（資料）

1. 調査団員氏名
2. 調査行程
3. 関係者リスト
4. 討議議事録
5. ソフトコンポーネント計画書
6. 参考資料

1. 調査団員氏名

調査団員氏名、所属

（1） 第一回概略設計調査 (期間：2018 年 5 月 7 日から 5 月 20 日まで)

氏名	担当	所属先
古角　信弘	業務主任／建築計画	株式会社福永設計
勢山　詔子	建築設計／自然条件調査	株式会社福永設計
八重野　広起	構造設計	株式会社福永設計
荒井　幸喜	設備設計	株式会社福永設計
粟生田　浩	施工計画／積算	株式会社福永設計
鈴木　一代	機材計画／維持管理計画	有限会社エストレージャ
村上　友美子	保健計画（１）	有限会社エストレージャ
佐久間　晶子	保健計画（２）／業務調整	株式会社アジア共同設計コンサルタント
海老原　慧	機材計画（自社補強）	有限会社エストレージャ
南　知佳	業務調整（自社補強）	株式会社アジア共同設計コンサルタント

（2） 第二回概略設計調査 (期間：2018 年 6 月 27 日から 7 月 19 日まで)

氏名	担当	所属先
葦田　竜也	団長	JICA 人間開発部保健第四チーム
神作　麗	技術参与	JICA 国際協力専門員
中村　悦子	協力企画	JICA 人間開発部保健第四チーム
古角　信弘	業務主任／建築計画	株式会社福永設計
勢山　詔子	建築設計／自然条件調査	株式会社福永設計
鈴木　一代	機材計画/維持管理計画	有限会社エストレージャ
岩上　隼人	調達計画／積算	株式会社アジア共同設計コンサルタント
村上　友美子	保健計画（１）	有限会社エストレージャ
佐久間　晶子	保健計画（２）／業務調整	株式会社アジア共同設計コンサルタント
南　知佳	業務調整（自社補強）	株式会社アジア共同設計コンサルタント
駒形　朋子	アドバイザー	東京医科歯科大学大学院保健衛生学研究科

（3） 概略設計説明調査 (期間：2018 年 11 月 24 日から 12 月 1 日まで)

氏名	担当	所属先
葦田　竜也	団長	JICA 人間開発部保健第四チーム
神作　麗	技術参与	JICA 国際協力専門員
中村　悦子	協力企画	JICA 人間開発部保健第四チーム
古角　信弘	業務主任／建築計画	株式会社福永設計
勢山　詔子	建築設計／自然条件調査	株式会社福永設計
鈴木　一代	機材計画／維持管理計画	有限会社エストレージャ
佐久間　晶子	保健計画（２）／業務調整	株式会社アジア共同設計コンサルタント

2. 調査行程

調査日程

(1) 第一回概略設計調査

			①業務主任/建築計画	②建築設計/自然条件調査	③構造設計	④設備設計	⑤施工計画/積算	⑥機材計画/維持管理計画	⑦保健計画（1）	⑧保健計画（2）/業務調整	⑨機材計画（自社補強）	⑩業務調整（自社補強）
No.	月/日	曜日	古角　信弘	勢山　詔子	八重野 広起	荒井　幸喜	栗生田　浩	鈴木　一代	村上 友美子	佐久間 晶子	海老原　慧	南　知佳
1	5/7	月	【東京　→イスラマバード】									
2	5/8	火	JICA打合わせ CADD表敬訪問		市場調査			①と同様				
			インセプション協議（PIMS）									
3	5/9	水	PIMS対象病院調査 （CH, IH）				施工業者調査打ち合わせ	①と同様				
4	5/10	木	PIMS対象病院調査 （MCHC）				建設価格調査	①と同様	PIMS対象病院調査 （MCHC） 保健省		①と同様	機材代理店調査 輸送業者調査
5	5/11	金	他ドナー調査 （WHO、GIZ）、サイト調査	サイト調査			建設価格調査	Rural Health Center、DHO訪問 機材代理店調査	Rural Health Center、DHO訪問	他ドナー訪問 （WHO、GIZ）	⑥と同様	機材代理店調査
6	5/12	土	CN, CMT調査 施設計画立案・再委託協議・TNドラフト作成		施工会社調査	①と同様	建設価格調査	CN, CMT調査、供与機材リスト整理、TNドラフト作成	CN, CMT踏査、 TNドラフト作成		⑥と同様 【イスラマバード→バンコク】	⑦と同様
7	5/13	日	団内会議、資料整理、TNドラフト作成		施工会社調査	①と同様	建設価格調査	①と同様			【バンコク→東京】	①と同様
8	5/14	月	TNドラフト会議（JICA）、PIMSランチミーティング		施工会社調査	①と同様	建設価格調査	①と同様				①と同様
9	5/15	火	TN協議（PIMS）		建設価格調査 【イスラマバード→ラホール→】	①と同様	③と同様 【イスラマバード→ラホール→】	①と同様				①と同様
10	5/16	水	TN協議・署名（PIMS）	①と同様 【イスラマバード→バンコク】	【→バンコク→東京】	水道・電気調査	【→バンコク→東京】	①と同様				①と同様
11	5/17	木		【バンコク→東京】		水道・電気調査 プライベート病院調査		CADD プライベート病院調査	⑥と同様	資料整理 プライベート病院調査		⑥と同様
12	5/18	金	JICA報告 PIMS対象病院調査			JICA報告 PIMS対象病院調査 機材代理店		④と同様	④と同様	①と同様		④と同様
13	5/19	土	PIMS ED面会 【イスラマバード→ラホール→バンコク】			水道・電気調査 【イスラマバード→ラホール→バンコク】		①と同様 【イスラマバード→ラホール→バンコク】	報告書執筆 【イスラマバード→ラホール→バンコク】	資料整理 【イスラマバード→ラホール→バンコク】		輸送業者調査 【イスラマバード→ラホール→バンコク】
14	5/20	日	【バンコク→東京】			【バンコク→東京】		【バンコク→東京】				【バンコク→東京】

(2) 第二回概略設計調査

			JICA人間開発部 保健第四チーム課長	JICA国際協力専門員（保健）	JICA人間開発部 保健第四チーム ジュニア専門員	①業務主任/建築計画	②建築設計/自然条件調査	③機材計画/維持管理計画	④保健計画（1）	⑤保健計画（2）/業務調整	⑥機材調達/積算	⑦業務調整	⑧アドバイザー
No.	月/日	曜日	葦田 竜也	神作 麗	中村 悦子	古角 信弘	勢山 詔子	鈴木 一代	村上 友美子	佐久間 晶子	岩上 隼人	南 知佳	駒形 朋子
1	6/27	水									【東京→イスラマバード】		
2	6/28	木									PIMS対象病院踏査		
3	6/29	金									医療機材代理店調査		
4	6/30	土									資料整理		
5	7/1	日									資料整理		
6	7/2	月	【東京→イスラマバード】			【東京→イスラマバード】					医療機材代理店調査		【東京→イスラマバード】
7	7/3	火	・JICA打ち合わせ ・CADD訪問 ・PIMS訪問			・JICA打ち合わせ ・CADD訪問 ・PIMS訪問							
8	7/4	水	・PIMS対象病院踏査 ・MD協議			・PIMS対象病院踏査 ・MD協議					①と同様 【イスラマバード→バンコク】	医療機材代理店調査	①と同様
9	7/5	木	MD協議			・MD協議 ・現地再委託先打ち合わせ		MD協議			【バンコク→東京】	医療機材代理店調査	PIMS対象病院踏査
10	7/6	金	・MD署名 ・JICA打ち合わせ ・日本大使館訪問 【イスラマバード→バンコク】			・MD署名 ・日本大使館訪問	MD署名					代理店への医療機材見積依頼	PIMS対象病院踏査 【イスラマバード→バンコク】
11	7/7	土	【バンコク→東京】			・TNドラフト作成 ・PIMSサイト調査		・PIMS対象病院踏査 ・TNドラフト作成		資料整理		⑤と同様	【バンコク→東京】
12	7/8	日				TNドラフト作成				【イスラマバード→ドバイ→タジケント】		資料整理	
13	7/9	月				CADD訪問（MD報告）		・同左 ・PIMS対象病院踏査 ・医療機材代理店調査	PIMS対象病院踏査			③と同様	
14	7/10	火				PIMS対象病院踏査			救急システム調査（Rescue 1122、Edhi）			・PIMS対象病院踏査 ・医療機材代理店調査	
15	7/11	水				・PIMS対象病院踏査 ・CDA訪問（Plannning Department）		・PIMS対象病院踏査 ・EAD訪問				③と同様	
16	7/12	木				・TN協議 ・CDA訪問（Fire Safety Department, Sanitation Department, Water Supply Department） ・インフラ調査（IESCO、N-VIROPAK）		・TN協議 ・PIMS対象病院踏査 ・インフラ調査（N-VIROPAK）	PIMS対象病院踏査			・TN協議 ・PIMS対象病院踏査	
17	7/13	金				TN署名	TN署名 【イスラマバード→バンコク】	①と同様	・プライベート病院調査（Polyclinic） ・看護協会調査 【イスラマバード→バンコク】			TN署名 【イスラマバード→バンコク】	
18	7/14	土				・報告書ドラフト作成 ・サイト調査	【バンコク→東京】	報告書ドラフト作成	【バンコク→東京】			【バンコク→東京】	
19	7/15	日				・報告書ドラフト作成 ・PIMS設備調査		①と同様					
20	7/16	月				PIMS TN後協議		①と同様					
21	7/17	火				PIMS TN後協議		①と同様					
22	7/18	水				JICA打ち合わせ 【イスラマバード→バンコク】		JICA打ち合わせ 【イスラマバード→バンコク】					
23	7/19	木				【バンコク→東京】		【バンコク→東京】					

(3) 概略設計説明調査

No	月/日		JICA 人間開発部 保健第四 チーム課長 葦田 竜也	JICA国際協力 専門員(保健) 神作 麗	JICA 人間開発部 保健第四 チーム ジュニア専門員 中村 悦子	①業務主任 /建築計画 古角 信弘	②機材計画/ 維持管理計画 鈴木 一代	③保健計画(2) /業務調整 佐久間 晶子	④建築設計/ 自然条件調査 勢山 詔子
1	11/24	土				【東京→バンコク→イスラマバード】			
2	11/25	日				団内会議、説明会資料作成			
3	11/26	月	【東京→イスラマバード】			PIMS(技術的な説明、協議)			
4	11/27	火	8:30 PIMS 概要設計説明 10:00 JICAパキスタン打合せ 13:00 保健省(MoNHSRC)表敬・打合せ 次官補						
5	11/28	水	15:00: 計画開発省(MPDR) Chief of Health 打合せ			9:00-PIMS、 15:00- MPDR	機材調査		①と同様
6	11/29	木	11:00 MD 署名, 14:00-14:45: JICA 報告 15:00-15:30: 日本国大使館報告				PIMS BME	①と同様	PIMS P&D
			【イスラマバード→カラチ】		【イスラマバード →東京】	ローカルコンサ ルタント	保健省面談		ローカルコンサ ルタント
7	11/30	金	Karachi Children Hospital 訪問 【カラチ→バンコク】			【イスラマバード→バンコク】			

3. 関係者リスト

計画開発改革省 (MPDR)		
Ministry of Planning, Development and Reform	Chief of Health	Dr. Muhammad Asif
連邦保健省 (MNHSRC)		
Ministry of National Health Services, Regulations and Coordination	Joint Securetary	Mr. Muhammad Bashir Khetran
	Deputy Director Program-1	Dr. Sabeen Afzal
パキスタン医科学研究所 (PIMS)		
PIMS Administration		
PIMS	Executive Director	Dr. Raja Amjad Mahmood
PIMS	Joint Exective Director	Dr. Ejaz Qadeer
PIMS	Deputy Director (OPD)	Dr. Iram Naveed
PIMS	Financial Director	Captain Asif
小児病院 (CH)		
Children's Hospital	Director	Dr. Anjum Javed
OPD Children	Deputy Director	Dr. Pairzo Achakzai
Department of Neonatology	Head of Department	Professor Haider Shirazi
	Assistant Professor, NICU doctor	Dr. Shireen Gul
	NICU doctor	Dr. Alia Halim
	Doctor	Dr Shagfta
Department of Paeds Medicine	Head of Paeds Medicine	Professor. Jai Krishian
Department of Pediatric Surgery	Head of Department	Professor Nadeen Akhtar
	Doctor	Dr. Mudassar Gandal
	Senior Registrar	Dr. Khurram Arif
Children OT	Assistant Professor, In-charge Anesthesia	Dr. Shahid Khan
	Head Nurse	Ms. Nasreen Nawab
Lab. Biocheministy	Head of Laboratory Biocheministy	Dr. Shehla Anjum Baig
	I/c Radialogist	Mr. Samina Akhtar
Neuro Disability & Neuro Deveopment and rehebalitation	HOD Peads	Professor Hashim Raza
母子保健センター (MCHC)		
Department of Obsterics & Gynaecology	Head of Department	Professor / Dr. Syeda Batool Mazhar
	Deputy Director	Dr. Amber Atta
	Assistant Director	Dr Irfan Ahmed
	Chief NSG Superintendent	Ms Humaira khushnood
MCH Head of Unit 2	Professor of Geanacology	Professor Nasira Tasneem
Obsterics & Gynaecology OT	OT incharge	H/N Zainab Khatoon
OPD	Staff	Ms. Azea Ashewf

Engineering Department		
Department of Engineering	Deputy Director of Engineering	Mr. Ubaid Ullar Khan
Civil Engineering	Civil Engineer	Mr. Rafaqat Ali
Electrical Department	Engineer	Mr. Tarice Mehmood
Islamabad Hospital (Main PIMS)	HVAC Engineer	Mr. Shibli Razzaq
MCH and BCC (Burn Care Center)	HVAC Engineer	Mr. Amjad Latif
Cardiac Center.	HVAC Engineer	Mr. Syed Khurram Shahzad, Naqvi
	Boiler Engineer	Mr. Akhtar Malik
PIMS	Electro Medical Engineer	Mr Hammad
IH, MCH, CH and BCC	Electrial Engineer	Mr. Ghulam Murtaza
Hospital Management Information System (HMIS)		
HIMS	Manager	Mr. Manzar Naqvi
Islamabad District Health Officer Hospital		
Department of Pathology	Head of Pathology	Proffesor Lubna Naseem
首都行政開発庁 (CADD)		
Capital Administration and Development Division	Secretary	Dr. Saqib Nisar
	Additional Secretery	Dr. Shabana
	Joint Secretary	Mr. Dr Jamal Yousaf
	DDG Development, Senior research Officer	Mr. Dr Zafar iqbal
イスラマバード首都開発局 (CDA)		
Capital Development Authority	Chairman	Mr. Ishrat Ali
	Joint Secretary	Mr. Ifran Anjum
Building Control	Director, Building Control -1	Mr. Faisal Naeem Baig
Building Control	Dy Director, planning wing	Mr. Sajiad
Emergency & Disaster management Directorate, Fire prevention, Protection & Life Safety Advisory, Fire Headquarters	Assistant Director	Mr. Khalid Abbasi,
	In-charge Fire Audit Prevention	Mr. Naveed Hassan
	In-charge Fire Audit Prevention	Mr. Zulfiqar Ali
イスラマバード首都自治体 (MCI)		
Water supply	Director (Water Supply)	Mr. Nasir Jamil Butt
Sanitation	Director (Sanitation)	Sardar Khan Zimri
Donors		
WHO		
RMNCAH & Nutrition Cluster Lead, Promoting Health through the Lifecourse	Medical Officer	Dr Lamia Mahmoud
Health Systems Development	Coordinator	Dr Jamal Thabet Nasher
GIZ		
Support to Social Protection-Social Health Protection (SP-SHP)	Project Manager	Ms. Alexandra Plueschke
	Advisor	Dr. Imran Masood

4. 討議議事録

TECHNICAL NOTES on the Preparatory Survey for
the Project for Strengthening the Function of Pakistan Institute of Medical Science

The Pakistan Institute of Medical Science (hereinafter referred to as "the PIMS") and the JICA survey team (hereinafter referred to as "the Team") held a series of discussions on technical subjects on the Project from 14 May to 15 May 2018 The mission 1 is carried out by the consultant team to collect necessary information and to develop the design of the cooperation before mission 2, which is tentatively scheduled in early July 2018. It is intended that the JICA will exchange an official Minutes of Discussion with the PIMS in the mission 2. In the course of the Technical Notes discussion of the mission 1, both sides have confirmed the followings.

Islamabad
16th May, 2018

古角信弘

Nobuhiro KOKADO
Chief Consultant
Preparatory Survey Team
Fukunaga Architects-Engineers

Executive Director
Pakistan Institute of Medical Sciences
PIMS, Islamabad

DR.Raja Amjad Mahmood
Executive Director
The Pakistan Institute of Medical Science

16/05/2018

1. Objective of the Project

The project aims to enhance the medical service provided at the Children Hospital and the Maternal & Children's Health Centre at the PIMS by constructing facilities and providing equipment to the PIMS, thereby contributing to improve the access of the patients to both organizations and to improve the quality of the medical services provided by both organizations.

2. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

2-1. Executing agency & preparation of the PC-1

The PIMS will be the executing agency for the Project. The PIMS shall coordinate with all the relevant authorities to ensure smooth implementation of the Project by preparing a new PC-1 for the Project *or* by updating the existing PC-1 created in August 2016 *(selecting one)*, and obtain necessary approval from the supervising ministry, the Capital Administration and Development Division (hereinafter referred to as the "CADD") and other relevant authorities. The CADD and the PIMS ensures that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts of the CADD, the PIMS, the Children's Hospital and the Maternal & Children's Health Centre are shown in Annex. 1.

The PIMS organized a managing committee (the JICA Project Committee) to proceed the project in Pakistan. The members are;

Executive Director of the PIMS, Dr. Raja Amiad Mahmood
Joint Executive Director of the PIMS, Dr. Ejaz Qadeer
Head of Department, Obstetrics & Gynecology, Dr. Syeda Batool Mazhar
Head of Unit 2 MCHC, Dr. Nasira Tasnim
Head of Department, Administration, Dr. Iram Naveed
Head of Department, Pediatric Neonatology, Professor Haider Shirazi
Head of Department, Pediatric Medicine, Professor Jai Krishian
Head of Department, Pediatric Surgery, Professor Nadeen Akhtar
Civil Engineer, Mr. Rafaqat Ali
Bio Medical Engineer, Mr. Riaz Ahmed

2-2 Environmental and social considerations

2-2-1. The Pakistan side confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social

Considerations (April, 2010).

2-2-2. The Project is categorized as "C" from the following considerations:

The project is likely to have minimal adverse impact on the above mentioned JICA guidelines. Not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

However, the CADD/PIMS shall submit the environmental check list, according to the JICA guideline.

3. Project site

3-1. Location and the extent of the site

Both sides confirmed that the extent of the Project site in the premise of the PIMS, which is shown in Annex 2.

(Topographic survey and other required surveys will be carried out based on the T.N. discussion, commencing on 18 May 2018.)

3-2. Confirmation of extent of the site investigations

-The PIMS explained that the history of the Project site. It was once a potential construction project site but it has never been used as a building site nor a dumping ground. Both parties confirmed that the investigations such as topographical, geographical and underground object survey shall be carried out regarding the Project site.

-Both sides confirmed the demolition of a temporary shed on the project site / relocation of infrastructure (water reservoir and a café) / etc. fundamentally bourn by the CADD / PIMS.

4. Tentative extent of cooperation and their priority

4-1. The PIMS requested the items of the new facility & equipment shown in the Annex 3 and 4 "Tentative project components". The outline of the request are as follows;

(1) Intensive Care Units; such as Neonatology Intensive Care Unit (NICU) and Maternal Fetal Intensive Care Unit (MFICU) and High Dependency Unit (HDU)

(2) Operation theatres (OTs) for major surgeries of the Maternal & Children's Health Centre (MCH Centre) and an Operation theatre for major surgeries at the Children's Hospital (CH);

(3) High risk labour & delivery rooms, recovery rooms, and Central Sterilized Supply Department (C.S.S.D)

(4) New wards for CH and MCH Centre; details of requested number of beds per sub-specializations is shown in Annex. 3

(5) Equipment and furniture for the new facility

(6) Equipment which is required for upgrading the existing facilities. .

(7) Facilities (rooms) required to be altered; in cases where a particular department moves to the new facility for expansion, existing departments may utilize the space for expansion. *(For instance, if the NICU ward will move to the new facility as par increasing the number of cots, the empty space can be utilized for separating existing PICU and Surgical PICU)*

(8) Revamping the existing HVAC systems at the CH and the MCH Centre.

4-2. The size of new facilities and extent of procurement of equipment will be examined through technical and financial analysis by the Japanese side and will be proposed to Pakistan side.

4-3. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.

4-4. Concerning the limitation of budget for the Project, The Team explained and the PIMS understood that, although the facility component and/or equipment shall be covered according to the priorities, those of which are put lower priorities may be excluded from the Project.

5. *Other items*

5-1. Staff for the New Facility

As for making fully use of the benefits derived from the project, The PIMS agreed to acquire sustainable budget for medical & maintenance staff and cost of maintenance of facility and equipment.

5-2. Staff for the OT-5

The PIMS assured that the financial issue has been 90% solved and the new staff will be ready for the OT-5 (day-care surgery operation theatre) at the CH, which has not been actively used.

5-3. Issue of hard water and the C.S.S.D at the MCH Centre

The PIMS is aware of the issue of the hard water and a broken water softener at the MCH Centre, which is causing un-safe medical environment. Many hands scrub basins are not functioning and 2 out of 3 autoclaves are broken at the C.S.S.D. The PIMS has a plan to procure 1 (one) autoclave to maintain the medical service of the MCH Centre. It has also been received a temporary supply from the central C.S.S.D of the PIMS. It will

remain as an issue until drastic solution would be employed such as replacing the water softener. The list of mechanical equipment of HVAC at the MCH Centre is shown in Annex.5

5-4. Number of beds at the new hospital wards

It was emphasized that increase of number of beds at the CH and the MCH Centre will benefit to increase the quality of medical services they provide. The PIMS's point of view is that doubling the number of beds at CH and at MCH Centre is required to accommodate the patients which have been increasing every year. Also, it was concluded that the function of the ICU has more priority than the new hospital wards.

5-5. Request of the future extension - vertically

The PIMS requested that the New Facility to have enough structural strength to increase the number of floors in the future; the foundation should be designed up to 5-6 floors, if the new facility is designed to have 2-3 floors.

5-6. Seminar rooms for training purpose

The PIMS requested that the New Facility to have training functions, such as seminar rooms, duty room for resident doctors and equipment such as OT cameras for training purposes. Traditionally and from now on, the PIMS receives resident doctors (trainees) and trainees from the other hospitals.

5-7 Emergency for the New Facility

The PIMS requested an emergency reception, examination and minor treatment room at the New Facility. The PIMS understands that it is necessary to organize clear roles & responsibilities of a new emergency unit, since there are existing Emergency & Accidents Centres (EAC) both at CH & MCH.

5-8. Modern equipment at the laboratories at the CH and the MCH is required

It was emphasized that manual operation at laboratories can not meet today's demands of tests at the CH and the MCH Centre. It is required that replacing manual lab. Equipment to the modern (automatic) equipment.

5-9. Existing equipment

The PIMS agreed that the Biomedical Engineering Section to complete the check list of existing equipment at the CH and the MCH Centre (Annex. 6) and submit the list to the survey team by the end of May. The equipment which was tentatively recognized the 'necessity of replacement' was marked with circle in the list. The purpose of the check of existing equipment at the CH and the MCH Centre by the PIMS side is to double

check the necessity of replacement.

5-10. HMIS (Hospital Management Information System)

The PIMS has HMIS since 2004. The IH (Islamabad Hospital), CH, MCH Centre, Cardiac Center, BCC (Burn Care Center) are the service delivery departments of the PIMS and the all are connected with the optical fiber cables between buildings.

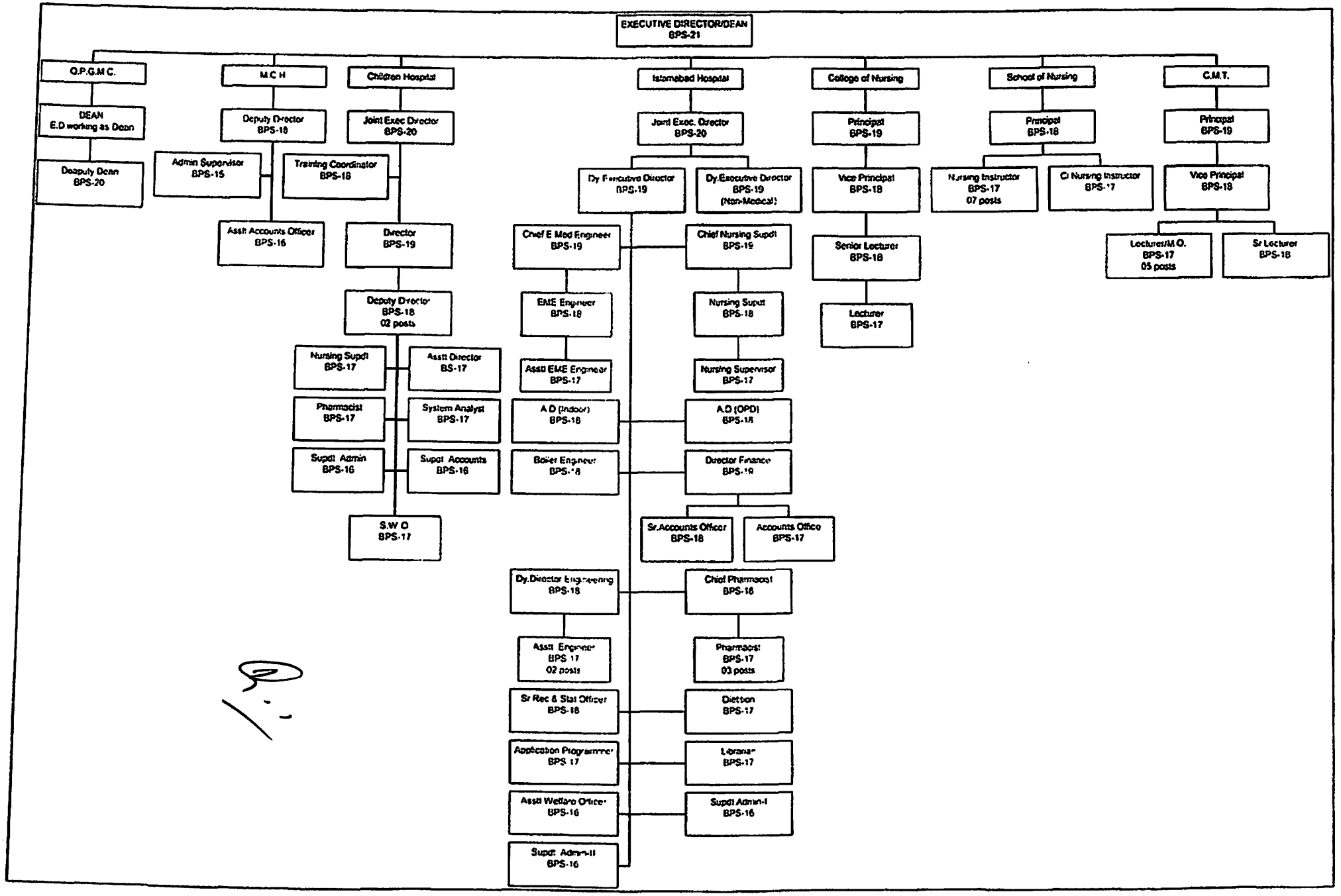
At the PIMS, around 600-700 computers are attached with the HMIS. VB-6 programme is installed with HMIS. If the New Facility would be part of the HMIS, fiber optic cables from the HMIS main to the new building and the UPS hardware is required. At the same time, existing HMIS Centre needs upgrading in order to cater the requirements of new building. HMIS is installed in the MCH Centre and the CH, but there is a shortage of hardware (computers), therefore, it has not been activated yet. 14 years have been passed since the database were initially installed. It needs upgrading to meet modern medical services and management.

Annex 1: Organization chart of the Pakistan Institute of Medical Science
Annex 2: Project site
Annex 3: Tentative project components
Annex 4: Tentative diagram of current and proposed CH & MCH
Annex 5: HVAC work required at MCH (original HVAC equipment)
Annex 6: List of Existing Equipment

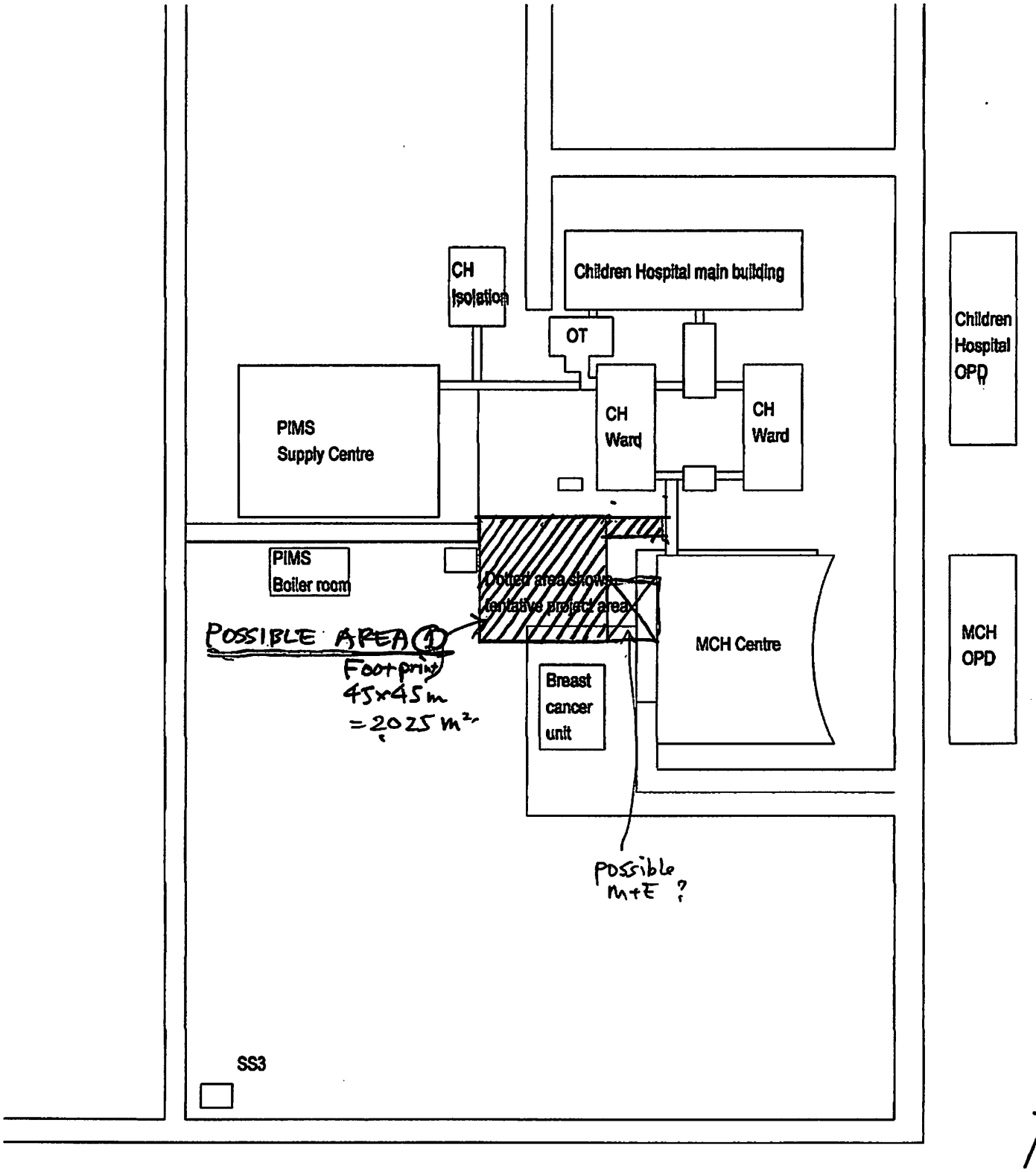
Obstetrics

Attachment 1-

ORGANIZATIONAL CHART OF PAKISTAN INSTITUTE OF MEDICAL SCIENCES, ISLAMABAD.



Annex 2



PIMS PROJECT SITE
1:2000

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Annex 3
(Discussion purpose 20180516)

Table: Project components and the priority

		Project Component		Prio rity	
1	-	Site preparation & EIA, etc.		A	CADD/ PIMS
2	New Facility& equipment	Intensive Care Unit	-NICU: Neonatl Intensive Care Unit, 20 beds - MFICU: Maternal Fetal Intensive Care Unit, 10 beds -HDU: High Dependency Unit, 10 beds	A	Japan
3	N.F.& E	Operation Theatres	-OT1: MCH major surgeries, Gynae Oncology (can be shared with Gynae Urology and Fistula) -OT2: MC major surgeries, High risk Obstetrics -OT3: Gynae Endoscopy – -OT4: CH major surgeries -High risk delivery room (2beds) -Pre-op and post ops recovery room (10beds)	A	Japan
4	N.F.& E	CSSD	-A new CSSD for the OTs, ICU, Emergency of the New Facility	A	Japan
5-1	N.F.& E	Clinical Laboratory	-A new Clinical laboratory Point of care clinical laboratory(Hematology, Biochemistry, Serology which will be utilized for intraoperative, inpatient and emergency case.)	A	Japan
5-2	New Equipment	Clinical Laboratory equipment	- Special tests for prenatal diagnosis and embyrology lab.	B	Japan
6	N.F.& E	Reception of emergency	-Minor treatment unit: 1 Examination room: 4	A	Japan
7	N.F.& E	Hospital wards	-CH:80 beds (*1) -MCH:-70-90 beds (*2)] (Breakdown and priority is shown on next page)	A	Japan
8	Existing Equipemnt	Medical equipment for Islamabad Hospital	Equipment for Histopathology, Microbiology	B	Japan
9	Existing Equipment	Medical equipment for Children Hospital	Equipment for NICU, OT, CSSD, Lab., etc.	A	Japan
10	Existing equipment	Medical equipment for MCHC	Equipment for Emergency, Delivery room, ICU, OT, CSSD, etc.	A	Japan
11	Existing HVAC system	Replace for MCHC	Detailes attached	A	Pakistan
12	Existing HVAC system	Replace for CH		B	Pakistan/ Japan
13	Exisitng facilities	Alterations to rooms at existing hospitals	Where necessary, after certain functions move to the new facility, such as converting old NICU space to perdiatric surgical ICU both for neonates and general sugincal patients	A	Pakistan
14	N.F.& E	HMIS	New fibre optic cable outside and within HMIS and the new facility. UTP hardware and computers required.	A	Pakistan

Leo

*1

- **Request of hospital beds from the CH**

Priority A

- Surgical beds 20
- Pediatric oncology 10
- Pediatric nephrology 10
- Pediatric endocrinology 10

Priorit B

- Pediatric gastro entrology 10
- Pediatric neurosciences 10
- Pediatric cardiology 10

*2

- **Request of hospital beds from the MCH**

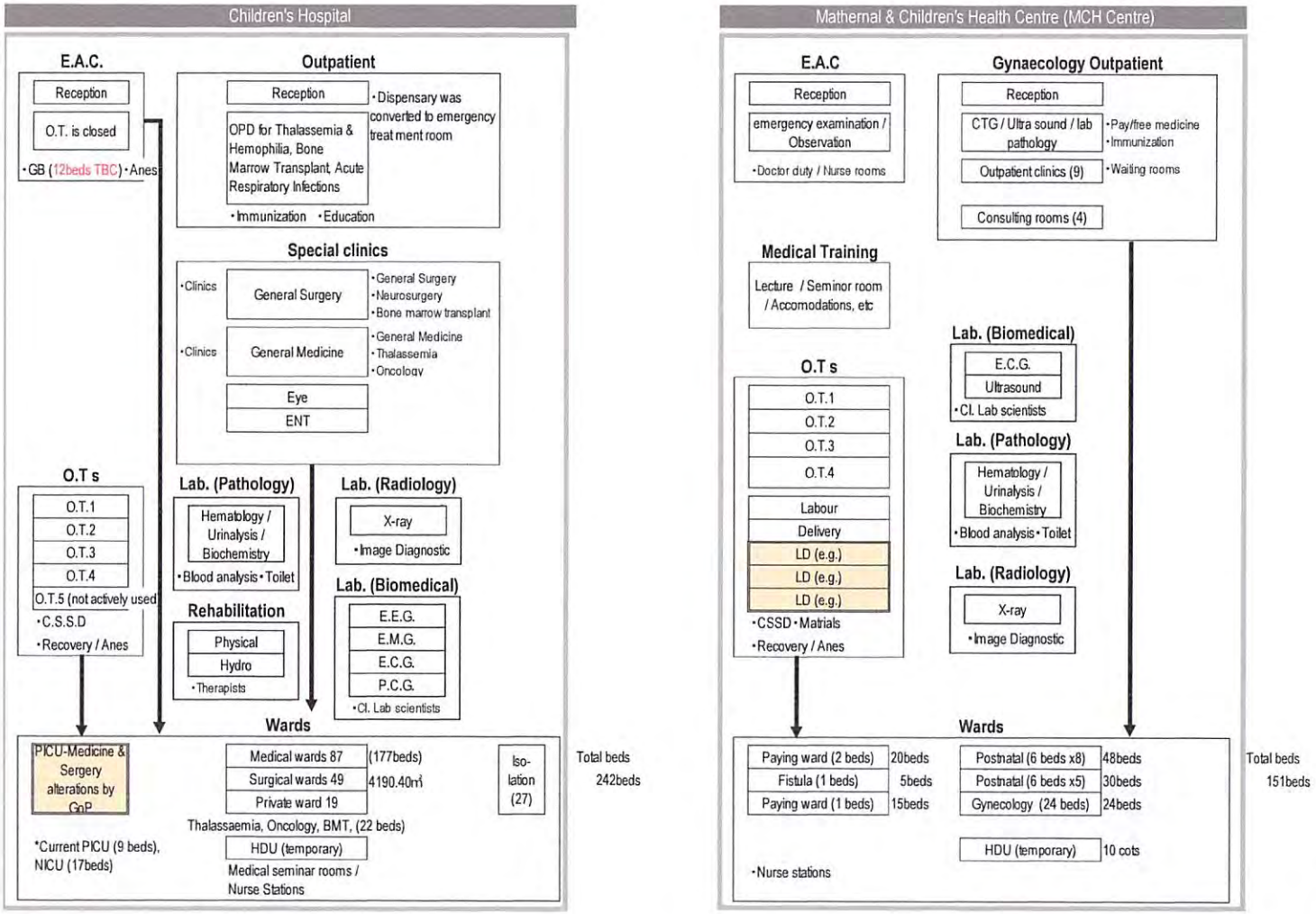
Priority A: 30 beds for New Gynecology

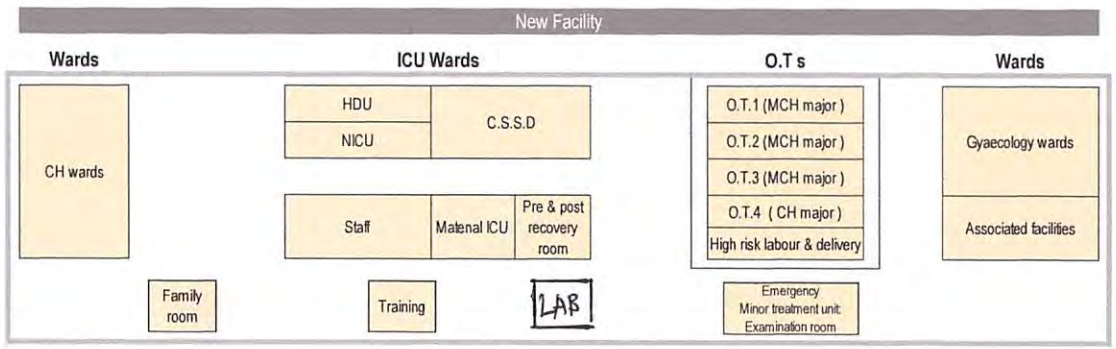
- Gynae Oncology 10-15 beds
- Gynae Urology and Fistula 10-15 beds
- Reproductive Endocrinology & IVF & support services. 10-15 beds
- Gynae Endoscopy –daycare 10-15 beds

Priorit B: 30 beds for high risk Obstetrics

- Perinatal Medicine Unit 30 beds
- (Kangaroo mother care unit 10 bedded unit.)

Annex. 4 Tentative diagram of current and proposed CH & MCH
(Discussion purpose)





ANNEX 5

HVAC work Required for Mother Care and Child Health Center

LIST OF INVENTORY OF EQUIPMENT OF HVAC SYSTEM
INSTALLED AT MOTHER & CHILD HEALTH CENTRE, PIMS ISLAMABAD

S #	Description	Qty
1.	Boiler (Steam) Evaporating capacity /thermal output 1239000 Kcal/hr/ each working pressure: 10.0 kg/cm²/each	2 Sets
2.	Absorption Chiller Sanyo Japan. Capacity: 175 Ton each.	2 Sets
3.	Cooling Tower Capacity: 990000 kcal/hr/each	2 Sets
4.	Pumps a) Chilled/Hot water pumps b) Condenser water pumps c) Treated water pumps d) Raw water pumps e) Chilled water pumps f) Hot water pumps g) Steam water supply pumps h) Sewerage pumps (sanitary) i) Drainage pumps (seepage water) j) Hydrant water (pumping)	03 Sets 02 Sets 02 Sets 02 Sets 02 Sets 04 Sets 02 Sets 04 Sets 10 Sets 01 Set
5.	Air Handling Units (AHU) Sabro PK	08 No.
6.	Fan Coil Units (FCU) & Heating Convector	209 No.
7.	Water Softener (WS-1)	01 Unit
8.	Chemical Feeder	06 Set
9.	Exhaust Fresh Air Fan	165 No.
10.	Expansion Tank	03 No.
11.	Hot Water Storage Tank	02 Set
12.	Steam Water Heat Exchanger	02 Set
13.	Electrical & Control (HVAC)	01 Lot

Note:-

1. HVAC system was installed on 1998 by Govt of Japan.

2. HVAC system miner repair many time, now both Chillers Tubs has been leaked. Cooling towers, pumps etc beyond repairable.

3. Now Above all equipment and System use full life is completed.

4. Initiative submitted to PIMS Govt of Pakistan on 22 December, 2015. Amount. Rs. 5.0 Million Budget is not available

5. Fist time submitted PC-1 to Ministry of CADD Govt of Pakistan on 10 December, 2015. Amount. Rs. 75 Million

6. Second time submitted PC-1 to Ministry of CADD Govt of Pakistan on 25 January , 2016 . Amount. Rs. 75 Million

7. Third time submitted PC-1 to Ministry of CADD Govt of Pakistan on May, 2016. Amount. Rs. 120 Million

Hospital name : MCHC

Summary of inspection for existing medical equipment

ANNEX. 6

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
1	Abortive Instrument set	Takasago			8		1998							
2	Anesthesia Device				1	OT	2014	○						
2	Anesthesia Device				3		2014							
4	Anethesia Apparatus	Acoma	PH-3F		2		1998							
5	Aus. Suction Unit	Nakamura	GT-100		2		1998							
6	Auto Dispenser	Nichiryo	DL-7		1		1998							
7	Autoclave	Sakura	SPA-211		1		1998							
8	Automatic Blood Cell Counter	TOA Medical	F-820, AD-270		1		1998							
9	Automatic Blood Cell Counter				1		2014							
10	Automatic Infusion Pump	Nakamura	FP-955		3		1998							
11	Automatic Infusion Pump	Nakamura	FP-955		4		1998							
12	Baby Bassinet	Paramaount	KB-105		62		1998							
13	Bed	Paramaount	KA-4524S		5		1999							
14	Bed with Mattress	Paramaount	KA-877		1	DR	1998	○					○	
14	Bed with Mattress	Paramaount	KA-877		9		1998							
16	Bed with Mattress	Paramaount	KA-309		68		1998							
17	Bed with Mattress	Paramaount	KA-309ETC		10		1998							
18	Bedside Cabinet	Paramaount	KF-570		125		1998							
19	Blood Bank Refrigerator	Sanyo	MBR-506D		2		1998							
20	Blood Gas Analyzer	AVL	Compact2		1		1998							
21	Blood Sedimentation Set	Kayagaki	A327		1		1998							
22	Boiling Sterilizer	Muranaka	DHS-L		2		1998							
23	Boiling Sterilizer	Muranaka	DHS-L		11		1999							
24	Caesarean Section Set	Takasago			12		1998							
25	Cardiotocography CTG Monitor	Toitsu	MT-332		2		1998							
26	Cardiotography CTG Monitor	Toitsu	MT-332		3		1998							
27	Cardiotography CTG Monitor	Toitsu	MT-332		1		1998							
28	Cardiotography CTG Monitor	Toitsu	MT-430		1		1998							
29	Cast	Muranaka	009-008		12		1998							
30	Childbirth Phantom	Kyoto	M 46		1		1999							
31	Childbirth Phantom	Kyoto	F5		5		1999							
32	Clinical Instrument Set	Muranaka	PR-148		4		1998							
33	Clinical Instrument Set	Muranaka	PR-148		6		1999							
34	Clinical Refractometer	Kayagaki	B-415		1		1998							
35	Clinical Rotator	Sakura	VP-10B		1		1998							
36	Computer (Out Patient)	Compaq	Desk Pro-1000		2		1999							
37	Computer (Training)	Compaq	Desk Pro-1000		1		1999							
38	Copy Machine	Canon	NP-6030		1		1999							
39	CTG Monitor				1	DR	2006	○						
39	CTG Monitor				1	ICU	2006	○						
39	CTG Monitor				2		2006							
40	CTG Monitor	Toitsu	MT-332		2		1999							

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Hospital name : MCHC

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
41	Cusco's Vaginal Speculum Set	Takasago			2		1998							
42	Cusco's Vaginal Speculum Set	Takasago			4		1999							
43	Defibrillator	Nihonkoden	TEC-7100K		1	ER	1998		○				○	
44	Defibrillator with Stand	Nihonkoden	TEC-7100K		1		1998							
45	Delivery Bed				1	DR	2014	○	○				○	
45	Delivery Bed				1	DR	2014	○	○				○	
45	Delivery Bed				1	DR	2014	○	○				○	
45	Delivery Bed				1		2014							
46	Delivery Table	Nakamura	GD-2000		7		1998							
47	Delivery Table	Nakamura	GD-2000		2		1999							
48	Diagnostic Set	Muranaka	A138.10.118		8		1998							
49	Diagnostic Set	Muranaka	A138.10.118		5		1998							
50	Diagnostic Set	Muranaka	A-13810-118		6		1999							
51	Digital Billirubin Analyzer	Nakamura	A-7001		1		1998							
52	Doppler Fetus Detector				1	OPD	2014	○						
52	Doppler Fetus Detector				1	OPD	2014	○						
52	Doppler Fetus Detector				1	DR	2014	○						
52	Doppler Fetus Detector				7		2014							
53	Doppler Fetus Detector	Toitsu	FD-400D		2		1998							
54	Doppler Fetus Detector	Toitsu	FD-400		3		1998							
55	Doppler Fetus Detector	Toitsu	FD-400		4		1998							
56	Doppler Fetus Detector	Toitsu	FD-400D		1		1998							
57	Doppler Fetus Detector	Toitsu	FD-400D		7		1999							
58	Doppler Fetus Detector	Toitsu	FD-400		2		1999							
59	Drying Oven	Kayagaki	KEP-60PM		1	Lab	1998		○				○	
60	Effacement Simulator	Kyoto	NM26		1		1999							
61	Effacement Simulator	Kyoto	NM26		5		1999							
62	Electric Tester	Hioki	3119-II		1		1998							
63	Electrical Maintenance Tool Set	Hozan	S-86		1		1998							
64	Electro Surgical Unit	Mizuho	TRC-1500B		4		1998							
65	Electrocardiograph				2		2014							
66	Electrocardiograph	Nihonkoden	ECG-8820K		1	ICU	1999		○				○	
66	Electrocardiograph	Nihonkoden	ECG-8820K		1	ICU	1999		○				○	
67	Electrolyte Analyzer	AVL	AVL988/3		1		1998							
68	Electronic Balance	YMC	MJ-300		1		1998							
69	Electrosurgical Unit				4		2014							
70	Emergency Cart	Muranaka	PR-610		2		1998							
71	Examination Light	Yamada	39W		4		1999							
72	Examining Light	Yamada	39S		1	ER	1998	○					○	
72	Examining Light	Yamada	39S		1	ER	1998	○					○	
73	Examining Light	Yamada	39S		2		1998							
74	Examining Table	Paramaount	KC-265		2		1998							

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Hospital name : MCHC

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
75	Examining Table	Marquis	MD-578		10		1999							
76	Fetal Actocardiograph				4		2014							
77	Film illuminator	Seikosha	SF77U4T		1		1998							
78	Film Illuminator	Seikosha	SF-77U2T		4		1998							
79	Film Illuminator	Seikosha	SF-77U2 T		1		1998							
80	Film Illuminator	Seikosha	SF77U2T		6		1999							
81	Forceps stand	Muranaka	007-003		12		1998							
82	Freezer	Sanyo	MDF-U332		1		1998							
83	General Maintenance Tool Set	Maeda	700DX		1		1998							
84	General Radiography System	Shimadzu	UD-150L-RII		1		1998							
85	Hematocrit Centrifuge	Kubota	KN-70		1	Lab	1998		○				○	
85	Hematocrit Centrifuge	Kubota	KN-70		1	Lab	1998		○				○	
86	Hematocrit Centrifuge	Kubota	3100		1		1998							
87	High Pressure Steam Sterilizer		Udono		1	OT	2014	○						
88	High Pressure Steam Sterilizer	Sakura	AIIIS-B09		2	OT	1998		○				○	
89	HIV & HBS AG Testing Kit (E lisa)	Sanofi Fujirebio	PW41, PR2100		1		1998							
90	Hot Air Sterilizer	Sakura	HE-152		1	Lab	1998	○						
91	Hysterectomy Set	Takasago			4		1998							
92	Icterometer	Minolta	JM-102		1		1998							
93	Incubator	Sakura	IF-102		1		1998							
94	Infanr Warmer	Dragger	Baby therm 8004		1	OT	2014		○				○	
94	Infanr Warmer	Dragger	Baby therm 8004		1	DR	2014		○				○	
94	Infanr Warmer	Dragger	Baby therm 8004		1	DR	2014		○				○	
94	Infanr Warmer	Dragger	Baby therm 8004		1		2014							
95	Infant Bath	Nakamura	N-145		4		1998							
96	Infant Dressing/Treatment Table	Nakamura	M-1000		3		1998							
97	Infant Laryngoscope & Resuscitation	Nakamura	S-300+142		4		1998							
98	Infant Laryngoscope & Resuscitation Set	Nakamura	S-300+142		1		1998							
99	Infant Portable Incubator	Toitsu	ACDC		1	OT	1998		○				○	
99	Infant Portable Incubator	Toitsu	ACDC		4		1998							
100	Infant Scale	Misaki	BSL-20		3		1998							
101	Infant Warmer	Nakamura	NIW-3500		1	DR	1998		○				○	
101	Infant Warmer	Nakamura	NIW-3500		1	DR	1998	○					○	
101	Infant Warmer	Nakamura	NIW-3500		2		1998							
102	Infant Warmer	Nakamura	NIW-3500		2		1998							
103	Instrument Cabinet	Muranaka	PR-163		2		1998							
104	Instrument Cabinet	Muranaka	PR-163		2		1998							
105	Instrument Cabinet	Muranaka	PR-163		8		1998							
106	Instrument Cabinet	Muranaka	PR-163		2		1998							
107	Instrument Cabinet	Muranaka	PR-163		6		1999							
108	Instrument Carriage	Muranaka	CA3-2213		3		1998							
109	Instrument Sterilizing Tray	Muranaka	010-001		12		1998							

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Hospital name : MCHC

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
110	Instrument Trolley	Muranaka	PR-263		1	DR	1998	○					○	
111	Instrument Trolley	Muranaka	PR-263		2		1998							
112	Instrument Trolley	Muranaka	PR-265-R		8		1998							
113	IV Pole	Muranaka	MA-24		6		1998							
114	IV Pole	Muranaka	MA-24		7		1998							
115	IV Pole	Muranaka	MA-24		8		1998							
116	IV Pole	Muranaka	MA-24		10		1998							
117	Kick Bucket	Muranaka	PR-146		7		1998							
118	Kotaka's Placenta Forceps set				4		1999							
119	Lab Instrument Set	Kayagaki	2H 2SA		1		1998							
120	Laboratory Autoclave	Sakura	ASV-2402		1		1998							
121	Laboratory Center Table	Dalton	GA-505		2		1998							
122	Labour Pain Bed with Mattress	Nakamura	GD-F		9		1998							
123	Laparoscope				1	OT	2014	○					○	
124	Laparotomy Instrument Set	Takasago			2		1998							
125	Laproscope	Olympus	A5295A		1	OT	1998	○					○	
126	Laproscope	Nakamura	SEMM GYNE-RING		1		1998							
127	Laryngoscope Set	Blue Cross	ET-AI		4		1998							
128	Linear Scan	Shimadzu	SDL-32C		1		1998							
129	Linear Scan	Shimadzu	SDU-350A		1		1999							
130	Linear Scan	Shimadzu	SDU-350A		2		1999							
131	Liner Scan	Shimadzu	SDU-500C		1		1998							
132	Measuring Scale	Muranaka	HP		2		1999							
133	Medical Cabinet	Itoki	33YSET		4		1999							
134	Micro Pipette	Nichiryo	50V-S/50V-M		4		1998							
135	Microscope Research	Olympus	CHS-213EM		1	Lab	1998	○					○	
135	Microscope Research	Olympus	CHS-213EM		2		1998							
136	Mobil X-Ray Unit	Shimadzu	MU-125M		1	ICU	1998		○				○	
137	Mortuary Cot	Katoman	KDT-3		1		1998							
138	Mortuary Regrigerator	Katoman	2B		2		1998							
139	Normal Delivery Instrument Set	Takasago			30		1998							
140	Obstetric Examining Table	Nakamura	GE-3100		1	ER	1998	○					○	
140	Obstetric Examining Table	Nakamura	GE-3100		1	ER	1998	○					○	
141	Obstetric Examining Table	Nakamura	GE-3100		2		1998							
142	Obstetric Examining Table	Nakamura	GU-300		2		1998							
143	Obstetric Examining Table	Nakamura	GE-3100		6		1999							
144	Obstetric Examining Unit	Nakamura	GU-300		6		1998							
145	Obstetric Instruments Set	Takasago			4		1998							
146	Obstetric Instruments Set	Takasago			4		1999							
147	Obstetric Operating Table				3		2014							
148	Obstetric Operation Table	Muranaka	OL-202		4		1998							
149	Operating Instrument Set	Muranaka	PR-116ETC		5		1998							

2018/5/16

Hospital name : MCHC

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
150	Operating Light	Yamada	84		5		1998							
151	Operating Light	Yamada	82		1		1998							
151	Operating Light	Yamada	82		1	DR	1998		○					
152	Operating Light	Yamada	8350		4		1998							
153	Operating Light	Yamada	50SC		2		1999							
154	Over Bed Table	Paramaount	KF-281		125		1998							
155	Overhead Projector	Kindermann	ECO-24		2		1999							
156	Patient Monitor with Recorder	Nihonkoden	BSM-7105K		1	ER	1998		○				○	
156	Patient Monitor with Recorder	Nihonkoden	BSM-7105K		2		1998							
157	Patient Monitor with Recorder	Nihonkoden	BSM-8301K		1		1998							
158	Photo therapy Unit	Nakamura	PT-1600		3		1998							
159	Phototheraphy Unit				2		2014							
160	Pipette Washer	Kayagaki	A242		1		1998							
161	Prescription Counter	Muranaka	K-3211J		8		1998							
162	Radiology Instrument Set	Okamoto	A-2		1		1998							
163	Refrigerator	Sanyo	MPR-311		1	DR	1998	○					○	
164	Refrigerator	Sanyo	MPR-311		2		1998							
165	Refrigerator	Sanyo	MPR-311		1		1998							
166	Refrigerator	Sanyo	MPR-311D		4		1999							
167	Refrigerator	Sanyo	MPR-311D		2		1999							
168	Resuscitator for Neonates/Adults	Nakamura	S-300INFANT		4		1998							
169	Screen	Elmo	HW-4		2		1999							
170	Slide Projector	Kindermann	Dia Focus A		1		1999							
171	Slide Projector	Elmo	552 Xenon		1		1999							
172	Speaker System (Set)	TOA	LA-30Etc		1		1999							
173	Spectrophotometer	Shimadzu	UV-1201		1		1998							
174	Spectrophotometer				1		2014							
175	Sphygmomanometer	Muranaka	DR-10		6		1998							
176	Sphygmomanometer	Muranaka	DR-10		12		1998							
177	Sphygmomanometer	Muranaka	DR-5		5		1998							
178	Sphygmomanometer	Muranaka	DR-10		14		1999							
179	Sterilizing Instrument Storage Cabinet	Muranaka	PR-163		10		1998							
180	Stethoscope	Muranaka	336-001-01		6		1998							
181	Stethoscope	Muranaka	336-001-01		7		1998							
182	Stethoscope	Muranaka	336-001-01		12		1998							
183	Stethoscope	Muranaka	068-008-04		14		1999							
184	Still Camera	Olympus			1		1999							
185	Storage Cabinet	Dalton	CA-521		1		1998							
186	Stretcher	Paramaount	KK-613		2		1998							
187	Stretcher	Paramaount	KK-613		2		1998							
188	Stretcher	Muranaka			4		1998							
189	Stretcher	Paramaount	KK-613		2		1998							

2018/5/16

Hospital name : MCHC

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
190	Suction Unit				5		2014							
191	Suction Unit	Mizuho	MSP-205A		1	OT	1998	○					○	
191	Suction Unit	Mizuho	MSP-205A		6	OT	1998							
192	Suction Unit	Mizuho	MSP-205A		4		1998							
193	Suction Unit	Nakamura	P-70		1	WARD	1998	○					○	
193	Suction Unit	Nakamura	P-70		1	Nursery	1998	○					○	
193	Suction Unit	Nakamura	P-70		2		1998							
194	Suction Unit	Nakamura	P-70		4		1998							
195	Tally Counter	Kayagaki	KYG-8		2		1998							
196	Traube's Obstetric Stethoscope	Muranaka	055-003-02		14		1999							
197	TV Set	Sony	KVG25MI		3		1999							
198	Ultrasonic Cleaner	Sakura	US-20E		1		1998							
199	Ultrasonic Nebulizer				1	Nursery	2014	○						
199	Ultrasonic Nebulizer				1		2014							
201	Ultrasound Diagnostic System				1		2014	○						
201	Ultrasound Diagnostic System				1		2014							
202	Vacuum Extraction Vesseles				5		2014							
203	Vacuum Extractor	Nakamura	GT-200		1	DR	1998		○				○	
203	Vacuum Extractor	Nakamura	GT-200		1	DR	1998		○				○	
203	Vacuum Extractor	Nakamura	GT-200		1		1998							
204	Vaginal Operation Set	Takasago			4		1998							
205	VCR Set	JVC	HR-1837MS		3		1999							
206	Vehicle	Toyota	LH-114R		2		1998							
207	Video Camera	Sony	MVC-FD71		1		1999							
208	Ward Instruments Set	Muranaka	PR-148ETC		4		1998							
209	Water Bath	Sakura	KH-806		1		1998							
210	Water Distilling Apparatus	Kayagaki	DW-18III		2		1998							
211	Weighting Scale	Muranaka	AT		4		1999							
212	Wheel Chair	Muranaka	PM100A		2		1998							
213	Work Table	Muranaka	PR-410		4		1998							
214	X-Ray Film Development Equipment	Nishimoto	NE-2400		1		1998							
				Total Q'ty	1,135									

Hospital : Children HP

Summary of inspection for existing medical equipment

No.	Name of Equipment	Manufacture	Model	Serial	Q'ty	Installed Place	Year of installation	In Use	Causes of usage				Necessity of replacement	Remarks
									Break down	No consumable	No user	No Needs		
1	ANAETHESIA	ACCOMA	ART-21EX		1	RECOVERY ROOM	2007	○						
2	ANAETHESIA APPARATUS	ACCOMA	PRO-45		1	OT-2CH	2007	○						
3	ANAETHESIA APPARATUS	ACCOMA	PRO-45		1	OT-5CH	2007	○						
4	ANAETHESIA APPARATUS	ACCOMA	PRO-45		1	OT-5CH	2007	○						
5	ANAETHESIA VENTILAYTOR	ACCOMA	PRO-45V		1	OT-2CH	2007	○						
6	ANAETHESIA VENTILAYTOR	ACCOMA	PRO-45V		1	OT-5CH	2007	○						
7	ANAETHESIA VENTILAYTOR	ACCOMA	PRO-45V		1	OT-5CH	2007	○						
8	Anesthesia device with all accessories				4	OT Anesthesia	2013/10/31	○						
9	AUTOCLAV SMALL SIZE		HRM-24211		1	AE	2007	○						
10	AUTOCLAVE	HIRAYAMA	HVE-50		1	STERILIZATION	2007	○						
11	Autoclave CSSD with all accessories				1	OT	2013/11/4	○						
12	Autoclave Large				1	CH	2013							
13	Autoclave Small				1	CH	2013							
14	Automatic Blood Cell Counter with all accessories				1	Labo	2013/11/4	○						
15	Automatic Tissue Processor				7	CH	2014							
16	Automatic Tissue Slide Stainer				8	CH	2014							
17	Baby warmer with all accessories				4	HDA L-R: 2 Nursery OT	2013/10/30	○						
18	BLOOD GAS ALAYZER	Bayer	348		1	LAB CH	2007							
19	BRONCHOSCOPE RIGID	Karl Storz	10339A		1	OT-5CH	2007	○						
20	CHEMISTTRY ALAYZER	Bayer	EXPRESS RLUS		1	LAB CH	2007							
21	Computed Radiorography				1	CH	2013							
22	CTG machine with all accessories				4	HAD L-R: 1 Pvt. Ward: 1 E.A.C.: 1 OPD: 1	2013/11/6	○						
23	CYSTOSCOPE RIGID	Karl Storz	27301AA		1	OT-5CH	2007	○						
24	Deferibrillator				5	CH	2014							
25	Delivery bed with all accessories				4	HDA L-R	2013/11/2	○						
26	DENTAL UNIT	J-MORITA	ACTUS EC11		1	DENTAL CH	2007	○						
27	Diagnostic Ultrasound				10	CH	2013							
28	DISTILLTION PLANT	TOKYO Rikakikai	SA-2100E		1	LAB CH	2007							
29	ECG machine with all accessories				2	E.A.C.: 1 Gen. ward: 1	2013/11/6	○						
30	ELECTRIC DRILL FOR ORTHOPEDIC	MIZUHO	M-200		1	OT	2007							
31	ELECTRIC DRILL FOR ORTHOPEDIC SURGERY	MIZUHO	M-200		1	OT-5CH	2007	○						
32	ELECTRIC TONOMETER	TOPCON	CT-80ETC		1	EYE-1	2007	○						
33	Electromyography				11	CH	2014							
34	ELECTROSURGICAL UNIT	MIZUHO	TRC-1500B		1	OH-5CH	2007		○				○	
35	ELECTROSURGICAL UNIT	MIZUHO	TRC-1500B		2	OT	2007							
36	ELECTROSURGICAL UNIT	MIZUHO	TRC-1500B		1	OT-2CH	2007							
37	ELECTROSURGICAL UNIT	MIZUHO	TRC-1500B		1	OT-5CH	2007							
38	Endoscop System (Bronchoscope)				1	CH	2014							

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39	Endoscope				2	CH	2013							
40	Fetal Doppler detector with all accessories				10	HAD L-R: 4 Pvt. Ward: 1 OT: 2 E.A.C.: 1 OPD: 2	2013/11/6	○						
41	FIBER COLONSCOPE	FUJINO	FC-1Z		1	OT-5CH	2007	○						
42	FIBER GASTROSCOPE	FUJINO	FG-IZP		1	OT-5CH	2007	○						
43	Forklifter				2	CH	2013							
44	FREEZER	SANYO TOKYO	MDF-192AT		1	LAB CH	2007	○						
45	FUNDUS CAMERA	TOPCON	TRC-50EX ETC		1	EYE-2	2007	○						
46	GKIN GRAFT KIFE	MIZUHO			1	OT	2007	○						
47	HEMATOLOGY ANALAYZER	Nihonkoden	MEK-6318K		1	LAB CH	2007		○				○	
48	HIP SPICA TABLE	MURANAKA	PM-020		1	PROCEDURE	2007	○						
49	HOT AIR OVEN	ABC LABO	KSF-60PM		1	LAB CH	2007	○						
50	INFANT INCUBATOR	ESSE	CRSITINA SC		1	E WARD	2007							
51	INFANT INCUBATOR	ESSE	CRSITINA SC		1	ISOLATION	2007							
52	INFANT INCUBATOR	ESSE	CRSITINA SC		7	NICU	2007							
53	INFANT INCUBATOR	ESSE	CRSITINA SC		2	ROOM	2007							
54	INFANT INCUBATOR	ESSE	CRSTINA SC		1	W WARD	2007							
55	INFANT WARMER	ESSE	LR90		1	AE	2007	○						
56	INFANT WARMER	ESSE	LR90		4	NICU	2007							
57	INFANT WARMER	ESSE	CRSITINA SC		2	ROOM	2007							
58	Infarred Radiation Theraphy Unit				10	CH	2014							
59	INFUSION PMP	TOP	TOP-3300		1	OT	2007	○					○	
59	INFUSION PMP	TOP			1	ROOM	2007							
60	JINDICE METER	Konica Minorta	JM--103		1	N.I.C.U.	2007	○						
61	Laparoscopy with all accessories				1	OT	2013/9/28	○						
62	LOW FREQUENCY THERAPY UNIT	ITO	ES-420		1	SPECAIL OT	2007							
63	MANUAL DERMATONE	MIZUHO			1	OT	2007	○						
64	MICROSCOPE	Nikon	501V-15		3	LAB CH	2007							
65	MICROSCOPE W/PHOTO AND TV MONITOR	Nikon	501F-15		1	LAB CH	2007							
66	Microwave Daithermy				9	CH	2014							
67	Mobile Radiolography System				1	CH	2014							
68	Nebulizer with all accessories				2	Nursery: 1 Gen. Ward: 1	2013/11/5	○						
69	Obst. Table Gynae with all accessories				3	OT	2013/11/5	○						
70	OPERATING LAMP	YAMADA	6664		1	OH-5CH	2007	○						
71	OPERATING LAMP	YAMADA	6664		2	OT	2007	○						
72	OPERATING LAMP	YAMADA	6664		1	OT-2CH	2007	○					○	
73	OPERATING LAMP	YAMADA	6664		1	OT-5CH	2007	○						
74	Operation Table				1	CH	2014							
75	OPERETING TABEL	MURANAKA	PM-020		2	OT	2007	○						
76	OPERETING TABEL		PM-020		1	OT-5CH	2007	○						
77	OPERETING TABEL	MURANAKA	PM-020		1	OT-5CH	2007	○						
78	OPERETING TABLE	MURANAKA	PM-020		1	OT-2CH	2007	○						
79	OPG Machine				1	CH	2014							

80	OXYGEN ANARLYZER	ATOM	OX-21		2	N.I.C.U.	2007	○						
81	PATIENT MONITOR	ESSE	M9B		1	NICU	2007							
82	PATIENT MONITOR	ESSE	M9B		1	OT-2CH	2007							
83	PATIENT MONITOR	ESSE	M9B		1	OT-5CH	2007	○					○	
84	PATIENT MONITOR	ESSE	M9B		1	OT-5CH	2007						○	
85	PATIENT MONITOR	ESSE	M9B		1	PICU	2007	○					○	
85	PATIENT MONITOR	ESSE	M9B		1	PICU	2007	○						
86	PATIENT MONITOR	ESSE	M9B		2	ROOM	2007							
87	PH METER	DKK-TOA	HM-25R		1	LAB CH	2007							
88	Photo therapy unit with all accessories				2	Nursery	2013/11/2	○						
89	PHOTOTHERAPY unit	ATOM	PIT-220TLR		1	N.I.C.U.	2007	○						
89	PHOTOTHERAPY unit	ATOM	PIT-220TLR		4	N.I.C.U.	2007							
90	PIPETTE set	NICHIRYO	NPX-100		1	LAB CH	2007							
91	PLASTER CUTTER ELECTRIC	MIZUHO	M-1		1	OT	2007							
92	PLASTER CUTTER ELECTRIC	MIZUHO	M-1		1	PROCEDURE	2007	○						
93	PLASTER CUTTER ELECTRIC	MIZUHO	M-1		1	AE	2007	○						
94	PULS OXIMETER	ITO	ES-420		1	E WARD	2007	○						
95	PULS OXIMETER	ESSE	CRSITINA SC		1	ISOLATION	2007							
96	PULS OXIMETER	ESSE	PM50		2	ROOM	2007							
97	PULS OXIMETER	ESSE	PM-50		1	W WARD	2007	○						
98	SIGMOIDOSCOPE RIGD	Karl Storz	24916		1	OT-5CH	2007	○						
99	Spectro photometer with all accessories				1	Labo	2013/11/4	○						
100	SUCTIN MACHINE	SANKO	MMC-1400		1	ISOLATION	2007	○						
101	SUCTIN MACHINE	KOUSHIN	TAF-7000FD		1	OT-5CH	2007	○					○	
102	SUCTIN MACHINE	KOUSHIN	TAF-7000FD		1	OT-5CH	2007	○						
103	SUCTION MACHINE	SANKO	MMC-1400		1	E WARD	2007	○						
104	SUCTION MACHINE	KOUSHIN	TXF-7000		2	OT	2007	○						
105	SUCTION MACHINE	KOUSHIN	TAF-7000FD		1	OT-2CH	2007	○						
106	SUCTION MACHINE	SANKO	MMC-1400		1	W WARD	2007	○						
107	Suction unit with all accessories				5	HDA L-R: 2 OT: 3	2013/11/4	○						
108	Surgical Diathermy machine with all accessories				4	OT	2013/11/4	○						
109	Surgical Mobile C-Arm				1	CH	2014							
110	SYNOPTOPHRE	IMAM&CO.	1-2510B		1	EYE-3	2007	○						
111	SYRING INFUSION PUNP	TOP	TOP-5300		1	OT-5CH	2007	○					○	
112	SYRING INFUSION PUNP	TOP	TOP-5300		1	OT-5CH	2007							
113	SYRING PUNP	TOP	TOP-5300		10	NICU	2007							
114	SYRING PUNP	TOP	TOP-5300		1	OT-2CH	2007	○						
115	SYRING PUNP	TOP	TOP-5300		5	PICU	2007							
116	ULTAR SONIC NEBULIZER	KOUSHIN	COMFORT-2000		1	ENT	2007							
117	ULTRA SONIC NEBULIZER	KOUSHIN	COMFORT-2000		5	WAD 01	2007							
118	Ultrasound machine with all accessories				2	Labo Radiology	2013/10/28	○						
119	ultrasoundo unit B/W	Toshiba Medical	SSA-510		2	Radiology CH	2007	○						
120	Vacuum extractor with all accessories				2	HDA L-R	2013/11/2	○						
121	VENTILATOR	ACOMA	ICV-60		2	NICU	2007	○						
122	VENTILYTOR	ACOMA	ICV-60		1	PICU	2007							

123	VENTILYTOR	ACOMA	ART-21EX		1	PICU	2007	○						
123	VENTILYTOR	ACOMA	ART-21EX		1	PICU	2007	○						
125	X-ray FILAM PROCEESOR	J-MORITA	LEVEL.356MD		1	DENTAL CH	2007	○						
126	X-ray FILAM PROCEESOR	ELK	SUPER90 RLUS		2	Radiology CH	2007	○						
127	X-ray unit w/tv system	Toshiba Medical	KXO-50xm/dfx-1000a		1	Radiology CH	2007							
128	X-ray unit w/tv system	Toshiba Medical	KXO-32s		1	Radiology CH	2007	○						
129	X-ray unit w/tv system	Toshiba Medical	IME-200A		1	Radiology CH	2007	○						
				Total Q'ty	**265**									

TECHNICAL NOTES on the Preparatory Survey for

the Project for Strengthening the Function of Pakistan Institute of Medical Sciences

Mission 2

Pakistan Institute of Medical Sciences (hereinafter referred to as "PIMS") and the JICA consultant team (hereinafter referred to as "the Team") held a series of discussions on technical subjects of the Project from 12 to 13 July 2018. In the course of the Technical Notes discussion, both sides have confirmed the followings.

Islamabad
13th July, 2018

古角信弘

Nobuhiro KOKADO
Chief Consultant
Preparatory Survey Team
Fukunaga Architects-Engineers

DR.Raja Amjad Mahmood
Executive Director
Pakistan Institute of Medical Sciences (PIMS)

13/7/2018

1. Project site & adjustment of possible buildable area

The Team & PIMS engineering team further investigated current situation of the existing infrastructure on project site during the mission 2. It is recommended to avoid building on the existing infrastructure as much as possible, and the possible buildable area was adjusted (Annex.1). Removal or relocation of the existing canteen was required, and both parties confirmed that this item is included in the undertaking by the government of Pakistan.

2. Planning idea with requested components

The consultant team proposed a planning idea with facility components requested at the MD discussion, with consideration of the adjustment of buildable area. (Annex.2). Machine room are located in the separated building to install hazardous materials.

Installation of evacuation ramp is recommended by the relevant authorities and the total floor area is increased. Both parties agreed that it is possible that some components such as laundry and kitchen maybe eliminated from the project through further study.

3. Operation theatres

There are four existing OTs at the MCH centre. Four new OTs were requested by PIMS at the new facility. The MCH wishes to utilize the new OTs with the purpose for emergent obstetric cases such as emergent surgeries of high risk pregnant patient and for other required obstetrics and gynaecology cases. Neo-natal unit will utilize new OTs with the purpose for emergent neonatal cases.

4. Equipment

4-1. Priorities

Both sides confirmed the list of requested equipment with priorities (ANNEX 3).

Primarily, equipment with priority A is subject to feasibility study. However, some equipment marked priority B is essential, such as Hematology analyzer, Biochemistry analyzer, and Electrolyte analyzer, etc. PIMS agreed to equip laboratory analyzers through lease agreements.

4-2. Transferring existing medical equipment to new facility

PIMS agreed to transfer equipment, such as Infant incubators, Ventilators, Infant warmers from the existing CH to new facility.

5. Providing infrastructure

PIMS acknowledged increase of supply capacity and/or new installation of the following items.

-Electricity increase: It is discussed a possible replacement of existing 250kVA transformer to 1,000kVA to supply electricity to new facility. According to the Islamabad Electricity Service Company (IESCO), an approved electrical engineer shall submit an analysis report to the IESCO for application of electricity supply increase more than 500kVA. PIMS confirmed that it is their responsibility to obtain approval from the IESCO with this matter.

-Oxygen supply increase: There are two liquified oxygen tanks on PIMS premise. Existing 5,000 m^3 tank is supplying O2 to MCH Centre, Burn Care Centre and the CH. The consultant team recommended to replace the existing small tank to 10,000m^3 tank and PIMS agreed to consider the possibility.

-Fire fighting water: It is required to provide 100,000L water reservoir and installation of two fire fighting pumps, according to a preliminary advice from the Fire Service Department. PIMS agreed to see if it is feasible to install the firefighting equipment.

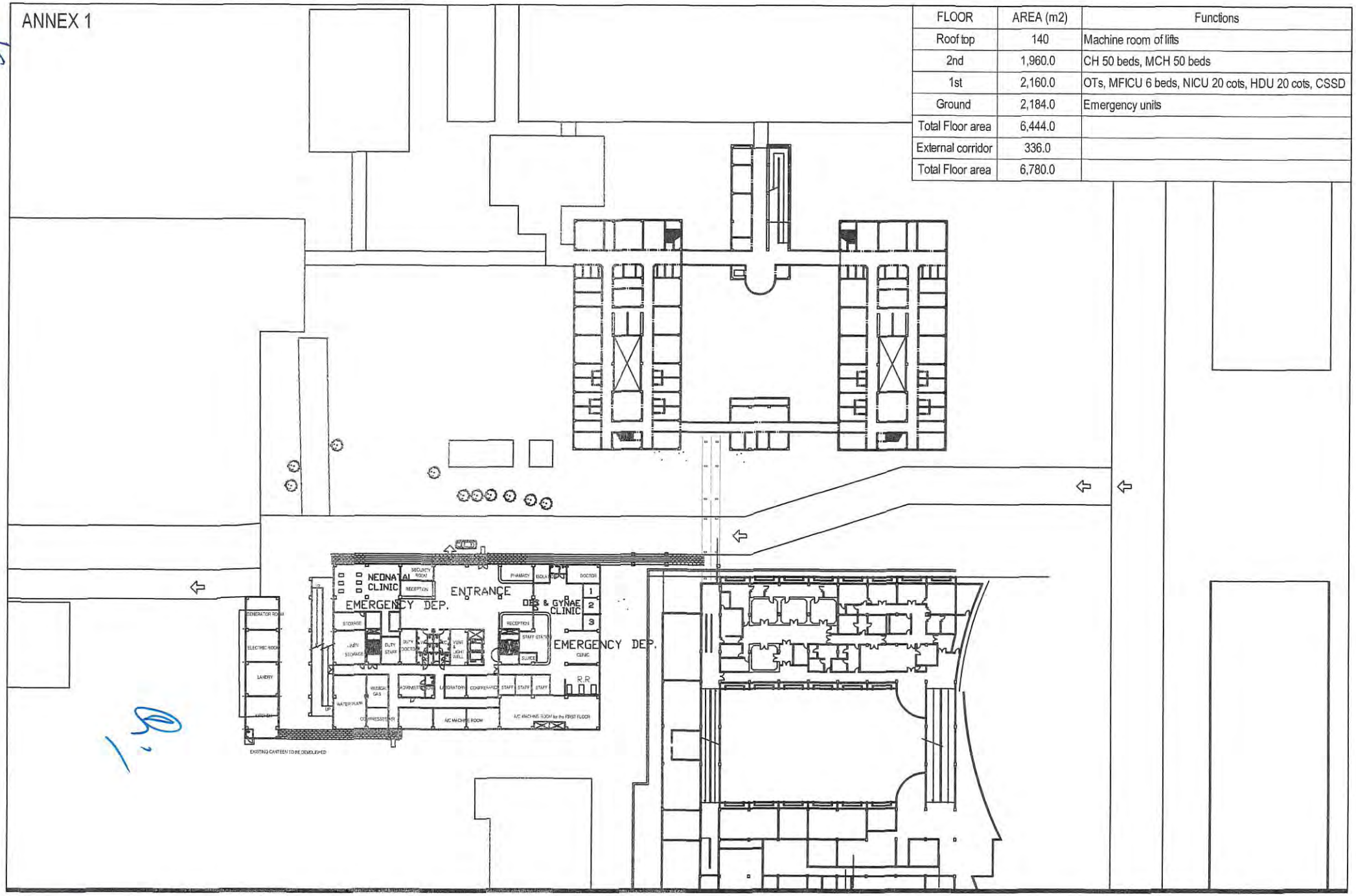
Annex 1: Project site

Annex 2: Planning idea with requested components

Annex 3: Equipment list

ANNEX 1

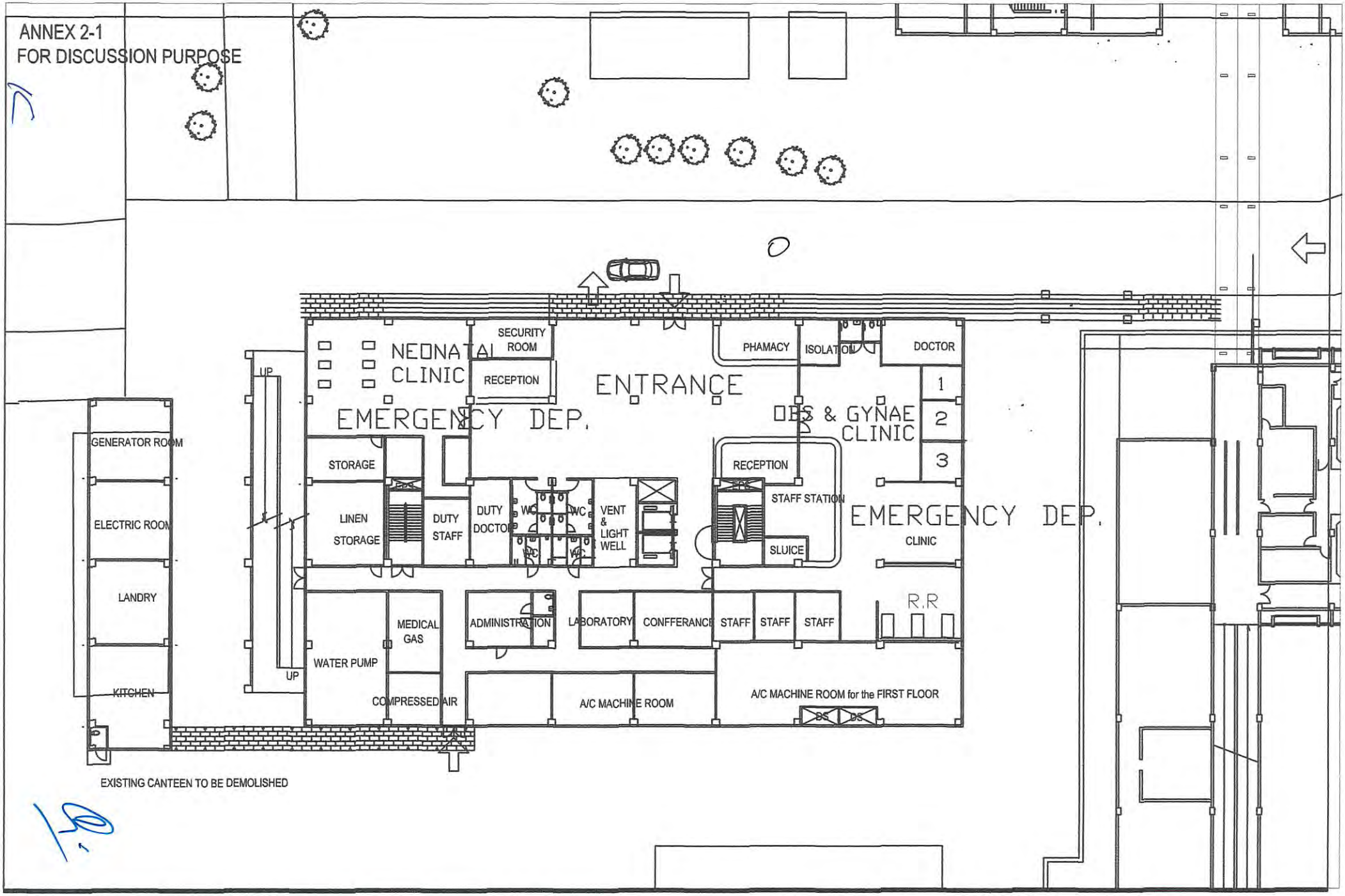
FLOOR	AREA (m2)	Functions
Roof top	140	Machine room of lifts
2nd	1,960.0	CH 50 beds, MCH 50 beds
1st	2,160.0	OTs, MFICU 6 beds, NICU 20 cots, HDU 20 cots, CSSD
Ground	2,184.0	Emergency units
Total Floor area	6,444.0	
External corridor	336.0	
Total Floor area	6,780.0	



THE PROJECT FOR STRENGTHENING THE FUNCTION OF PIMS SCHEMATIC DESIGN DRAFT SITE PLAN 1:1000

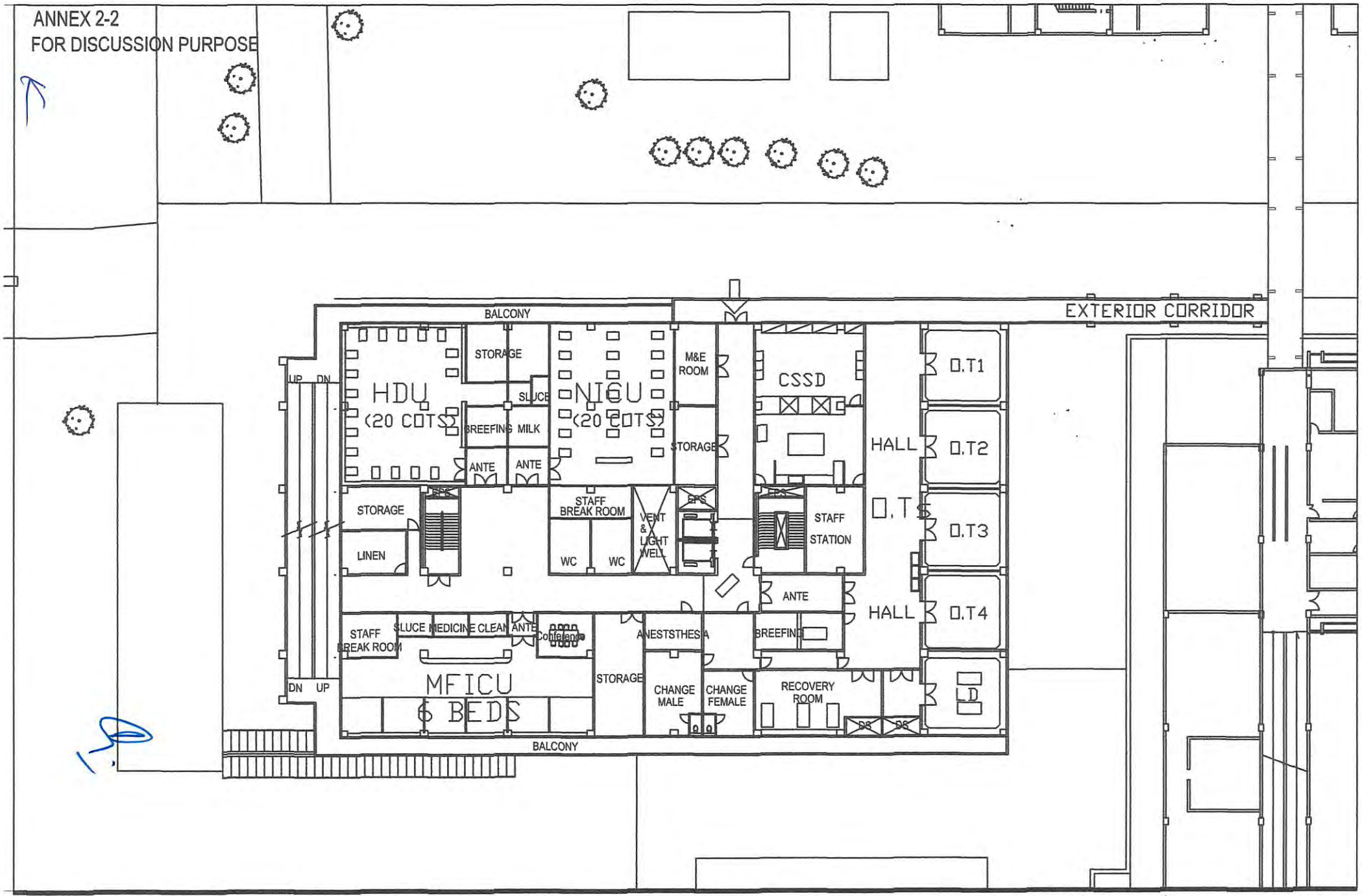
FUKUNAGA ARCHITECTS-ENGINEERS

ANNEX 2-1
FOR DISCUSSION PURPOSE



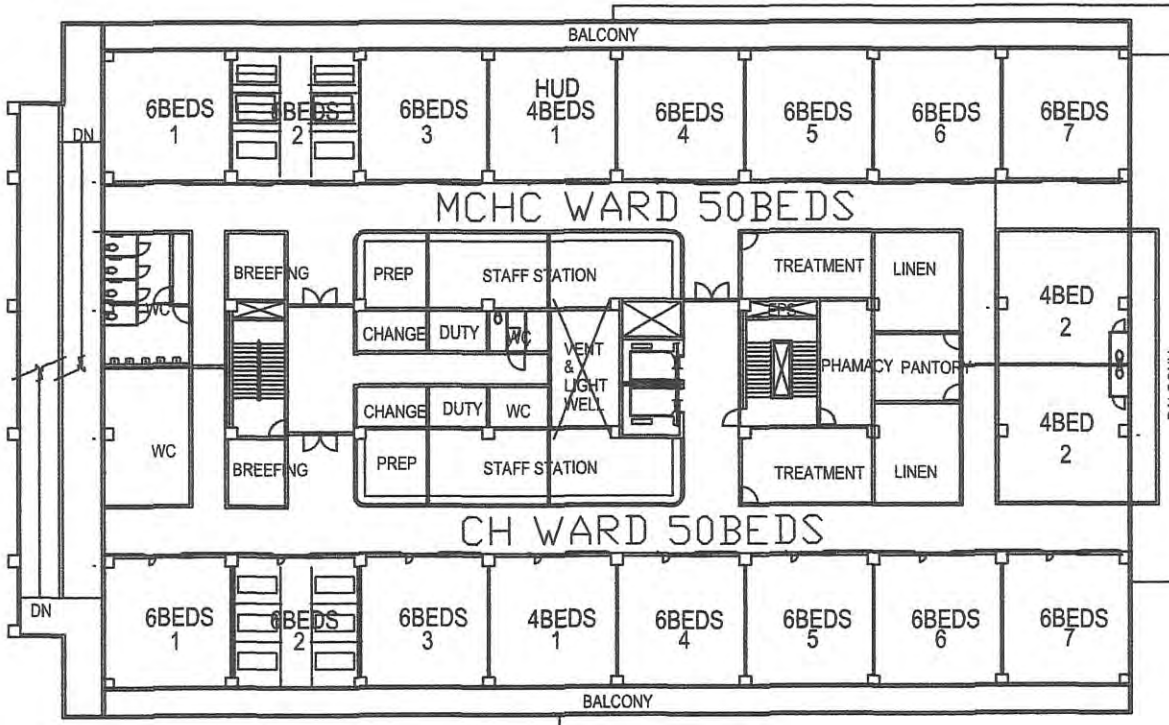
THE PROJECT FOR STRENGTHENING THE FUNCTION OF PIMS SCHEMATIC DESIGN DRAFT GROUND FLOOR PLAN 1:400 2018.07.13 FUKUNAGA ARCHITECTS-ENGINEERS

ANNEX 2-2
FOR DISCUSSION PURPOSE



THE PROJECT FOR STRENGTHENING THE FUNCTION OF PIMS | SCHEMATIC DESIGN DRAFT | FIRST FLOOR PLAN 1:400 | 2018.07.13 | FUKUNAGA ARCHITECTS-ENGINEERS

ANNEX 2-3
FOR DISCUSSION PURPOSE



THE PROJECT FOR STRENGTHENING THE FUNCTION OF PIMS | SCHEMATIC DESIGN DRAFT | SECOND FLOOR PLAN 1:400 2018.07.13 | FUKUNAGA ARCHITECTS-ENGINEERS

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
NE-01-01	Billblanket	5	NICU	A	
NE-01-02	Blood gas analyzer	1	NICU	A	Portable type will be needed.
NE-01-03	Diagnostic set	2	NICU	C	To be provided by GOP.
NE-01-04	Digital Baby Weighing Scale	2	NICU	A	
NE-01-05	ECG Machine	1	NICU	A	
NE-01-06	EEG Machine	1	NICU	C	Existing EEG machine could be used at CH.
NE-01-07	Air way scope	1	NICU	B	
NE-01-08	Infant Incubator	10	NICU	A	10 existing Incubators will be shifted from CH NICU to New Facility. Dual mode type is requested, if possible.
NE-01-09	Infant meter	2	NICU	B	
NE-01-10	Infrared Thermometer	2	NICU	C	To be provided by GOP.
NE-01-11	Jaundice meter	2	NICU	A	
NE-01-12	LED- X ray Illminator	1	NICU	A	
NE-01-13	Medicine Cart	1	NICU	C	To be provided by GOP.
NE-01-14	Miscellaneous Instruments	5	NICU	C	To be provided by GOP.
NE-01-15	Mobile X ray machine	1	NICU	A	Digital Radiography is requested, if possible.
NE-01-16	Ultrasonic Nebulizer	5	NICU	A	
NE-01-17	Ophthalmoscope	1	NICU	B	
NE-01-18	Patient monitor	20	NICU	A	Necessity of functions are ECG, Pulse Rate, NIBP and CO2.
NE-01-19	Phototherapy unit	5	NICU	A	
NE-01-20	Resuscitation Cart	1	NICU	C	To be provided by GOP.
NE-01-21	Suction Machine	3	NICU	A	
NE-01-22	Transport Incubator	1	NICU	A	
NE-01-23	Vein Finder (IR)	3	NICU	A	
NE-01-24	Ventilator	6	NICU	B	14 existing ventilators will be sifted from CH NICU to New Facility.
NE-01-25	Bubble CPAP	5	NICU	A	
NE-01-26	Cerebral Fluid Monitor	1	NICU	B	
NE-01-27	Oxygen Hood	1	NICU	B	
NE-01-28	Pulse Oximeter	5	NICU	B	
NE-01-29	SIPAP	2	NICU	A	
NE-01-30	Syringe Pump	20	NICU	A	To be attached the Docking station, at least 5 units are necessary.
NE-01-31	Infusion Pump	10	NICU	A	To be attached the Docking station, at least 5 units are necessary.
NE-01-32	Stethoscope	10	NICU	C	To be provided by GOP.
NE-01-33	Bronchoscope	1	NICU	B	
NE-01-34	Medicine Refrigerator	1	NICU	A	
NE-01-35	Transport case for diagnostic samples	1	NICU	C	To be provided by GOP.
NE-01-36	Fiber Optics Laryngoscope for infant	1	NICU	A	
NE-02-01	Ventilator	6	MFICU	A	
NE-02-02	Vital Sign Monitor	6	MFICU	A	
NE-02-03	Resuscitation Trolly	3	MFICU	C	To be provided by GOP.
NE-02-04	Medicine Trolly	2	MFICU	C	To be provided by GOP.
NE-02-05	Ultrasonic Nebulizer	2	MFICU	A	
NE-02-06	Defibrillator	1	MFICU	A	
NE-02-07	Infusion Pump	2	MFICU	A	
NE-02-08	Syringe Pump	5	MFICU	A	
NE-02-09	Motorized Gadged Bed	6	MFICU	A	
NE-02-10	Intubation Scope	1	MFICU	B	
NE-02-11	ECG Machine	1	MFICU	A	
NE-02-12	Digital Doppler Ultrasound Diagnostic Machine	1	MFICU	A	The trans virginal probe will be necessary.
NE-02-13	Stethoscope	10	MFICU	C	To be provided by GOP.
NE-02-14	Stretcher	1	MFICU	A	
NE-02-15	Treatment Instrument set	3	MFICU	C	To be provided by GOP.

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
NE-02-16	Medicine Refrigerator	1	MFICU	A	
NE-02-17	Transport case for diagnostic samples	1	MFICU	C	To be provided by GOP.
NE-03-01	Baby Cradle	20	HDU	A	
NE-03-02	Infant Warmer	10	HDU	A	
NE-03-03	Infant Incubator	1	HDU	A	
NE-03-04	Emergency cart	1	HDU	C	To be provided by GOP.
NE-03-05	Medicine Cart	1	HDU	C	To be provided by GOP.
NE-03-06	Treatment Instrument set	1	HDU	C	To be provided by GOP.
NE-03-07	Stethoscope	10	HDU	C	To be provided by GOP.
NE-03-08	Ultrasonic Nebulizer	3	HDU	A	
NE-03-09	Patient monitor	10	HDU	A	
NE-03-10	Transport Incubator	1	HDU	A	
NE-03-11	Medicine Refrigerator	1	HDU	A	
NE-03-12	Transport case for diagnostic samples	1	HDU	C	To be provided by GOP.
NE-03-13	Gadged Bed	6	HDU	A	
NE-04-01	Anesthesia Machine	4	OT	A	
NE-04-02	Patient monitor	6	OT	A	
NE-04-03	Infusion Pump	4	OT	A	
NE-04-04	Invasive BP Monitoring Pressure kit with	4	OT	A	
NE-04-05	Pressure bag with inflating Cuff for BP machir	4	OT	A	
NE-04-06	Syringe Pump	4	OT	A	
NE-04-07	Suction Machine	9	OT	A	Cap.: 5L, Flow rate 50L/min., 2
NE-04-08	Defibrillator	1	OT	A	
NE-04-09	Electric OT table	4	OT	A	
NE-04-10	Surgical Diathermy Machine	4	OT	A	
NE-04-11	BIS Monitoring equipment with all Anesthesia	1	OT	B	
NE-04-12	Nerve locator with supply of insulating	4	OT	B	
NE-04-13	Nerve Stimulator	1	OT	B	
NE-04-14	Cystoscope (Hard type)	1	OT	B	Hard type is requested.
NE-04-15	Infant Incubator	1	OT	C	
NE-04-16	Suction Irrigation Unit	1	OT	B	It is necessary to be supplied same brand of the Cystoscope.
NE-04-17	Fiber Optic Laryngoscope	2	OT	A	
NE-04-18	LED- X ray Illminator	4	OT	A	
NE-04-19	Miscellaneous Surgical Instrument Set	10	OT	C	To be provided by GOP.
NE-04-20	Infant Scale	1	OT	B	
NE-04-21	Laparoscope	1	OT	A	Video recorder will be needed.
NE-04-22	Operating Hysteroscope	1	OT	B	
NE-04-23	C-Arm Fluoroscope	1	OT	B	
NE-04-24	Harmonic Scalpel	1	OT	B	
NE-04-25	Anesthesia Cart	4	OT	C	To be provided by GOP.
NE-04-26	Ultrasound Diagnostic Machine	1	OT	B	
NE-04-27	Stretcher	2	OT	A	Manufacture sholud be selected appropriate brand.
NE-04-28	Instruments Table	6	OT	C	To be provided by GOP.
NE-04-29	Mayo Table	6	OT	C	To be provided by GOP.
NE-04-30	Operation Microscope	1	OT	B	
NE-04-31	Transport case for diagnostic samples &	2	OT	C	To be provided by GOP.
NE-04-32	Patient Warming System	4	OT	A	2 of Adult, 2 of child
NE-04-33	UV Hand Scub Unit	2	OT	A	3 basins, 3 ports of water supply
NE-04-34	Blood gas analyzer	1	OT	A	
NE-04-35	Air way scope	1	OT	B	
NE-05-01	Doppler Fetus Detector	2	DR	A	Transducer x 2 pcs are needed for
NE-05-02	Ultrasound Diagnostic Machine	1	DR	A	The trans virginal probe will be necessary as an accessary.
NE-05-03	Delivery Table	2	DR	A	
NE-05-04	Vacuum Extractor	2	DR	A	
NE-05-05	Operating Light	2	DR	A	If impossible to be supplied with Ceiling type, the mobile type is
NE-05-06	Suction Unit	2	DR	A	Same as OT type

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
NE-05-07	CTG Monitor	2	DR	A	Desk top type, 5 extra probes, doppler probe x 5pcs
NE-05-08	Miscellaneous Delivery Instrument Set	5	DR	C	To be provided by GOP.
NE-05-09	Stethoscope	2	DR	C	To be provided by GOP.
NE-05-10	Sphygmomanometer	2	DR	C	To be provided by GOP.
NE-05-11	Anesthesia Cart	2	DR	C	To be provided by GOP.
NE-05-12	Instruments Table	2	DR	C	To be provided by GOP.
NE-06-01	High Pressure Steam Sterilizer (Large size)	2	CSSD	A	Cap.: More than 600L, electrcic door are requested.
NE-06-02	High Pressure Steam Sterilizer (Medium size)	1	CSSD	B	
NE-06-03	EOG Sterilizer	1	CSSD	B	Instead of EOG type, it is better to introduce Plasma sterilizing method.
NE-06-04	Ultrasonic washer	1	CSSD	A	
NE-06-05	Sterilized bag sealler	2	CSSD	A	
NE-06-06	Water softner	2	CSSD	A	Same company of Autoclave is recommended.
NE-07-01	Automated Biochemistry Analyzer	1	LAB	B	If this machine could not be provided by JICA, the PIMS will be equipped through lease agreement.
NE-07-02	Water bath	1	LAB	C	
NE-07-03	Micropipette	10	LAB	A	
NE-07-04	Vortex Mixer	1	LAB	C	
NE-07-05	Autoclave	1	LAB	C	
NE-07-06	Drying Sterilizer	1	LAB	C	
NE-07-07	Electronic Balance	1	LAB	C	
NE-07-08	Hematology Analyzer	1	LAB	B	If this machine could not be provided by JICA, the PIMS will be equipped through lease agreement.
NE-07-09	Centrifuge	2	LAB	A	Table top type is required.
NE-07-10	Tally Counter	2	LAB	C	To be provided by GOP.
NE-07-11	Incubator	1	LAB	A	50L, Desk top type
NE-07-12	Blood Bank Refrigerator	1	LAB	A	
NE-07-13	Water Distilling Apparatus	1	LAB	A	
NE-07-14	Electrolyte Analyzer	1	LAB	B	If this machine could not be provided by JICA, the PIMS will be equipped through lease agreement.
NE-07-15	Blood Sedimentation Set	1	LAB	A	Simple one is OK
NE-07-16	Blood gas analyzer	1	LAB	B	
NE-07-17	Blood bank refrigerator	1	LAB	A	
NE-07-18	Medicine refrigerator	1	LAB	B	
NE-08-01	Doppler Fetus Detector	1	ER	A	
NE-08-02	Ultrasound Diagnostic Machine	1	ER	A	Mobile type is requested.
NE-08-03	Vacuum Extractor	1	ER	C	
NE-08-04	Infant Scale	1	ER	A	
NE-08-05	Adult Scale	2	ER	A	
NE-08-06	Operating Light (Mobile type)	5	ER	A	
NE-08-07	Emergency cart	1	ER	C	To be provided by GOP.
NE-08-08	Medicine Cart	1	ER	C	To be provided by GOP.
NE-08-09	Ultrasonic Nebulizer	3	ER	A	
NE-08-10	ECG Machine	1	ER	A	
NE-08-11	Defibrillator	1	ER	A	
NE-08-12	Suction Unit	3	ER	A	
NE-08-13	Patient monitor	5	ER	A	
NE-08-14	Infant Warmer	1	ER	B	
NE-08-15	Emergency treatment bed	1	ER	A	
NE-08-16	Motorized Gadged Bed	3	ER	A	
NE-08-17	Gadged Bed (Manual type)	3	ER	A	
NE-08-18	Stethoscope	5	ER	C	To be provided by GOP.
NE-08-19	Sphygmomanometer	1	ER	C	To be provided by GOP.
NE-08-20	Miscellaneous Instruments & Table	1	ER	C	To be provided by GOP.

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
NE-08-21	Stretcher	2	ER	A	
NE-08-22	Medicine Refrigerator	1	ER	A	
NE-08-23	Baby Bed	6	ER	A	Quantity is depend on the floor
NE-09-01	Bed	100	Ward	A	Depend on the ward room required.
NE-09-02	Emergency cart	4	Ward	C	To be provided by GOP.
NE-09-03	Medicine Cart	4	Ward	C	To be provided by GOP.
NE-09-04	Ultrasonic Nebulizer	4	Ward	A	
NE-09-05	Stethoscope	10	Ward	C	To be provided by GOP.
NE-09-06	Sphygmomanometer	10	Ward	C	To be provided by GOP.
NE-09-07	Doppler Fetus Detector	5	Ward	B	
NE-09-08	Ultrasound Diagnostic Machine (Portable	1	Ward	B	
NE-09-09	Obstetric Examnation Table	2	Ward	B	Depend on the floor allocation.
NE-09-10	Infant Scale	2	Ward	A	Necessary to be considered for increasing quantity according to the
NE-09-11	Adult Weight Scale	2	Ward	A	
NE-09-12	ECG Machine	2	Ward	C	
NE-09-13	Surgical Instrument Set	4	Ward	C	To be provided by GOP.
NE-09-14	LED- X ray Illminator	2	Ward	A	Depend on the allocation of the
NE-09-15	Patient monitor	2	Ward	B	
NE-09-16	Stretcher	2	Ward	A	Depend on the floor allocation.
NE-09-17	Mobile X ray machine	1	Ward	B	
NE-09-18	CR Reader	1	Ward	C	Existing CR scanner at CH or MCHC could be used.
NE-09-19	Medicine Refrigerator	4	Ward	A	
NE-09-20	Defibrillator	1	Ward	A	The AED type is acceptable.
NE-10-01	Bed	4	Recovery room	A	
NE-10-02	Vital Sign Monitor	4	Recovery room	A	
NE-11-01	Child Birth Simulator for all stage of labor and delivery	1	Others	C	
NE-11-02	OB/GY Ultrasound Simulator with Low frequency, High risk fetal cases	1	Others	C	

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
CH-1-01	Hematology Analyzer	1	Clinical Laboratory	B	
CH-2-01	Infusion Pump	4	OT	B	
CH-2-02	Syringe Pump	4	OT	B	
CH-2-03	Electro Surgical Unit	1	OT	B	
CH-2-04	Operating Light	1	OT	B	
CH-2-05	Patient Monitor	4	OT	B	
CH-2-06	Suction Unit	6	OT	B	
CH-2-07	Anesthesia machine	4	OT	B	
CH-2-08	Anesthesia Trolly	5	OT	C	To be provided by GOP
CH-2-09	Blood Warmer	2	OT	B	
CH-2-10	Infant Warmer	3	OT	B	
CH-2-11	Ultrasonic Nebulizer	1	OT	B	
CH-2-12	Defibrillator	1	OT	B	
CH-3-01	Patient Monitor	1	PICU	B	
CH-3-02	Ventilator	6	PICU	A	
CH-4-01	Butterfly Hydrotherapy Bath Tub	1	Physiotherapy	B	
CH-4-02	Infrared rays Lamps	1	Physiotherapy	B	
CH-4-03	Shortwave Diathermy	1	Physiotherapy	B	
CH-4-04	Ultrasound machine	1	Physiotherapy	B	
CH-4-05	Electrical Nerve Stimulator	1	Physiotherapy	B	

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
MC-1-01	Suction Unit	1	HDU	B	
MC-2-01	Bed with Mattress	2	DR	B	
MC-2-02	Delivery Table	3	DR	B	
MC-2-03	Infant Warmer	3	DR	B	
MC-2-04	Instrument Trolly	1	DR	C	To be provided by GOP.
MC-2-05	Refrigerator	1	DR	B	
MC-2-06	Vacuum Extractor	2	DR	B	
MC-3-01	Defibrillator	1	ER	B	
MC-3-02	Examination Lamp	2	ER	B	
MC-3-03	Obstetric Examination Table	2	ER	C	To be provided by GOP.
MC-3-04	Patient Monitor	1	ER	B	
MC-3-05	ECG machine	2	ER	B	
MC-3-06	Mobile X ray machine	1	ER	B	
MC-4-01	Infant Incubator	1	OT	B	
MC-4-02	Suction Unit	1	OT	B	
MC-4-03	Infant Warmer	1	OT	B	
MC-5-01	Autoclave	1	CSSD	B	
MC-6-01	Dry Sterilizer	1	Laboratory	B	
MC-6-02	Hematocrit Centrifuge	2	Laboratory	B	
MC-6-03	Research Microscope	1	Laboratory	B	
MC-7-01	X ray machine	1	Radiology	B	
MC-8-01	Suction Unit	1	Ward	B	

Item No.	Name of equipment	Q'ty	Department	Priority	Remarks
IH-1-01	Automated Immnohistochemistry Analyzer	1	Lab. Histopathology	B	
IH-2-01	Automated Coagulation Analyzer	3	Lab. Hematology	B	
IH-2-02	Automated ESR machine	3	Lab. Hematology	B	
IH-2-03	Automated Slide Stainer	3	Lab. Hematology	B	
IH-2-04	Centrifuge	4	Lab. Hematology	B	
IH-2-05	Hematology Analyzer	4	Lab. Hematology	B	
IH-2-06	Hot Air Oven	2	Lab. Hematology	B	
IH-2-07	Sample Storage Racks	4	Lab. Hematology	C	To be provided by GOP.
IH-2-08	Teaching Microscope (Multi-head)	2	Lab. Hematology	B	
IH-2-09	Binocular Microscope	10	Lab. Hematology	B	
IH-3-01	Anaerobc Chamber	1	Lab. Microbiology	B	
IH-3-02	Automated Media Preparator & Dispenser	1	Lab. Microbiology	B	
IH-3-03	Weighing machine Scientific	1	Lab. Microbiology	B	
IH-3-04	Centrifuge (Large cap. 15 mL tube)	1	Lab. Microbiology	B	
IH-3-05	CO2 Incubator	1	Lab. Microbiology	B	
IH-3-06	Deionized Water Plant	1	Lab. Microbiology	B	
IH-3-07	Autoclave	1	Lab. Microbiology	B	
IH-3-08	Microscope Double head	1	Lab. Microbiology	B	
IH-3-09	Freezer (-20°C)	1	Lab. Microbiology	B	
IH-3-10	Medical refrigerator	1	Lab. Microbiology	B	
IH-3-11	Water Bath	1	Lab. Microbiology	B	

Minutes of Discussions
on the Preparatory Survey for
The Project for Strengthening the function of
Pakistan Institute of Medical Science

Based on the several preliminary discussions between the Government of the Islamic Republic of Pakistan (hereinafter referred to as "Pakistan") and Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") of the Project for Strengthening the function of Pakistan Institute of Medical Science (hereinafter referred to as "the Project") to Pakistan, headed by Tatsuya Ashida, Director, Health Team 4, Human Development Dept., from 2nd to 6th, July, 2018. The Team held a series of discussions with the officials of the Government of Pakistan and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Islamabad, 7th October, 2018

Mr. Tatsuya Ashida
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

Dr. Raja Amjad Mahmood
Executive Director,
PIMS, Islamabad
Pakistan

Syed Mujtaba Hussain
Joint Secretary
Economic Affair Division

Government of Pakistan

Mr. Muhammad Bashir Khetran
Joint Secretary
Ministry of National Health Services Regulations and Coordination
Government of Pakistan

ATTACHMENT

1. Objective of the Project

   The objective of the Project is to make better quality of healthcare service for mothers and children at Pakistan Institute of Medical Science (hereinafter referred to as "PIMS") through developing facilities and providing equipment.

2. Title of the Preparatory Survey

   Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for Strengthening the Function of Pakistan Institute of Medical Science".

3. Project site

   Both sides confirmed that the Project site at PIMS, which is shown in Annex 1.

4. Responsible authority for the Project

   Both sides confirmed the authorities responsible for the Project are as follows:

   The PIMS will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project including preparation of the new PC-1 for the Project, and obtain necessary approval from Ministry of National Health Services Regulations and Coordination (hereinafter referred to as "MoNHSRC") and ECNEC. MoNHSRC and the PIMS ensure that the undertakings for the Project shall be managed by relevant authorities properly by end of November, 2018. The organization charts of the PIMS, the Children Hospital (hereinafter CH) and Mother & Child Health Centre (hereinafter MCH) are shown in Annex 2.

5. Items requested by the Government of Pakistan

   5-1. As a result of discussions, both sides confirmed that the items requested by the Government of Pakistan are described in Annex 3, but not limited to.

   5-2. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the Project will be decided by the Government of Japan.

   5-3. The Government of Pakistan shall submit an official request to the Government of

Japan through a diplomatic channel until the end of September, 2018.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Pakistan side agreed that the procedures and basic principles of Japanese Grant as described in Annex 4 shall be applied to the Project.
As for the monitoring of the implementation of the Project, JICA requires Pakistan side to submit the Project Monitoring Report that the form is attached as Annex 5 every month.

6-2. The Pakistan side agreed to take the necessary measures, as described in Annex 6, for smooth implementation of the Project. The contents of the Annex 6 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.
The contents of Annex 6 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

7-1. The Team will proceed with further survey in Pakistan until 18th July.

7-2. An official request to the Government of Japan will be submitted until the end of September, 2018.

7-2. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Pakistan in order to explain its contents around late November to early December.

7-3. If the contents of the draft Preparatory Survey Report are accepted and the undertakings for the Project are fully agreed by the Pakistan side, JICA will finalise the Preparatory Survey Report and send it to Pakistan around April 2019.

The above schedule is tentative and subject to change.

8. Expected outcomes and indicators

The key indicators for expected outcomes should be agreed in the preparatory survey for explanation on draft preparatory survey report. The Pakistan side will be responsible for the achievement of agreed key indicators and shall monitor the progress based on those indicators.

9. Environmental and Social Considerations

9-1. The Pakistan side confirmed to give due environmental and social considerations during implementation, and after completion of the Project, in accordance with

the JICA Guidelines for Environmental and Social Considerations (April, 2010).

9-2. The Project is categorized as "C" from the following considerations:
Not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

9-3. The Pakistan side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and obtain necessary certificate for smooth implementation of the Project. If the project is found applicable to the Guidelines, the Pakistan side shall take necessary measures to obtain environmental licence before the tender and report it to JICA Pakistan office.

10. Necessity of Soft Component
Both sides confirmed the necessity of soft component on proper use of the equipment. That will be provided under the Project. The team will examine the appropriateness and make the detailed plan by April 2019.

11. Undertaking of the Project
Both side confirmed the undertaking of the Project as described in Annex 6. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in No.2 of "2) During the Project" of Annex 6, both sides confirmed that such customs duties, internal taxes and other fiscal levies, which shall be clarified in the bid documents by PIMS during the implementation stage of the Project. The Pakistan side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.
Both sides also confirmed that the Annex 6 will be used as an attachment of G/A.

11-1. Necessary Clearance/ Permit for the Project and Approval of PC- I .
Both sides confirmed the timetable of the following key actions for the Project;

1) In order to submit the Project to the Japanese Cabinet, PIMS shall make effort for seeking approval of PC- I by MoNHSRC by the end of November, 2018. The Team will provide necessary information for preparation of the PC- I by the end of September, 2018.
Initial Environmental Examination (IEE) on the Project shall be completed for

the approval of PC- I by the end of September, 2018.

2) The required procedures to obtain regulatory compliance and necessary permissions from the relevant agencies/authorities for the construction of the new building in the project site in PIMS shall be commenced immediately after signing of the Exchange of Notes and Grant Agreement of the Project and shall be completed before the commencement of the tendering procedures

12. Other Relevant Issues

12-1. Items requested by the Government of Pakistan, which are described in Annex 3, subject to further discussion between the relevant authorities and the survey team. The final components of facility and equipment for the Project will be defined through the further discussion and agreed by subsequent Technical Notes which will be signed by Pakistan side and the team leader of Japanese consultant team for the Project.

12-2. MoNHSRC with the concerned department on the Pakistan side over the guideline for under the Pakistan Environmental Conservation Law.

12-3. Survey team is aware of the issue of the hard water and a broken water softener especially at the MCH, which is causing un-safe medical environment. As MCH as well as CH facilities were constructed by using Japanese Grant ,Survey team strongly recommend that PIMS takes necessary measure for improving the environment of C.S.S.D in MCH as well as CH such as the procurement of water softener.

12-4. Japanese side requested the Pakistan side to ensure recruitment and distribution of the sufficient staff in order to provide quality medical services at the hospital not only health personnel but also person who could take charge of management and administration for new facilities and equipment provided by the Project. Pakistan side agreed to take an effort including assuring the human resources and budgets in the aforementioned PC-1 and recruiting quality staff in timely manner.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Components requested by the Government of Pakistan

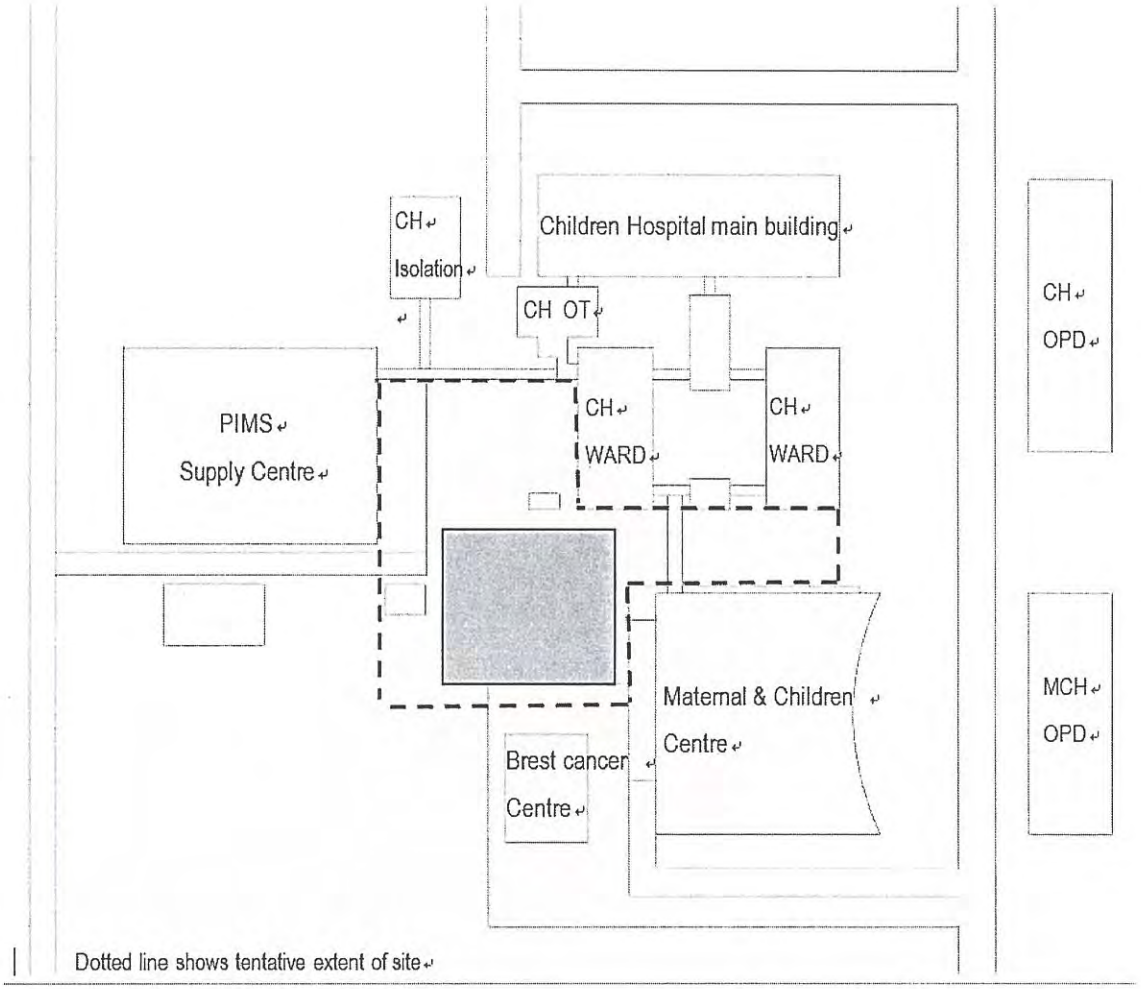
Annex 4 Japanese Grant

Annex 5 Project Monitoring Report (template)

Annex 6 Major Undertakings to be taken by the Government of Pakistan

Annex 1

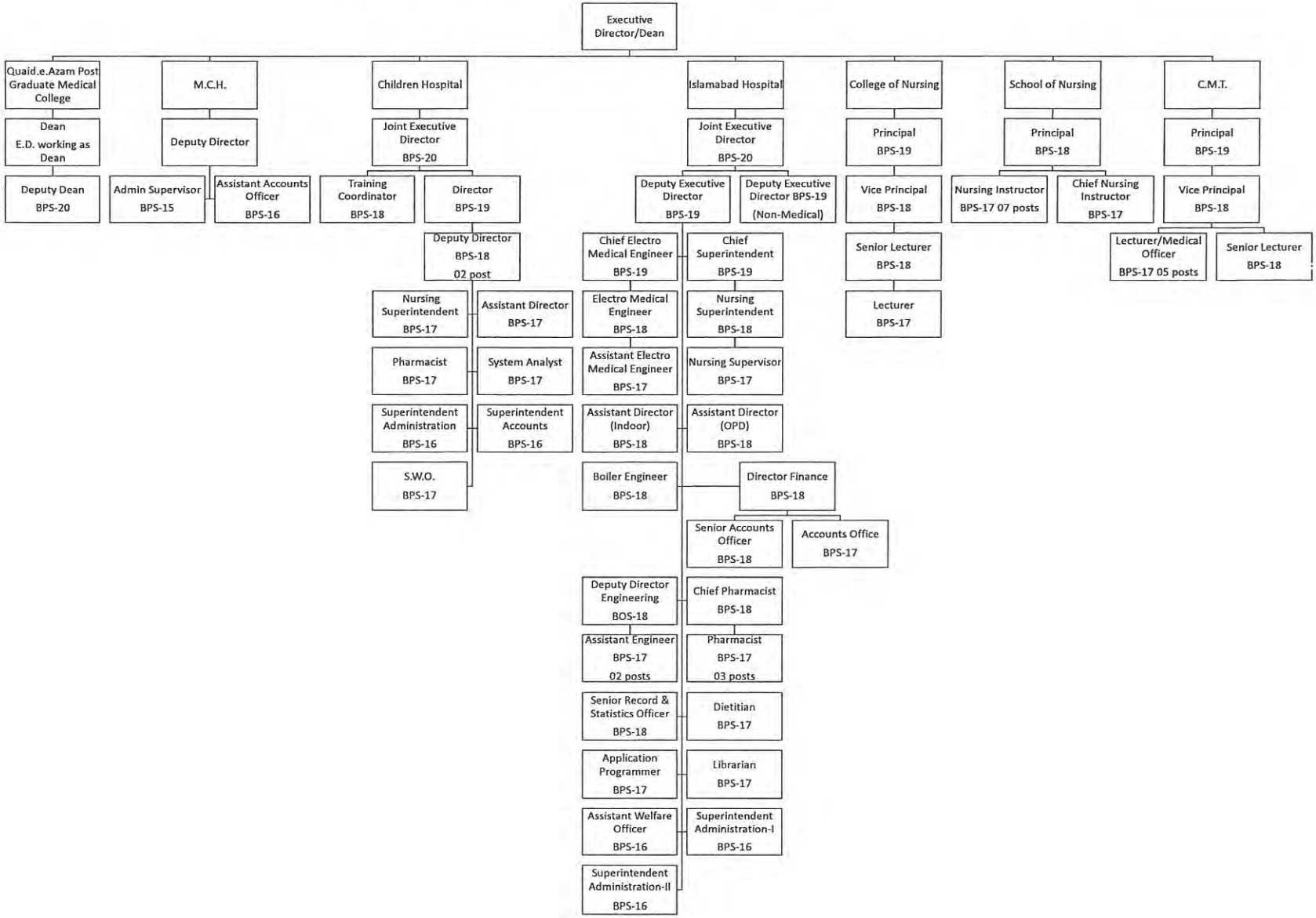
Project site



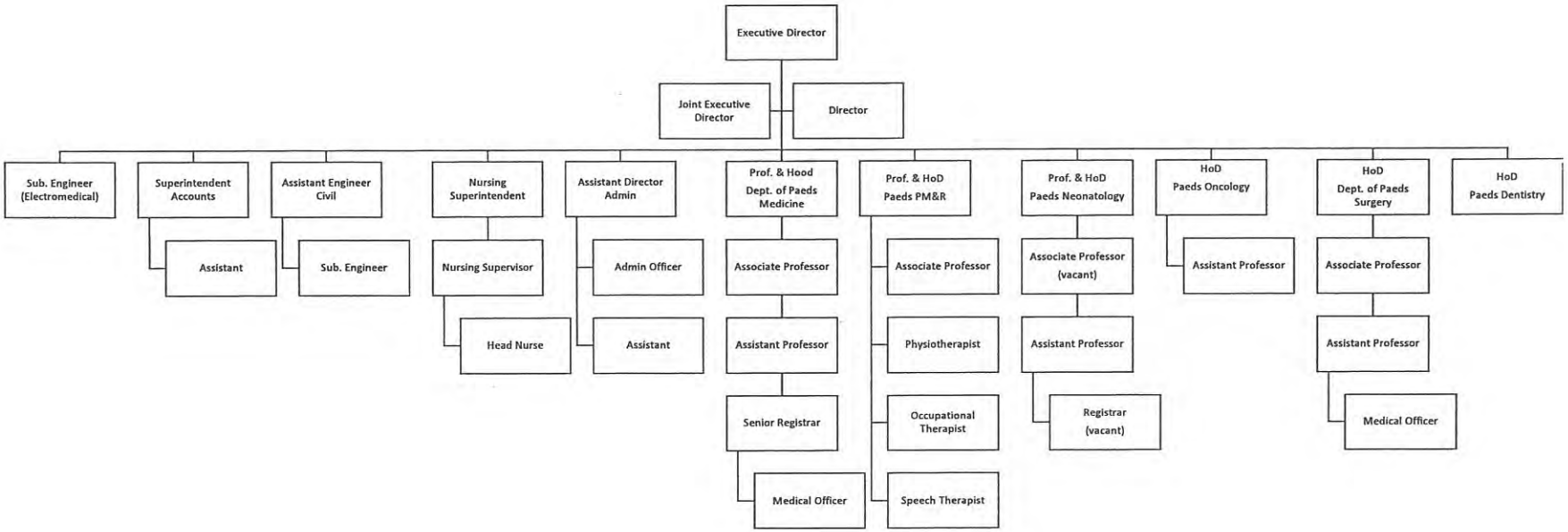
* Grey area shows tentative building foot print

Annex 2

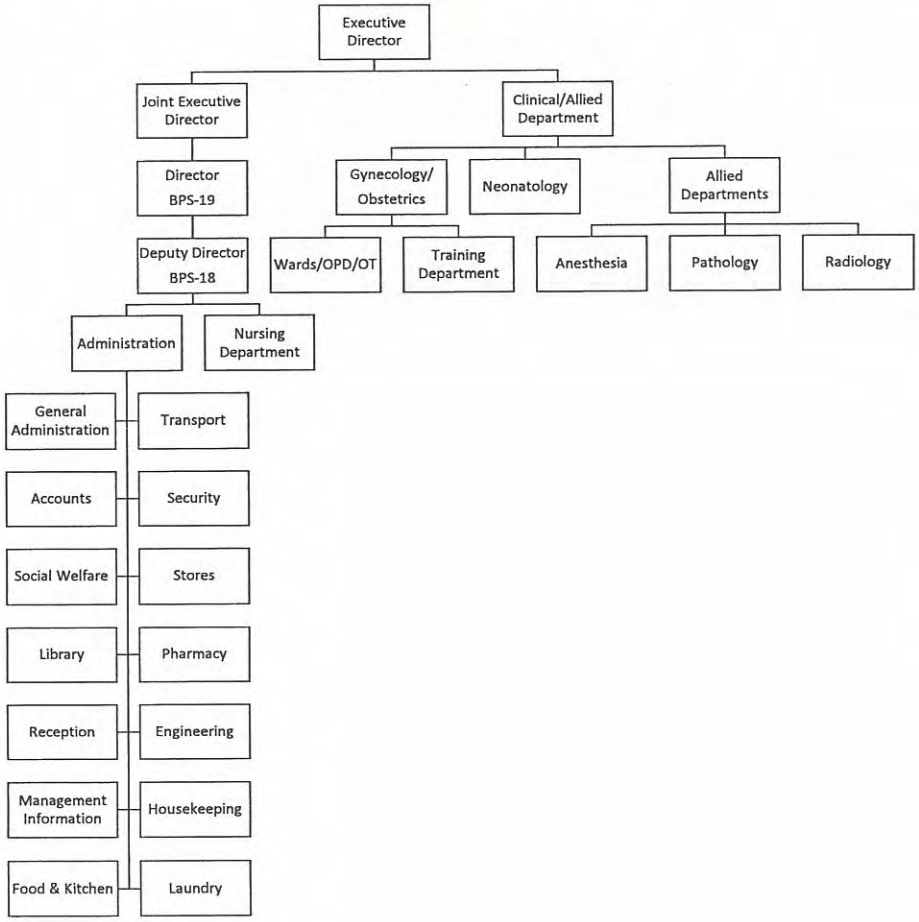
Organization Chart of Pakistan Institute of Medical Sciences



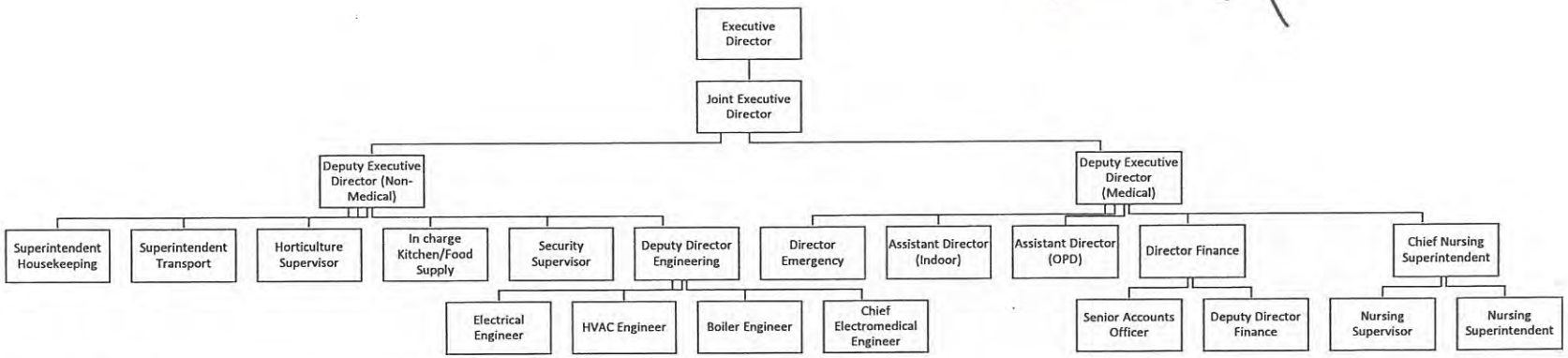
Organization Chart of Children's Hospital



Organization Chart of Maternal and Child Health Centre



Organization Chart of Islamabad Hospital



CLINICAL DEPARTMENTS

Department of General Surgery
Department of Plastic Surgery
Department of Dental Surgery
Department of Oral Maxillofacial Surgery
Department of Orthopedic Surgery
Department of Neurosurgery
Department of Psychiatry
Department of Neurology
Department of Physiotherapy
Department of Rheumatology
Department of General Medicine
Department of Gastroenterology
Department of Nephrology
Department of Urology
Department of Ophthalmology
Department of Dermatology
Department of Pulmonology
Department of E.N.T (Ear, Nose, Throat)

Annex 3

Components requested by the Government of Pakistan

1. Facility Component

		Project Component	Priority	
1-1	Intensive Care Unit (CH)	-NICU: Neonatal, 20 cots -HDU: Neonatal, 20 cots	A	Japan
1-2	Intensive Care Unit (MCH)	- MFICU: Maternal Fetal Intensive Care Unit, 6 beds -HDU: 4 beds	A	Japan
2-1	OT facilities	-Operation Theatres (4) -High risk delivery room (2 beds)	A	Japan
2-2		-Pre-operation room	B	Japan
2-3		-Recovery room (3 beds)	A	Japan
2-4		-Recovery room (Isolation)	A	Japan
3	CSSD		A	Japan
4	Clinical Laboratory	-A new Clinical laboratory Point of care clinical laboratory (Haematology, Biochemistry, etc.)	A	Japan
5-1	Emergency Clinic	-Neo-natal unit (1)	A	Japan
5-2		-Obs & Gynae (3)	A	Japan
5-3	Emergency beds	-Cots for neo-natal	A	Japan
5-4		- Obs & Gynae beds	A	Japan
6	Waiting area	-Patient waiting area	A	Japan
7	Pharmacy		A	Japan
8-1	Hospital wards	-CH: Paediatric surgery & Paediatric medicine	A	Japan
8-2		-MCH: high risk patient	A	Japan
8-3		-MCH: private beds	C	Japan
8-4		-MCH: isolation beds	B	Japan
9	Conference	Patient briefing	A	Japan
10	Family rooms		C	Japan
11	Kitchen		A	Japan
12	Laundry		A	Japan
13	Alterations to rooms at existing hospitals	Where necessary, after certain functions move to the new facility, such as converting old NICU space to paediatric ICU.	A	Pakistan
14	HMIS	New fibre optic cable outside and within HMIS and the new facility. UTP hardware and computers	A	Pakistan

2. Equipment Component

Annex 3

		Project Component	Priority	
1	Equipment	Equipment for new facility	A	Japan
2	Equipment	Replacement of existing equipment	B	Japan
3	Medical instrument	Medical instrument & furniture such as medicine cabinets, instrument tables, emergency carts, etc	A	Pakistan
4	Equipment	General furniture & PCs	A	Pakistan

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.

b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.

2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures, including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

Attachment 1

PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3)Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

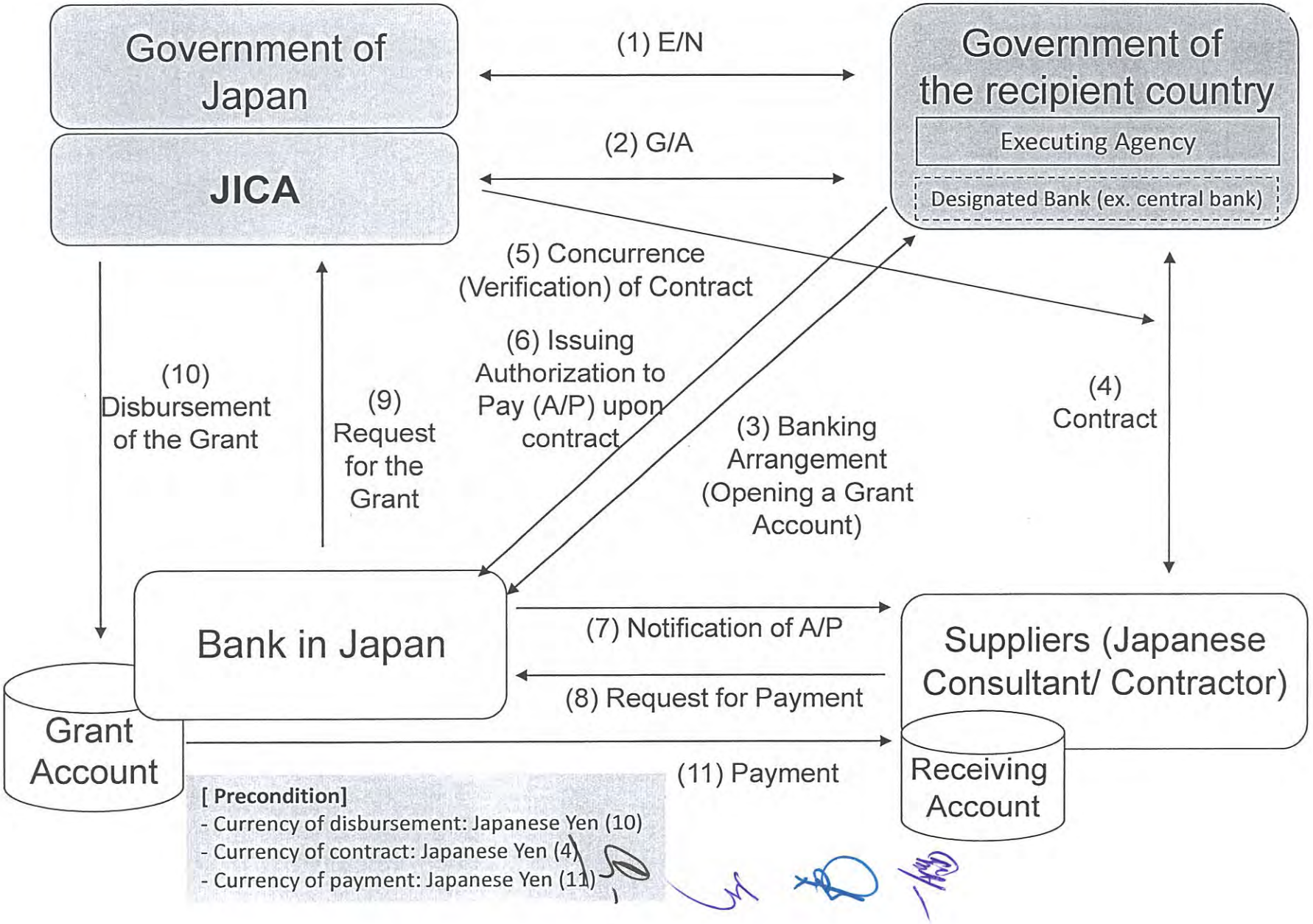
notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.

2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Attachment 2

Financial Flow of Japanese Grant (A/P Type)



Project Monitoring Report
on
Project for Strengthening the function of Pakistan Institute of Medical Science
Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Executing Agency	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:
Line Ministry	Person in Charge (Designation) Contacts Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*
Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks *(at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Attachment 6

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C－D	Price (Increased) F=C＋D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

-

-

-

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

		Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost		(A/D%)	(B/D%)	(C/D%)	
	Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
	others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost		(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost		(A/D%)	(B/D%)	(C/D%)	
Total		(A/D%)	(B/D%)	(C/D%)	

Annex 6

Major Undertakings to be taken by Recipient Government of Pakistan

1. Specific obligations of the Government of Pakistan which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MONHSRC		
2	To issue Authorization to Pay (A/P)to a bank in Japan (Agent Bank) for the payment to the consultant	within 1 month after the signing of the agreement	MONHSRC		
3	To obtain approval of IEE/EIA if applicable	within 2 month after G/A	MONHSRC/ PIMS		
4	To secure the following lands 1) Project site for the JICA building 2) Temporary construction yard and stock yard near the Project site 3) borrow pit and disposal site near the Project site	1 month before notice of the bidding document	MONHSRC/ PIMS		
5	To clear and level the Project site by taking measures as follows 1) Diversion of existing power, water, city gas, liquid oxygen, storm water line, telephone & fibre cable line and any other on-site infrastructure which are in the new building area. 2) Removal of Trees 3) Removal or relocation of building/shed and/or any things which may be obstacle on the Project site 4) Clear the rooms/some part of existing locations and their surroundings including relocation/ removal of equipment of MCHC and CH where construction work to be held as a part of the Project.	1 month before notice of the bidding document	MONHSRC /PIMS		
6	To obtain building permit	1 month before notice of the bidding document	MONHSRC/ PIMS		
7	To submit Project Monitoring Report (with the result of detailed design)	before preparation of bidding document	PIMS		
8	To clarify the personnel /department who manage the facility constructed	within 1 month after G/A	PIMS		
9	To secure the budget for newly assigned personnel	No later than May of 2 fiscal years before the completion of the Project	MONHSRC/ PIMS		
10	To take necessary procedures for budgetary requests including coming fiscal year	No later than May of 1 fiscal year before the completion of the Project	MONHSRC/ PIMS		
11	To secure necessary budget for the procedure for EIA	1 month before notice of the bidding document	MONHSRC/ PIMS		
12	To implement EIA and obtaining necessary certificate	1 month before notice of the bidding document	MONHSRC/ PIMS		

2. During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue Authorization to Pay (A/P)to a bank in Japan (Agent Bank) for the payment to the consultant and Suppliers(s)	within 1 month after the singing of the contract and the agreement	MONHSRC		
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the singing of the contract and the agreement	MONHSRC		
	2) Payment commission for A/P	every payment	MONHSRC		
3	To ensure prompt unloading and customs clearance at port of disembarkation in recipient country and to assist the supplier(s) with internal transportation therein		MONHSRC/ PIMS		
4	To accord Japanese nationals and/or physical persons of third countries 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	during the Project	EAD/ MONHSRC		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted	during the Project	EAD/ MONHSRC		
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the implementation of the Project	during the Project	MONHSRC		
7	To submit Project Monitoring Report.	every month	PIMS		
8	To submit a report concerning completion of the Project	within six months after completion of the Project	PIMS		
9	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities				
	1) Electricity Install high voltage lines and a service drop for the JICA building	1 month before completion of the construction	PIMS		
	2) General furniture Procure and install general furniture,PC for HMIS	1 month before completion of the construction	PIMS		
	3) Medical equipment and medical furniture Procure and install equipment and transfer existing equipment	3 month after completion of the construction	PIMS		

	4) Planting and gardening Planting and gardening works around the JICA building	1 month after completion of the construction	PIMS		
10	To arrange and secure the temporary land/space in the site for the construction, enough space for temporary storage materials and machines, setting temporary office and accommodation shall be provided hospital land,	during the construction	PIMS		
11	To secure the safety of outpatient and their family who visit the hospital for health services	during the construction	PIMS		
12	To transfer medical equipment and furniture to the new building	during the construction	PIMS		
13	To implement alteration work such as **installation of outlet and circuit of electricity**	during the construction	PIMS		
14	To remove unusable medical equipment	Before the installation	PIMS		
15	To complete training of new staffs	Before hand over of the Facility	PIMS		
16	Technical Assistance" Soft Component" Per diem, accommodation and transportation fee for Soft Component Program attendees	during implementation of the Soft Component	PIMS		
	Allocate sufficient staff with appropriate skills and experiences for operation and maintenance of the JICA building and equipment under the Grant Aid	at the commencement of installation work of the equipment	PIMS		

3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the JICA building constructed and equipment under the Grant Aid 1) Allocation of maintenance cost including the renovation of the expenses necessary for the renovation of maintenance contract 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	PIMS		
2	To renovate and utilize properly the space in existing building after transfer of the function to the facility constructed	After the completion of the construction	PIMS		

(A/P: Authorization to Pay, B/A: Banking Arrangement, EIA: Environmental Impact Assessment, G/A: Grant Agreement, IEE: Initial Environmental Examination, MONHSRC: Capital Administration and Development Division)

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

Minutes of Discussions
on the Preparatory Survey for
the Project for Extension of Intensive Care at
Maternal and Child Health Care Centre and Children's Hospital in
Pakistan Institute of Medical Science
(Explanation on Draft Preparatory Survey Report)

With reference to the minutes of discussions signed between the Government of the Islamic Republic of Pakistan (hereinafter referred to as "Pakistan") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on 29th November, 2018, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report on the Project for Extension of Intensive Care at Maternal and Child Health Care Centre (hereinafter MCHC) and Children's Hospital (hereinafter CH) in Pakistan Institute of Medical Science (hereinafter referred to as "the Draft Report"), headed by Mr. Tatsuya ASHIDA, Director, Health Team 4, Health Group 2, Human Development Department, JICA from 26th November to 30st November 2018.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Islamabad, 29th November 2018

Mr. Tatsuya Ashida
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

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ATTACHMENT

1. Title of the Project

   Pakistan side proposed that the project for Pakistan Institute of Medical Science (hereinafter referred to as "PIMS") was officially named as "the Project for Extension of Intensive Care at MCHC and CH in PIMS" (hereinafter referred to as "the Project").The Team acknowledged the proposed title and will take necessary measure for the confirmation of the name of the Project.

2. Objective of the Project

   The objective of the Project is to make better quality of healthcare service for mothers and children, especially focus on the high risk perinatal care at PIMS through developing facilities and providing equipment.

3. Contents of the Project

   Both sides confirmed that the Project site at PIMS, which is shown in Annex 1. As for the medical equipment provided by the Japan side included in Annex 2.

4. Responsible Authority for the Project

   Both sides confirmed the authorities responsible for the Project are as follows:

   The PIMS will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project including preparation of the new PC-1 for the Project, and obtain necessary approval from Ministry of National Health Services Regulations and Coordination (hereinafter referred to as "MoNHSRC") and ECNEC. MoNHSRC and the PIMS ensure that the undertakings for the Project shall be managed by relevant authorities properly by end of November, 2018. The organization charts of the MoNHSRC, PIMS, CH and MCHC are shown in Annex 3.

5. Contents of the Draft Report

   After the explanation of the contents of the Draft Report by the Team, the Pakistan side agreed to its contents.

6. Cost Estimate

Both sides confirmed that the cost estimate including the contingency described in the Draft Report is provisional and will be examined further by the Government of Japan for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.

7. Confidentiality of the Cost Estimate and Technical Specifications

Both sides confirmed that the cost estimate and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

8. Timeline for the Project Implementation

The Team explained to the Pakistan side that the expected timeline for the project implementation is attached as Annex 4.

9. Expected Outcomes and Indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Pakistan side will be responsible for the achievement of agreed key indicators targeted in year 2024 and shall monitor the progress based on those indicators.

[Quantitative indicators]

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr 2017)	Target (Yr 2024)
The annual number of patients hospitalised in MFICU.	- (143 by existing intensive care beds)	300
The annual number of patients hospitalised in NICU.	947	1,100
The annual number of obstetrical and paediatric surgeries	14,410	16,500

[Qualitative indicators]

1. Health care services for high risk perinatal patients will be strengthened.
2. Quality of care in MCHC and CH will be ameliorated through improving medical treat environment.
3. Maintenance of medical equipment and Central Sterile Supply Department (hereinafter CSSD) will be managed effciently.

10. Technical Assistance ("Soft Component" of the Project)

Considering the sustainable operation and maintenance of the products and services granted through the Project, technical assistance is planned under the Project. The Pakistan side confirmed to deploy necessary number of counterparts who are appropriate and competent in terms of its purpose of the technical assistance as described in the Draft Report.

11. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 5. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in 2-5 of Annex 5, both sides confirmed that such levies in Pakistan which include income tax, withholding tax, commercial tax, custom duties and other levies imposed on imported goods which shall be clarified in the bid documents by MNHSRC during the implementation stage of the Project. The Pakistan side confirmed that necessary procedure for tax exemption above mentioned would be taken promptly to avoid delay in implementing the Project. In particular, both sides agreed the Pakistan side bears the commercial tax if it is not exempted.

The Pakistan side assured to take the necessary measures and coordination including allocation of the necessary budget which is preconditions of implementation of the Project. The amount to be budgeted over the next five (5) fiscal years on the Pakistan side is estimated in Annex 6 together with the budget preparation and approval process. Based on the estimation, the Team specifically requested the Pakistan side to prepare the additional FY2018 budget hopefully in this January. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 5 will be used as an attachment of the Grant Agreement(G/A).

12. Monitoring during the Implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (hereinafter referred to as "PMR") attached as Annex 7. The timing of submission of PMR is described in Annex 5.

13. Project Completion

Both sides confirmed that the project completes when the building constructed and equipment procured by the grant are in operation. The completion of the Project will

be reported to JICA promptly, but in any event not later than six months after completion of the Project.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, and Sustainability). The result of the evaluation will be publicised. The Pakistan side is required to provide necessary support for the data collection.

15. Schedule of the Study

JICA will finalise the Preparatory Survey Report based on the confirmed items. The report will be sent to the Pakistan side around April 2019.

16. Environmental and Social Considerations

16-1. General Issues

The Team explained that "JICA Guidelines for Environmental and Social Considerations (April 2010)" (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as C because the Project is likely to have minimal adverse impact on the environment under the Guidelines.

16-2. Environmental Conservation Law

The Pakistan side reconfirmed that the Project does not need the Initial Environmental Examination and/or the Environmental Impact Assessment. PIMS will acquire No Objection Certificate from Pakistan Environment Protection Council, the Pakistan Environment Protection Agency.

17. Other Relevant Issues

17-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

17-2. Maintenance of the Equipment

Pakistan side agreed to take necessary major to assure the proper function of equipment procured by the Project through preventive maintenance such as periodical check.

The Team requested the Pakistan side to secure enough budget for appropriate

maintenance of the water softner in order to assure proper function of autoclaves.

17-3. Renovation

Both sides confirmed renovation of current NICU to surgical PICU is essential to achieve the objective of the Project. The Pakistan side agreed to undertake the responsibility for the renovation by two months before the hand over of the Project.

17-4. Human Resources

The Team provided the estimated number of necessary staff for the project implementation, as described in Annex 8. The Pakistan side agreed to allocate necessary staff with providing proper training by the hand over of the Project.

17-5. Reroute of existing lines

The Pakistan side confirmed that two water supply lines, electricity line and telephone/internet line will be rerouted by one month before the notice of the tender of the Project.

17-6. Water Softner

Survey team is aware of the issue of the hard water and a broken water softener especially at the MCH, which is causing un-safe medical environment. As MCH as well as CH facilities were constructed by using Japanese Grant ,Survey team strongly recommend that PIMS takes necessary measure for improving the environment of CSSD in MCH as well as CH such as the procurement of water softener.

17-7 Boundaries of the Project Site

Pakistan side agreed to set the corner of the site for the boudaries for the Project in order to secure the site immediately after the approval of PC-1.

Annex 1 Project Site

Annex 2 Medical equipment and medical furniture list

Annex 3 Organization chart

Annex 4 Project Implementation Schedule

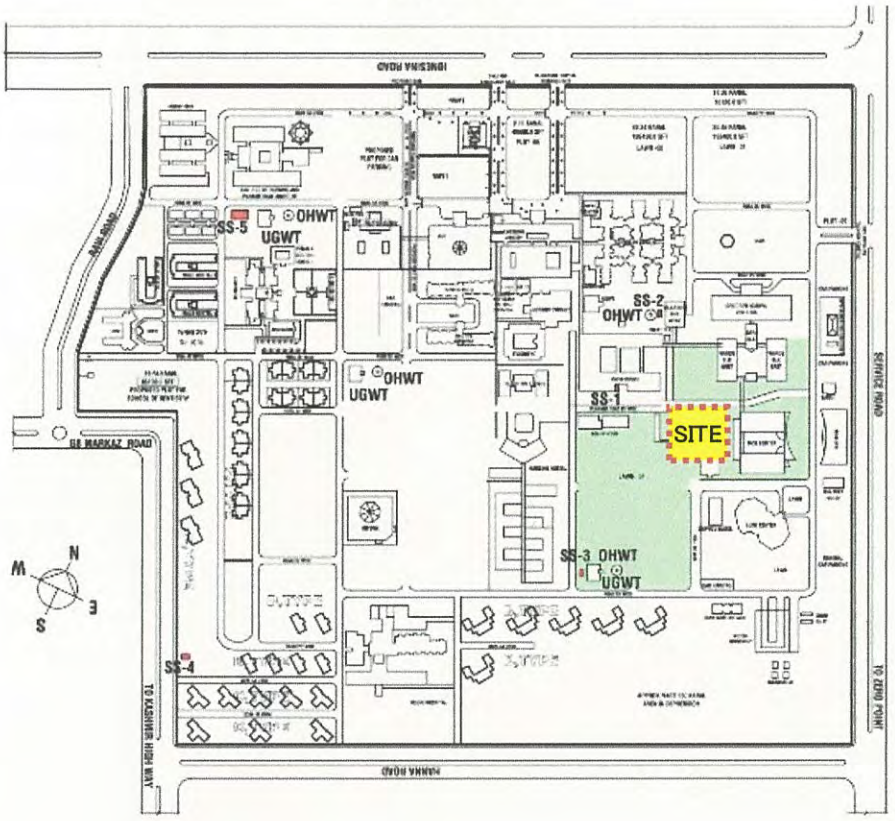
Annex 5 Major Undertakings to be taken by Recipient Government/to be covered by the Japanese Grant

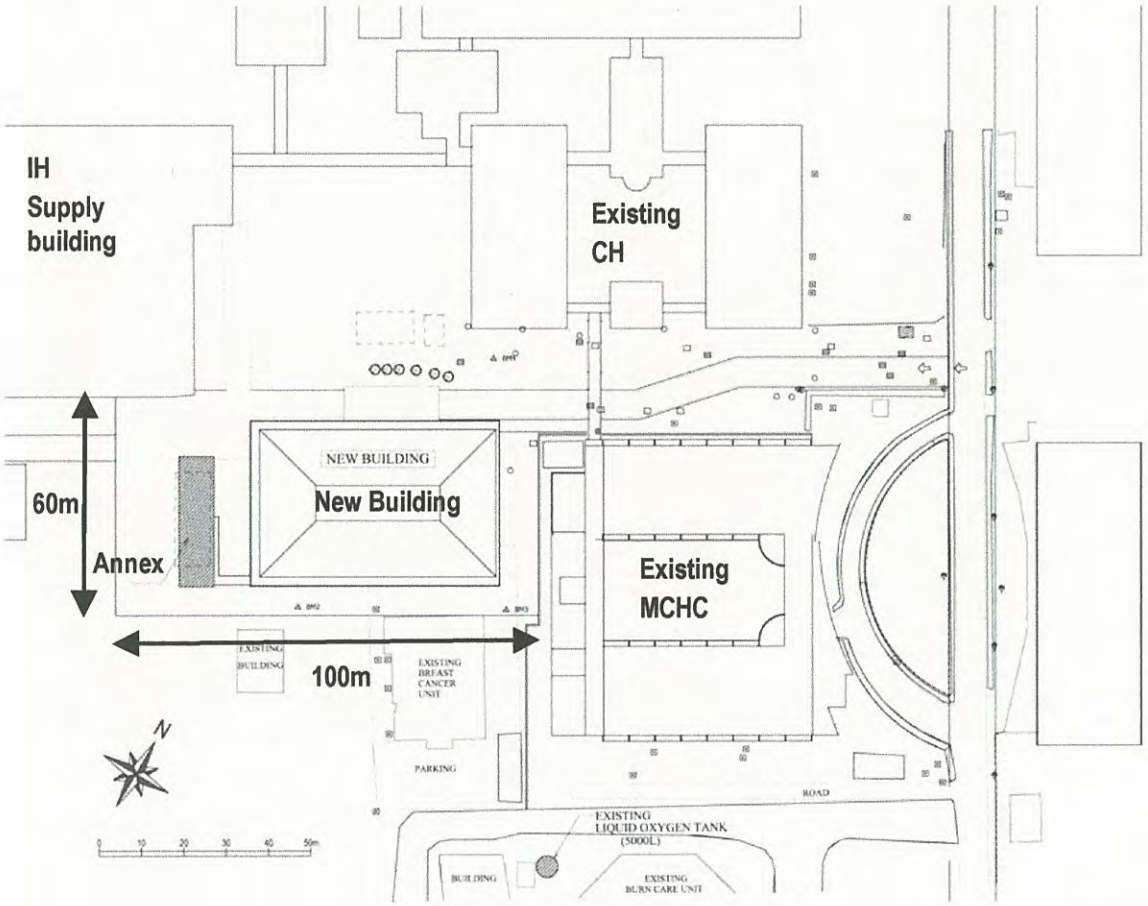
Annex 6 Total Estimated Costs to be included in the Budget Proposal for Parliaments' Approval

Annex 7 Project Monitoring Report (template)

Annex 8 Medical Staff Required for the Project Implementation

Project site





No.	ME No.	Name of equipment	Q'ty	Department	Priority
NE-01-01	ME-011	Biliblanket	5	NICU	A
NE-01-02	ME-010	Blood Gas Analyzer (Portable Type)	1	NICU	A
NE-01-04	ME-066	Digital Baby Weighing Scale	2	NICU	A
NE-01-05	ME-021-01	ECG Machine	1	NICU	A
NE-01-08	ME-015-01	Infant Incubator	10	NICU	A
NE-01-11	ME-007	Jaundice Meter	2	NICU	A
NE-01-12	ME-060-01	LED X ray Illuminator	1	NICU	A
NE-01-15	ME-001	Mobile X ray Machine	1	NICU	A
NE-01-16	ME-030-01	Ultrasonic Nebulizer	5	NICU	A
NE-01-17	ME-058	Ophthalmoscope	1	NICU	BB
NE-01-18	ME-019-01	Patient Monitor	20	NICU	A
NE-01-19	ME-009	Phototherapy Unit	5	NICU	A
NE-01-21	ME-056-01	Suction Unit	3	NICU	A
NE-01-22	ME-016-01	Transport Infant Incubator	1	NICU	A
NE-01-23	ME-041	Vein Finder	3	NICU	A
NE-01-25	ME-045	Bubble CPAP	5	NICU	A
NE-01-30	ME-026-01	Syringe Pump	20	NICU	A
NE-01-31	ME-027-01	Infusion Pump	10	NICU	A
NE-01-34	ME-081-01	Medicine Refrigerator	1	NICU	A
NE-01-36	ME-061-01	Laryngoscope for infant	1	NICU	A
NE-01-37	ME-083-01	Oxygen Humidifier	14	NICU	BB
NE-01-38	ME-084-01	Wall Suction Unit	14	NICU	BB
NE-02-01	ME-025-02	Ventilator	6	MFICU	A
NE-02-02	ME-019-02	Patient Monitor	6	MFICU	A
NE-02-05	ME-030-02	Ultrasonic Nebulizer	2	MFICU	A
NE-02-06	ME-020-01	Defibrillator	1	MFICU	A
NE-02-07	ME-027-02	Infusion Pump	2	MFICU	A
NE-02-08	ME-026-02	Syringe Pump	6	MFICU	A
NE-02-09	ME-077-01	Motorized Gadged Bed	6	MFICU	A
NE-02-11	ME-021-02	ECG Machine	1	MFICU	A
NE-02-12	ME-028-01	Ultrasound Diagnostic Machine	1	MFICU	A
NE-02-14	ME-075-01	Stretcher	1	MFICU	A
NE-02-16	ME-081-02	Medicine Refrigerator	1	MFICU	A
NE-02-17	ME-083-02	Oxygen Humidifier	6	MFICU	BB
NE-02-18	ME-084-02	Wall Suction Unit	6	MFICU	BB
NE-02-19	ME-059-01	Fiber Optic Laryngoscope	1	MFICU	BB
NE-03-01	ME-079-01	Baby Cradle	20	HDU	A
NE-03-02	ME-003	Infant Warmer	10	HDU	A
NE-03-03	ME-015-02	Infant Incubator	1	HDU	A
NE-03-08	ME-030-03	Ultrasonic Nebulizer	3	HDU	A
NE-03-09	ME-019-03	Patient Monitor	10	HDU	A
NE-03-10	ME-016-02	Transport Infant Incubator	1	HDU	A
NE-03-11	ME-081-03	Medicine Refrigerator	1	HDU	A
NE-03-13	ME-076-01	Gadged Bed	6	HDU	A
NE-03-14	ME-083-03	Oxygen Humidifier	24	HDU	BB
NE-03-15	ME-084-03	Wall Suction Unit	22	HDU	BB
NE-04-01	ME-046	Anesthesia Machine	4	OT	A

No.	ME No.	Name of equipment	Q'ty	Department	Priority
NE-04-02	ME-019-04	Patient Monitor	6	OT	A
NE-04-03	ME-027-03	Infusion Pump	4	OT	A
NE-04-05	ME-036	Pressure Bag with Inflating Cuff for BP machine	8	OT	A
NE-04-06	ME-026-03	Syringe Pump	4	OT	A
NE-04-07	ME-056-02	Suction Unit	9	OT	A
NE-04-08	ME-020-02	Defibrillator	1	OT	A
NE-04-09	ME-044	Electric Operation Table	4	OT	A
NE-04-10	ME-043	Surgical Diathermy Machine	4	OT	A
NE-04-17	ME-059-02	Fiber Optic Laryngoscope	4	OT	A
NE-04-18	ME-060-02	LED X ray Illuminator	4	OT	A
NE-04-21	ME-034	Laparoscope System	1	OT	A
NE-04-27	ME-075-02	Stretcher	2	OT	A
NE-04-32	ME-006	Patient Warming System	4	OT	A
NE-04-34	ME-037	Blood Gas Analyzer	1	OT	A
NE-04-36	ME-082-01	Blood Bank Refrigerator	1	OT	A
NE-04-37	ME-083-04	Oxygen Humidifier	5	OT	BB
NE-04-38	ME-084-04	Wall Suction Unit	4	OT	BB
NE-05-01	ME-014-01	Doppler Fetus Detector	2	DR	A
NE-05-02	ME-028-02	Ultrasound Diagnostic Machine	1	DR	A
NE-05-03	ME-018	Delivery Table	2	DR	A
NE-05-04	ME-008	Vacuum Extractor	2	DR	A
NE-05-05	ME-040	Operating Light (Stand type)	2	DR	A
NE-05-06	ME-056-03	Suction Unit	2	DR	A
NE-05-07	ME-017	CTG Monitor	2	DR	A
NE-05-08	ME-083-05	Oxygen Humidifier	2	DR	BB
NE-05-09	ME-084-05	Wall Suction Unit	2	DR	BB
NE-06-01	ME-048	High Pressure Steam Sterilizer (Large size)	2	CSSD	A
NE-06-02	ME-049	Washer Disinfector	1	CSSD	BB
NE-06-03	ME-052	Low Temperature Sterilizer	1	CSSD	BB
NE-06-04	ME-055	Ultrasonic Washer	1	CSSD	A
NE-06-05	ME-050	Sterilized Bag Sealler	2	CSSD	A
NE-06-06	ME-051	Water Softner	2	CSSD	A
NE-06-07	ME-053	Tube Dryer	1	CSSD	BB
NE-06-08	ME-054	System Dryer	1	CSSD	BB
NE-07-03	ME-074	Micropipette	10	LAB	A
NE-07-09	ME-068	Centrifuge	2	LAB	A
NE-07-11	ME-067	Incubator	1	LAB	A
NE-07-13	ME-070	Water Distilling Apparatus	1	LAB	A
NE-07-15	ME-072	Blood Sedimentation Set	1	LAB	A
NE-07-17	ME-082-02	Blood Bank Refrigerator	1	LAB	A
NE-07-18	ME-081-04	Medicine Refrigerator	1	LAB	BB
NE-08-01	ME-014-02	Doppler Fetus Detector	1	ER	A
NE-08-02	ME-028-03	Ultrasound Diagnostic Machine	1	ER	A
NE-08-04	ME-004-01	Infant Scale	1	ER	A
NE-08-05	ME-063	Adult Scale	2	ER	A
NE-08-06	ME-062	Examination Light (Mobile type)	5	ER	A
NE-08-09	ME-030-04	Ultrasonic Nebulizer	3	ER	A

No.	ME No.	Name of equipment	Q'ty	Department	Priority
NE-08-10	ME-021-03	ECG Machine	1	ER	A
NE-08-11	ME-020-03	Defibrillator	1	ER	A
NE-08-12	ME-056-04	Suction Unit	3	ER	A
NE-08-13	ME-019-05	Patient Monitor	5	ER	A
NE-08-15	ME-057	Emergency Treatment Bed	1	ER	A
NE-08-16	ME-076-02	Gadged Bed	5	ER	A
NE-08-17	ME-012-01	Obstetric Examination Table	3	ER	A
NE-08-21	ME-075-03	Stretcher	2	ER	A
NE-08-22	ME-081-05	Medicine Refrigerator	2	ER	A
NE-08-23	ME-079-02	Baby Cradle	6	ER	A
NE-08-24	ME-083-06	Oxygen Humidifier	10	ER	BB
NE-08-25	ME-084-06	Wall Suction Unit	2	ER	BB
NE-08-26	ME-080-01	Examination Table for Infant	2	ER	BB
NE-08-27	ME-059-03	Fiber Optic Laryngoscope	2	ER	BB
NE-08-28	ME-061-02	Laryngoscope for infant	1	ER	BB
NE-08-29	ME-077-02	Motorized Gadged Bed	3	ER	A
NE-09-01	ME-076-03	Gadged Bed	75	Ward	A
NE-09-02	ME-078	Bed for infant	25	Ward	A
NE-09-04	ME-030-05	Ultrasonic Nebulizer	4	Ward	A
NE-09-07	ME-014-03	Doppler Fetus Detector	5	Ward	BB
NE-09-09	ME-012-02	Obstetric Examination Table	2	Ward	BB
NE-09-10	ME-004-02	Infant Scale	2	Ward	A
NE-09-11	ME-065	Adult Weighing Scale	2	Ward	A
NE-09-14	ME-060-03	LED X ray Illuminator	2	Ward	A
NE-09-15	ME-019-06	Patient Monitor	2	Ward	BB
NE-09-16	ME-075-04	Stretcher	2	Ward	A
NE-09-19	ME-081-06	Medicine Refrigerator	3	Ward	A
NE-09-20	ME-020-04	Defibrillator	1	Ward	A
NE-09-21	ME-083-07	Oxygen Humidifier	12	Ward	BB
NE-09-22	ME-084-07	Wall Suction Unit	6	Ward	BB
NE-09-23	ME-059-04	Fiber Optic Laryngoscope	1	Ward	BB
NE-09-24	ME-061-03	Laryngoscope for infant	1	Ward	BB
NE-09-25	ME-080-02	Examination Table for Infant	2	Ward	BB
NE-10-01	ME-076-04	Gadged Bed	4	Recovery Room	A
NE-10-02	ME-022	Vital Sign Monitor	4	Recovery Room	A
NE-10-03	ME-083-08	Oxygen Humidifier	4	Recovery Room	BB
NE-10-04	ME-084-08	Wall Suction Unit	2	Recovery Room	BB
NE-11-01	ME-076-05	Gadged Bed	2	Labor Room	A

Floor	Function		Room name	Cabinet		Shelf			
				1	4	1	2	3	4
				Shelf with glass	Locker	1800W	1500W	1200W	900W
1	Common facility		Entrance hall						
	Common	102	Security						
		103	Pharmacy	7					
	Laboratory	106	Laboratory	3					
	Common facility	107	Litter				6	0	0
	Emergency	108	Medical equipment & linen storage (Common)			4	1		
		111	Doctor duty room						
		112	Staff duty room						
	Administration	115	Administration office						
		118	Director room						
		119	Training / conference room						
		120	Staff changing room (male)		9				
		121	Staff changing room (female)		9				
	Obs& Gynae	129	Staff station						
		130	Document/equipment						
		131	Medicine room	3			0		0
		132	Sluice (Solid waste)				1		1
		135	Doctor's office						
		136	Emergency Clinics 1						
		137	Emergency Clinics 2						
		138	Emergency Clinics 3						
		143	Staff breakroom						
		144	Medical equipment storage (Obs & Gynae)				4		2
		145	Patient briefing room						
	Neonatal	146	Reception (Neonatal)						
		147	Clinic & treatment room of neonatal emergency unit						
		148	Patient briefing room						
		149	Sluice (Solid waste)				1		2
		150	Staff breakroom						
	Supply	157	Laundry & Linen				4		1
		158	Kitchen				5		1
2	Operation	202	Medical equipment storage				4		
		203	Staff station				0		
		204	Anesthesia				0		
		205	Patients briefing room						
		208	Sluice (Solid waste)				1		
		210	OT hall						
		218	Doctor & staff changing		9				
					9				
		221	Doctor & staff changing		12				
	Operation								
	Operation								

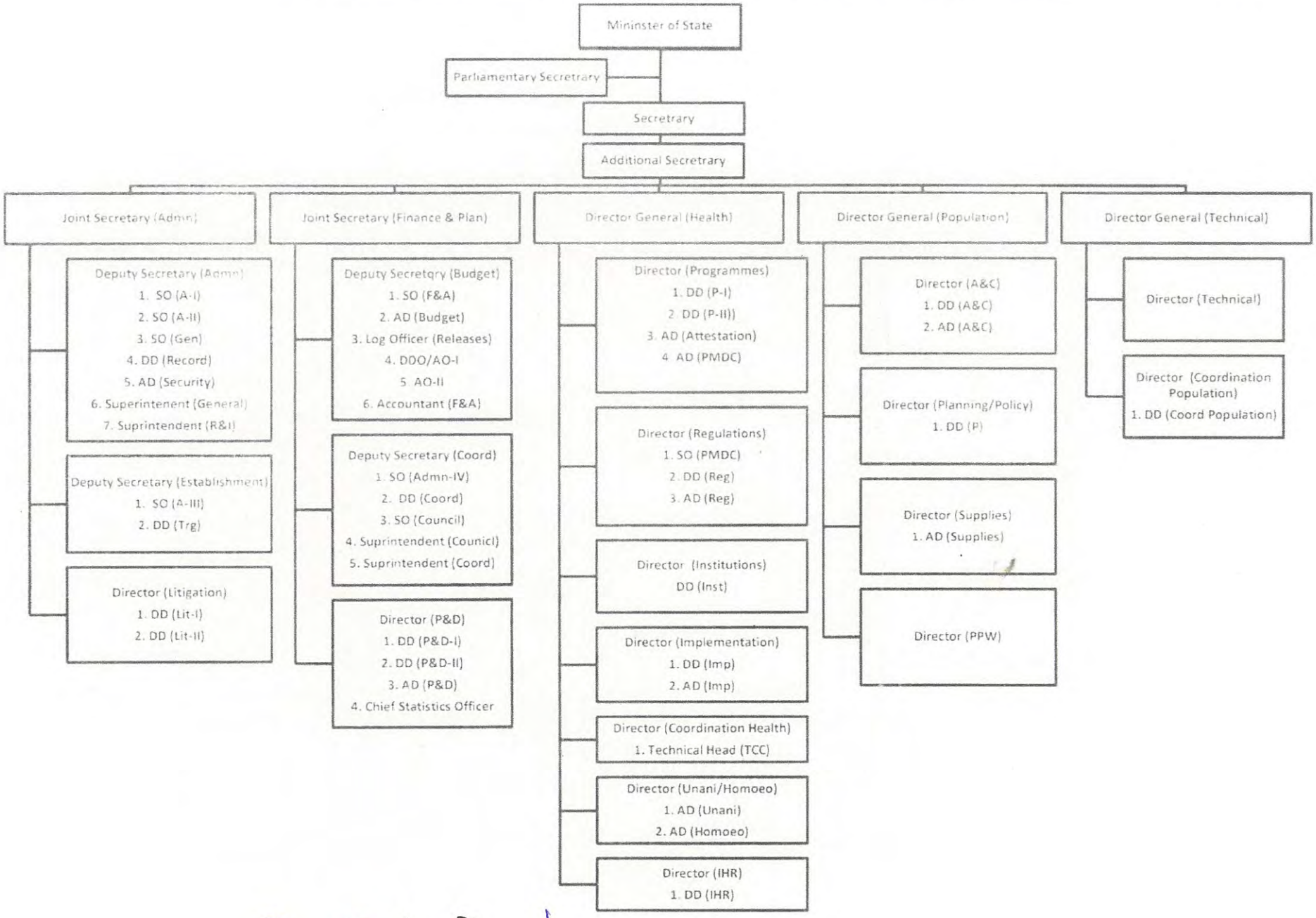
	Supply		CSSD						
	Supply	225	Medical equipment room &				4		
		226	Medical equipment Storage				4		
	MFICU	229	Staff station				0		
		230	Medicine room	2		1			
		232	Medical equipment storage				5	1	
		233	Sluice (Solid waste)				2		
		234	Staff breakroom						
	Common	238	Patient briefing room						
	NICU	247	Sluice (Solid waste)				1		2
		249	Staff breakroom						
		250	Medical equipment storage				6		
		251	Milk kitchen & refrigerator	3					
3	Ward children	305	Treatment room	2					
		306	Linen storage				10		
		307	Laundry						
		309	Sluice (Solid waste) 2					1	
		310	Staff station						
		312	Patient briefing room						
		313	Doctor duty room						
		314	Staff duty room						
		315	Medical equipment storage				4		2
	Ward Common	319	Changing room (male staff)		6				
		321	Changing room (female staff)		6				
		324	Pharmacy	6					
	Ward Obs & Gynae	330	Linen storage	0			10		
		331	Laundry						
		333	Sluice (Solid waste) 2					1	
		334	Staff station						
		336	Patient briefing room						
		337	Doctor duty room						
		338	Staff duty room						
		339	Medical equipment storage				4		2
				26	60	5	77	3	13

Floor	Function		Room name	DESK				Meeting table		Chair				Cabinet		White board	Ward laundry	
				D1	D2	D3	D4	M1	M2	Stackable	C1	C2	C3	2	3		Washing machine	Dryer
														Document shelf with glass door	Steel document shelf with door			
1	Common	102	Security	2														
		103	Pharmacy	2						2	2							
	Laboratory	106	Laboratory								3							
	Common facility	107	Litter															
	Emergency	108	Medical equipment & linen storage (Common)															
		111	Doctor duty room		1							1		2				
		112	Staff duty room		1							1		2				
	Administration	115	Administration office	6		1					6				6			
		118	Director room				1						1	2				
		119	Training / conference room					1		7					2			
		120	Staff changing room (male)															
		121	Staff changing room															
	Obs& Gynae		Waiting area/ corridor															
	Obs& Gynae	129	Staff station								4							
		130	Document/equipment storage												4			
		131	Medicine room															
		132	Sluice (Solid waste)															
		135	Doctor's office		1							1		2				
		136	Emergency Clinics 1		1							1						
		137	Emergency Clinics 2		1							1						
		138	Emergency Clinics 3		1							1						
		143	Staff breakroom						1	4								
		144	Medical equipment storage (Obs & Gynae)															
		145	Patient briefing room						1	4								
	Neonatal	146	Reception (Neonatal)							4								
		147	Clinic & treatment room of neonatal emergency unit								4							
		148	Patient briefing room						1	4								
		149	Sluice (Solid waste)															
		150	Staff breakroom						1	4								
	Supply	157	Laundry & Linen															
		158	Kitchen															
2	Operation	202	Medical equipment storage (OTS)															
		203	Staff station						1		4			2	3			
		204	Anesthesia	2							2			1	1			
		205	Patients briefing room						1	4								
		208	Sluice (Solid waste)															
		210	OT hall													2		
		218	Doctor & staff changing room (male)															
		221	Doctor & staff changing room (female)															

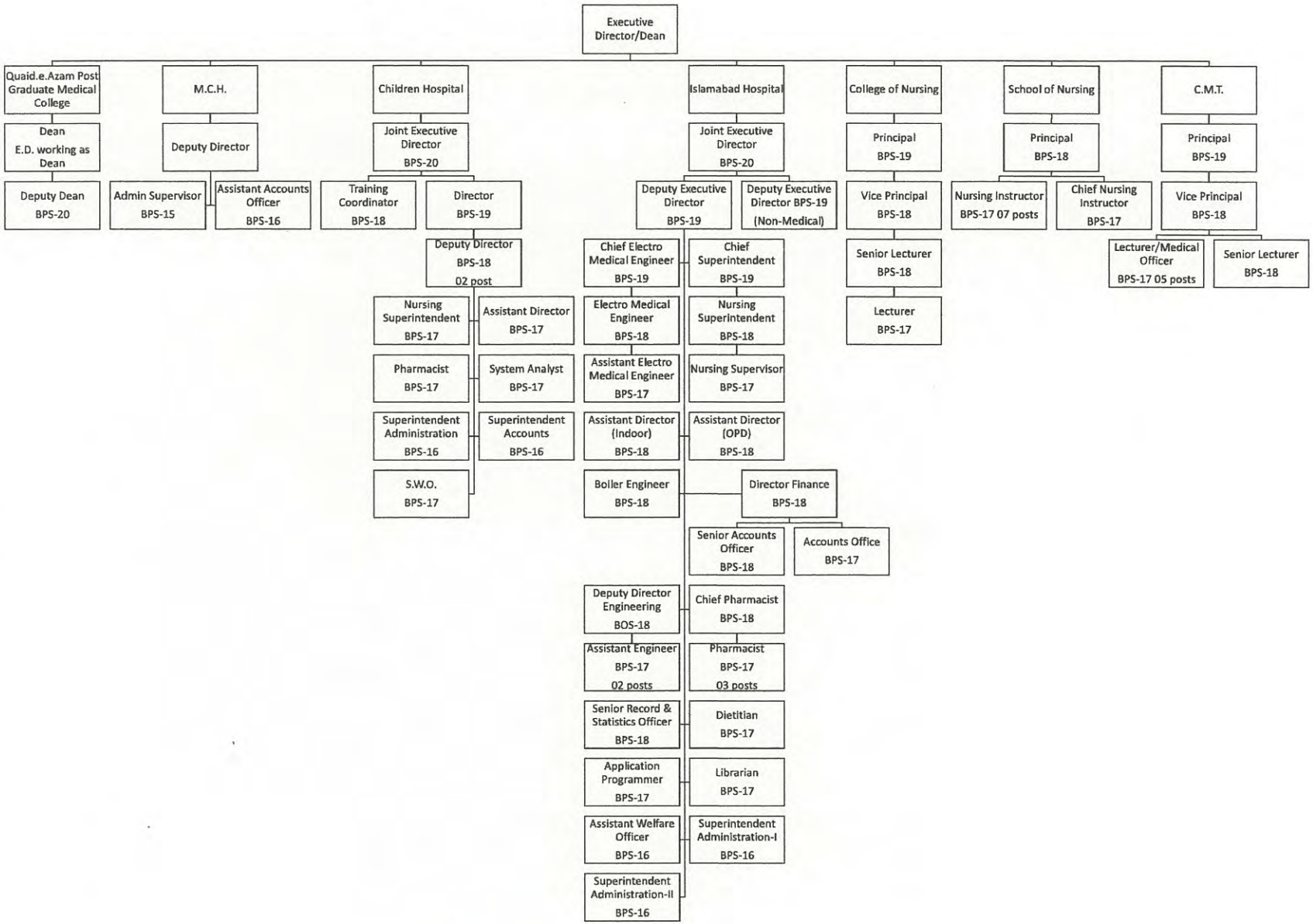
	Supply	225	Medical equipment room & workshop																
		226	Medical equipment Storage																
	MFICU	229	Staff station								3			2					
		230	Medicine room																
		232	Medical equipment storage																
		233	Sluice (Solid waste)																
		234	Staff breakroom						1	4									
	Common	238	Patient briefing room						1	4									
	NICU	247	Sluice (Solid waste)																
		249	Staff breakroom						1	4									
		250	Medical equipment storage																
		251	Milk kitchen & refrigerator room																
3	Ward children	305	Treatment room																
		306	Linen storage																
		307	Laundry															3	2
		309	Sluice (Solid waste) 2																
		310	Staff station								6								
		312	Patient briefing room						1	4									
		313	Doctor duty room		1							1		2					
		314	Staff duty room		2							2		2					
		315	Medical equipment storage																
	Ward Common	319	Changing room (male staff)																
		321	Changing room (female staff)																
		324	Pharmacy																
	Ward Obs & Gynae	330	Linen storage																
		331	Laundry															3	2
		333	Sluice (Solid waste) 2																
		334	Staff station								6								
		336	Patient briefing room						1	4									
		337	Doctor duty room		1							1							
		338	Staff duty room		2							2							
		339	Medical equipment storage																
				12	12	1	1	1	11	53	40	12	1	17	16	2	6	4	

Annex 3

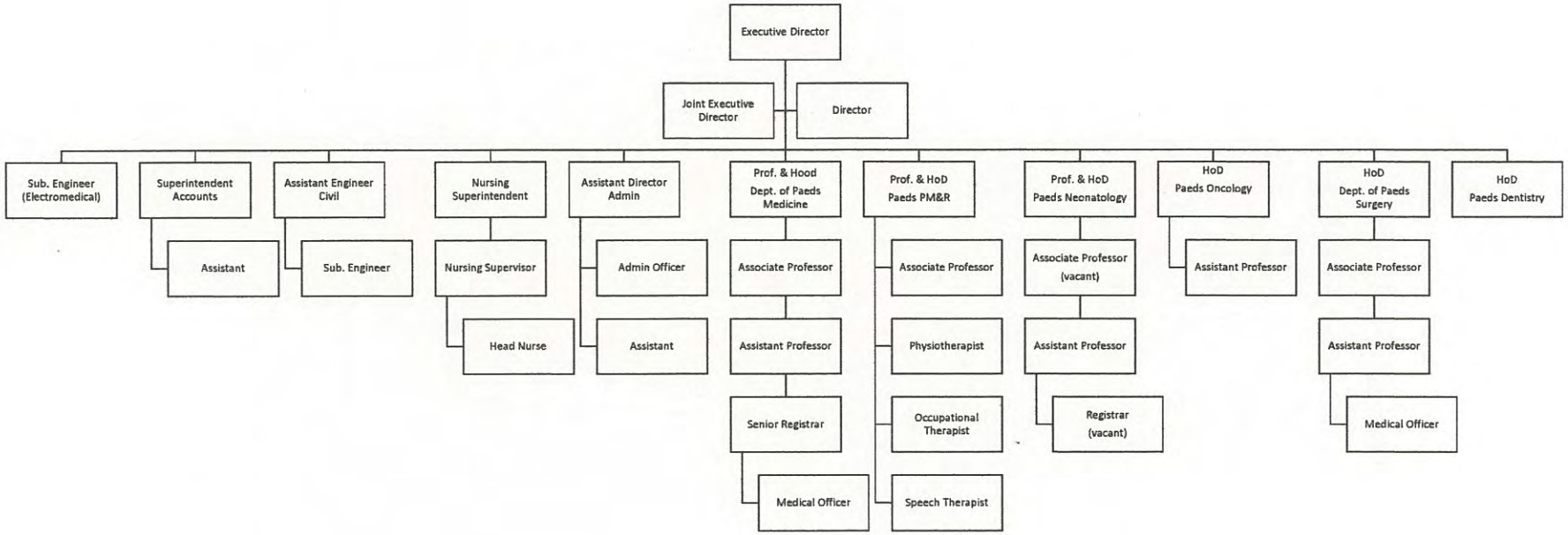
Organization Chart of Ministry of National Health Services, Regulations and Coordination



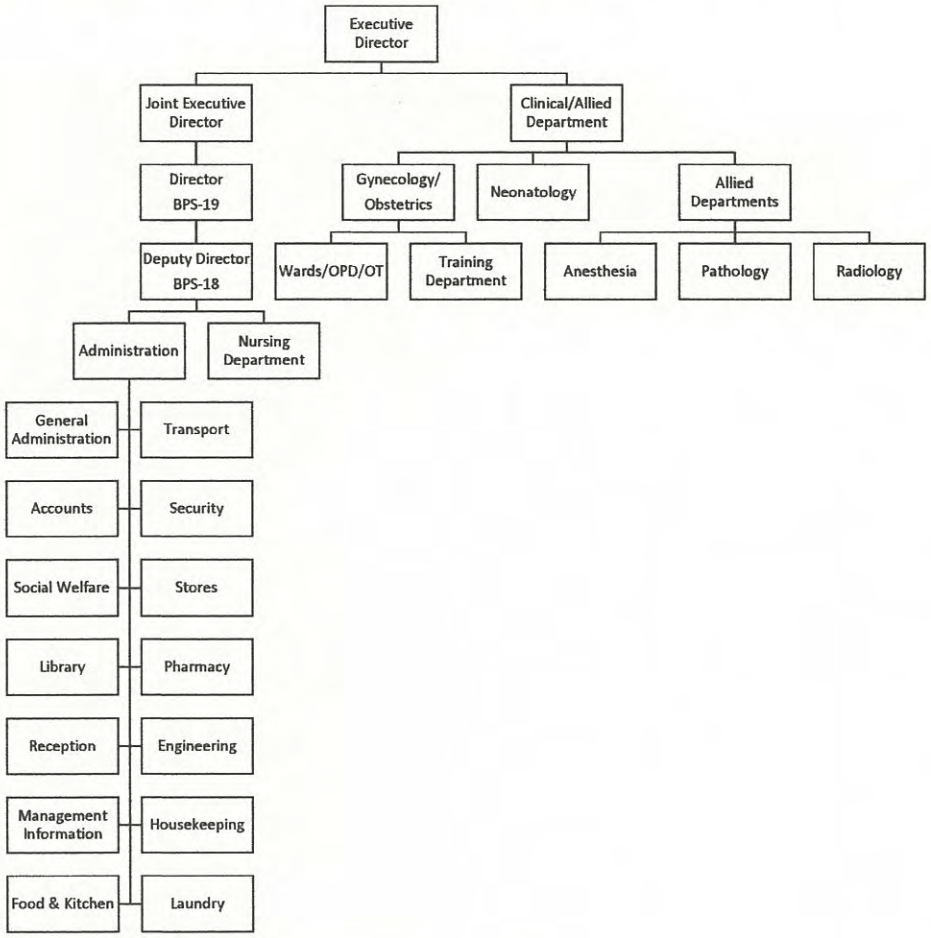
Organization Chart of Pakistan Institute of Medical Sciences



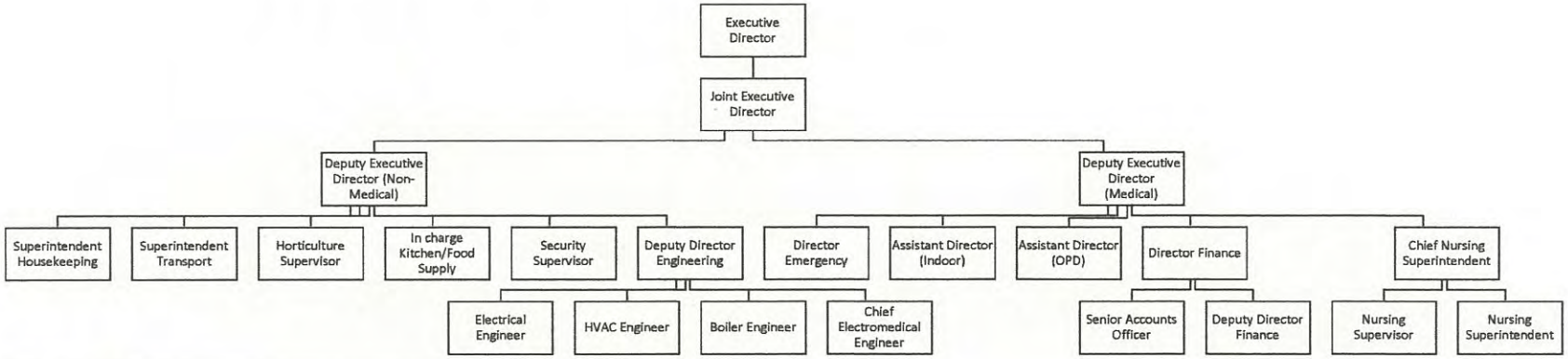
Organization Chart of Children's Hospital



Organization Chart of Maternal and Child Health Centre



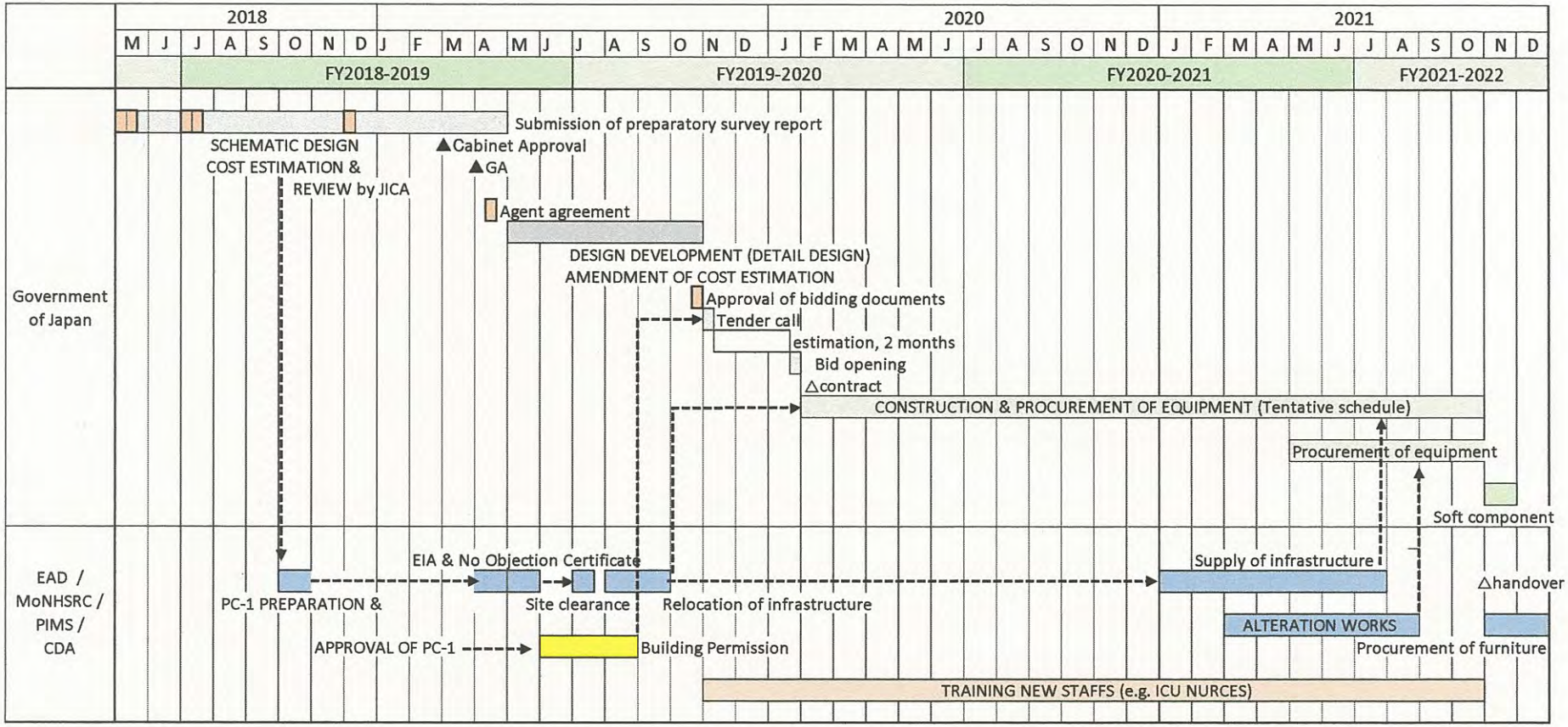
Organization Chart of Islamabad Hospital



CLINICAL DEPARTMENTS

Department of General Surgery
Department of Plastic Surgery
Department of Dental Surgery
Department of Oral Maxillofacial Surgery
Department of Orthopedic Surgery
Department of Neurosurgery
Department of Psychiatry
Department of Neurology
Department of Physiotherapy
Department of Rheumatology
Department of General Medicine
Department of Gastroenterology
Department of Nephrology
Department of Urology
Department of Ophthalmology
Department of Dermatology
Department of Pulmonology
Department of E.N.T (Ear, Nose, Throat)

Implementation Schedule



Annex 5

Major Undertakings to be taken by Recipient Government of Pakistan

1. Specific obligations of the Government of Pakistan which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost (1,000Rs)	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MoPDR		
2	To issue Authorization to Pay (A/P)to a bank in Japan (Agent Bank) for the payment to the consultant	within 1 month after the signing of the agreement			
3	To obtain approval of IEE/EIA if applicable. To obtain No objection Certificate from EPA	within 2 months after G/A	, PIMS		
4	To secure the following lands 1) Project site for the JICA building 2) Temporary construction yard and stock yard near the Project site 3) borrow pit and disposal site near the Project site	1 month before notice of tender	PIMS		
5	To clear and level the Project site by taking measures as follows 1) Reroute of existing water supply lines, power supply line and telephone/internet line 2) Demolition and/or relocation of buildings and underground water storage on site 3) Removal of Trees and its roots 4) Removal of paving on site	1 month before notice of tender	PIMS, PWD	85,000	
6	To obtain approval by related authorities 1) To obtain building permit 2) To obtain agreement from IESCO (electricity company) and SNGPL (City gas company) if increase of supply in the current contract are required	2 months before notice of tender	PIMS	65,000	
7	To submit Project Monitoring Report (with the result of detailed design)	before approval of bidding document	MoNHSRC, PIMS		
8	To appoint a Project Management Unit (PMU)		MoNHSRC, PIMS		
9	To secure the budget for newly assigned personnel		MoNHSRC, PIMS		
10	To take necessary procedures for budgetary requests		MoNHSRC		

2. During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To issue Authorization to Pay (A/P)to a bank in Japan (Agent Bank) for the payment to the consultant contractor and suppliers.	within 1 month after the signing of the contract and the agreement	MoNHSRC		
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		MoPDR		
	1) Advising commission of A/P	within 1 month after the signing of the contract and the agreement	MoNHSRC		
	2) Payment commission for A/P	every payment	MoNHSRC		
3	To ensure prompt unloading and customs clearance at port of disembarkation in recipient country and to assist the supplier(s) with internal transportation therein		MoNHSRC		
4	To accord Japanese nationals and/or physical persons of third countries 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	during the Project	MoNHSRC		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be exempted	during the Project	MoNHSRC		
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the implementation of the Project	during the Project	MoNHSRC		
7	To submit Project Monitoring Reports.	every month	PIMS		
8	To submit the completion report of the Project	within six months after completion of the Project	PIMS		
9	Alteration and renovation to the existing PICU after NICU will move to the new facility. To transfer medical equipment and furniture to the new building	during the construction	PIMS	70,000	
10	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities			180,000	
	1) Electricity To Provide 11kVA high voltage underground line up to new facility	3 months before completion of the construction	PIMS		
	2) Water To provide water supply to new facility	3 month before completion of the construction	PIMS		
	3) City gas To provide city gas (Sui Northern Gas, SNGPL) to new facility	3 month before completion of the construction	PIMS		
	4) Medical gas supply To provide liquid oxygen gas line from existing CE5 (5000m3) gas tank and supply oxygen	3 months before completion of the construction	PIMS		
	5) Telephone / Internet To provide telephone and internet line, and to install necessary system and equipment in the new facility	1 month before completion of the construction	PIMS		
	6) HMIS To provide necessary HMIS system to new facility and install computers in the new facility	1 month before completion of the construction	PIMS		

11	To provide equipment and furniture				
	1) To procure Medical equipment (Priority B & C)	1 month after completion of the construction	PIMS	1,180,000	
	2) To procure general furniture	1 month after completion of the construction	PIMS	40,000	
12	Landscaping work Planting and gardening works around the JICA building	1 month after completion of the construction	PIMS	38,000	
13	To arrange and secure the temporary land/space in the site for the construction, enough space for temporary storage materials and machines, setting temporary office and accommodation shall be provided hospital land,	during the construction	PIMS	-	
14	To secure the safety of outpatient and their family who visit the hospital for health services		PIMS	-	
15	To remove unusable medical equipment	Before the installation	PIMS	-	
16	Technical Assistance" Soft Component" Per diem, accommodation and transportation fee for Soft Component Program attendees	during implementation of the Soft Component	PIMS	-	
	Allocate sufficient staff with appropriate skills and experiences for operation and maintenance of the JICA building and equipment under the Grant Aid	at the Completion (before soft component program starts)	PIMS	Refer to the staff allocation plan before completion of facility (2019-2020 staff plan)	

3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the JICA building constructed and equipment under the Grant Aid 1) Allocation of maintenance cost including the renovation of the expenses necessary for the renovation of maintenance contract 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	PIMS		
2	To renovate and utilize properly the space in existing building after transfer of the function to the facility constructed	After the completion of the construction	PIMS		

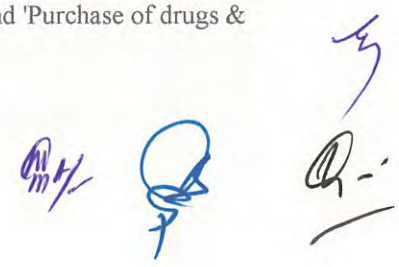
(A/P: Authorization to Pay, B/A: Banking Arrangement, EIA: Environmental Impact Assessment, G/A: Grant Agreement, IEE: Initial Environmental Examination, CADD: Capital Administration and Development Division, MoPDR: Ministry of Planning, Development and Reform)

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

UNIT: 100,000PKR

S. No.	Item	1st Year	2nd Year	3rd Year	4th Year	5th Year
		FY2021	FY2022	FY2023	FY2024	FY2025
A. SAFF SALARIES AND OPERATIONAL COST						
1	Salaries of staff	1983	2136	2300	2477	2669
2	Repair of machinery and durable goods(@12% of total cost of Machinery applicable after 1-5 years)	0	6.792	7.315	7.878	8.485
3	POL／Lubricants	1	1.077	1.160	1.249	1.345
4	Repair of furniture @ 12%	0	2.4	2.585	2.784	2.998
5	Postage & telex and telephone instrument	0.5	0.539	0.580	0.625	0.673
6	Gas Charge	4.5	4.847	5.220	5.622	6.054
7	Electricity	7	7.539	8.120	8.745	9.418
8	Office stationary printing	1.3	1.400	1.508	1.624	1.749
9	Book & journals	0.2	0.215	0.232	0.250	0.269
10	Training of doctors auxiliary staff, conference & seminars	0	0	0	0	0
11	General store supplies	52	56.004	60.316	64.961	69.963
12	Entertainment	0	0	0	0	0
	Sub-Total A	2050	2217	2387	2571	2769
B. MAINTENANCE OF BUILDING AND INFRASTRUCTURE						
1	Annual repair of building @ 3.5% of cost of building		0	0	0	54
2	Special repair of building @ 2% of cost of building	0	0	0	0	31
	Sub-Total B	0	0	0	0	85
	GRAND TOTAL	2049.50	2216.50	2387.17	2570.99	2853.95
	Grand Total in Million	204.9	221.6	238.7	257.0	285.3

*Item 11: 'General store supplies' include `Uniforms & Protective clothing' and 'Purchase of drugs & medicines'.



Project Monitoring Report
on
Project for Strengthening the function of Pakistan Institute of Medical Science
Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Ministry	Person in Charge (Designation) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*
Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (*at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Attachment 6

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C−D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

-

-

-

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

Medical staff required for the departments

Annex.8

		Administration, CSSD, ME, maintenance	Emergency	Pharmacy	Laboratory	O.T. s	MFICU / HDU	NICU / HDU	CH ward & Medical office	MCHC ward & Medical office
Doctors										
	Professor / Chief of departments	1	1		1	1			1	0
	Assosicated professor	1				5			8	6
	Technician & assistant			8	10	19				
	Sub total	2	1	8	11	25	0	0	9	6
	Total	62								
Nurses										
	Chief head nurse, nursing supervisor, head nurse	3	1			1	1	2	1	1
	Nurse, midwife		20			15	20	40	24	24
	Sub total	3	21	0	0	16	21	42	25	25
	Total	153								
Others										
	CSSD	9								
	ME	7								
	Facility enineers & assitants	12								
	Account officer & assistant	1								
	Social welfare, statistic officer	4								
	Receptionist, Casher	8								
	Kitchen, laundry	34								
	Security	9								
	Storage	4								
	Ambulance	4								
	Sanitary worker, ward boy, aya		17		2	16	16	6	11	17
	Sub total	92	17	0	2	16	16	6	11	17
	Total	177								

5. ソフトコンポーネント計画書

パキスタン国
医科学研究所機能強化計画

ソフトコンポーネント計画書
（案）

2018 年 9 月

共同企業体

株式会社福永設計

有限会社エストレージャ

株式会社アジア共同設計コンサルタント

目　　次

1. ソフトコンポーネントを計画する背景

本プロジェクトの対象機関であるパキスタン医科学研究所（Pakistan Institute of Medical Sciences：PIMS）は首都イスラマバードに位置し、総合病院、小児病院（Children Hospital：CH)、母子保健センター（Maternal & Child Health Care Centre：MCHC）、看護大学、医療技術短期大学等から構成される公的な第三次医療機関である。MCHC、CH は、首都圏だけでなく、隣接するパンジャブ州のほか、カイバル・パフトゥンクワ州等、医療機関の少ない遠方からの患者や妊産婦の受け入れも行っている。近年、交通インフラの整備や首都周辺の急激な人口増加に伴い、来院患者数は増加の一途を辿っており、政府が重要項目に位置付けている妊産婦・新生児ケアにおいても、同施設の、特に救急診療部門、重症患者のための集中治療部門、手術部門そして病棟部門では、既存の施設・機材だけでは十分なサービスの提供が難しくなっている。

こうした状況を改善するため、本プロジェクトは現在、MCHC 及び CH で実施している周産期医療のうち、特に、ハイリスク妊産婦や新生児のケアに係るサービスを集約し、専用の集中治療室、手術室、分娩室、救急外来診療室、検査室及び病棟等を整備するとともに、これらにおいて必要となる医療機材の調達により、PIMS における周産期医療サービスの拡充と質の向上を目標とする。また医療従事者の教育病院として重要な役割を担う同施設の整備は、人材育成環境の改善・強化にも貢献するものである。

本プロジェクトでは、医療施設を新設し、その各諸室に医療機材を設置する。対象となる医療機材は、既存施設で使用されている仕様とほぼ同等のグレードとするが、既存機材の中には、約 30 年前のモデルもある。本プロジェクトで調達される全ての機材は最新モデルであるため、中には、機器全体の構造や仕組み等が 30 年前から大きく変化した機材も含まれる。これらを良好な状態で使用し続けるためには、必要な情報収集を怠らず、保守管理業務を適切に行ってゆく必要がある。

現在、既存機材を含む、PIMS の各医療施設で使用されているすべての医療機材の維持管理業務は PIMS 内の Bio-Medical Engineering（以下 BME）というセクションが担っている。しかし、同業務を円滑に進めるための基本的なシステムが整っていない。例えば、各機材の基本情報や定期整備の対象となる機材の使用期間、その期間中の故障回数、修理実施の有無などの履歴が残る機材管理台帳が整備されていないため、個々の機材の状態が正常なのか異常なのかといった判断、もしくは、いつまで使えるのかといった予測が困難である。これにより、機材の維持や更新が効率的かつ経済的に行われないだけでなく、同セクションの技師が実践を通じた技能向上を目指す上で、整備計画の立案能力や機材の不具合に関する分析力、対応力などが強化されにくい。

また、MCHC と CH の中央滅菌材料室に据え付けられた大型オートクレーブは、数年前から故障している。現在、手術に使用する大量の医療器具やリネン等は、小型の滅菌装置を使うほか、総合病院の中央滅菌室まで運搬して対応せざるをえず、移動中に起こりうる滅菌済資材への汚染と、その汚染資材からの感染リスクがある。また、滅菌作業に係るスタッフへの負担も大きく、滅菌プロセス全体に支障が生じている。

本プロジェクトにより整備される施設では、特にハイリスク妊産婦や新生児等を扱うため、院内感染防止対策は最重要課題であり、中央滅菌材料部門（以下「CSSD」）において、オートクレーブ等の関連機材の保守管理を含め、適切かつ効率的な運用・管理能力の向上が必要不可欠である。

以上の状況を鑑み、本ソフトコンポーネントでは、2 つの課題について、OJT による実技を中心とした技術研修を実施する計画を立案した。1 つ目は、新設棟に導入される医療機材の適切な維持管理を実施するために必要な体制を構築する。2 つ目は、今回の新設棟にも、CSSD が備わることから、当部門に設置されるオートクレーブ等の機材保守管理を含め、CSSD の適切な運用・管理体制を定着させる。具体的な内容は下記のとおりである。

(1) 医療機材維持管理能力の向上

新施設に設置された医療機材を適切に使用、維持していくため、現地の状況に即した医療機材維持管理システムを構築し、その運用指導を行う。具体的には、既存の機材管理台帳が単なる機材リストにしかすぎず、個々の機材に必要な情報、使用期間中の不具合及び修理等の履歴は記録が無いことから、これらの情報とその更新履歴等を付加し、検索・表示が出来るよう簡易なプログラムを作成、導入する。この管理台帳を基に、医療機材管理技術者（バイオメディカルエンジニア）が実施すべき保守点検業務を定期化するとともに、同点検内容も同台帳に記録し、管理できるようにする。また、同技術者は、このプロセスにおいて、今回新たに配備される医療機材の保守点検を含む取り扱い方法に習熟し、医療現場でそれを使用する医師・看護師・臨床検査技師などに対し、必要な説明を適切な方法で実施できるよう能力強化を図る。

また、調達された医療機材を適切に維持管理し、可能な限り長い間、良好に活用するためには、保守点検、修理等に係るコスト（現地代理店に対する技術サポート料やスペアパーツ、消耗品の購入など）のための予算確保も重要な課題であることから、上記点検・修理履歴には、これらへの支出金額も記録した修理レポートを作成し、病院事務管理の資材調達課に提出する流れを作る。これにより、資材調達課は上記レポートから機材維持管理に必要な年間予算を算出し、次年度の業務計画への反映が可能となる。

本ソフトコンポーネントの対象施設は、今般建設される新施設とするが、同施設での維持管理体制で初期の成果が出れば、PIMS の他の施設に普及拡大が可能であり、これを視野に入れた研修とする。

(2) CSSD の運用・管理能力の向上

既存の CH 及び MCHC の CSSD における滅菌装置及び滅菌器具の不適切な管理状況が確認されたため、滅菌作業に従事する医療スタッフの機材の運用・管理能力向上に必要な知識・技術の強化研修を行う。主要な強化項目は、① 新たに設置される滅菌装置や周辺機器及び軟水処理装置等の適切な取り扱いと日常点検、② BME を対象とした定期的な保守点検方法の習得、 ③ 清潔維持のための動線を考慮に入れた滅菌資材の適切かつ効率的な取り扱い等である。これらに関しても、PIMS の他施設の CSSD への普及・定着を将来的な目標とする。

2. ソフトコンポーネントの目標

ソフトコンポーネントの成果に加え、相手国実施機関による継続的な活動により、達成されるべき目標は以下のとおりである（3 年後を想定）。

（1） PIMS の全ての医療施設において、医療機材の維持管理能力が向上する。
（2） PIMS の全ての医療施設において、中央滅菌材料部門の運用・管理能力が向上する。

3. ソフトコンポーネントの成果

ソフトコンポーネント完了時に達成されるべき直接的成果は以下に示すとおり。

（1） 医療機材維持管理能力の向上

新施設において、医療機材保守管理部門の技術者に対する技術指導により以下の成果が達成される。

1) 既存の医療機材管理台帳が実用的なものに改定される。
2) 改定された台帳に、機材維持管理に必要な情報・データ（納入日、定期点検、故障診断・修理等の履歴、点検・修理の際に使用した交換部品、消耗品の詳細、支出金額の履歴等）が正確に記録されるようになる。
3) 今回新たに配備される医療機材の使用・保守管理方法を理解し、医師、看護師、検査技師等に適切に指導ができる。
4) 実際の作業方法、工程に即した医療機材維持管理運用マニュアルが作成される。
5) 医療機材管理台帳と医療機材維持管理運用マニュアルに基づき機材の定期点検や修理計画が立案されるようになる。
6) 上記点検計画に基づいた定期点検や修理が実施される。

（2） CSSD の運用・管理能力の向上

新施設の CSSD における、関連診療科のスタッフ及び医療機材維持管理部門の技術者に対する指導により、以下の成果が達成される。

1) CSSD において、滅菌資材の適切な運用管理体制が構築される。
2) CSSD の運用管理マニュアルが作成される。
3) CSSD 管理下の機材（オートクレーブ、超音波洗浄装置、滅菌シーラー等）の適切かつ効率的な運用及び保守管理が行われるようになる。

4. 成果達成度の確認方法

（1） 医療機材維持管理能力の向上

成果項目	確認方法	
	ソフコンによる指導後	3 年後
1) 既存の医療機材管理台帳が実用的なものに改定される。	改定版医療機材管理台帳がスタッフに周知されていることを確認する。	部門長は改定版台帳が必要に応じ改訂されていることを具体的な改訂点とともに評価者に報告する
2) 改定された台帳に基づき機材維持管理に必要な情報・データ（納入日、定期点検故障診断・修理等の履歴、交換部品、消耗品の履歴及びそれら部品、消耗品の支出金額等）が正確に記録される。	• 研修で台帳記入方法の演習およびテストを行いその理解度をチェックする。 • 同台帳に各機材の基本情報、初回の定期点検記録データ、支出金額等が正確に記載され、更新されていることを確認する。	部門長は、機材管理台帳の記載状況をモニタリングし、その結果を評価者に報告する。
3) 今回新たに配備される新型モデルの医療機材の使用･保守管理方法を理解し、医師、看護師､検査技師等に適切に指導ができる。	• 研修におけるオリエンテーション演習で、参加者による技術チェックを行う。	部門長は、機材管理台帳から、当該機材の使用・維持管理状況をモニタリングし、その結果を評価者に報告する。
4) 実際の作業方法､工程に即した医療機材維持管理運用マニュアルが作成される。	• 作成された医療機材維持管理運用管理マニュアルがスタッフに周知されていることを確認する。 • その内容が実際の作業方法、工程に即したものであることを確認する。	• 部門長は、必要に応じてマニュアル内容を現実に即したものに改訂されていることを具体的な改訂点とともに評価者に報告する。 • 評価者はマニュアルの改訂点がスタッフに周知されていることを確認する。
5) 医療機材管理台帳の正確な記録と医療機材維持管理運用マニュアルに基づき機材定期点検､修理計画及び機材維持管理予算計画などが立案される。	評価者は､医療機材管理台帳に、次回実施予定の定期点検・修理計画の内容が適切に記述されていることを確認する。 また、維持管理に必要な予算計画が記述され、事務部門に確実に伝達されたことを確認する。	部門長は､機材の定期点検･修理計画とその実施状況を評価者に報告する。
6) 上記点検計画に基づいた定期点検や修理が実施される。	部門長は初回実施済みの定期点検実績報告及び定期点検チェックシートの内容を確認し、評価者に報告する。	部門長は定期点検実績報告及び定期点検チェックシートの内容を確認し、評価者に報告する。

（2） 中央滅菌材料部門の運用・管理能力の向上

成果項目	確認方法	
	ソフコンによる指導後	3 年後
1) CSSD において、適切な滅菌資材の運用管理体制が構築される。	• CSSD の滅菌資材運用管理体制フローチャートの存在を確認する。 • 技術指導実施前と実施後に上記フローチャートの理解度を筆記試験で確認する。	• 部門長は、必要に応じてフローチャートをより現状に即したものに更新していることを具体的な改訂点とともに評価者に報告する。 • 評価者はフローチャートの改定点がスタッフに周知されていることを確認する。
2) 実際の作業方法、工程に即したCSSDの運用管理マニュアルが作成される。	• 作成された CSSD 運用管理マニュアルの存在を確認する。 • その内容に滅菌資材の運用管理体制が確実に記載されていることを確認する。 • スタッフにマニュアルの存在が周知されていることを確認する。	• 部門長は、必要に応じてマニュアル内容を現実に即したものに更新していることを具体的な改訂点とともに評価者に報告する。 • 評価者はマニュアルの改定点がスタッフに周知されていることを確認する。
3) CSSD 管理下の機材（オートクレーブ、超音波洗浄装置、滅菌シーラー等）の適切かつ効率的な運用及び保守管理が行われるようになる。	• 技術指導実施前と実施後に筆記テストを行い、左記機材の運用及び保守管理に必要な知識の理解度を確認する。 • 研修で左記機材の運用及び保守管理演習を行い、その技術レベルをチェックする。 • 部門長による、滅菌資材運用工程のモニタリング計画が立案されていることを確認する。	• 評価者は、医療機材管理台帳から、CSSD の滅菌関連機材の定期点検計画、点検実績及びその結果を確認する。 • 部門長は滅菌資材運用工程のモニタリング結果を評価者に報告する。

5. ソフトコンポーネントの活動（投入計画）

各成果達成に向けた活動（投入計画）は以下のとおりである。

(1) 研修実施に必要な要員

1) 運用マニュアル作成指導コンサルタント（日本人）　：1 名（格付 3 号）

本ソフトコンポーネントで向上をめざす「医療機材維持管理能力」と「CSSD の運用・管理能力」については、研修を通じた知識と技術の強化だけでなく、業務の質を一定以上のレベルで保持してゆくために業務マニュアルを整備する。現状に即し、使用者にとって理解しやすくまた、PIMS 全体で活用しやすい内容、構成にするため、開発途上国において、医療分野の業務マニュアルや現任教育用の教科書作成指導に加え、効果的な研修を実施するための教材開発の知見、経験を有する要員を配置する。

2) 医療機材維持管理指導コンサルタント（日本人）　：1 名（格付 3 号）

１つ目のテーマである「(1) 医療機材管理台帳の有効活用による医療機材維持管理能力の向上」を担当する。同要員には、国内外において医療機材の維持管理に係るシステム設計、運用・管理及び現場での保守点検業務の指導経験を有する臨床工学技士を配置する。

3) 中央滅菌材料部門の運用・管理指導コンサルタント（日本人）　：1 名（格付 4 号）

２つ目のテーマである「(2) 中央滅菌材料部門の運用・管理能力の向上」を担当する。同要員には、国内外の病院施設における中央滅菌材料部門の機能、役割を熟知し、その運用経験のみならず、機材の点検・修理に必要な知識・技術をも有し、指導経験のある医療の専門職者を配置する。

4) 研修計画／業務調整コンサルタント（日本人）　：1 名（格付 4 号）

本研修を短期間で効率的に実施するために、研修実施計画の策定、対象医療施設、関係機関との渉外、会場の手配等の計画／調整コンサルタントを配置する。当要員は CUDBAS 手法に精通しており、研修のファシリテーションも行う。

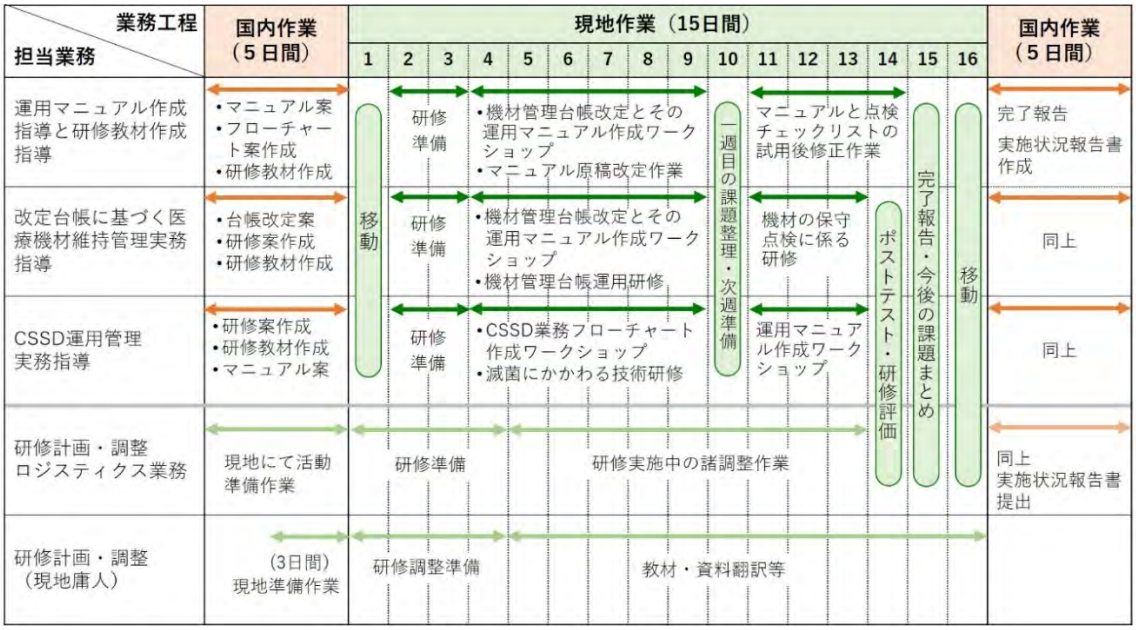
5) 研修計画／調整コンサルタント（現地傭人）　：1 名

上記研修計画・調整を担う日本人コンサルタントを補佐するために、現地事情に精通したパキスタン人を計画／調整コンサルタントを配置する。

(2) 活動計画

本ソフトコンポーネントの活動は、下記の工程で実施する方針である。

ソフトコンポ―ネント業務実施工程表



1) 国内事前準備

研修の具体的な計画を立案し、先方実施機関と協議の上、合意を得る。また、各技術研修で必要となる講義用教材、資料等の準備作業を行う。

2) 現地調整業務

本研修を効率的に進めるだけでなく、学習効果を持続させるために、先方の実施機関や関連機関と十分に内容を検討し、基本となる業務マニュアルはもとより、研修カリキュラムや教材作成は現地の業務担当者と共同作業で行い、PIMS の現状に、より即したものとすることが不可欠である。将来的に PIMS 全体でより多くの職員に活用されることを見据え、マニュアルや研修教材に関しては、一部、ウルドゥ語への翻訳が効果的であり、翻訳期間を考慮した業務計画を設定する必要がある。従って研修実施 7 日前に現地入りすることを計画する。

(3) 現地研修等

技術指導内容については下表のとおりとした。

1) 医療機材維持管理能力の向上

サブテーマ	① 医療機材管理台帳改定
成果	既存の医療機材管理台帳が実用的なものに改定される。
指導担当者	医療機材維持管理指導コンサルタント、運用マニュアル作成指導コンサルタント
指導手法	【ワークショップ】現行の医療機材管理台帳の改定版作成作業を、医療機材管理部門の責任者ほか代表者と行い、同作業を通じて下記項目の理解を促す
指導内容	• 医療機材維持管理のツールとしての台帳の考え方。そのメリットと注意点等 • 医療機材維持管理に必要な項目の明確化と台帳の構成 • 台帳の運用方法とその指導方法
対象者	医療機材管理部門の責任者、事務部門担当者
成果品	• 改定 医療機材管理台帳【第 1 版】

サブテーマ	② 医療機材管理台帳への正確な記録と情報の更新
成果	改定された台帳に、機材維持管理に必要な情報・データ（納入日、定期点検、故障診断・修理等の履歴、点検・修理の際に使用した交換部品、消耗品の詳細、支出金額の履歴等）が正確に記録されるようになる。
指導講師	医療機材維持管理指導コンサルタント、運用マニュアル作成指導コンサルタント
指導手法	【研修】プレテストによる基礎知識の確認、講義、デモンストレーション、演習、 実践トレーニング、ポストテストによる理解度の確認・評価
指導内容	• 医療機材維持管理台帳改定の目的と今後の活用（運用）方法 • 必要なデータの正確な記入方法
対象者	機材維持管理部門技術者、事務管理部門担当者
成果品	• 研修プログラム • 研修教材（プレゼンテーション教材、ワークブック、手元資料等） • プレテスト・ポストテストの結果 • 参加者アンケート集計結果

サブテーマ	③ 新型モデルの医療機材の使用・保守管理方法の理解及び他の医療従事者への指導技術
成果	今回新たに配備される新型モデルの医療機材の使用・保守管理方法を理解し、医師、看護師、検査技師等に適切に指導ができる。
指導講師	医療機材維持管理指導
指導手法	【研修】プレテストによる基礎知識の確認、講義、デモンストレーション、演習、 施設での実践トレーニング、ポストテストによる理解度の確認・評価
指導内容	• 新たに設置される機材の特徴、使用方法、点検・修理方法 • 医療機材管理台帳リストへの追加記入方法 • 医師・看護師・検査技師等へのオリエンテーション方法
対象者	機材維持管理者、機材使用者
成果品	• 研修プログラム • 研修教材（プレゼンテーション教材、手元資料等） • プレテスト・ポストテストの結果 • 参加者アンケート集計結果

サブテーマ	④ 医療機材管理台帳運用マニュアル作成
成果	実際の作業方法、工程に即した医療機材維持管理台帳運用マニュアルが作成される
指導講師	医療機材維持管理指導コンサルタント、運用マニュアル作成指導コンサルタント、研修計画／業務調整コンサルタント
指導手法	【ワークショップ】あらかじめ作成した医療機材管理台帳運用マニュアルの内容確認と改定作業を行う。同作業を通じて、参加者に、下記項目の理解を促す
指導内容	• CUDBAS 手法（A Method of Curriculum Development Based on Vocational Ability Structure ： 職業能力の構造に基づくカリキュラム開発手法）を応用した、業務マニュアル作成技術。医療機材管理台帳に基づく機材の維持管理業務にかかわる技術者の行動分析と業務の分類・整理法、行動基準の考え方。 • マニュアル試用版による実務作業の確認、内容の検証 • マニュアル原稿の補正 • 医療機材の定期点検計画・修理計画のフォーマット作成 • 定期保守点検チェックシート（フォーマット）作成
対象者	医療機材管理担当部門の代表者数名
成果品	医療機材維持管理台帳運用マニュアル【第１版】

サブテーマ	⑤ 医療機材の定期点検計画・修理計画及び維持管理予算計画立案
成果	医療機材管理台帳と医療機材維持管理運用マニュアルに基づき機材の定期点検や修理計画が立案されるようになる。
指導講師	医療機材維持管理指導、研修計画／業務調整コンサルタント
指導手法	【研修】プレテストによる基礎知識の確認、講義、デモンストレーション、演習、 実践トレーニング、ポストテストによる理解度の確認・評価
指導内容	• 医療機材管理台帳と医療機材維持管理運用マニュアルに基づく機材の定期点検の計画および修理計画の必要性 • 上記計画の立案方法 • 医療機材管理台帳への記述方法
対象者	機材維持管理者
成果品	• 研修プログラム • 研修教材（プレゼンテーション教材、手元資料等） • プレテスト・ポストテストの結果 • 医療機材の定期点検計画表 • 参加者アンケート集計結果

サブテーマ	⑥ 計画書に基づく定期点検と機材修理
成果	点検計画に基づく定期点検、修理計画に基づく修理が実施される。
指導講師	医療機材維持管理指導、研修計画／業務調整コンサルタント
指導手法	【研修】プレテストによる基礎知識の確認、講義、デモンストレーション、演習、 実践トレーニング、ポストテストによる理解度の確認・評価
指導内容	• 点検計画に基づく定期点検、修理計画に基づく修理の必要性 • 定期保守点検チェックシートの内容及び使用方法 • 主要な医療機材の点検方法 • 定期点検結果、修理状況、結果等に関する医療機材管理台帳への記述方法
対象者	機材維持管理者、維持管理部門技術者、機材使用者
成果品	• 研修プログラム • 研修教材（プレゼンテーション教材、手元資料等） • プレテスト・ポストテストの結果 • 定期保守点検チェックシート • 医療機材の定期点検実績表・修理記録 • 参加者アンケート集計結果

2) 中央滅菌材料部門の運用・管理能力の向上

サブテーマ	① CSSD における適切な滅菌資材の運用管理体制構築
成果	CSSD において、適切な滅菌資材の運用管理体制が構築される。
指導講師	CSSD 運用・管理指導コンサルタント、運用マニュアル作成指導コンサルタント、研修計画／業務調整コンサルタント
指導手法	【ワークショップ】CSSD 管理者、作業員で CSSD の滅菌資材運用管理体制フローチャートの作成作業を行う。あらかじめ作成したフローチャートの確認と修正作業を通じて CSSD の滅菌資材運用体制、スタッフの役割、業務内容を明確化する。
指導内容	• CUDBAS 手法を応用した業務フローチャート作成技術 • CSSD 運用にかかわる管理者およびスタッフの行動分析と業務の分類・整理 • 効率的な作業手順・動線の再確認 • 業務可視化の必要性とメリット • フローチャートの活用方法
対象者	CSSD 管理者・作業員、各診療科スタッフ、維持管理部門技士
成果品	CSSD の滅菌資材運用管理体制フローチャート

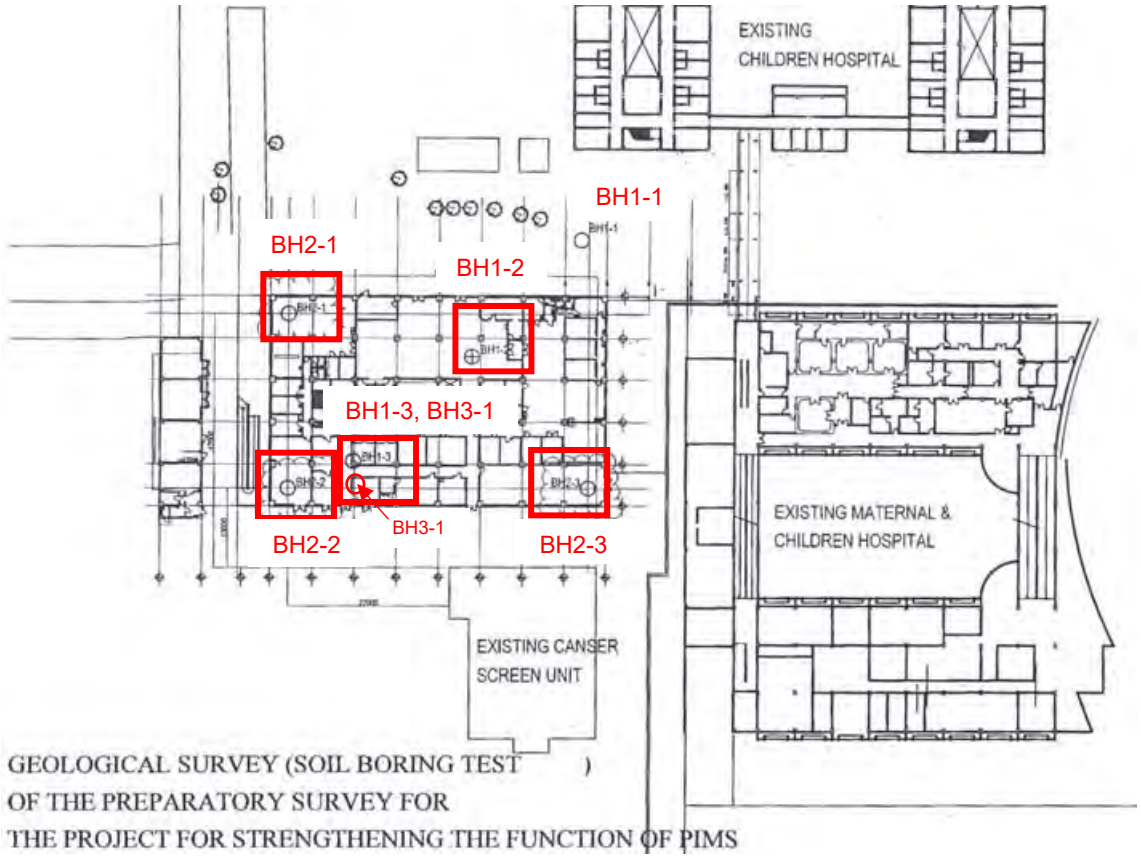
サブテーマ	② CSSD の運用管理マニュアル作成
成果	実際の作業方法、工程に即した CSSD の運用管理マニュアルが作成される
指導講師	CSSD 運用・管理指導コンサルタント、運用マニュアル作成指導コンサルタント、研修計画／業務調整コンサルタント
指導手法	【ワークショップ】あらかじめ作成した CSSD 運用マニュアルの内容確認作業を通じて下記項目の理解を促す。同様に日常点検用のチェックシートを作成する
指導内容	• CUDBAS 手法を応用した、CSSD 運用にかかわる管理者およびスタッフの行動分析と業務の分類・整理法およびマニュアルの構成内容決定方法 • マニュアル試用版による内容の検証方法 • マニュアル原稿の補正・校閲方法 • 業務やモニタリングにおけるマニュアルの活用方法 • CSSD 機材の定期点検計画/計画実績表フォーマット作成 • CSSD 機材の定期点検チェックシート（フォーマット）作成
対象者	CSSD スタッフ、各診療科スタッフ、維持管理部門技術者
成果品	中央滅菌材料部門の運用・管理マニュアル【第１版】 日常点検用チェックシート

6. 参考資料

6-1 地盤調査

地質調査結果概要

現地再委託で実施された地質調査では、標準貫入試験及びラボ試験を行った。下記に標準貫入試験の位置を示す。



【標準貫入試験の位置】

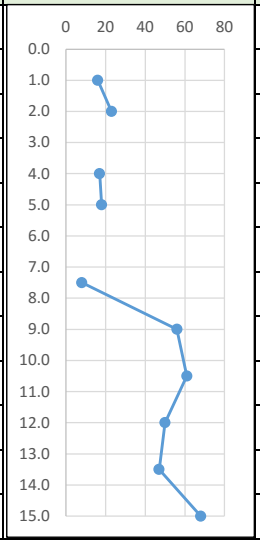
BH1-1

FINITE ENGINEERING

BORE HOLE LOG

Project: Strengthening the Function of PIMS, Islamabad	
Bore Hole No.: 01	Location: PIMS, Islamabad
Type of Boring: Rotary	Date Started: 25-05-2018
Termination Depth: 15 m	Date Completed: 27-05-2018
Ground Water Table: Not Encountered	Geotechnical Engineer: Kifayat Ullah

Depth(m)	Sample Description	Classification Symbol	Legend	Sample Type	Moisture	Penetration Values 15 cm	15 cm	15 cm	N-Values	N- Profile	Recovery Length (cm)	CR %	RQD %	Remarks
1.0	Very stiff, Silty Clay	CM		DS		6	8	8	16		35			
2.0	Very stiff, Silty Clay	CM		DS		6	9	14	23		38			
3.0	Silty Clay	CM		UDS							32			
4.0	Very stiff, Silty Clay	CM		DS		6	7	10	17		32			
5.0	Very stiff, Silty Clay	CM		DS		5	8	10	18		40			
6.0	Silty Clay	CM		UDS							40			
7.5	Firm to stiff, Silty Clay	CM		DS		5	4	4	8		20			
9.0	Very dense, Gravels with Sand	GW		DS*		15	27	29	56		-			
11	Very dense, Gravels with Sand	GW		DS*		21	34	27	61		-			
12.0	Dense, Gravel with Sand	GW		DS*		R	R	R	50		-			
14	Dense, Gravel with Sand	GW		DS		15	20	27	47		26			
15.0	Very dense, Gravels with little cobbles	GW		DS*		25	33	35	68		-			



Checked By: _____ Note: * CPT

BH1-1

University of Engineering & Technology, Lahore
Department of Civil Engineering
Geotechnical Engineering Laboratory

UU TRIAXIAL COMPRESSION TEST

Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

Client: Finite Engineering

BH/TP No. BH-1

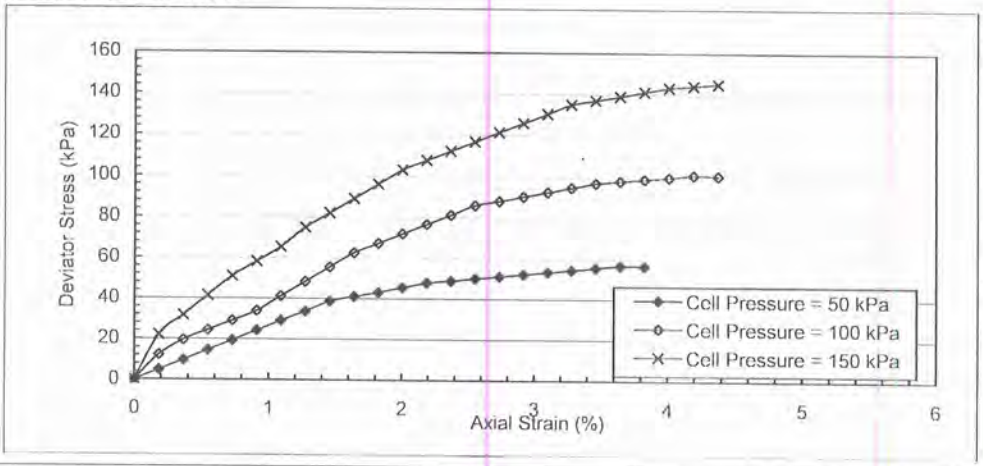
Sample No. 1 (UDS)

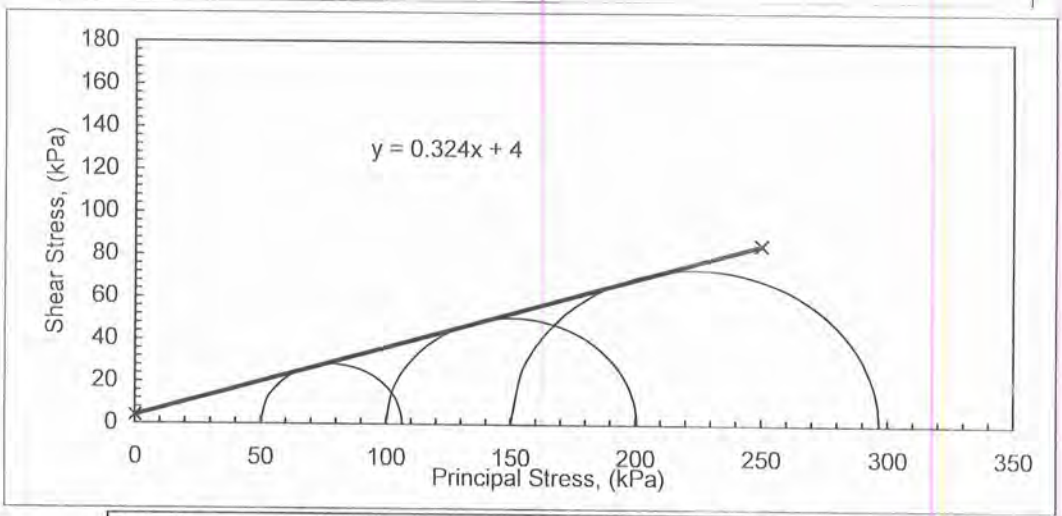
Depth (m): 3.0

Natural Dry Density = 17.2 kN/m^3

Natural Moisture Content = 21.4 %

Test Method: ASTM D2850





Cohesion	4.0 kPa	Angle of Internal Friction, ϕ =	18 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by: 2/7/18.

Director

BH1-1

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Department of Civil Engineering
Geotechnical Engineering Laboratory

UU TRIAXIAL COMPRESSION TEST

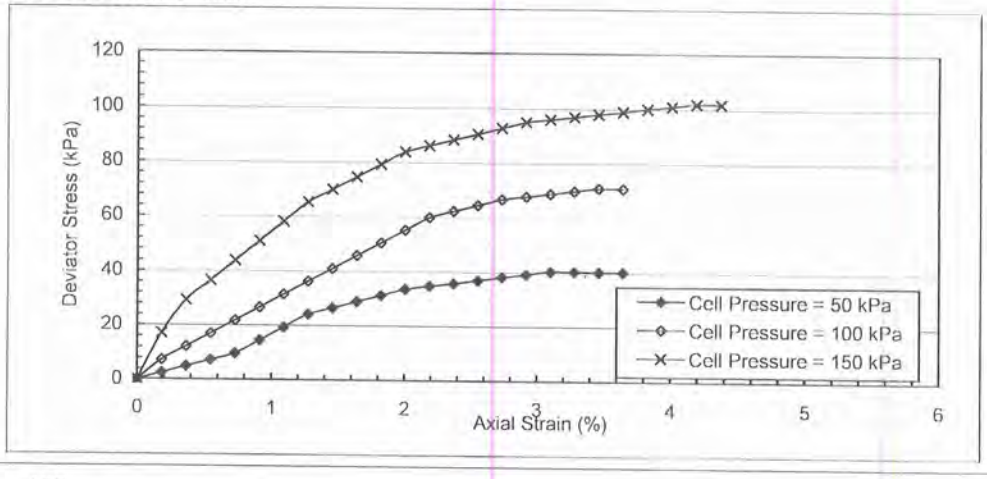
Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

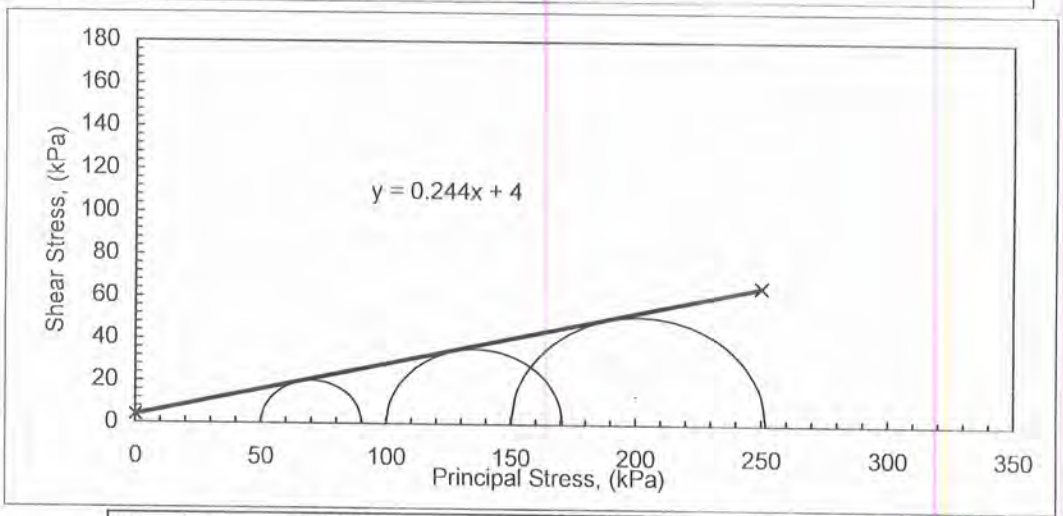
Client: Finite Engineering

BH/TP No. BH-1
Sample No. 2 (UDS)
Depth (m): 6.0

Natural Dry Density = 16.6 kN/m^3
Natural Moisture Content = 24.0 %

Test Method: ASTM D2850





Cohesion	4.0 kPa	Angle of Internal Friction, ϕ =	14 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by:

Director

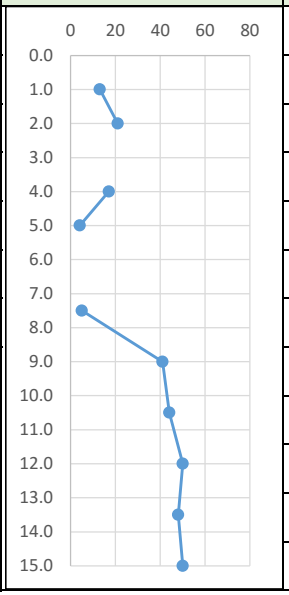
BH1-2

FINITE ENGINEERING

BORE HOLE LOG

Project: Strengthening the Function of PIMS, Islamabad	
Bore Hole No.: 02	Location: PIMS, Islamabad
Type of Boring: Rotary	Date Started: 28-05-2018
Termination Depth: 15 m	Date Completed: 29-05-2018
Ground Water Table: Not Encountered	Geotechnical Engineer: Kifayat Ullah

Depth(m)	Sample Description	Classification Symbol	Legend	Sample Type	Moisture	Penetration Values 15 cm	15 cm	15 cm	N-Values	N- Profile	Recovery Length (cm)	CR %	RQD %	Remarks
1.0	Stiff, Silty Clay	CM		DS		4	5	8	13		31			
2.0	Very stiff, Silty Clay	CM		DS		5	10	11	21		34			
3.0	Silty Clay	CM		UDS							26			
4.0	Very stiff, Silty Clay	CM		DS		5	8	9	17		30			
5.0	Soft, Silty Clay	CM		DS		1	2	2	4		37			
6.0	Silty Clay	CM		UDS							49			
7.5	Firm, Silty Clay	CM		DS		2	2	3	5		38			
9.0	Dense, Gravels with Sand	GW		DS*		12	20	21	41		-			
10.5	Dense, Gravels with Sand	GW		DS*		18	21	23	44		-			
12.0	Dense, Gravels with Sand	GW		DS		22	22	28	50		36			
13.5	Dense, Gravels with Sand	GW		DS*		19	28	20	48		-			
15.00	Dense, Gravels with little cobbles	GW		DS*		16	24	26	50		-			



Checked By: _____ Note: * CPT

BH1-2

University of Engineering & Technology, Lahore
Department of Civil Engineering
Geotechnical Engineering Laboratory

UU TRIAXIAL COMPRESSION TEST

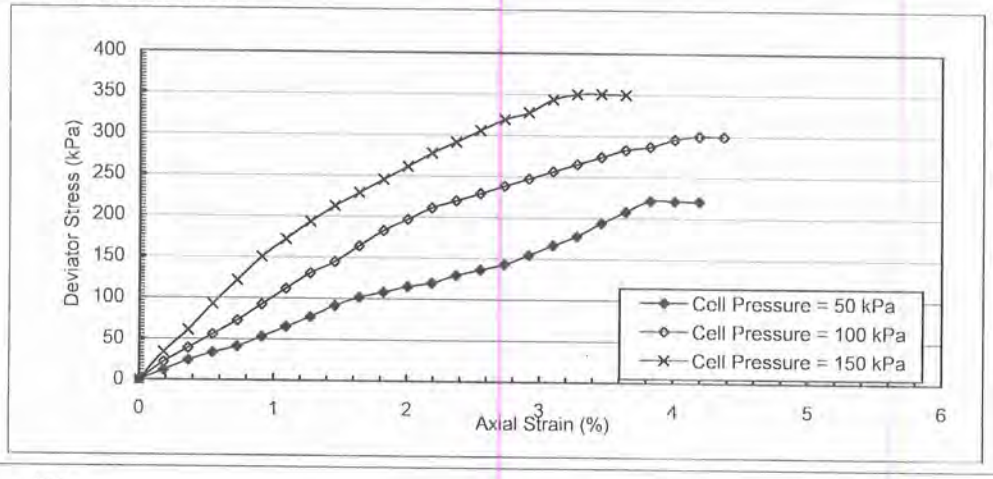
Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

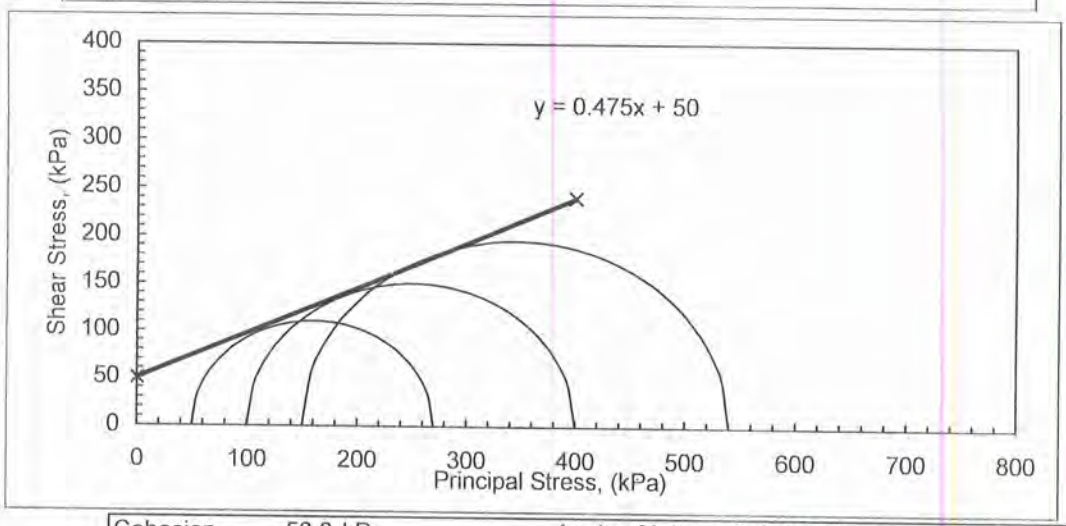
Client: Finite Engineering

BH/TP No. BH-2
Sample No. 3 (UDS)
Depth (m): 3.0

Natural Dry Density = 17.6 kN/m^3
Natural Moisture Content = 14.6 %

Test Method: ASTM D2850





Cohesion	50.0 kPa	Angle of Internal Friction, ϕ =	25 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by: 2/7/18

BH1-2

University of Engineering & Technology, Lahore
Department of Civil Engineering
Geotechnical Engineering Laboratory

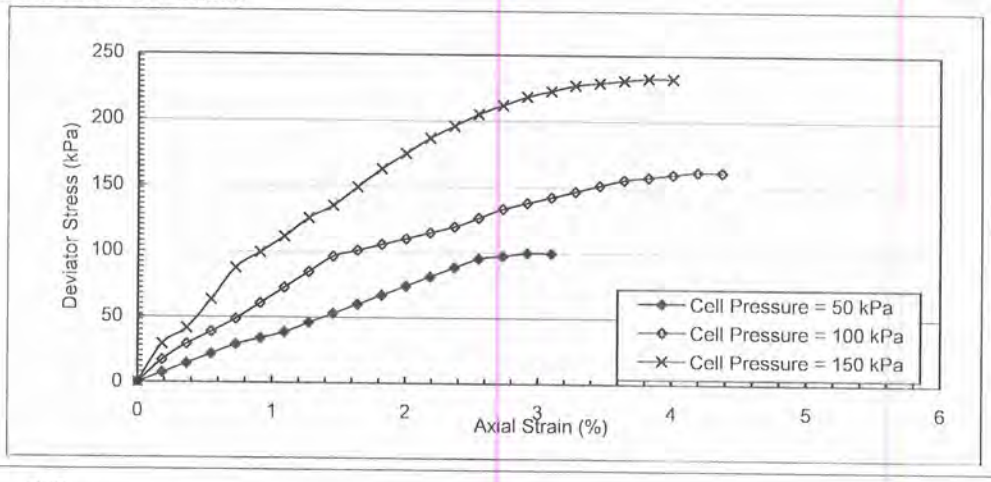
UU TRIAXIAL COMPRESSION TEST

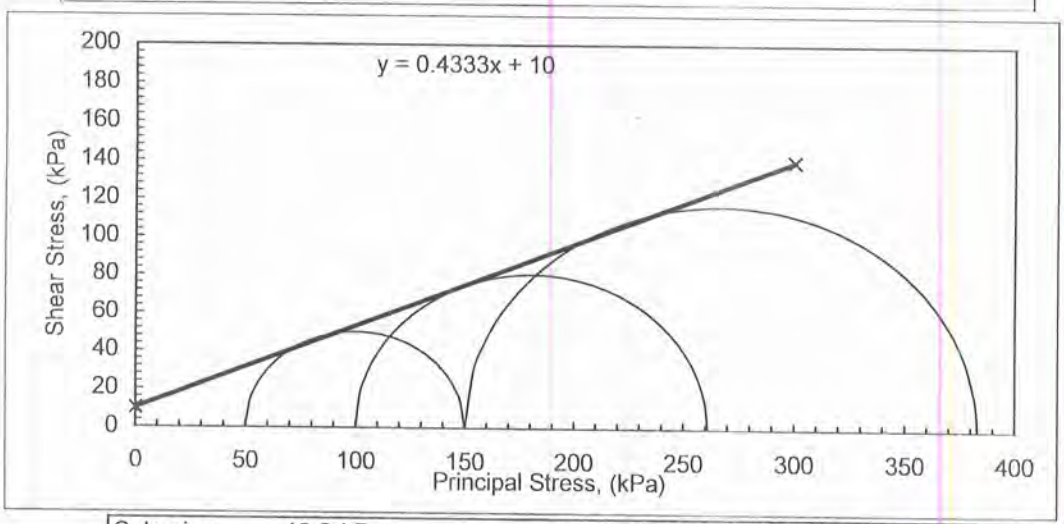
Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

Client: Finite Engineering

BH/TP No.	BH-2		
Sample No.	4 (UDS)	**Natural Dry Density =**	16.9 kN/m^3
Depth (m):	6.0	**Natural Moisture Content =**	21.7 %

Test Method: ASTM D2850





Cohesion	10.0 kPa	Angle of Internal Friction, ϕ =	23 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by:

Director

2-7-18

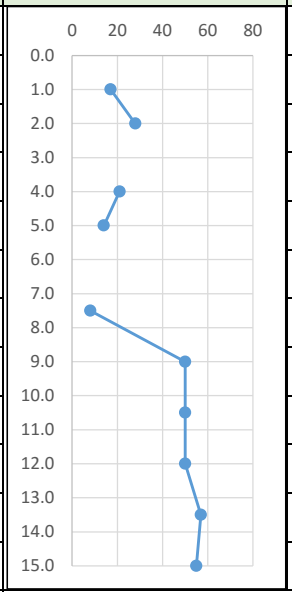
BH1-3

FINITE ENGINEERING

BORE HOLE LOG

Project: Strengthening the Function of PIMS, Islamabad	
Bore Hole No.: 03	Location: PIMS, Islamabad
Type of Boring: Rotary	Date Started: 31-05-2018
Termination Depth: 15 m	Date Completed: 2-06-2018
Ground Water Table: Not Encountered	Geotechnical Engineer: Kifayat Ullah

Depth(m)	Sample Description	Classification Symbol	Legend	Sample Type	Moisture	Penetration Values 15 cm	15 cm	15 cm	N-Values	N- Profile	Recovery Length (cm)	CR %	RQD %	Remarks
1.0	Very stiff, Silty Clay	CM		DS		2	6	11	17		30			
2.0	Very stiff, Silty Clay	CM		DS		10	12	16	28		34			
3.0	Silty Clay	CM		UDS							55			
4.0	Very stiff, Silty Clay	CM		DS		8	9	12	21		40			
5.0	Stiff, Silty Clay	CM		DS		4	6	8	14		35			
6.0	Silty Clay	CM		UDS							45			
7.5	Firm to stiff, Silty Clay	CM		DS		3	3	5	8		37			
9.0	Dense, Gravels with Sand	GW		DS		42	R	R	50		-			
10.5	Dense, Gravels with Sand	GW		DS		7	R	R	50		-			
12.0	Dense, Gravels with Sand	GW		DS		10	R	R	50		-			
13.5	Very dense, Gravels with Sand	GW		DS*		15	28	29	57		26			
15.00	Very dense, Gravels with little cobbles	GW		DS*		14	27	28	55		-			



Checked By: _____ Note: * CPT

BH1-3

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Department of Civil Engineering
Geotechnical Engineering Laboratory

UU TRIAXIAL COMPRESSION TEST

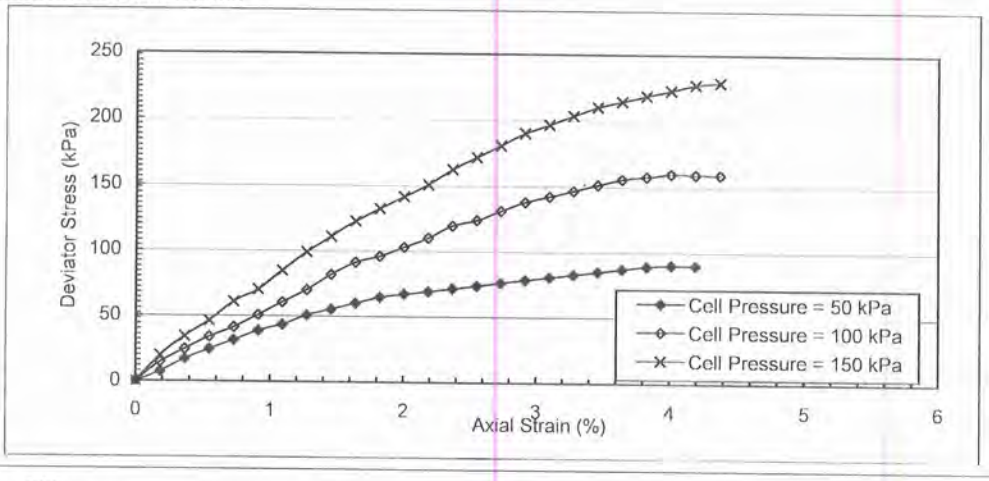
Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

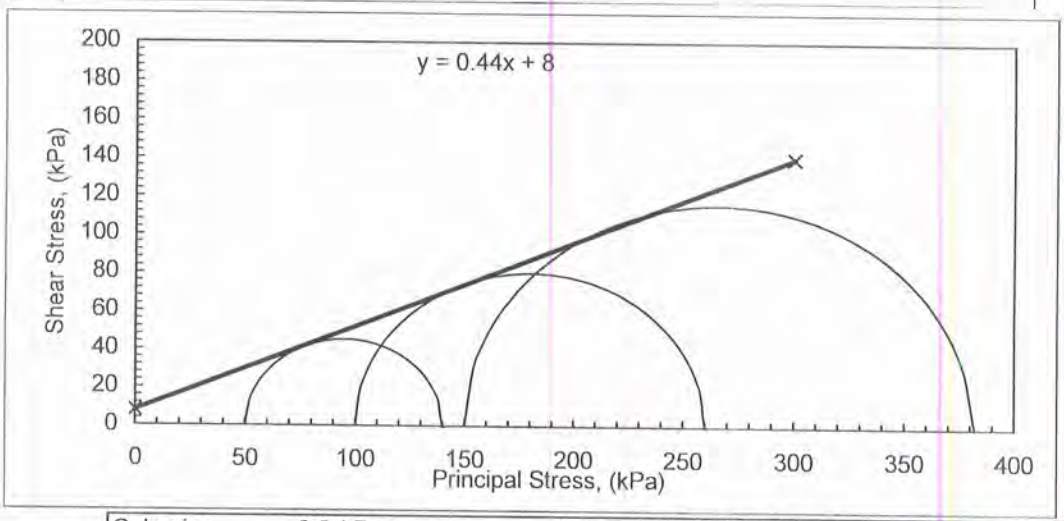
Client: Finite Engineering

BH/TP No. BH-3
Sample No. 5 (UDS)
Depth (m): 3.0

Natural Dry Density = 16.4 kN/m^3
Natural Moisture Content = 25.2 %

Test Method: ASTM D2850





Cohesion	8.0 kPa	Angle of Internal Friction, ϕ =	24 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by: 2.7.18

BH1-3

University of Engineering & Technology, Lahore
Department of Civil Engineering
Geotechnical Engineering Laboratory

UU TRIAXIAL COMPRESSION TEST

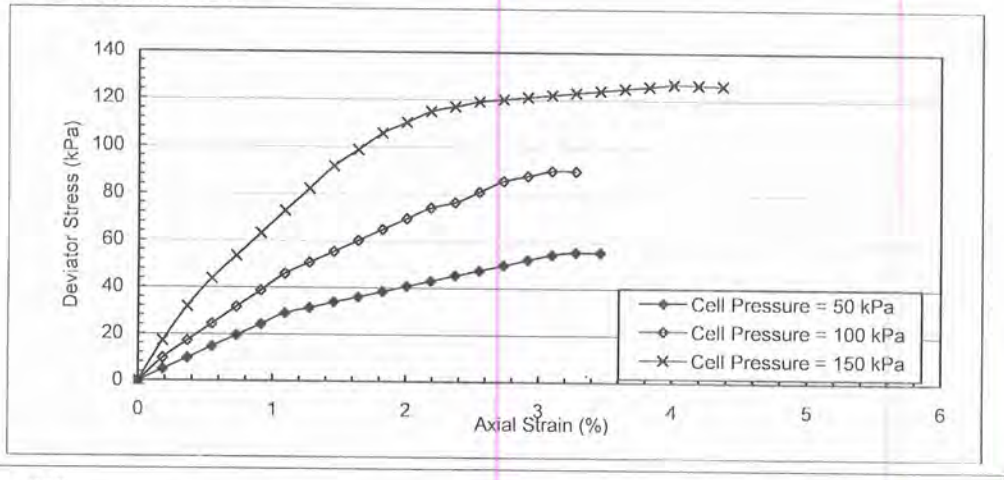
Project: Preparatory Survey on the Project of Strengthening the Function of Pakistan Institute of Medical Sciences **Dated:** 7/6/2018

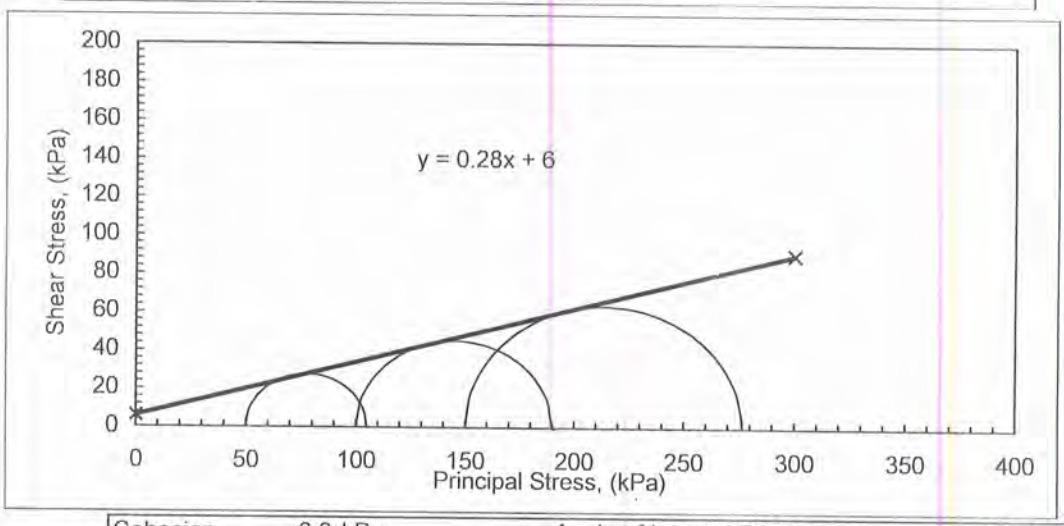
Client: Finite Engineering

BH/TP No. BH-3
Sample No. 6 (UDS)
Depth (m): 6.0

Natural Dry Density = 15.8 kN/m^3
Natural Moisture Content = 27.8 %

Test Method: ASTM D2850





Cohesion	6.0 kPa	Angle of Internal Friction, ϕ =	16 degree

Note: Test was conducted on sample at natural moisture content and dry density as mentioned above

Prepared by:

Checked by: 27.7.18

Table-1: Summary for laboratory test results of borehole samples

Borehole No.	Depth (m)	Sample No.	Grain Size Analysis			Atterberg's Limits			NMC (%)	Dry Density (kN/m^3)	Bulk Density (kN/m^3)	UCS (kPa)	Direct Shear Test		Triaxial Compression Strength Test		Unified Classification (ASTM D-2487)
			Gravel (%)	Sand (%)	Silt/ Clay (%)	L.L. (%)	P.L. (%)	P.I. (%)					Phi	Cohesion (kN/m^2)	Phi	Cohesion (kN/m^2)	
BH 2-1	1	SPT-1	1	5	84	27.4	21.5	6	-	-	-	-	-	-	-	-	CL-ML
	3	SPT-3	1	1	98	25.0	18.6	6	-	-	-	-	-	-	-	-	CL-ML
	3.9	UDS-1	-	-	-	-	-	-	25.14	15.59	19.52	-	-	-	18.54°	36.28	-
	4.5	SPT-4	1	2	97	24.7	19.5	5	-	-	-	-	-	-	-	-	CL-ML
	6	SPT-6	1	2	97	24.3	19.3	5	-	-	-	-	-	-	-	-	CL-ML
	6.9	UDS-2	-	-	-	-	-	-	14.60	-	19.22	206.77	-	-	-	-	-
	7.5	SPT-7	1	4	96	25.2	19.0	6	-	-	-	-	-	-	-	-	CL-ML
	9.9	UDS-3	-	-	-	-	-	-	13.90	-	18.22	-	8.5°	64.16	-	-	-
	10.5	DS-1	47	3	50	20.9	16.9	4	-	-	-	-	-	-	-	-	CL-ML
BH 2-2	1	SPT-1	4	6	90	24.5	19.6	5	-	-	-	-	-	-	-	-	CL-ML
	3	SPT-3	3	5	92	25.5	19.7	6	-	-	-	-	-	-	-	-	CL-ML
	3.9	UDS-1	-	-	-	-	-	-	13.20	-	17.75	-	11.6°	63.20	-	-	-
	4.5	SPT-4	0	6	94	21.5	17.6	4	-	-	-	-	-	-	-	-	CL-ML
	6	SPT-6	0	3	97	24.5	20.9	4	-	-	-	-	-	-	-	-	CL-ML
	6.9	UDS-2	-	-	-	-	-	-	14.50	-	18.64	197.54	-	-	-	-	-
	7.5	SPT-7	1	4	96	23.0	18.7	4	-	-	-	-	-	-	-	-	CL-ML
	12	DS-4	45	5	50	23.2	19.1	4	-	-	-	-	-	-	-	-	CL-ML

Borehole No.	Depth (m)	Sample No.	Grain Size Analysis			Atterberg's Limits			NMC (%)	Dry Density (kN/m^3)	Bulk Density (kN/m^3)	UCS (kPa)	Direct Shear Test		Triaxial Compression Strength Test		Unified Classification (ASTM D-2487)
			Gravel (%)	Sand (%)	Silt/ Clay (%)	L.L. (%)	P.L. (%)	P.I. (%)					Phi	Cohesion (kN/m^2)	Phi	Cohesion (kN/m^2)	
BH 2-3	1	SPT-1	2	4	94	24.0	19.9	4	-	-	-	-	-	-	-	-	CL-ML
	3	SPT-3	1	3	96	27.3	21.4	6	-	-	-	-	-	-	-	-	CL-ML
	3.9	UDS-1	-	-	-	-	-	-	23.83	15.40	19.02	-	-	-	17.28°	54.42	-
	4.5	SPT-4	0	2	98	22.3	17.0	5	-	-	-	-	-	-	-	-	CL-ML
	6	SPT-6	0	3	97	24.1	17.6	6	-	-	-	-	-	-	-	-	CL-ML
	6.9	UDS-2	-	-	-	-	-	-	15.80	-	19.32	210.46	-	-	-	-	-
	7.5	SPT-7	2	2	96	24.1	19.2	5	-	-	-	-	-	-	-	-	CL-ML
	9.9	UDS-3	-	-	-	-	-	-	14.20	-	18.14	-	11.3°	66.55	-	-	-
	13.5	DS-4	48	1	51	24.0	20.0	4	-	-	-	-	-	-	-	-	CL-ML

BH2-1

GEOENGINEERS

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Sub-surface Exploration Bore Hole Logs

Project: Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.

Location: PIMS, Islamabad

Borehole No.	2-1	Date Started:	26-09-2018	Sheet 1 of 2	
Ref. Elevation:		Date Completed:	27-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
- - - - --1	Borehole diameter is 6"		**FILL MATERIAL: (0 ~ 1 m)** Greyish brown, firm, silty Clay with sand, gravel of sedimentary origin and pieces of bricks.	SPT-1	8	9	11	20	11.25	Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
- - - - --2		– × – × –	**Silty CLAY: (1 ~ 10 m)** Brown, stiff to very stiff, low to medium plastic silty CLAY with traces of pebbles and some gravel of sedimentary origin.	SPT-2	8	10	11	21	11.81	
- - - - --3		– × – × –	Stiff soil was observed at 3 m depth.	SPT-3	6	9	11	20	12.75	
- - - - --4		– × – × –	Undisturbed sample was collected from 3.9 m depth.	UDS-1						
- -4.5 - --5		– × – × –	Stiff soil was observed at 4.5 m depth.	SPT-4	8	10	12	22	14.03	
- - - - --6		– × – × –	Stiff soil was observed at 5.20 m depth.	SPT-5	8	11	12	23	14.66	
- - - - --7		– × – × –	Very stiff soil was observed at 6 m depth.	SPT-6	7	12	12	24	17.10	
- -7.5 - --8		– × – × –	Undisturbed sample was collected from 6.9 m depth.	UDS-2						
- - - - --9		– × – × –	Very stiff soil was observed at 7.5 m depth.	SPT-7	6	11	14	25	17.81	
- - - - --10		– × – × –	Very stiff soil was observed at 9 m depth. Undisturbed sample was collected from 9.9 m depth.	SPT-8 UDS-3	8	12	13	25	17.81	

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Sub-surface Exploration Bore Hole Logs

Project:	Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.	**Location:**	PIMS, Islamabad

Borehole No.	2-1	Date Started:	26-09-2018	Sheet 2 of 2	
Ref. Elevation:		Date Completed:	27-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
- -10.5 - --11 - - - - --12 - - - - --13 - -13.5 - --14 - - - - --15	Borehole diameter is 6"	– ĝ × ĝ –	**Gravelly Silty CLAY with some Boulders: (10 ~ 15 m)** Brown, stiff to very stiff, low to medium plastic silty CLAY with sub angular to sub-rounded gravel, cobbles and some boulders of sedimentary origin. SPT value was observed as refusal at 10.5 m and 12 m depth due to presence of gravel. Disturbed sample was collected from 12.9 m depth. UDS tube was not driven due to presence of gravel. SPT value was observed as refusal at 13.5 m and 15.0 m depth due to presence of gravel.	SPT-9/DS-1 SPT-10/DS-2 DS-3 SPT-11/DS-4 SPT-12/DS-5	48 60/3" 60/2" 60/3"	60/3" - - -	- - - -	R R R R		Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
- - - - --16 - - - - --17 - - - - --18 - - - - --19 - - - - --20			**End of the Borehole**							

BH2-2

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Sub-surface Exploration Bore Hole Logs

Project: Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.

Location: PIMS, Islamabad

Borehole No.	2-2	Date Started:	28-09-2018	Sheet 1 of 2	
Ref. Elevation:		Date Completed:	29-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
-	Borehole diameter is 6"		**Fill material 0 to 0.2m**: silty clay with pieces of bricks and plastic bags etc.							Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
-		– × – × –	**Silty CLAY: (0.2 ~ 9 m)**							
-		– × – × –	Brown, stiff to very stiff, low to medium plastic							
--1		– × – × –	silty CLAY with traces of pebbles and some	SPT-1	7	8	10	18	10.13	
-		– × – × –	gravel of sedimentary origin.							
-		– × – × –								
-		– × – × –								
-		– × – × –								
--2		– × – × –	Stiff soil was observed at 2 m depth.	SPT-2	8	9	10	19	10.69	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Stiff soil was observed at 3 m depth.							
--3		– × – × –		SPT-3	7	10	11	21	13.39	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Undisturbed sample was collected from 3.9 m	UDS-1						
--4		– × – × –	depth.							
-		– × – × –								
-4.5		– × – × –	Stiff soil was observed at 4.5 m depth.	SPT-4	8	10	12	22	14.03	
-		– × – × –								
--5		– × – × –								
-		– × – × –	Very stiff soil was observed at 5.20 m depth.	SPT-5	5	11	14	25	15.94	
-		– × – × –								
-		– × – × –								
-		– × – × –								
--6		– × – × –	Very stiff soil was observed at 6 m depth.	SPT-6	7	10	12	22	15.68	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Undisturbed sample was collected from 6.9 m	UDS-2						
--7		– × – × –	depth.							
-		– × – × –								
-7.5		– × – × –	Very stiff soil was observed at 7.5 m depth.	SPT-7	6	13	10	23	16.39	
-		– × – × –								
--8		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--9		– ĝ × ĝ –	**Gravelly Silty CLAY with some Boulders:**	SPT-8/DS-1	38	60/4"	-	R		
-		– ĝ × ĝ –	**(9 ~ 10 m)**							
-		– ĝ × ĝ –	Brown, stiff to very stiff, low to medium plastic							
-		– ĝ × ĝ –	silty CLAY with sub angular to sub rounded							
-		– ĝ × ĝ –	gravel, cobbles and some boulders of sedimentary	DS-2						
--10		– ĝ × ĝ –	origin.							

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GEOENGINEERS

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Sub-surface Exploration Bore Hole Logs

Project:	Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.	**Location:**	PIMS, Islamabad

Borehole No.	2-2	Date Started:	26-09-2018	Sheet 2 of 2	
Ref. Elevation:		Date Completed:	27-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
-	Borehole diameter is 6"	– ĝ × ĝ –	**Gravelly Silty CLAY with some Boulders: (10 ~ 15 m)**							Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
-10.5		– ĝ × ĝ –	Brown, stiff to very stiff, low to medium plastic silty CLAY with sub angular to sub-rounded gravel, cobbles and some boulders of sedimentary origin.	SPT-9/DS-3	51	60/3"	-	R		
-		– ĝ × ĝ –								
--11		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	SPT value was observed as refusal at 10.5 m and 12 m depth due to presence of gravel.							
-		– ĝ × ĝ –								
--12		– ĝ × ĝ –		SPT-10/DS-4	60/3"	-	-	R		
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	Disturbed sample was collected from 12.9 m depth. UDS tube was not driven due to presence of gravel.	DS-5						
-		– ĝ × ĝ –								
--13		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-13.5		– ĝ × ĝ –		SPT-11/DS-6	60/3"	-	-	R		
-		– ĝ × ĝ –								
--14		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	SPT value was observed as refusal at 13.5 m and 15.0 m depth due to presence of gravel.							
--15		– ĝ × ĝ –		SPT-12/DS-7	60/2:	-	-	R		
-			**End of the Borehole**							
-										
-										
--16										
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--17										
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-										
-										
--20										

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BH2-3

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Sub-surface Exploration Bore Hole Logs

Project: Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.

Location: PIMS, Islamabad

Borehole No.	2-3	Date Started:	29-09-2018	Sheet 1 of 2	
Ref. Elevation:		Date Completed:	30-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
-	Borehole diameter is 6"		**Fill material 0 to 0.2m**: silty clay with pieces of bricks and plastic bags etc.							Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
-		– × – × –	**Silty CLAY: (0.2 ~ 10.0 m)**							
-		– × – × –	Brown, stiff to very stiff, low to medium plastic							
--1		– × – × –	silty CLAY with traces of pebbles and some	SPT-1	7	8	11	19	10.69	
-		– × – × –	gravel of sedimentary origin.							
-		– × – × –								
-		– × – × –								
-		– × – × –								
--2		– × – × –	Stiff soil was observed at 2 m depth.	SPT-2	8	10	11	21	11.81	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--3		– × – × –	Very stiff soil was observed at 3 m depth.	SPT-3	6	9	13	22	14.03	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Undisturbed sample was collected from 3.9 m	UDS-1						
--4		– × – × –	depth.							
-		– × – × –								
-4.5		– × – × –	Very stiff soil was observed at 4.5 m depth.	SPT-4	6	11	12	23	14.66	
-		– × – × –								
--5		– × – × –								
-		– × – × –	Very stiff soil was observed at 5.20 m depth.	SPT-5	8	10	14	24	15.30	
-		– × – × –								
-		– × – × –								
-		– × – × –								
--6		– × – × –	Very stiff soil was observed at 6 m depth.	SPT-6	9	11	14	25	17.81	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Undisturbed sample was collected from 6.9 m	UDS-2						
--7		– × – × –	depth.							
-		– × – × –								
-7.5		– × – × –	Very stiff soil was observed at 7.5 m depth.	SPT-7	11	12	14	26	18.53	
-		– × – × –								
--8		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--9		– × – × –	Very stiff soil was observed at 9 m depth.	SPT-8	10	12	15	27	19.24	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –	Undisturbed sample was collected from 9.9 m	UDS-3						
--10		– × – × –	depth.							

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Sub-surface Exploration Bore Hole Logs

Project:	Geological Survey (Soil Boring Test No. 2) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.	**Location:**	PIMS, Islamabad

Borehole No.	2-3	Date Started:	29-09-2018	Sheet 2 of 2	
Ref. Elevation:		Date Completed:	30-09-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Site Engineer:	Sarmad Khan	Site Inspector :	Ali Qureshi

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
-	Borehole diameter is 6"	– ĝ × ĝ –	**Gravelly Silty CLAY with some Boulders: (10 ~ 15 m)**							Percussion method was used for drilling up to the proposed depth of 15 m. Soil was classified as CL-ML as per (ASTM D-4318) Unified soil classification (ASTM D-2487) SPT was performed in soil according to (ASTM D-1586)
-10.5		– ĝ × ĝ –	Brown, stiff to very stiff, low to medium plastic silty CLAY with sub angular to sub-rounded gravel, cobbles and some boulders of sedimentary origin.	SPT-9/DS-1	46	60/4"	-	R		
-		– ĝ × ĝ –								
--11		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	SPT value was observed as refusal at 10.5 m and 12 m depth due to presence of gravel.							
-		– ĝ × ĝ –								
--12		– ĝ × ĝ –		SP-10/DS-2	53	60/3"	-	R		
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	Disturbed sample was collected from 12.9 m depth. UDS tube was not driven due to presence of gravel.	DS-3						
-		– ĝ × ĝ –								
--13		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-13.5		– ĝ × ĝ –		SPT-11/DS-4	60/3"	-	-	R		
-		– ĝ × ĝ –								
--14		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –								
-		– ĝ × ĝ –	SPT value was observed as refusal at 13.5 m and 15.0 m depth due to presence of gravel.							
--15		– ĝ × ĝ –		SPT-12/DS-5	60/3"	-	-	R		
-			**End of the Borehole**							
-										
-										
--16										
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Table-1: Summary for laboratory test results of borehole samples

Borehole No.	Depth (m)	Sample No.	Grain Size Analysis			Atterberg's Limits			NMC (%)	Dry Density (kN/m^3)	Bulk Density (kN/m^3)	Triaxial Compression Strength Test		Unified Classification (ASTM D-2487)
			Gravel (%)	Sand (%)	Silt/ Clay (%)	L.L. (%)	P.L. (%)	P.I. (%)				Angle of Internal Friction (Phi)	Cohesion (kN/m^2)	
BH 3-1	2	SPT-2	0	2	98	24.5	18.3	6	-	-	-	-	-	CL-ML
	3	UDS-1	-	-	-	-	-	-	26.17	15.10	19.02	8°	39	-
	6	UDS-2	-	-	-	-	-	-	30.34	14.71	19.12	13°	49	-
	7.5	SPT-5	3	9	88	27.5	21.8	6	-	-	-	-	-	CL-ML
	11	SPT-7	31	16	52	23.4	19.6	4	-	-	-	-	-	CL-ML

BH3-1

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Sub-surface Exploration Bore Hole Log

Project:	Confirmatory Borehole for Geological Survey (Soil Boring Test No. 3) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.	**Location:**	PIMS, Islamabad

Borehole No.	3-1	Date Started:	12-12-2018	Sheet 2 of 2	
Ref. Elevation:		Date Completed:	14-12-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Geologist:	Mohsin Alam	Site Inspector :	Sarmad Khan

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
-	Borehole diameter is 6"		**Fill material 0 to 0.2m**: silty clay with pieces of bricks and plastic bags etc.							Percussion method was used for drilling up to the proposed depth of 15 m. SPT was performed in soil according to (ASTM D-1586)
-		– × – × –	**Silty CLAY: (0.2 ~ 10 m)**							
-		– × – × –	Brown, stiff to very stiff, low to medium plastic							
--1		– × – × –	silty CLAY with traces of pebbles and some	SPT-1	6	8	9	17	9.56	
-		– × – × –	gravel of sedimentary origin.							
-		– × – × –								
-		– × – × –								
-		– × – × –								
--2		– × – × –	Stiff soil was observed at 1 m and 2 m depth.	SPT-2	7	9	10	19	10.69	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--3		– × – × –	Undisturbed sample was collected from 3 m	UDS-1						
-		– × – × –	depth.							
-		– × – × –								
-		– × – × –								
-		– × – × –								
--4		– × – × –	Stiff soil was observed at 4 m depth.	SPT-3	5	10	12	22	14.03	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--5		– × – × –	Very stiff soil was observed at 5 m depth.	SPT-4	7	11	13	24	15.30	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--6		– × – × –	Undisturbed sample was collected from 6 m	UDS-2						
-		– × – × –	depth.							
-		– × – × –								
-		– × – × –								
-		– × – × –								
--7		– × – × –								
-		– × – × –								
-7.5		– × – × –	Stiff soil was observed at 7.5 m depth.	SPT-5	4	8	12	20	14.25	
-		– × – × –								
--8		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--9		– × – × –	Very stiff soil was observed at 9 m depth.	SPT-6	7	11	14	25	17.81	
-		– × – × –								
-		– × – × –								
-		– × – × –								
-		– × – × –								
--10		– × – × –								

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GEOENGINEERS

Geotechnical Engineers, Pilling, Tube well Construction, Drilling, Grouting, Geological Mapping, Topographic Survey, Feasibility Study of irrigation & Hydel Projects.

Sub-surface Exploration Bore Hole Log

Project:	Confirmatory Borehole for Geological Survey (Soil Boring Test No. 3) of the Preparatory Survey for the Project of Strengthening the Function of Pakistan Institute of Medical Sciences, Islamabad.	**Location:**	PIMS, Islamabad

Borehole No.	3-1	Date Started:	12-12-2018	Sheet 2 of 2	
Ref. Elevation:		Date Completed:	14-12-2018	Ground Water Table/ Seepage Water: Not encountered	
Sampler weight: 63.5 kg		Type of boring:	Percussion	Weather:	Sunny
Driller:	Raja Waqas	Drop Height:	30"	Coordinates :	
Final Depth: (m)	15	Geologist:	Mohsin Alam	Site Inspector :	Sarmad Khan

Depth (m)	Dia of Hole	Legend	Description of Material	Sample Type & no.	SPT (inches) 6	6	6	N Value	Corrected N Value (N_{60})	Remarks
- - - - --11 - - - - --12 - - - - --13 - - - - --14 - - - - --15	Borehole diameter is 6"	– ĝ × ĝ –	**Gravelly Silty CLAY with some Boulders: (10 ~ 15 m)** Brown, stiff to very stiff, low to medium plastic silty CLAY with sub angular to sub-rounded gravel, cobbles and some boulders of sedimentary origin. SPT value was observed as refusal at 11 m depth due to presence of gravel. Disturbed sample was collected from 13 m depth. SPT not performed due to presence of gravel. SPT value was observed as refusal at 15.0 m depth due to presence of gravel.	SPT-7/ DS-1 DS-2 SPT-8/ DS-3	39 60/2"	60/3"		R R	R R	Percussion method was used for drilling up to the proposed depth of 15 m. SPT was performed in soil according to (ASTM D-1586)
- - - - --16 - - - - --17 - - - - --18 - - - - --19 - - - - --20			**End of the Borehole**							

6-2 参考文献

参考文献

上位計画

番号	名　　称	和訳	種類	発行機関	発行年
P1	Pakistan 2025 -One nation -One Vision Executive summary	国家開発政策 2025	PDF	Planning Commission, MOPDR	2016
P2	National Health Vision Pakistan 2016-2025	国家保健政策2016-2025	PDF	MONHSRC	2016

予算、PIMS計画

番号	名　　称	和訳	種類	発行機関	発行年
F1	Final Budget and Actual Expenditure for the year 2016-2017	2016-2017年度実行予算収支	PDF	PIMS	2017
F2	Budget 2015-2016 Current expenditure and development expenditure	2015- 2016年度当座支出と開発支出	冊子	CADD	2016
F3	Budget 2015-2016 Current expenditure and development expenditure	2017- 2018年度当座支出と開発支出	PDF	CADD	2018
F4	Pakistan Economic Survey Health & Nutrition　2015-2017	パキスタン経済調査 保健と栄養　2015-2017	PDF	Government of Pakistan Finance Division	2017
F5	Government of Pakistan Finance Division BUDGET 2015-2017	政府財務局　予算　2015-2017	PDF	Government of Pakistan Finance Division　Cabinet Secretariat	2017
F6	PC-1 Form: The Project for Extension of Intensive Care Department of Mother and Child Health Center & Children Hospital, Pakistan Institute of Medical Sciences (PIMS), Islamabad (January 2019)	PIMS母子保健センターと小児病院の集中治療部門の強化にかかるPC－1（2019年1月へMoPD&Rへ再提出）	PDF	PIMS / MoNHSR&C	2019
F7	PC-1 Form: Replacement & Up Gradation of HVAC Plant Room Equipment & Allied works at PIMS, Islamabad (April 2018)	PIMSのHVAC機械室機器及び関連業務にかかるPC－1（2018年4月版）	PDF	PIMS / CAD	2018

病院統計

番号	名　　称	和訳	種類	発行機関	発行年
E1	Statical Report of PIMS 2016 - 2017	PIMS 調査統計　2012 - 2017	コピー	PIMS	2018
E2	PIMS Operation Register Summary IH 2012-2017	手術記録の要約　IH　2012-2017	コピー	PIMS	2018
E3	MCHCentre PIMS Year wise report 2013 to 2017	母子保健センターの利用者に関する(外来患者数、入退院数、出生数、手術患者数、病床稼働率等の統計）2013-1017	コピー	PIMS	2018
E4	MCH Centre Stats 2001-2018	母子保健センター基本統計	PPT	PIMS	2018
E5	Statistics of CH PIMS year 2016, 2017	小児病院患者数統計2016，2017	コピー	PIMS	2018
E6	PIMS CH 5 year Workload of OT department	小児病院　2013- 2017の月別６診療科手術患者記録	コピー	PIMS	2018
E7	Patients Workload in CH, PIMS	小児病院　2013- 2017の疾患別手術患者、検査	コピー	PIMS	2018
E8	5 years mayor and minor surgeries data along with definitions CH	小児病院　2013- 2017のメジャー手術、マイナ	コピー	PIMS	2018
E9	Brief about Paeds Surgery(CH)2014-2016	小児病院7種の手術統計2014-2016	コピー	PIMS	2018
E10	The children Hospital Daily Report for In-door patient 2013-2017	小児病院の入退院に関する統計	コピー	PIMS	2018
E11	Existing medical center Islamabad	イスラマバード既存医療施設	コピー	CDA	2018

保健統計

番号	名　　称	和訳	種類	発行機関	発行年
H1	UNICEF 「Data: Monitoring the situation of children and women 2018」	母子保健指標	PDF	UNICEF	2018
H2	国連児童基金「世界子供白書」子どもの死亡率に関する推計値		PDF	UNICEF	2017
H3	平均余命	https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=AF-PK-IN	Web	世界銀行	2016
H4	出生1,000人当たり乳児死亡率	https://data.worldbank.org/indicator/SP.DYN.IMRT.IN?locations=AF-IN-PK	Web	世界銀行	2017
H5	出生1,000人当たり5歳未満児死亡率	https://data.worldbank.org/indicator/SH.DYN.MORT?locations=AF-IN-PK	Web	世界銀行	2015
H6	出生100,000人当たり妊産婦死亡率	https://data.worldbank.org/indicator/SH.STA.MMRT?locations=AF-IN-PK	Web	世界銀行	2015
H7	Pakistan Demographic and Health Survey 2017-18, Key Indicators Report National Institute of Population Studies Islamabad, Pakistan　P.26-28	妊婦健診、および分娩介助者	PDF	パキスタン国家統計局	2018
H8	UNICEF, Situation analysis of Children in Pakistan 2017, P.50	小児死亡原因	PDF	UNICEF	2017
H9	Health Institutions, Beds and Personnel	パキスタン国内病院数・医師数	PDF	パキスタン国家統計局	2017
H10	人口1,000人当たりの看護師数	https://data.worldbank.org/indicator/SH.MED.NUMW.P3?locations=IM	Web	世界銀行	2015
H11	SBP Staff Notes 01/18, State of Health Sector in Pakistan P.8	医師と看護師の海外就労登録者数（人数）	PDF	パキスタン国立銀行	2018

建築計画

番号	名　　称	和訳	種類	発行機関	発行年
A1	Building Code of Pakistan (Seismic Provision 2007)	パキスタン建築基準（地震条項2007）	ｺﾋﾟｰ	Ministry of Housing & Works, Government of Pakistan	2007
A2	Building Code of Pakistan - Fire Safety Provision - 2016 (Based on NFPA 1 Fire Code 2015)	パキスタン建築基準（火災安全条項）	PDF	PEC / National Disaster Management Authority	2016
A3	Islamabad Residential Sectors - Zoning regulations 2005	イスラマバード市条例	ｺﾋﾟｰ	Capital Development Authority	2005
A4	CDA Building Standards 2010 for Sire Prevention & Life Safety	イスラマバード市火災条例2010	PDF	Capital Development Authority	2010
A5	Sanitary sewer system (map, G8/2, G8/4)	プロジェクトサイト周辺下水道図	ｺﾋﾟｰ	Metropolitan Cooperation Islamabad	2018（入手年）
A6	Monitoring point of pressure survey	プロジェクトサイト周辺上水道図	ｺﾋﾟｰ	Metropolitan Cooperation Islamabad	2018（入手年）

施工計画

番号	名　　称	和訳	種類	発行機関	発行年
C1	Pakistan Environmental Protection Agency (review of IEE and EIA) Regulation 2000	初期環境評価及びEIAにかかる規則2000	PDF	Pakistan Environmental Protection Agency	2000
C2	Registration Policy - 2017 Guideline for new, renewal and upgradation of constructors / operators licenses	2017年度登録基準　施工会社／オペレーターの新規登録・更新・カテゴリー上位申請ガイドライン	PDF	PEC	2017

その他

番号	名　　称	和訳	種類	発行機関	発行年
O1	Triage of Obstetric patients coming to MCH Emergency	MCH産科救急来院者のトリアージ	コピー	PIMS MCHC	2018
O2	Admission Through Emergency Ward	救急病棟からの入院	コピー	Unit-II MCHC PIMS	2018
O3	College of nursing Tentative Schedule for Post Basic Specialization Program 2017-2018	看護短大専門基礎課程卒後プログラム2017-2018	コピー	College of nursing PIMS	2018
O4	医師・歯科医師養成課程	http://www.pmdc.org.pk/Portals/0/admission%20housejob%20regulations.pdf	Web	Pakistan Medical and Dental Council	2017
O5	Rules & Regulation for nursing educational institutions	看護師養成課程	冊子	Pakistan nursing council	2001（改定2016)
O6	パキスタン教育事情	https://www.mofa.go.jp/mofaj/toko/world_school/01asia/infoC11000.html)	Web	日本外務省	2019

JICA報告書

番号	名　　称	種類	発行機関	発行年
R1	イスラマバード小児病院建設計画基本設計調査報告書	Web	JICA	1982
R2	Basic design survey for the establishment of the college of nursing and paramedical institute in the Islamic Republic of Pakistan	Web	JICA	1984
R3	母子保健センター建設計画基本設計調査報告書	Web	JICA	1996
R4	イスラマバード小児病院復旧計画基本設計調査報告書	Web	JICA	2003
R5	イスラマバード小児病院改善計画基本設計調査報告書	Web	JICA	2005
R6	カラチ小児病院改善計画準備調査報告書	Web	JICA	2012
R7	保健セクター情報収集・確認調査「パキスタン・イスラム共和国　保健セクター分析報告書」	Web	JICA	2012
R8	基礎研究　開発途上国のレベルに応じた日本の病院施設・技術の適用　基礎研究報告書	PDF	JICA	2016
R9	パキスタン・イスラム共和国　保健施設・機材整備に関する情報収集・確認調査ファイナルレポート	PDF	JICA	2018