	2	Washing Machine, 25 lit./7kg	2	A
2	LD	3	Extractor (Centrifuge), 10kg	2	A
2	LD	4	Electric Boiler, 50 lit.	1	A
2	LD	5	Drying Machine, 7kg	2	A
2	LD	6	Ironing Machine with Table 170cm Width	1	A
2	LD	7	High Temperature Dry Air Disinfection Chamber, 1200-1500 cubic decimeter	1	A

Requested Equipment List ANNEX - II

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No			
2	KT	1	Electric Copper, 60 lit for 1st and 2nd dishes	2	B
2	KT	2	Electric Frying-Pan for 25kg	1	B
2	KT	3	Electric Boiler, 100 lit.	1	B
2	KT	4	Electric Oven, 12.3kW per 1 section	4	B
2	KT	5	Food Rub-Grating Machine for Dietic Feeding	1	B
2	KT	6	Refregerating Chamber, 7.5 cubic meter for Food Storage	3	A
2	KT	7	Refregerating Cabinet, 500 cubic decimeter for Food Storage	3	A
2	KT	8	Bread Storage Cabinet for 120-150 pieces	1	B
2	KT	9	Potato Peeling Machine, 10kg	1	A
2	KT	10	Electric Meat Chopping (Grinding) Machine	3	A
2	KT	11	Steam Boiling Copper, 200 lit.	1	B
2	KT	12	Vegetable Cutting Machine	1	A
2	KT	13	Pastry Kneader, 50kg	1	B
2	KT	14	Roast Board 3 section	1	B

Requested Equipment List ANNEX - II

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No			
1	X	1	General X-ray Unit	1	A
1	X	2	Automatic Film Processor	1	A
1	X	3	Ultrasound Unit w/Color Doppler, Impulse	1	B
1	X	4	Electrocardiograph (ECG)	1	A
1	ICU	1	Ventilator for Infant (newborn)	3	A
1	ICU	2	Resuscitation Table for Newborn Warming	3	A
1	ICU	3	Ultrasonic Nebulator w/mask and tubes	5	A
1	ICU	4	Neonatal Monitor	6	A
1	ICU	5	Electric Suction Unit for Newborn	3	A
1	ICU	6	Infant Incubator	3	A
1	ICU	7	Infusion Pump	6	A
1	ICU	8	Electronic Balance for Newborn 0-10kg	6	A
1	ICU	9	Refrigerator, Deep Freezer	1	B
1	ICU	10	Oxygen Supply Unit	1	A
1	NE	1	Echoencephalography (EEG) Unit for Newborn and Child	1	A
1	NE	2	Electronic Balance for Newborn	1	A
1	NE	3	Electromyograph	1	A
1	NE	4	Electric Suction Unit for Newborn	3	A
1	PE	1	Electronic Balance for Newborn	2	A
1	PE	2	Infant Incubator	2	A
1	PE	3	Ultrasonic Inhaller w/mask for children Izomed type	3	A
1	PE	4	Infusion Pump	3	A
1	PE	5	Electric Suction Unit for Newborn	3	A
1	NB	1	Electronic Balance for Newborn	2	A
1	NB	2	Electronic Tonometer	2	A
1	NB	3	Ultrasonic Inhaller w/mask for children Izomed type	3	A
1	NB	4	Infusion Pump	3	A
1	NB	5	Electric Suction Unit for Newborn	3	A
1	NB	6	Infant Incubator	2	A
1	FP	1	Microsope	1	A
1	FP	2	Gynecology / Obstetric Chair	2	B
1	FP	3	Set of Obstetric / Gynecology Instruments	2	B
1	CL	1	Automatic Blood Cell Analyzer w/reactives	1	A
1	CL	2	Biochemical Analyzer w/reactives	1	A
1	CL	3	Electrolyte Analyzer (K, Ca, Na, Cl, Mg) or reactives	1	A
1	CL	4	Spectrophotometer	1	C
1	CL	5	Laboratory Microscope Binocular	2	B
1	CL	6	Electronic Analytic Balance	1	A
1	CL	7	Blood Gas Analyzer	1	A
1	CL	8	pH-meter	1	A
1	CL	9	Transculaneous Bilirubin Analyzer for Newborn up to 400mmol/l	1	A
1	CL	10	Coaglograph	1	A
1	LD	1	Washing Machine with Drying/Extracting Mode	2	A
1	LD	2	Ironing Unit	1	A
1	PC	1	Dental Chair Mounted Unit with Compressor and Dental Instrument Set	1	A
1	PC	2	ENT Chair Mounted Unit with ENT Instrument Set	1	A
1	PC	3	Opthalmology Chair Mounted Unit with Lenses Diagnostic Set	1	A
1	PC	4	Electrocardiograph	1	A
1	G	1	General Diagnostic Pediatric Set (Stethoscope child, Sphygmomanometer, etc)	20	B
1	G	2	Ambulance (Minibus Type)	1	A
1	G	3	Minibus Panel Van for Transportation of Food/Drugs, etc.	1	A

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Requested Equipment List ANNEX - II

Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No			
IN	X	1	X-ray Stationary Unit with 2 X-ray Tubes with Digital Processing & Telemetry for X-ray Scopy and X-ray Graphy	1	A
IN	X	2	Automatic Film Processor	1	A
IN	X	3	Mobile X-ray Unit	1	B
IN	ICU	1	Ventilator for Infant (newborn) and Child	3	A
IN	ICU	2	Anesthesia Apparatus w/Ventilator for Children and Adult	1	A
IN	ICU	3	Ultrasonic Nebulator w/mask and tubes	3	A
IN	ICU	4	Bedside Monitor (Breathing, Tempareture, Pulse, ECG, O2 flow etc)	9	A
IN	ICU	5	Hardwire Central Monitor	1	A
IN	ICU	6	Infant Incubator	1	B
IN	ICU	7	Plazmapheresis Unit for 1 patient w/centrifuge and timer (Platelet, WBC,TPE)	1	A
IN	ICU	8	Infusion Pump	9	A
IN	ICU	9	Oxygen Supply Unit w/mask & monitor	5	A
IN	ICU	10	Electronic Balance for Newborn 0-10kg	1	A
IN	ICU	11	Blood Pressure Tonometer (Electronic Type) Pediatric	5	A
IN	ICU	12	Laryngoscope Set for Children	3	B
IN	ICU	13	Blood Haemosorbtion Unit (Red Blood Cells)	1	B
IN	ICU	14	UV Extracorporal Blood Disinfection.	1	B
IN	ICU	15	Blood Refrigerator (Big capacity)	1	B
IN	EX	1	Echoencephalography Unit	1	B
IN	EX	2	Electronic Balance for Newborn	1	A
IN	EX	3	Multichannel Cardioanalyzer	1	A
IN	EX	4	Computer System for External Respiration (Spiroanalyzer)	1	A
IN	EX	5	1-channel Electrocardiograph	1	A
IN	ES	1	Endoscope Cleaning Unit (Cabinet)	2	A
IN	ES	2	Ultrasound Washing Unit for Endoscopic Tools	1	B
IN	IIF	1	Electronic Balance for Newborn	3	A
IN	IIF	2	Electronic Balance for Adult	1	A
IN	IIF	3	Electronic Tonometer	5	A
IN	IIF	4	Ultrasonic Inhaller w/Mask for Children Izomed Type	2	A
IN	IIF	5	Infusion Pump	3	A
IN	VIF	1	Electronic Balance for Newborn	2	A
IN	VIF	2	Electronic Balance for Adult	1	A
IN	VIF	3	Electronic Tonometer	3	A
IN	VIF	4	Ultrasonic Inhaller w/Mask for Children Izomed Type	2	A
IN	VIF	5	Infusion Pump	3	A
IN	AIF	1	Electronic Balance for Newborn	1	A
IN	AIF	2	Electronic Balance for Adult	1	A
IN	AIF	3	Electronic Tonometer	1	A
IN	AIF	4	Ultrasonic Inhaller w/Mask for Children Izomed Type	3	A
IN	AIF	5	Infusion Pump	3	A
IN	CL	1	Automatic Blood Cell Analyzer for 23 Parameters w/reactives	1	A
IN	CL	2	Biochemical Analyzer w/reactives	1	A
IN	CL	3	Electrolyte Analyzer (K, Ca, Na, Cl, Mg) w/reactives	1	A
IN	CL	5	Spectrophotometer	1	B
IN	CL	6	Laboratory Microscope	2	B
IN	CL	7	Electronic Analytic Balance	1	A
IN	CL	8	Blood Gas Analyzer	1	A
IN	CL	9	pH-meter	1	B

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Item No.			Description	Q'ty Requested	Priority by Kazakhstan Side
Hospital	Dept.	No			
IN	CL	10	Coagulometer	1	A
IN	CL	11	Hemoglobinmeter Electronic Handy Unit	1	A
IN	CL	12	Refractometer Electronic Handy Unit (Express)	1	A
IN	CL	13	Analyzer Glucose (Blood, Urine etc)	1	A
IN	CL	14	Fume Hood	1	B
IN	CLB	1	Colony Counter	2	A
IN	CLB	2	Sterilizer Table Top (for loops, needles, & calture mouth tubes)	1	A
IN	CLB	3	pH-meter	1	A
IN	CLB	4	Multistation Nitrogen Dry Box	1	A
IN	CLB	5	Hiloop AutosterilIZer (for metal loops)	1	A
IN	CLB	6	Fluorescent Microsope	1	A
IN	ST	1	High Pressure Steam Sterilizer, volume 200 liters or more	1	A
IN	ST	2	Hot Air Sterilizer, 200 liters capacity	1	A
IN	ST	3	Ultrasonic Washing Machine	1	A
IN	EM	1	Electronic Balance for Newborn	1	A
IN	EM	2	Electronic Tonometer Pediatric	1	A
IN	EM	3	Electronic Balance for Children and Adult	1	A
IN	G	1	General Diagnostic Set (Stethoscope, Sphygmomanometer, etc)	10	B
IN	G	2	Ambulance (Minibus Type)	1	A
IN	Milk	1	Milk processing Equipment Capacity 1000l/day for production of dietic milk, kefir, sour creram, yogurt, curdled cheese for dietic feeding of children 0-14 ages with packing line	1	A
IN	Milk	2	Minibus Panel Van for Transportation of Milk Products to Hospitals	1	A

Introductory Remarks ;

Hospital

2	City Children Hospit l, No. 2
1	City Children Hospital, No. 1
IN	City Children Infectious Diseases Hospital

Department

X	Radiology Department
ICU	Reanimation Department
EY	Ophthalmology Department
EX	Functional Examination Department
ES	Endoscopy Department
SG	Surgery & Urology Department
OR	Traumatology & Orthopaedy Department
OP	Operation Department
CH	Cardiohematology Department
ENT	ENT Department
OD	Dentistry Room
RH	Physiotherapy & Rehabilitation Department
CL	Clinical Laboratory Department
PH	Pharmacy Department
ST	Sterilization Department
KT	Kitchen / Catering Department
EM	Emergency Reception - Diagnostic Department
G	General Hospital Equipment & Others
NE	Neurology Department
PE	Perinatal Rehabilitation Department
NB	Infant - Pediatric Department
FP	Family Planning Department
LD	Laundry Room
PC	Polyclinic / Ambulatory No. 5
IIF	Intestinal Infectious Desease Department
VIF	Virus Infectious Desease Department
AIF	Aerial Infectious Desease Department
CLB	Bacteriology Laboratory
Milk	Milk Kitchen

Item No. of Equipment

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MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY
ON THE PROJECT FOR IMPROVEMENT OF MEDICAL EQUIPMENT
FOR CHILDREN HOSPITALS IN ASTANA CITY IN THE REPUBLIC OF KAZAKHSTAN
(EXPLANATION ON DRAFT REPORT)

In March, 1999, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Improvement of Medical Equipment for Children Hospitals in Astana City in the Republic of Kazakhstan (hereinafter referred to as "the Project") to the Republic of Kazakhstan (hereinafter referred to as "Kazakhstan"), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Kazakhstan side on the components of the draft report, JICA sent to Kazakhstan the Draft Report Explanation Team (hereinafter referred to as " the Team "), which is headed by Dr. Kunihiko Hirabayashi, Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health and Welfare from August 9 to August 25, 1999.

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

Astana, August 18, 1999

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Leader
Draft Report Explanation Team
Japan International Cooperation Agency
Japan

Aryn Yerlan Mukhtarovich
First Deputy Minister
Ministry of Health, Education and Sport
The Republic of Kazakhstan

Mamin Askar Uzakpaevich
First Vice Mayor
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Sergey Michailovich Demochkin
Chief Doctor and Chief Project Manager
City Children Hospital No.2

Erlan A. Arinov
Head
External Aid Coordination
Agency on Strategic Planning and Reforms

ATTACHMENT

1. Components of the Draft Report

The Government of Kazakhstan agreed and accepted in principle the components of the draft report along with its amendments as explained by the Team.

The finally agreed list of equipment is attached as Annex-I.

2. Japan's Grant Aid scheme

The Kazakhstan side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Kazakhstan as explained by the Basic Study Team and described in Annex-III and Annex-IV of the Minutes of Discussions signed by both parties on April 8, 1999.

3. Schedule of the Study

JICA will complete the final report in English in accordance with the confirmed item and submit it to the Government of Kazakhstan by November, 1999.

4. Other relevant issues

4-1. Both sides confirmed the responsible and implementing organizations as described in Annex-II.

4-2. On behalf of the Kazakhstan side, the Mayor of the Astana City strongly requested the Japanese side to introduce a CT scanner to the City Children Hospital No.2, which was not confirmed in the discussions as referred in Annex-I. And the Japanese side agreed to explain it to the Government of Japan.

4-3. The Kazakhstan side requested consultant services to make the Project more effective. And both sides agreed that the following technical advices on the Laboratory departments need to be included to the Project as the soft components.

(1) To improve the Laboratory management system.

(2) To strengthen the quality control methodologies.

4-4. Both sides agreed that the Kazakhstan side will submit annual report to the Japanese side at least during five years including suggested indicators such as the total number of the patients and the number of the patients from outside the Astana City using a designed form for the evaluation of the Project impact.

Item No.	Description	Q'ty Planned
Children Hospital No. 2		
X-ray Department		
2-X-1	CT Scanner	*****
2-X-2	MRI	0
2-X-3	X-ray stationary unit for X-ray scopy and X-ray graphy	1
2-X-12	X-ray unit, general graphy	1
2-X-4	X-ray mobile unit	2
2-X-5	X-ray film processor, automatic	1
2-X-6 (1)	X-ray film illuminator (1 film)	2
2-X-6 (2)	X-ray film illuminator (3 films)	2
2-X-6 (3)	X-ray film illuminator (6 films x 2 steps, mobile)	1
2-X-7	X-ray protective apron	6
2-X-8	X-ray cassette loading desk	1
2-X-9	X-ray film storage box	1
2-X-10	Ultrasound stationary unit with color doppler unit	1
2-X-11	Ultrasound unit, portable with Linear and Convex probe	1
2-X-91	X-ray film development set	1
Reanimation Department (ICU)		
2-ICU-1	Ventilator for infant (Newborn)	2
2-ICU-2	Ventilator for children and adult	3
2-ICU-3	Ultrasonic nebulizer	6
2-ICU-4 (1)	Patient monitor	9
2-ICU-4 (2)	Neonatal monitor	1
2-ICU-5	Infant incubator	3
2-ICU-6	Plasmapheresis unit	0
2-ICU-7	Functional Reanimation Bed (ICU bed)	9
2-ICU-8	Defibrillator with cart	2
2-ICU-9 (1)	Infusion pump	9
2-ICU-9 (2)	Syringe pump	3
2-ICU-10	Oxygen supply unit	3
2-ICU-11	Weighing scale for newborn	1
2-ICU-12	Weighing scale	1
2-ICU-13	Sphygmomanometer	2
2-ICU-14	Laryngoscope set for child with ambu bag	9
2-ICU-15	Blood baemosorbtion unit (Pump)	1
2-ICU-16	UV extracorporal blood disinfection	0
2-ICU-17	Suction unit	6
2-ICU-91	Suction unit, low pressure continuous	0
2-ICU-18	Clavicular puncture disposable set	-
2-ICU-19	Peridual puncture disposable set	-
2-ICU-20	Spinal puncture disposable set	-
2-ICU-21	Refrigerator for reagent, test materials & blood	2
2-ICU-92	Pulse oxymeter	2

Item No.	Description	Q'ty Planned
Ophthalmology Department		
2-EY-1	Ophthalmoscope, handy unit	4
2-EY-2	Slit lamp	2
2-EY-3	Slit lamp for Infant	0
2-EY-4	Autorefractokeratometer	1
2-EY-5	Pachymeter with printer	0
2-EY-6	Ophthalmology lenses diagnostic set	2
2-EY-7	Fundus camera for stereoscopy eye examination	1
2-EY-8	Laser therapy unit	0
2-EY-9	Ophthalmo-chromoscope	1
2-EY-10	Ultrasound apparatus for ophthalmology	1
2-EY-11	Ophthalmology chair mounted unit	1
2-EY-12	Filed analyzer	1
Function Diagnostic Examination Department		
2-EX-1	Echoencephaloscopy	0
2-EX-2	Electromyograph (EMG)	1
2-EX-3	Weighing scale	1
2-EX-4	Cardioanalyzer, multichannel (12-ch)	0
2-EX-5	Spiroanalyzer	1
2-EX-6	Electroencephalograph (EEG), 18-ch	1
2-EX-7	Electrocardiograph (ECG), 6-ch	1
2-EX-8	Electrocardiograph (ECG), 1-ch	1
2-EX-9	Mingograph	0
Endoscopic Department		
2-ES-1	Fiber-gastroscope pediatric set	1
2-ES-2	Fiber-colonoscope pediatric set	1
2-ES-3	Fiber-bronchoscope pediatric set	1
2-ES-4	Laparoscope set for diagnostic	0
2-ES-5	Fiber-duodenoscope	1
2-ES-6	Tracoscope	1
2-ES-7	Universal light source for fiberscope	3
2-ES-8	Endoscopic suction pump	3
2-ES-9	Electrosurgical unit for endoscopy	2
2-ES-10	Endoscope cleaning set	2
2-ES-11	Ultrasonic washing unit, table top for endoscopic tools	1
2-ES-12	Anaesthesia apparatus	1
Surgical / Urology Department		
2-SG-1	Suction unit	5
2-SG-2	Operation lamp, mobile with battery	5
2-SG-3	Cysto-urethrofiberscope	1
2-SG-4	Urodynamic monitor	0
2-SG-5	Stretcher	0

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Item No.	Description	Q'ty Planned
2-SG-6	Coagulator	0
2-SG-7	Ultrasonic nebulizer	1
2-SG-8	Infant incubator	1
2-SG-9	Oxygen tent	2
2-SG-10	Anaesthesia apparatus with ventilator	0
2-SG-11	Ultrasonic surgical unit	0
2-SG-12	Drain system for abdominal cavity	-
2-SG-13	Thoracic drain system	-
2-SG-14	Puncture needle set (10 pcs./set)	2
2-SG-15	Osseous-Marrow drain tube	-
2-SG-16	Intestines intubation drain tube	-
2-SG-17	Oesophagus boogie set	1
2-SG-18	Operation table, universal	0
2-SG-91	Treatment table	1
Orthopaedy / Traumatology Department		
2-OR-1	Arthroscope set	1
2-OR-2 (1)	Functional traumatology bed, for adult	5
2-OR-2 (2)	Functional traumatology bed, for child	5
2-OR-3	Wheel chair	0
2-OR-4	Loupe glass, binocular	0
2-OR-5	Traumatology rod apparatus	-
2-OR-6	Metal work tool set	-
2-OR-7	Spinal cord traction staple set	-
2-OR-8	Bone drilling, cutting and treatment unit	0
2-OR-9	Nebulizer	1
2-OR-10	Anaesthesia apparatus with ventilator	0
2-OR-11	Infant incubator	1
2-OR-12	Operation table	0
2-OR-13	Laser therapy unit	0
2-OR-91	Treatment table	1
Operation Department		
2-OP-1	Anaesthesia apparatus with ventilator	5
2-OP-2	Operation table, universal type	4
2-OP-3	Operation table for orthopaedic	1
2-OP-4	Electrosurgical unit	3
2-OP-5	Coagulator	0
2-OP-6	Laparoscope set for operation, with monitor / video system	1
2-OP-7	X-ray mobile unit, for operation (C-arm, TV)	1
2-OP-8	Operation microscope for ophthalmology	2
2-OP-9	Ophthalmic surgery and microsurgery instrument set	2
2-OP-10	Operation suture materials for microsurgery	-
2-OP-11	Electrosurgical unit (for Ophthalmic Operation)	2

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Item No.	Description	Q'ty Planned
2-OP-12	Scissors, eye operation	-
2-OP-13	Suction unit (3 lit. x 2 btls) for Operation Room	5
2-OP-14	Operation lamp, mobile with battery	5
2-OP-15	Operation light, ceiling type	3
2-OP-16	Instrument set, Surgery instrument set for major operation	2
2-OP-17	Instrument set, Surgery instrument set for pediatric	2
2-OP-18	Instrument set, Surgery instrument set for new-born	2
2-OP-19	Hot air sterilizer	2
2-OP-20	Instrument set, Urology instrument set	2
2-OP-21	Cysto-urethroscope set, rigid type	1
2-OP-22	Instrument set, Microsurgery operation	1
2-OP-23	Cryosurgery set	0
2-OP-24	Electrosurgery high frequency unit	0
2-OP-25	Suture material (catgut, nylon etc)	-
2-OP-26	Universal suturing apparatus	-
2-OP-27	Hemostatic forceps (Mosquito)	-
2-OP-28	Hemostatic forceps (Kocher)	-
2-OP-29	Hemostatic forceps (Pean)	-
2-OP-30	Hemostatic forceps (Kelly)	-
2-OP-31	Needle holder	-
2-OP-32	Suture needle	-
2-OP-33	Suture scissors, straight	-
2-OP-34	Suture scissors, curved	-
2-OP-35	Operating knife handle	-
2-OP-36	Operating knife blade, disposable	-
2-OP-37	Operating scalpel	-
2-OP-38	Operating scissors, standard	-
2-OP-39	Scissors for angio-operations	-
2-OP-40	Surgical tweezers, 140mm	-
2-OP-41	Anatomy tweezers	-
2-OP-42	Instrument set, Traumatology (Orthopaedic) instrument set	1
2-OP-43	Instrument set, Traumatology (Orthopaedic) instrument set for child	2
2-OP-44	Operation microscope for neurosurgery operations	1
2-OP-45	Instrument set for operations on spinal cord (trauma and scholiasts)	1
2-OP-46	Instrument set, Neurosurgery instrument set	1
2-OP-47	Binocular loupe glass with fiber optic	1
2-OP-48	Instrument set for hip-pelvis operation of child with inborn dislocations	1
2-OP-49	Laser unit	0
2-OP-50	Instrument table	5
2-OP-51	Bone drilling, cutting and treatment unit	2
2-OP-52	Instrument set for operation on tendons	1
2-OP-53	Ultrasonic suction unit for brain operation	0

Item No.	Description	Q'ty Planned
2-OP-54	Brain drain system, disposable	-
2-OP-55	Spinal cord distracter, Harrington type for scoliosys operation	-
2-OP-56	Hip-pelvis inborn dislocations fixator, 5 different size	-
2-OP-57	Spinal cord traction frame	-
2-OP-58	Metal work tool set	-
2-OP-59	Cancellous bone screw set	-
2-OP-60	Bone fracture fixing plate	-
2-OP-61	Intramedullar bone screw	-
2-OP-62	Bone rod for fracture apparatus (dia. 3mm-6mm)	-
2-OP-63	Bone holding forceps (Langenbeck)	-
2-OP-64	Bone holding forceps (Farabeuf-Lambotte)	-
2-OP-65	Bone cutting forceps (Liston)	-
2-OP-66	Rongeur forceps	-
2-OP-67	Goniometer	1
2-OP-68	UV hand washing apparatus	3
2-OP-69	UV disinfection lamp, mobile	2
2-OP-70	X-ray film illuminator (1 film)	2
2-OP-71	Bix holder (Dressing drum stand)	10
2-OP-72	Dermatorm	2
2-OP-91	Patient monitor	5
2-OP-92	High pressure steam sterilizer (200 lit.) with water softener	2
Cardiohematology Department		
2-CH-1	Puncture needle set (10 pcs./set)	2
2-CH-2	Puncture needle set (for child)	0
2-CH-3	Weighing scale for newborn	1
2-CH-4	Weighing scale	1
2-CH-5	Stethoscope for infant	3
2-CH-6	Sphygmomanometer	3
2-CH-7	Catheter, urinal	-
2-CH-8	Infant incubator	1
2-CH-9	Functional bed (Gatch type)	10
2-CH-10	Aggregometer (Trombocycle analyzer)	0
2-CH-91	Pulse oxymeter	2
2-CH-92	Patient monitor	1
E.N.T Department		
2-ENT-1	ENT instrument set	2
2-ENT-2	Audiometer for children	1
2-ENT-3	Electrosurgical unit	1
2-ENT-4	Instrument Set, Microsurgery instrument set for larynx operation	2
2-ENT-5	Fiber-Rhino-Laryngoscope set.	1
2-ENT-6	Sinusoscope	0
2-ENT-7	ENT suction unit	3

Item No.	Description	Q'ty Planned
2-ENT-8	Cryosurgery unit, ENT	0
2-ENT-9	Laser unit, ENT	0
2-ENT-10	Operation microscope, for ENT	1
2-ENT-11	Laryngoscope, ceiling set	1
2-ENT-12	Operation table, universal type	1
2-ENT-13	Anaesthesia apparatus	1
2-ENT-14	Ultrasonic nebulizer	1
2-ENT-15	Autoclave, desk top type	1
2-ENT-16	Air conditioner	0
2-ENT-91	ENT chair unit	2
Dental Department		
2-OD-1	Dental unit with chair and air-compressor	1
2-OD-2	Dental instrument set	1
2-OD-3	Tooth filling preparation kit & material	-
2-OD-4	Electric oven	0
2-OD-5	Laboratory lathe	0
2-OD-6	Autoclave, desk top type	1
Physiotherapy & Rehabilitation Department		
2-RH-1	Ultrahigh frequency current treatment apparatus (Shortwave 0 - 50W)	2
2-RH-2	Diadinamical current treatment apparatus	0
2-RH-3	Electric analgesia and TENS therapy unit	2
2-RH-4	Artificial electric sleep apparatus	0
2-RH-5	Ultratone frequency treatment apparatus	0
2-RH-6	Ultrahigh frequency current treatment apparatus	0
2-RH-7	Low frequency alternating magnetic therapy unit	1
2-RH-8	UV treatment unit (whole body)	2
2-RH-9	Ultrasound wave therapy treatment unit	2
2-RH-10	Ultrasonic nebulizer	2
2-RH-11	Electric massage treatment unit	0
2-RH-12	Laser therapy unit	0
2-RH-13	Ortho trac, portable	0
2-RH-14	Hydro bubbler bath	1
2-RH-15	Ankle and leg exerciser	0
2-RH-16	Lower limb extension	0
2-RH-17	Rowing imitator	0
2-RH-18	Exercise stairs	0
2-RH-19	Perceptual motor training set	0
2-RH-20	Curb and mill	0
2-RH-21	Rotary shoulder & elbow apparatus	0
2-RH-22	Shoulder wheel	0
2-RH-23	Wrist roll	0
2-RH-24	Treadmill	1

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Item No.	Description	Q'ty Planned
Clinical Laboratory Department		
2-CL-1	Biochemical analyzer	1
2-CL-2	Spectrophotometer	1
2-CL-3 (1)	Centrifuge (General)	2
2-CL-3 (2)	Centrifuge (Hematocrit)	2
2-CL-4	Water distiller, 10 lit./h	1
2-CL-5	Hot air sterilizer	2
2-CL-6 (1)	Microscope, binocular	5
2-CL-6 (2)	Microscope, fluorescent	1
2-CL-7	Osmometer	0
2-CL-8	Electronic analytical balance	1
2-CL-9	Refrigerator for reagent, test materials & blood	2
2-CL-10	Blood cell counter	1
2-CL-11	HIV test kit	0
2-CL-12	Electrolyte analyzer (Na, K, Cl / Ca)	1
2-CL-13	Blood gas analyzer	1
2-CL-14	Electrophoresis with densitometer electronic	1
2-CL-15	Coaglometer, handy unit	0
2-CL-16	Hemoglobinmeter, handy unit	0
2-CL-17	Refractometer	1
2-CL-18	Protorombinmeter	0
2-CL-19	Water bath, thermostat type	2
2-CL-20	Glucose analyzer, handy unit	0
2-CL-21	Fume hood	1
2-CL-22	Coagulometer, semi-automatic	1
2-CL-23	Automatic urine analyzer	1
2-CL-24	Hemoglobinmeter	0
2-CL-91	Magnetic stirrer, with heater	2
2-CL-92	Roller for test tube	2
2-CL-93	Micropipette	10
2-CL-94	Pipette washer	1
2-CL-95	Glassware washer	1
Pharmacy Department		
2-PH-1	Prescription counter	2
2-PH-2	Refrigerator for reagent, test materials & blood	1
2-PH-3	Autoclave, vertical Type	0
2-PH-4	Electronic analytical balance	1
2-PH-91	Water distiller, 10 lit./h	1
2-PH-92	Rack for reagent	1
Sterilization Department		
2-ST-1	Autoclave, vertical Type	0
2-ST-2	High pressure steam sterilizer (400 lit.) with water softener	2

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Item No.	Description	Q'ty Planned
2-ST-3	Hot air sterilizer	2
2-ST-4	Ultrasonic washing machine for instrument	1
2-ST-5	Anaesthesia apparatus washing machine	0
2-ST-91	Bottle sterilizer (100 lit)	1
Emergency Reception - Diagnostic Department		
2-EM-1	Ultrasonic nebulizer	1
2-EM-2	Anaesthesia apparatus with ventilator	1
2-EM-3	Suction unit	1
2-EM-4	Weighing scale for newborn	1
2-EM-5	Sphygmomanometer (Aneroid type)	1
2-EM-6	Puncture needle set (10 pcs./set)	2
2-EM-7	Stethoscope for infant	5
2-EM-8	Catheter, urinal	-
2-EM-9	Infant incubator	1
General Hospital Equipment & Others		
2-G-1	General diagnostic set	15
2-G-2	Refrigerator for drugs for nurse post at wards	12
2-G-3	Ambulance (Minibus type)	1
2-G-4	Ambulance	
2-G-5	Minibus panel van	0
2-G-6	Computer	0
2-G-7	Photocopy machine	0
2-G-8	Air conditioner	6
2-G-9	Infusion pump	0
2-G-91	Stretcher	5
2-G-92	Wheel chair	5
Laundry Department		
2-LD-1	Washing machine, 30kg	2
2-LD-2	Washing machine, 25lit. / 7kg	0
2-LD-3	Extractor (Laundry)	2
2-LD-4	Electric boiler (Hot water)	1
2-LD-5	Drying machine (Laundry)	2
2-LD-6	Ironing machine (Laundry) with table 150cm width	1
2-LD-7	High temp. dry air disinfection chamber	0
Kitchen		
2-KT-1	Electric copper, 60 lit.	0
2-KT-2	Electric flying pan, 25kg	0
2-KT-3	Electric boiler, (Hot water, 100lit.)	1
2-KT-4	Electric oven, 12.3kW/section	0
2-KT-5	Food rub-grating machine	0
2-KT-6	Refrigerating chamber 7.5m3	0
2-KT-7	Refrigerating cabinet (500 lit.)	3

Item No.	Description	Q'ty Planned
2-KT-8	Bread storage machine, 120-150 pcs.	0
2-KT-9	Potato peeling machine, 10kg	0
2-KT-10	Electric meat chopping machine	0
2-KT-11	Steam boiling copper, 200lit.	0
2-KT-12	Vegetable cutting machine	0
2-KT-13	Pastry kneader, 50kg	0
2-KT-14	Roast board, 3 section	0

Item No.	Description	Q'ty Planned
Children Hospital No. 1		
X-ray Department		
1-X-1	X-ray stationary unit for X-ray scopy and X-ray graphy	1
1-X-2	X-ray film processor, automatic	1
1-X-3	Ultrasound stationary unit with color doppler unit	0
1-X-4	Electrocardiograph (ECG), 6-ch	1
1-X-91	X-ray film development set	1
1-X-92	X-ray protective apron	2
1-X-93	Ultrasound unit, portable with Linear and Convex probe	1
1-X-94	X-ray mobile unit	1
Reanimation Department (ICU)		
1-ICU-1	Ventilator for infant (Newborn)	3
1-ICU-2	Resuscitation table for newborn warming (Infant warmer)	3
1-ICU-3	Ultrasonic nebulizer	2
1-ICU-4	Neonatal monitor	6
1-ICU-5	Suction unit	3
1-ICU-6	Infant incubator	3
1-ICU-7 (1)	Infusion pump	4
1-ICU-7 (2)	Syringe pump	2
1-ICU-8	Weighing scale for newborn	1
1-ICU-9	Refrigerator for reagent, test materials & blood	1
1-ICU-91	Oxygen supply unit	1
1-ICU-92	Pulse oxymeter	2
Neurology Department		
1-NE-1	Electroencephalograph (EEG), 18-ch	1
1-NE-2	Weighing scale for newborn	1
1-NE-3	Electromyograph (EMG)	1
1-NE-4	Electrocardiograph (ECG), 12-ch	0
1-NE-5	Suction unit	3
Perinatal Rehabilitation Department		
1-PE-1	Weighing scale for newborn	1
1-PE-2	Infant incubator	2
1-PE-3	Nebulizer	3
1-PE-4 (1)	Infusion pump	1
1-PE-4 (2)	Syringe pump	3
1-PE-5	Suction unit	3
1-PE-91	Phototherapy unit	2
Infant - Pediatric Department		
1-NB-1	Weighing scale for newborn	1
1-NB-2	Sphygmomanometer	2
1-NB-3	Nebulizer	3
1-NB-4 (1)	Infusion pump	3

Item No.	Description	Q'ty Planned
1-NB-4 (2)	Syringe pump	1
1-NB-5	Suction unit	3
1-NB-6	Infant incubator	2
Family Planning Department		
1-FP-1	Microscope, binocular	1
1-FP-2	Obstetric / Gynaecology examination chair	1
1-FP-3	Obstetric / Gynaecology instrument set	2
Clinical Laboratory Department		
1-CL-1	Blood cell counter	1
1-CL-2	Biochemical analyzer	1
1-CL-3	Electrolyte analyzer (Na, K, Cl / Ca)	1
1-CL-4	Spectrophotometer	1
1-CL-5	Microscope, binocular	2
1-CL-6	Electronic analytical balance	1
1-CL-7	Blood gas analyzer	1
1-CL-8	pH-meter	1
1-CL-9	Bilirubin analyzer	1
1-CL-10	Coagulometer, semi-automatic	1
1-CL-91	Magnetic stirrer, with heater	2
1-CL-92	Roller for test tube	2
1-CL-93	Micropipette	10
1-CL-94	Pipette washer	1
1-CL-95	Glassware washer	1
1-CL-96 (1)	Centrifuge (General)	1
1-CL-96 (2)	Centrifuge (Hematocrit)	1
Laundry Department		
1-L-1 (1)	Washing machine, 30kg	2
1-L-1 (2)	Extractor (Laundry)	2
1-L-1 (3)	Drying machine (Laundry)	2
1-L-2	Ironing machine (Laundry) with table 150cm width	1
Policlinic No. 5		
1-PC-1 (1)	Dental unit with chair and air-compressor	1
1-PC-1 (2)	Dental instrument set	1
1-PC-2 (1)	ENT chair unit	1
1-PC-2 (2)	ENT instrument set	1
1-PC-3 (1)	Ophthalmology chair mounted unit	1
1-PC-3 (2)	Ophthalmology lenses diagnostic set	1
1-PC-3 (3)	Ophthalmology instrument set	1
1-PC-4	Electrocardiograph (ECG), 6-ch	1
General Hospital Equipment & Others		
1-G-1	General diagnostic set	6
1-G-2	Ambulance	1
1-G-3	Minibus, panel van	0

Item No.	Description	Q'ty Planned
Children Infectious Disease Hospital		
X-ray Department		
3-X-1	X-ray stationary unit for X-ray scopy and X-ray graphy	1
3-X-2	X-ray film processor, automatic	1
3-X-3	X-ray mobile unit	1
3-X-91	X-ray film development set	1
3-X-92	X-ray protective apron	2
3-X-93	Ultrasound unit, portable with Linear and Convex probe	1
Reanimation Department (ICU)		
3-ICU-1 (1)	Ventilator for infant (Newborn)	2
3-ICU-1 (2)	Ventilator for child and adult	1
3-ICU-2	Anaesthesia apparatus with ventilator	0
3-ICU-3	Ultrasonic nebulizer	3
3-ICU-4	Patient monitor	9
3-ICU-5	Central monitor	0
3-ICU-6	Infant incubator	1
3-ICU-7	Plasmapheresis unit	0
3-ICU-8 (1)	Infusion pump	7
3-ICU-8 (2)	Syringe pump	2
3-ICU-9	Oxygen supply unit	1
3-ICU-10	Weighing scale for newborn	1
3-ICU-11	Sphygmomanometer (Aneroid type)	2
3-ICU-12	Laryngoscope set for child with ambu bag	3
3-ICU-13	Blood hemosorbtion unit (Pump)	1
3-ICU-14	UV Extracorporal blood disinfection	0
3-ICU-15	Refrigerator for reagent, test materials & blood	1
3-ICU-91	Suction unit	2
3-ICU-92	Suction unit, Low pressure continuous	0
3-ICU-93	Pulse oxymeter	1
Functional Examination Department		
3-EX-1	Echoencephalography unit	0
3-EX-2	Weighing scale for newborn	1
3-EX-3	Cardioanalyzer, Multichannel	0
3-EX-4	Spiroanalyzer	1
3-EX-5	Electrocardiograph (ECG), 1-ch	1
3-EX-91	Electrocardiograph (ECG), 6-ch	1
3-EX-92	Electroencephalograph (EEG), 18-ch	1
Endoscopy Department		
3-ES-1	Endoscope cleaning set	2
3-ES-2	Ultrasonic washing unit, table top for endoscopic tools	1

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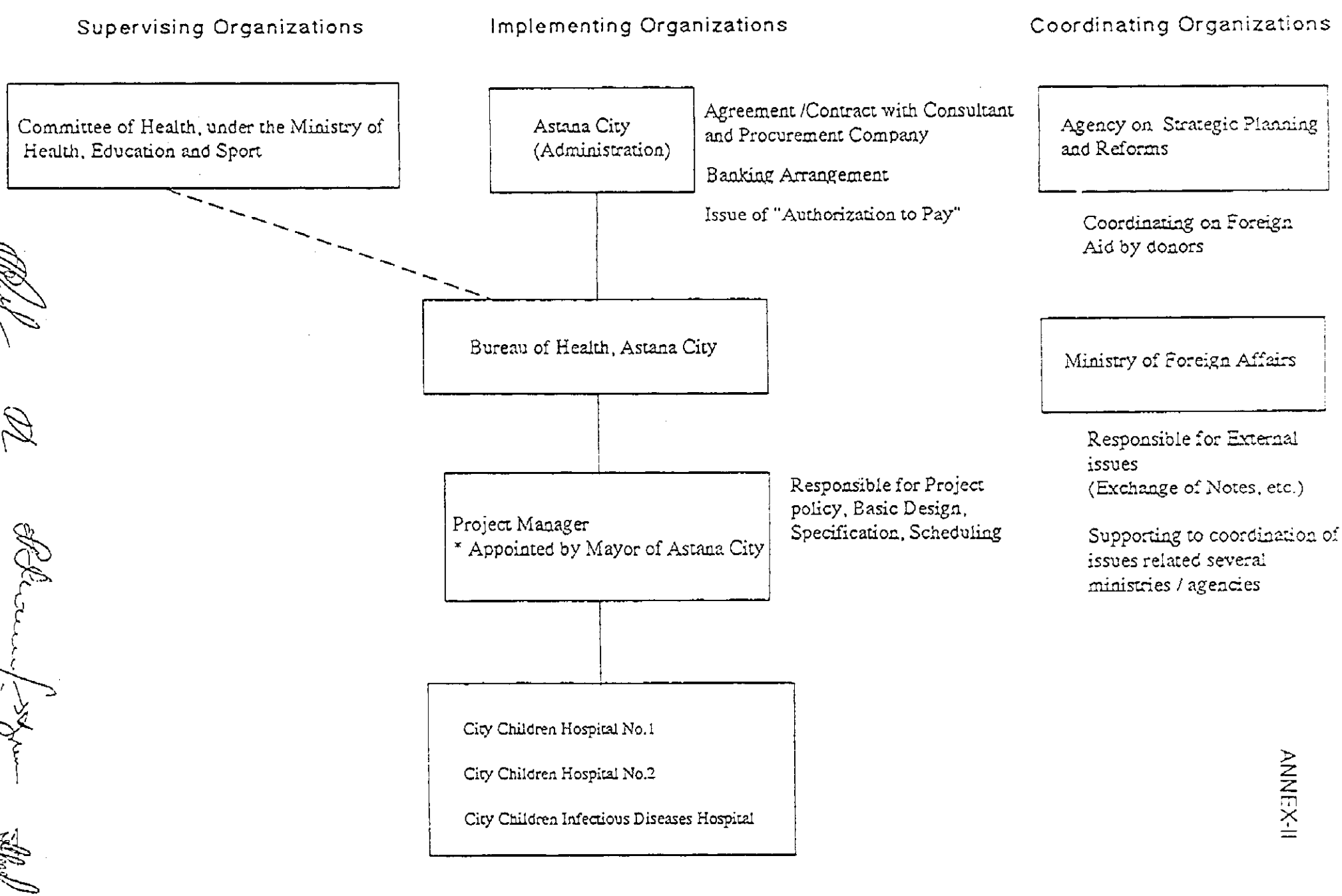
List of Equipment

Item No.	Description	Q'ty Planned
IIF : Intestinal Infectious Disease Department		
3-IIF-1	Weighing scale for newborn	1
3-IIF-2	Weighing Scale	1
3-IIF-3	Sphygmomanometer	3
3-IIF-4	Ultrasonic nebulizer	2
3-IIF-5 (1)	Infusion pump	3
3-IIF-5 (2)	Syringe pump	1
VIF : Virus Infectious Disease Department		
3-VIF-1	Weighing scale for newborn	1
3-VIF-2	Weighing scale	1
3-VIF-3	Sphygmomanometer	3
3-VIF-4	Ultrasonic nebulizer	2
3-VIF-5 (1)	Infusion pump	3
3-VIF-5 (2)	Syringe pump	1
AIF : Aerial Infectious Disease Department		
3-AIF-1	Weighing scale for newborn	1
3-AIF-2	Weighing scale	1
3-AIF-3	Sphygmomanometer	3
3-AIF-4	Ultrasonic nebulizer	2
3-AIF-5 (1)	Infusion pump	3
3-AIF-5 (2)	Syringe pump	1
Clinical Laboratory Department		
3-CL-1	Blood cell counter	1
3-CL-2	Biochemical analyzer	1
3-CL-3	Electrolyte analyzer (Na, K, Cl, or Ca)	1
3-CL-5	Spectrophotometer	1
3-CL-6	Microscope, binocular	2
3-CL-7	Electronic analytical balance	1
3-CL-8	Blood gas analyzer	1
3-CL-9	pH-meter	1
3-CL-10	Coagulometer, semi-automatic	1
3-CL-11	Hemoglobinmeter	0
3-CL-12	Refractometer, handy unit (express)	1
3-CL-13	Glucose analyzer	0
3-CL-14	Fume hood	1
3-CL-91	Magnetic stirrer, with heater	2
3-CL-92	Roller for test tube	2
3-CL-93	Micropipette	10
3-CL-94	Pipette washer	1
3-CL-95	Glassware washer	1
3-CL-96 (1)	Centrifuge (General)	1
3-CL-96 (2)	Centrifuge (Hematocrit)	1

Item No.	Description	Q'ty Planned
Bacteriology Laboratory		
3-CLB-1	Colony counter (manual test)	1
3-CLB-2	Autoclave, desk top type	0
3-CLB-3	pH-meter	1
3-CLB-4	Nitrogen dry box, multistation	0
3-CLB-5	Sterilizer	0
3-CLB-6	Microscope, stereoscope (x50)	1
3-CLB-91	Autoclave, vertical type	1
3-CLB-92	CO2 Incubator	0
3-CLB-93	Microscope, binocular	1
Sterilization Department		
3-ST-1	High pressure steam sterilizer (200 lit.) with water softener	1
3-ST-2	Hot air sterilizer	1
3-ST-3	Ultrasonic washing unit, table top	1
Emergency Reception - Diagnostic Department		
3-EM-1	Weighing scale for newborn	1
3-EM-2	Sphygmomanometer (Aneroid type)	1
3-EM-3	Weighing Scale	1
General Hospital Equipment & Others		
3-G-1	General diagnostic set	6
3-G-2	Ambulance (4WD)	0

Milk Plant		
3-MILK-1	Milk processing Equipment	0
3-MILK-2	Minibus panel van	0


Supervising Organizations
Implementing Organizations
Coordinating Organizations
Committee of Health, under the Ministry of Health, Education and Sport
Astana City (Administration)
Agreement /Contract with Consultant and Procurement Company
Banking Arrangement
Issue of "Authorization to Pay"
Agency on Strategic Planning and Reforms
Coordinating on Foreign Aid by donors
Bureau of Health, Astana City
Ministry of Foreign Affairs
Responsible for External issues (Exchange of Notes, etc.)
Supporting to coordination of issues related several ministries / agencies
Project Manager
* Appointed by Mayor of Astana City
Responsible for Project policy, Basic Design, Specification, Scheduling
City Children Hospital No.1
City Children Hospital No.2
City Children Infectious Diseases Hospital

ANNEX-II

JICA