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資料 1 . 調査団員・氏名

< 基本設計調査時 > 2009年3月9日 ~ 4月3日

No.	氏名	担当分野	所属先
1	荒 仁	総括	独立行政法人 国際協力機構 経済開発部 都市・地域開発グループ 都市・地域開発第三課 調査役
2	荻原 理江	技術参与	国立国際医療センター 国際医療協力局 派遣協力第一課
3	加藤 綾子	計画管理	独立行政法人 国際協力機構 人間開発部 保健行政・母子保健グループ 母子保健課
4	遠藤 建	業務主任/建築計画	株式会社日本設計インターナショナル
5	日野水 信	建築設計	株式会社日本設計インターナショナル
6	礪部 剛久	設備計画	株式会社日本設計インターナショナル
7	中嶋 英雄	施工計画/積算	株式会社日本設計
8	鈴木 誠	機材計画/調達	株式会社日本設計インターナショナル
9	渡辺 章	保健事情/看護教育	株式会社日本設計インターナショナル
10	中村 精一	設備計画〔補強〕	株式会社日本設計
11	清水 謙一	構造計画/自然条件調査 〔補強〕	株式会社日本設計
12	残松 伸吾	建築設計〔補強〕	株式会社日本設計インターナショナル

< 追加現地調査時 > 2009年6月27日 ~ 7月5日

No.	氏名	担当分野	所属先
1	遠藤 建	業務主任/建築計画	株式会社日本設計インターナショナル
2	浦野 勝雄	太陽光発電	株式会社日本設計インターナショナル
3	中村 精一	設備計画〔補強〕	株式会社日本設計

< 基本設計概要説明調査時 > 2009年8月22日 ~ 8月30日

No.	氏名	担当分野	所属先
1	佐々木 十一郎	団長	独立行政法人 国際協力機構 フィジー事務所長
2	高橋 園子	計画管理	独立行政法人 国際協力機構 人間開発部 保健行政・母子保健グループ 母子保健課
3	遠藤 建	業務主任/建築計画	株式会社日本設計インターナショナル
4	中嶋 英雄	施工計画/積算	株式会社日本設計
5	鈴木 誠	機材計画/調達	株式会社日本設計インターナショナル

資料 2 . 調査行程

基本設計調査日程

調査団員			総括	計画管理	技術参与	業務主任/建築計画	保健事情/看護教育	機材計画/調達	建築設計	設備計画	施工計画/積算	
月	日											
1	3月 9日	(月)										
2	10日	(火)										成田発
3	11日	(水)										オークランド着 同 発 ヌクアロファ着
4	12日	(木)										JICA事務所訪問、保健省・バイオラ病院表敬、インセプションレポート説明、調査日程等確認。病院視察
5	13日	(金)										バイオラ病院現況、建設予定地インフラ詳細調査
6	14日	(土)										バイオラ病院現況、建設予定地インフラ詳細調査
7	15日	(日)										基本設計元案作成
8	16日	(月)	成田発	保健省、バイオラ病院保健事情、看護教育に関する協議	成田発	調査結果報告、団内協議、資料整理	成田発	調査結果報告、団内協議、資料整理	成田発	調査結果報告、団内協議、資料整理		
9	17日	(火)	オークランド ヌクアロファ着	バイオラ病院現況、建設予定地詳細調査、団内協議	オークランド ヌクアロファ着	調査結果報告、団内協議、資料整理	オークランド ヌクアロファ着	調査結果報告、団内協議、資料整理	オークランド ヌクアロファ着	調査結果報告、団内協議、資料整理		
10	18日	(水)	調査状況報告、JICAトンガ支所、保健省、バイオラ病院表敬、建設予定地視察、					バイオラ病院現況、建設予定地詳細調査				
11	19日	(木)	大使館、外務省、財務省、保健省、バイオラ病院表敬、団内協議					バイオラ病院、建設予定地現況詳細調査				
12	20日	(金)	保健省でミニッツ案協議、保健大臣表敬					バイオラ病院、建設予定地現況詳細調査		調査結果報告、団内協議、資料整理		
13	21日	(土)	ミニッツ案協議					バイオラ病院、建設予定地現況詳細調査		調査結果報告、団内協議、資料整理		
14	22日	(日)	ミニッツ案協議									
15	23日	(月)	ミニッツ案協議、他ドナー訪問									
16	24日	(火)	ミニッツ署名、JICAトンガ支所、大使館報告									
17	25日	(水)	ヌクアロファ発 オークランド着	成果指標確認のベースライン調査	ヌクアロファ発 オークランド着	保健省で施設計画案、機材計画案協議				ヌクアロファ発 オークランド着		
18	26日	(木)	オークランド 成田着	他ドナー訪問	成田着	施設計画案、機材計画案協議				資機材代理店調査		
19	27日	(金)				施設計画案、機材計画案協議				資機材代理店調査		
20	28日	(土)				施設計画案、機材計画案協議				資機材代理店調査		
21	29日	(日)				団内協議、資料整理				資機材代理店調査		
22	30日	(月)				保健省でT/M案協議 (施設計画など)		ヌクアロファ発 オークランド市場調査	保健省でT/M案協議 (施設計画など)		オークランド発 成田着	
23	31日	(火)				テクニカルメモランダム署名		市場調査	テクニカルメモランダム署名			
24	4月 1日	(水)				ヌクアロファ発 オークランド		オークランド発 シドニー市場調査	ヌクアロファ発 オークランド			
25	2日	(木)	オークランド市場調査		シドニー市場調査	オークランド建設市場調査						
26	3日	(金)	オークランド発 成田着		シドニー発 成田着	オークランド発 成田着						

追加現地調査日程

調査団員			業務主任 / 建築計画	太陽光発電
1	6月27日	(土)	成田発	
2	28日	(日)	オークランド着 オークランド泊	
3	29日	(月)	オークランド発 ヌクアロファ着 JICA事務所訪問	
4	30日	(火)	MOH訪問(目的説明・予定/官庁打合せ確認・調査)、日本国大使・保健大臣協議立会い 計測準備・計測開始、維持管理スタッフと計画に関する打合せ	
5	7月1日	(水)	MOH打合せ、トンガ電力会社打合せ 計測状況確認、所轄の国土環境・資源省エネルギー部打合せ、計測確認	
6	2日	(木)	保健省維持管理に関わる打合せ トンガ電力会社発電所調査 計測終了 追加電流調査開始、データの収集、内容確認	
7	3日	(金)	調査資料整理。調査の保健省への報告。電気工事業者調査 保健大臣・次官への調査報告、JICA事務所への報告、大使館への報告。	
8	4日	(土)	調査のまとめ作業。追加電流測定終了 ヌクアロファ発 オークランド着	
9	5日	(日)	オークランド発 成田着	

基本設計概要説明調査日程

調査団員			総括	計画管理	業務主任/建築計画	施工計画/積算	機材計画/調達
1	8月22日	(土)		成田発 -			
2	8月23日	(日)		オークランド着 オークランド泊			
3	8月24日	(月)	スバ発 トンガタブ着 JICA事務所	オークランド発 ヌクアロファ着 JICA事務所訪問			
4	8月25日	(火)	MOH訪問(目的説明・予定)、基本設計概要説明 施設計画内容説明、機材計画内容説明				
5	8月26日	(水)		基本設計内容協議 ミニッツ協議			機材計画内容協議
6	8月27日	(木)		ミニッツ案協議		ミニッツ案協議	
7	8月28日	(金)	ミニッツ署名後 トンガタブ発 スバ着	ミニッツ内容確認。 ミニッツ署名 JICA事務所、大使館へ報告。			
8	8月29日	(土)		調査のまとめ作業。調査のまとめ作業 ヌクアロファ発			オークランド着
9	8月30日	(日)		オークランド発 成田着			

資料3 . 関係者（面会者）リスト

1. トンガ国関係者		
1-1	Ministry of Health	
	Dr. Viliami T. Tangi	Minster of Health
	Dr. Liliti Ofanoa	Director of Health
	Mr. Tuakoi Ahio	Principal Health Administrator
	Dr. Malakai Ake	Chief Medical Officer, Public Health
	Mr. Viliami Ika	Project Coordinator
	Mr. Sione Hufanga	Principal Health Planning Officer
1-2	Vaiola Hospital	
	Dr. Siale Akauola	Medical Superintendent of Vaiola Hospital
	Dr. Silio Tomiki	Chief Dental Officer of Vaiola Hospital
	Dr. Ana Aicauola	Senior Medical Officer, Radiology
	Dr. Paula S. Vivili	Senior Medical Officer, Ophthalmology, Diabetes, Health Promotion
	Dr. Veisia Matoto	Medical Officer Incharge, Medical Ward
	Dr. Moana Tupou	Medical Officer Incharge, Outpatient/A&E
	Dr. Toakase	Medical Officer In-charge, Pediatric Ward
	Dr. 'Sione Talanoa Latu	Medical Officer In-charge, Orthopedics
	Dr. Lisiate 'Ulufonua	Registrar
	Dr. Lei Schaaf	Surgeon In-charge, ENT
	Dr. Semisi Latu	Senior Medical Officer, Obstetrics
	Ms. Ana Navaefiafi	Chief Nursing Officer
	Sr. Ofa Takulua	Matron
	Sr. Pinomi Latu	Sister Incharge, Outpatient/A&E
	Mr. Sione Po'uliva'ati	Physiotherapist
	Mr. Siutaka Siva	Senior Pharmacist
	Mr. Sione Veilofia	Senior Medical Record Officer
	Ms. Leva'ita Asaeli	Pharmacist
	Ms. Ana Navaefiafi	Chief Nursing Officer
	Mr. 'Feleti Eke	Mechanical Supervisor
	Mr. Tu'Amelie Paea	Computer Programmer
	Mr. Clifton Latu	Computer Operator
1-3	School of Nursing	
	Sr. Tilema Cama	Principal
1-4	Ministry of Foreign Affairs	
	Mr. Vainga Tone	Secretary
1-5	Ministry of Finance	
	Mr. Aisake Eke	Secretary of Finance
	Ms. Natalia V. Palu	Principal Economist, Aid Management Division
1-6	Revenue Service Department	
	Ms. Lepaola Vaes	Dupty Commissioner of Revenue
1-7	Ministry of Works	
	Mr. Leveni Aho	Deputy Director of Works
1-8	AusAID	
	Ms. Telusa Hepisipa Fotu	Senior Policy Manager
	Ms. Barbara Tu'ipulotu	Program Manager
1-9	The Embassy of the People's Republic of China	
	Mr. Huang Yue Guo	First Secretary(Economic & Commercial)
1-10	Tonga Power Limited	
	Mr. Murray David	Superintendant/outer Islands Manager-Power Station
1-11	Tonga Water Board	
	Mr. Pita Moala	Project Manager
	Mr. Mafua	Chief Engineeer
1-12	Fire Department	
	Mr. Lofla Heimuli	Chief Fire Officer
1-13	BOC TONGA LTD(Gas Provider)	
	Mr. Arvind Kumar	
1-14	OSCOM Ltd.(Telecommunication Company)	
	Mr. Timote Tuitavuki	

2. 日本国関係者(敬省略)		
2-1	日本大使館	
	高瀬 康夫	特命全権大使
	大内 晃	参事官
	益原 直子	専門調査員
2-2	JICAトンガ支所	
	松井 信晃	支所長
	藤瀬 多佳子	ボランティア調整員
	井上 雅史	ボランティア調整員

資料 4 . 討議議事録 (M/D)

<基本設計調査時>

MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY
ON THE PROJECT FOR UPGRADING AND REFURBISHMENT
OF VAIOLA HOSPITAL (PHASE II)
IN THE KINGDOM OF TONGA

In response to a request from the Government of the Kingdom of Tonga (hereinafter referred to as "Tonga"), the Government of Japan decided to conduct a Preparatory Survey on the Project for upgrading and refurbishment of Vaiola Hospital (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Kingdom of Tonga the Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Hitoshi Ara, Assistant Director, Urban and Regional Development Group, Economic Infrastructure Department, JICA, and is scheduled to stay in the country from March 10th to March 31st, 2009.

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

In the course of discussions and field survey, both sides have confirmed the main items described on the ATTACHMENT. The Team will proceed to further works and prepare the Preparatory Survey Report.

Nuku'alofa, March 24th, 2009



Mr. Hitoshi ARA
Leader
Preparatory Survey Team
Japan International Cooperation Agency



Dr. Litili OFANOA
Director of Health
Ministry of Health
Kingdom of Tonga

ATTACHMENT

1 Objective of the Project

The objective of the Project is to improve the medical service function of Vaiola Hospital in Nuku'alofa in the Kingdom of Tonga through the improvement and upgrading of the medical facilities and equipment.

2 Project site

The site of the Project is Vaiola Hospital in Nuku'alofa, Tongatapu Island. The location is shown in Annex-1.

3 Responsible and Implementing Agency

3-1 The Responsible Agency and the Implementing Agency are the Ministry of Health of Tonga.

3-2 Organization chart including above Agencies is shown in Annex-2.

3-3 Both sides agreed to set up the Steering Committee and the Project Task Force to implement the Project smoothly. The Tonga side also agreed to inform the members of the above committees when the Team returns to explain the draft basic design.

4 Items requested by the Tonga side

After discussions with the Team, the items described in Annex-3 (facilities) and Annex-4 (equipment) were finally requested by the Tonga side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5 Japan's Grant Aid Scheme

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

5-2 Both sides will take necessary measures described in Annex-6, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6 Schedule of the Study

6-1 The consultants will proceed to further studies in Tonga until March 31st, 2009.

6-2 JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around August 2009.

6-3 In case that the contents of the report is accepted in principle by the Government of Tonga, JICA will complete the final report and send it to the Government of Tonga by October 2009.

7 Other relevant issues

7-1 Sustainability of the Project

(1) The Tonga side agreed to allocate sufficient budgets to manage Vaiola Hospital, to operate the equipment supplied by the Project, and to cover the provision of spare parts, consumables, reagents, and periodical maintenance contracts.

(2) The Tonga side ensured to assign sufficient number of the following qualified staff for operation and maintenance of building and equipment.

- Maintenance Engineer(s)
- Mechanical Technician(s)
- Electrician(s)

7-2 Confidentiality of the Project

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

7-3 Undertakings by the Tonga side

In addition to the major undertakings described in the Annex-6, the Tonga side confirmed;

- (1) to conduct necessary demolition and leveling works for the new facilities constructed by the Project and relocate function of the facility,
- (2) to complete necessary clearance or diversion works of existing infrastructure located in or around the Project site including underground works,
- (3) to transfer the existing equipment and furniture to be placed in the new building(s) after the completion of the Project.

7-4 Criteria of Equipment Selection

Both sides agreed to the following selection criteria of equipment.

- (1) Concordance with the functions and activities of the Project facilities
- (2) Current condition and insufficient numbers of the existing equipment
- (3) Available technical staff to operate and maintain the equipment
- (4) Accessibility of procurement of spare parts and consumables for the equipment
- (5) Technical and financial feasibility of operation and maintenance of the equipment

7-5 Criteria of Architectural Planning

Both sides agreed to review the Master Plan based on the following criteria.

- (1) Current usage of the functions (number of patients, consultation time per patient, consultation hours, etc...)
- (2) The number of medical staff
- (3) Characteristic of the functions

7-6 Renovation of the Existing OPD Building

The Team explained its findings on the durability of the existing OPD building and the nursing school building. However, the Tonga side expressed the possibility of continuing to use a part of the OPD building as the public health facility for the time being. The Team will conduct further survey for the durability of the building and will make technical advice on the renovations to be conducted by the Tonga side.

7-7 Request for the Location of Facilities in Buildings

The Tonga side requested to locate the facilities in buildings as follows. The Team agreed to consider the requests in the architectural planning.

- (1) The dental clinic, the outpatient clinic, the ante-natal clinic and the diabetes clinic should be arranged to avoid congestion of waiting space and mixing of circulation, due to the large number of patients for the facilities.
- (2) The ophthalmology clinic and the diabetes clinic should be located in close proximity as they share patients in common.

7-8 Medical Solid Waste

The Team explained the importance of the adequate management of medical solid waste. The Tonga side ensured to install autoclave sterilization facilities in the rear side of the hospital.

7-9 Operational Cost

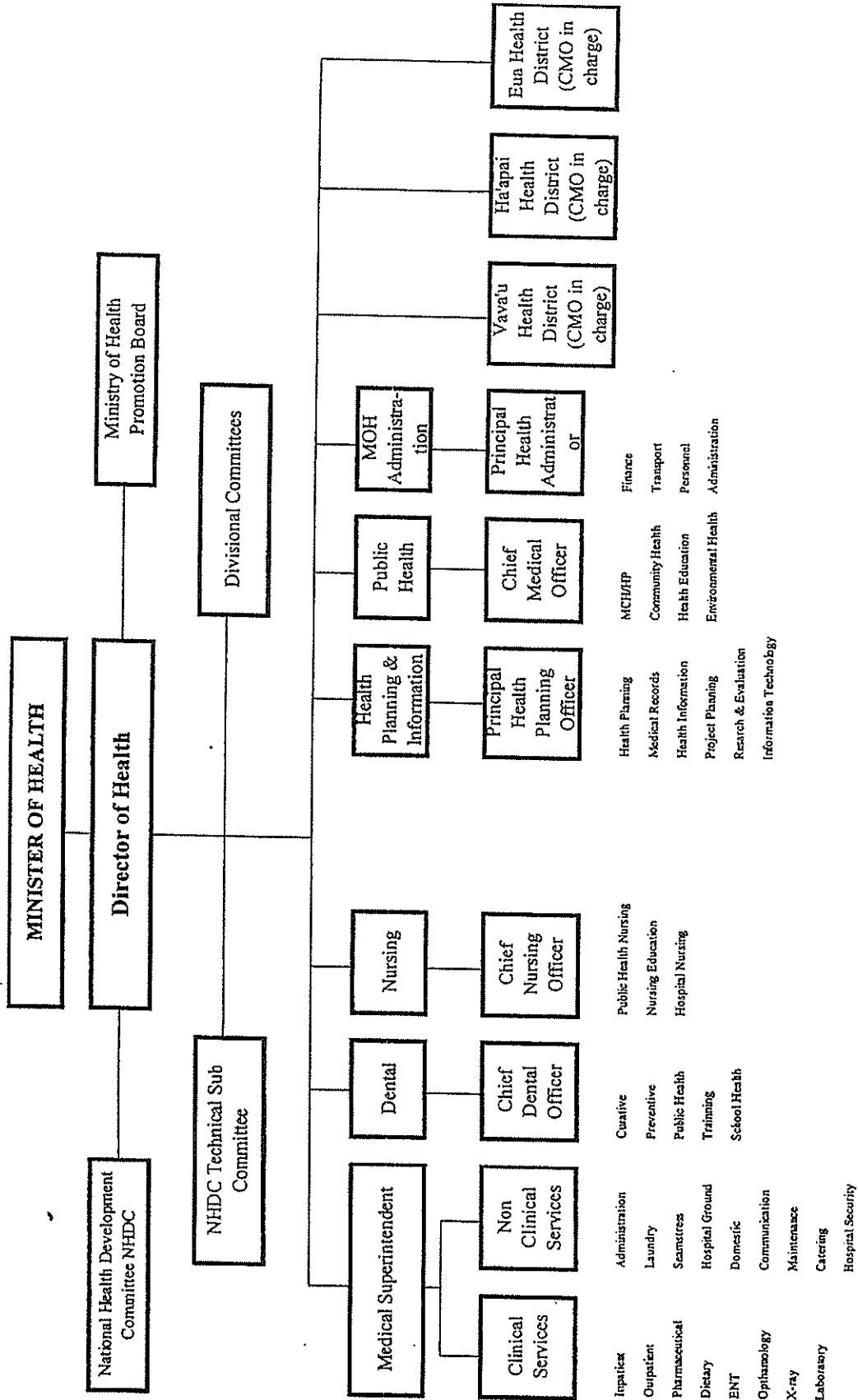
The Tonga side requested measures to reduce operational cost including rain water reservoirs and other systems. The Tonga side also emphasized the importance of introduction of a solar panel system as it is in line with the policy of the Government of Tonga on utilization of renewable energy sources. The Team explained the need for further study on their feasibility and appropriateness.

7-10 Training for Building Facilities and Equipment

The Tonga side requested technical support for facility (buildings, electrical, mechanical, and so on) and equipment maintenance. The Team explained the need for further study.

- Annex-1: Project Sites Map
- Annex-2: Organization Chart
- Annex-3: Requested Items (Facilities)
- Annex-4: Requested Items (Equipment)
- Annex-5: Japan's Grant Aid Scheme
- Annex-6: Major Undertakings to be taken by Each Government





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Requested Items (Facilities)

Priority	Main function	Contents of function
1 st	Hospital	Outpatients department Accident & Emergency Special clinics Ophthalmology & ENT Antenatal clinic Physiotherapy Dental health clinic Outpatient pharmacy Main entry/ Reception/ Admission Accounts Hospital administration Medical records
2 nd	Hospital Training Others Others	2-1 Diabetes clinic 2-2 Nursing school/ Training 2-3 Mortuary 2-4 Public Health

Requested Items (Equipment)

Annex-4

Name of Equipment	Priority	Requested Quantity
1. Emergency and Outpatient Department		
1 Defibrillator	A	1
2 Emergency Cart	A	1
3 Electrocardiograph	A	2
4 Patient Monitor	A	2
5 Nebulizer	A	2
6 Suction Unit	A	2
7 Examination Light	A	2
8 Patient Trolley	A	5
9 Emergency Trolley	A	2
10 Tabletop Autoclave	A	1
11 Weighing Scale, Adult	A	2
12 Weighing Scale, Infant	A	1
13 Height Scale	A	1
14 Operating Light	A	1
15 Wheel Chair	A	1
16 Digital Thermometer	A	1
17 Pulse Oximeter	A	1
18 Infusion Pump	A	2
19 Portable Glucometer	A	1
20 IV Stand	A	1
21 Observation Bed	A	8
22 Triage Beds	A	6
23 Diagnostic Set	A	2
24 Dressing Trolley	A	3
25 Sphygmomanometer	A	8
26 IVF Warmer	A	6
27 Ultrasound with Color Doppler	A	1
28. Treatment Instrument Set	B	1
29 Laryngoscope for Adult	B	2
30 Laryngoscope for Infant	B	1
31 Tracheotomy Instrument Set	B	1
32 Resuscitation Bag for Adult	B	1
33 Resuscitation Bag for Infant	B	1
34 Film Illuminator	A	1
35 Oxygen Flowmeter	B	6
36 Surgical Scrub Station	A	6
37 Instrument Cabinet	B	2
38 Examination Table	B	1
39 Syringe Pump	A	7
40 Portable Oximeter	A	1
2. Special Clinic		
1 Weighing Scale, Adult	A	1
2 Weighing Scale, Infant	A	1
3 Diagnostic Set	A	1
4 Sphygmomanometer	A	2
5 Pulse Oximeter	A	1
6 Height Scale	A	1
3. ENT		
1 Nasal Polypectomy Instrument Set	B	1
2 Tonsillectomy Instrument Set	B	1
3 Laryngectomy Instrument Set	B	1
4 Suction Machine	B	1
5 Pulse Oximeter	B	1
6 Bronchofiberscope	A	1
7 Cleft Lip Plasty Instrument Set	B	1
8 Mastoidectomy Instrument Set	B	1
9 ENT Treatment Unit	B	1
10 Examining Instrument Set	B	1
11 Film Illuminator	B	1
12 Audiometer	B	1

Name of Equipment	Priority	Requested Quantity
13 Sound Proof Unit		
4. Ante-natal	B	1
1 Fetal Doppler		
2 Examination Light	A	2
3 Fetoscope	A	4
4 Sphygmomanometer	A	1
5 Weighing Scale, Adult	A	1
6 Weighing Scale, Infant	A	1
7 Examination Table	A	1
8 Gynecological Examination Table	A	2
9 Portable Glucometer	A	2
10 Instrument Trolley	A	1
11 Patient Trolley	A	1
12 IV Stand	A	1
13 Wheel Chair	A	1
14 Vaginal Instrument Set	A	1
5. Physiotherapy	A	6
1 Therapy Bed		
2 Ultrasound Therapy Apparatus	B	1
6. Outpatient's Pharmacy	A	1
1 Cupboard for Dangerous Drugs		
2 Medical Refrigerator	B	1
3 Water Distiller	B	1
4 Water Filter	B	1
5 Electronic Balance	B	1
6 Medicine Trolley	B	1
7 Small Instrument Set	B	1
7. Dental Health	B	1
7.1 Detal Clinic		
1 Dental Unit		
2 Tabletop Autoclave	A	11
3 Dental X-ray Unit	A	2
4 Panoramic X-ray Unit	A	1
5 X-ray Film Developer	B	1
6 Ultrasonic Scaler	A	1
7 Amalgamator	A	6
8 Light Curing Unit	A	6
9 Extraction Instrument Set	A	6
10 Dental Instrument Set	A	1
11 Oral Surgery Equipment Set	A	4
12 Surgical Micromotor	B	2
13 Apex Locator	B	1
14 Water Distiller	B	1
7.2 Dental Laboratory	B	1
1 Model Trimmer		
2 Resin Curing Unit, Pressure Pot	A	1
3 Vibrator	A	1
4 Laboratory Lathe	A	1
5 Resin Curing Unit	A	1
6 Vacuum Mixer	A	1
7 Pencil Stand Blaster	A	1
8 Thermoplastic Pressure Former	A	1
9 Laboratory Micrometer	A	1
10 Centrifugal Casting Machine	A	1
11 Burnout Furnace	A	1
12 Hydraulic Flask Press	A	1
13 Articulator	A	1
14 Impression Tray	A	1
15 Flasks Set	A	1
16 Hydro Flask	A	20
17 Dental Bunsen Burner	B	1
18 Hanging Motor	B	2
19 Thermo Forming Unit	B	1
20 Electric Wax Knife	B	1

9

Name of Equipment	Priority	Requested Quantity
21 Polishing Unit	B	1
22 Dust Collector	B	1
23 Dental Laboratory Instruments	B	1
8. School of Nursing		
8.1 Model, Manequin, etc.		
1 Anatomical Human Body Male	B	1
2 Anatomical Human Body Female	B	1
3 Human Skelton	A	1
4 Circulatory System Model	A	1
5 Respiratory Organ Model	A	1
6 Nasal/Throat/Pharynx Model	A	1
7 Pregnant Uterus Model	A	1
8 Training Dummy for Dressing	A	1
9 Phantom for Delivery	A	1
10 Injection Simulator	A	2
11 Nursing Care Manikins for Dressing Techniques	A	1
12 Nursing Care Manikins for Patient Care	A	1
13 Clinical Procedure Training Manikin	A	1
14 Resuscitation Simulator	A	1
15 Child Care Simulator	A	1
16 Pediatric Care Simulator	A	1
17 Newborn Advance Care Simulator	A	1
18 Torso Model	A	1
19 Heart Disease 3D Display Model	B	1
20 Death of an Artery Model	A	1
21 Nasogastric Tube Feeding Model	B	1
22 Heart Model	B	1
23 Functional Larynx Model	B	1
24 Mini Brain model	B	1
25 Mini Kidney Model	B	1
26 Skin Section Model	A	1
27 Median Section of the Head Model	B	1
28 Functional Heart System model	B	1
29 Functional Eye	B	1
30 Placenta Model	B	1
8.2 Education Charts, etc.		
1 Cholesterol Anatomy Poster	A	1
2 3-D Pyramid	B	1
3 Diabetes Teaching Kit	A	1
4 Nutrition Diabetes Folding Display	A	1
5 Understanding Diabetes Poster	A	1
6 Chart Stand	A	1
7 Arthritis Chart	A	1
8 Human Ear Wall Chart	A	1
9 Skin Cancer Chart	A	1
10 Asthma Chart	A	1
11 Hypertension Chart	A	1
12 Hepatitis Chart	A	1
13 Cholesterol Chart	A	1
8.3 Medical Equipment for Education		
1 Neonatal Cot	A	1
2 Wheel Chair	A	1
3 Nursing Utensils Set	A	1
4 Irrigator Stand	A	1
5 Instrument Trolley	B	1
6 Binocular Microscope	A	1
7 Nebulizer	A	1
8 Walking aids-crutches, walter and tripod	B	1
9 ECG Machine	A	1
10 Sphygmomanometer	A	1
11 Thermometer	A	1
12 Patient Bed	B	2
13 Stretcher	B	1
14 Weighning Scale for Infant	B	1

1

Q.

Name of Equipment	Priority	Requested Quantity
15 Examination instrument Set	B	1
16 Suction unit	B	1
17 Oxygen Set	B	1
18 Commode Chairs	B	1
8.4 Equipment for Education		
1 TV System	B	1
2 VTR	B	1
3 VCD	B	1
4 Screen	B	1
5 LCD Projector System	B	1
6 White Board	A	3
7 Amplifier System	B	1
8 Copying Machine	B	1
9 Small Printing Machine	B	1
10 Computer with Printer	B	1
11 Printer for Computer (MP-3)	B	1
12 Cabinet	B	1
13 Digital Recording Camera	B	1
9. Public Health		
1 Weighing Scale, up to 200kg	A	2
2 Height Scale	A	2

Legend:

Priority A: Equipment necessary to carry out the Vaiola Hospital's function

Priority B: Equipment necessary to carry out the Vaiola Hospital's function but further study is required.

Note: Quantities are subject to change due to coordination with the facility

JAPAN'S GRANT AID SCHEME

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as part of this realignment, JICA was reborn on October 1, 2008. After the reborn of JICA, following the decision of the Government of Japan (hereinafter referred to as "the GOJ"), Grant Aid for General Project is extended by JICA.

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

1. Grant Aid Procedures

Japanese Grant Aid is conducted as follows-

- Preparatory Survey (hereinafter referred to as "the Survey")
 - the Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by The GOJ and JICA, and Approval by the Japanese Cabinet
- Determination of Implementation
 - The Notes exchanged between the GOJ and a recipient country (E/N)
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

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

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the implementation of the Project.

- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

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

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

(2) Selection of Consultants

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

(3) Result of the Survey

The Report on the Survey is reviewed by JICA, and after the appropriateness of the Project is confirmed, JICA recommends the GOJ to appraise the implementation of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the E/N will be signed between the GOJ and the Government of the recipient country to make a plea for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

The consultant firm(s) used for the Survey Will be recommended by JICA to the recipient country to also work on the Project's implementation after the E/N and the G/A, in order to maintain technical consistency.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

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

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex-6.

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making

payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

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

(9) Authorization to Pay (A/P)

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

(10) Social and Environmental Considerations

A recipient country must ensure the social and environmental considerations for the Project and must follow the environmental regulation of the recipient country and JICA socio-environmental guideline.

Major Undertakings to be taken by Each Government

Annex-6

NO	Items	To be covered by the Grant	To be covered by Recipient side
1	To secure land		
2	To clear, level and reclaim the site when needed		•
3	To construct gates and fences in and around the site		•
4	To construct the parking lot		•
5	To construct roads	•	
	1) Within the site	•	
	2) Outside the site		
6	To construct the building	•	•
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1)Electricity		
	a.The distributing line to the site		•
	b.The drop wiring and internal wiring within the site	•	
	c.The main circuit breaker and transformer		•*1
	2)Water Supply		
	a.The city water distribution main to the site		•*2
	b.The supply system within the site (receiving and/or elevated	•	
	3)Drainage		
	a.The city drainage main (for storm, sewer and others) to the site		(•)
	b.The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	•	
	4)Gas Supply		
	a.The city gas main to the site		(•)
	b.The gas supply system within the site	•	
	5)Telephone System		
	a.The telephone trunk line to the main distribution frame / panel (MDF) of the building		•
	b.The MDF and the extension after the frame / panel	•	
	6)Furniture and Equipment		
	a.General furniture		•
	b.Project equipment	•	
8	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	•	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	•	

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10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		•
11	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		•
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		•
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		•

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

*1 Existing 300kva transformer to be replaced by new 500kva transformer.

*2 New city water inlet from Taufaāhau road to new receiving tank is to be provided.


MINUTES OF DISCUSSIONS
ON PRELIMINARY STUDY
ON THE PROJECT FOR UPGRADING AND REFURBISHMENT
OF VAIOLA HOSPITAL (PHASE II)
IN THE KINGDOM OF TONGA
(EXPLANATION ON DRAFT REPORT)

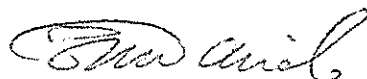
In March 2009, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preliminary Study Team on the Project for Upgrading and Refurbishment of Vaiola Hospital (Phase II) (hereinafter referred to as "the Project") to the Kingdom of Tonga (hereinafter referred to as "Tonga"), and through discussion, field survey, and technical examination of the study results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Tonga side on the components of the draft report, JICA sent to Tonga the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Juichiro Sasaki, Chief Representative, JICA Fiji Office, and is scheduled to stay in the country from August 24 to August 29, 2009.

In the course of discussions, both sides have confirmed the main items described in the ATTACHMENT. The Team will proceed to further works and prepare the Basic Design Study Report.

Nuku'alofa, August 28, 2009


Mr. Juichiro SASAKI
Leader
Draft Report Explanation Team
Japan International Cooperation
Agency
Japan


Dr. Siale 'Akau'ola
Director of Health
Ministry of Health
Kingdom of Tonga

ATTACHMENT

1. Components of the Draft Report

The Tonga side agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid Scheme

The Tonga side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Tonga as explained by the Team and described in Annex-5 and Annex-6 of the Minutes of Discussions signed by both sides on March 24, 2009.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to Tonga by October 2009.

4. Confidentiality of the Project

Both sides confirmed that all information related to the Project including detailed specifications of equipment and other technical information shall not be released to any outside parties before the signing of all the Contract(s) for the Project.

5. Other Relevant Issues

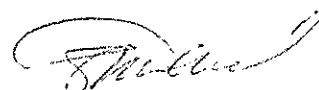
5-1 Confidentiality of the Project Cost Estimation

The Team explained the cost estimation of the Project as described in Annex-1. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside parties before the signing of all the Contract(s) for the Project. Tonga side understands that the Project Cost Estimation described in Annex-1 is not final and is subject to change.

5-2 Scope of Works

The issues discussed between the Team and the Tonga side are as follows:

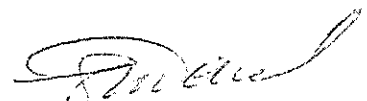
- (1) The Tonga side requested that the number of a mortuary refrigerator should be increased, based on the necessary number of deceased bodies to be kept in refrigerator, which ranged from 0 to 7 during last 9 months. The Team understood the necessity to increase the number of a mortuary refrigerator from 1 to 2 to keep 4 deceased bodies, while the space for 3 refrigerators for the mortuary would be included in the design, so that the Tonga side could procure another mortuary refrigerator to keep 6 deceased bodies at most.
- (2) Regarding the issue mentioned above (1), the area for the mortuary which is designed as 81.7 m² should be expanded to keep the space for 3 mortuary refrigerators. The Team understood the necessity for such change, as



reflected in the design drawings attached hereto as Annex-3-1.

- (3) The Tonga side requested that the space for VIP patients of the dental unit should be a separate room with a toilet because of the Tongan dignified cultural tradition, while it is suggested as a section of the dental room. The Team understood the necessity for such change, as reflected in the design drawings attached hereto as Annex-3-2.
- (4) The Tonga side requested that the waiting space of the dental unit should be converted into a room for dental pathologist, while the waiting space should be secured in the other area. The Team understood the necessity of such change, as reflected in the design drawings attached hereto as Annex-3-2.
- (5) Regarding the issue mentioned above (4), the Tonga side requested that the waiting space for 30 people of the dental unit should be prepared as the outside covered waiting space along with the corridor near to the dental unit. The Team understood the necessity of such change, as reflected in the design drawings attached hereto as Annex-3-2.
- (6) The Tonga side requested that 3 doors should be included for the multipurpose for the security and management purpose. The Team understood the necessity of such change, as reflected in the design drawings attached hereto as Annex-3-3.
- (7) The Tonga side requested that the plaster space of the accident and emergency (A&E) in the first floor of the outpatient department (O.P.D) should be separated from the treatment room for operational reason. The Team accepted such change, as reflected in the design drawings attached hereto as Annex-3-4. The both sides confirmed that the estimated cost increase would be predicted as minimum.
- (8) The Tonga side requested that 2 simulations rooms of the nursing school should be 1 room with the wider preparation space. The Team accepted such change, as reflected in the design drawings attached hereto as Annex-3-5. The both sides confirmed that the estimated cost increase would not be predicted.
- (9) The Tonga side requested that 2 changing rooms in the second floor of the O.P.D. should be converted to the consultant rooms and the security room should be converted to the office based on the needs of the rooms in this section. The Team accepted such change, as reflected in the design drawings attached hereto as Annex-3-6. The both sides confirmed that the estimated cost increase would not be predicted.
- (10) Both side agreed that a solar power system with a 30 KW capacity, which is approximately 20% of the total electrical consumption of the hospital, should be included in the scope of works of the Project.

Based on the above, both sides agreed, as the scope of works of the Project, the outline of the project described in Annex-2, design drawings described in Annex-3 with



several changes as reflected in Annex-3-1 to Annex-3-6 based the discussion between the Team and the Tonga side, and equipment list described in Annex-4.

Both sides also noted that the changes indicated in above (1), (2), (3), (4), (5) and (6) would cause the increase of the project cost estimation. Although further cost estimation is necessary, the Team pointed out that the predicted cost increase could be covered under the total project cost estimation indicated in above 5-1, by decreasing the number of air conditioners for the facilities of the Project. In reply, the Tonga side explained that all of the changes indicated in above (1) to (6) are necessary, and it would rather decrease the number of air conditioners to accommodate the necessary changes. Both sides agreed on these changes, and confirmed that such changes will be subject to approval of the Government of Japan.

5-3 Operation and Maintenance Cost

The Tonga side agreed to secure and allocate necessary budget and a staff for the proper and sustainable operation and maintenance of the facilities and the equipment to be provided under the Project as described in Annex-5.

The Tonga side also confirmed that it should allocate a maintenance staff for building and medical equipment including solar power system. Maintenance organization is described in Annex-6; however, currently the chief engineer, mechanical technician, and electrical technician posts are vacant. To address this issue, the Tonga side explained that it has already secured budget for hiring a chief engineer under the fiscal year (FY) 2009 budget (from July 2009 to June 2010) and it is currently looking for an appropriate personnel, while it has not secured any budget for hiring a mechanical technician and an electrical technician. The Team requested that the Tonga side should secure the budget for hiring a mechanical technician and an electrical technician under FY 2010 budget. The Tonga side agreed to it.

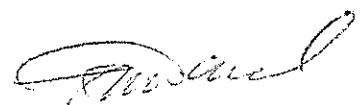
5-4 Obligation Works by the Tonga side

The Tonga side agreed to implement necessary infrastructure works and construction works related to the Project, such as demolition of existing two buildings, temporary relocation of pharmacy, PBX and IT server and these lines, by appropriate time with securing necessary budget allocation for expenses for such works as described in Annex-7. The Team explained that the timely completion of the obligation works by the Tonga side based on the schedule in Annex-7 is crucial for Japanese side to implement its works as scheduled, and in case that works by the Tonga side would be behind the schedule for certain period of time, Japanese side might have to re-schedule its implementation schedule accordingly.

5-5 Building Permission and Other Necessary Approval

The Tonga side confirmed that it should assign local architect and engineers.

The Tonga side explained the procedure for the design approval and building



permission, which the Ministry of Health would endorse drawings for submission and receive approval from the Ministry of Public Works. The Tonga side further described that it could proceed with the both process simultaneously, and necessary duration would be 3 months at most. The Tonga side confirmed that such process would be completed before tender notice for the Project.

5-6 Tentative Schedule of the Project

The tentative schedule of the Project is described in Annex-8.

Annex-1 Project Cost Estimation

Annex-2 Outline of the Project

Annex-3 Design Drawings

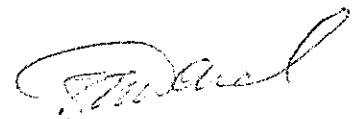
Annex-4 Equipment List

Annex-5 Operation and Maintenance Cost for Facilities and Equipment

Annex-6 Maintenance Organization

Annex-7 Undertakings by the Tonga side

Annex-8 Tentative Schedule of the Project



Project Cost Estimation

(1) Cost borne by Japanese side

The cost borne by Japanese side is estimated at approximately 1,981.1 million Japanese yen.

Item		Approximate Project Cost (million yen)		
Facility	Object Facility	1,607.3	1,634.5	1,806.7
	Furniture, etc	27.2		
Equipment Procurement		172.2		
Detailed Design, Consultant Supervision				174.4
TOTAL				1,981.1

(2) Estimation Condition

① Time of Estimation

July 2009

② Foreign Exchange Rate

T\$ 1 = JPY 47.56 (as of July 2009)

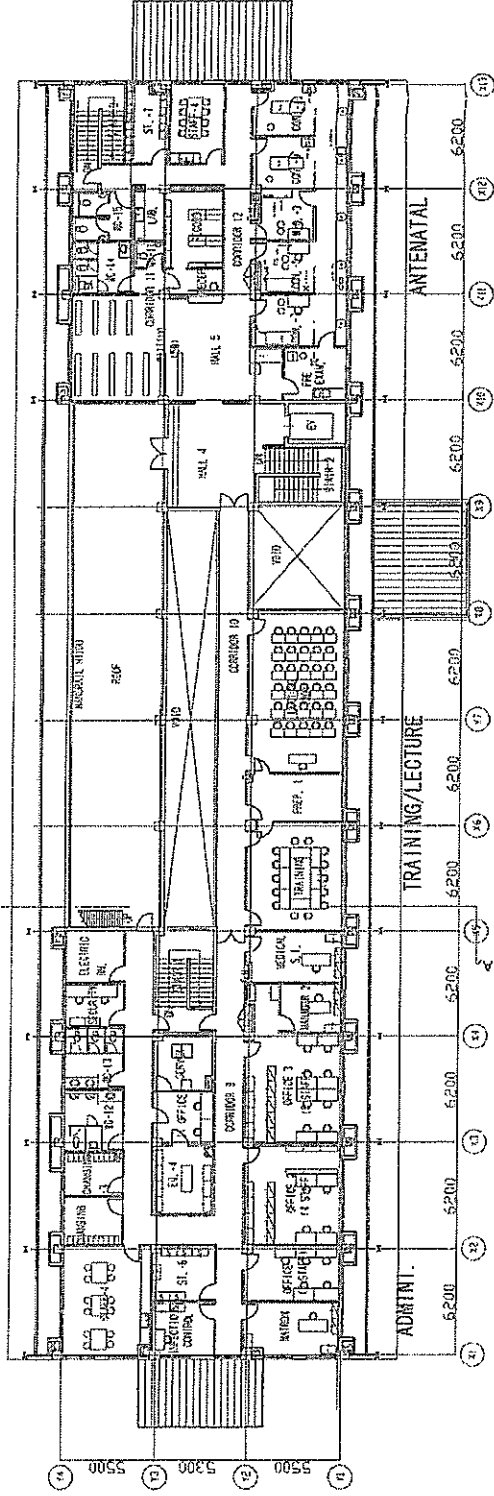
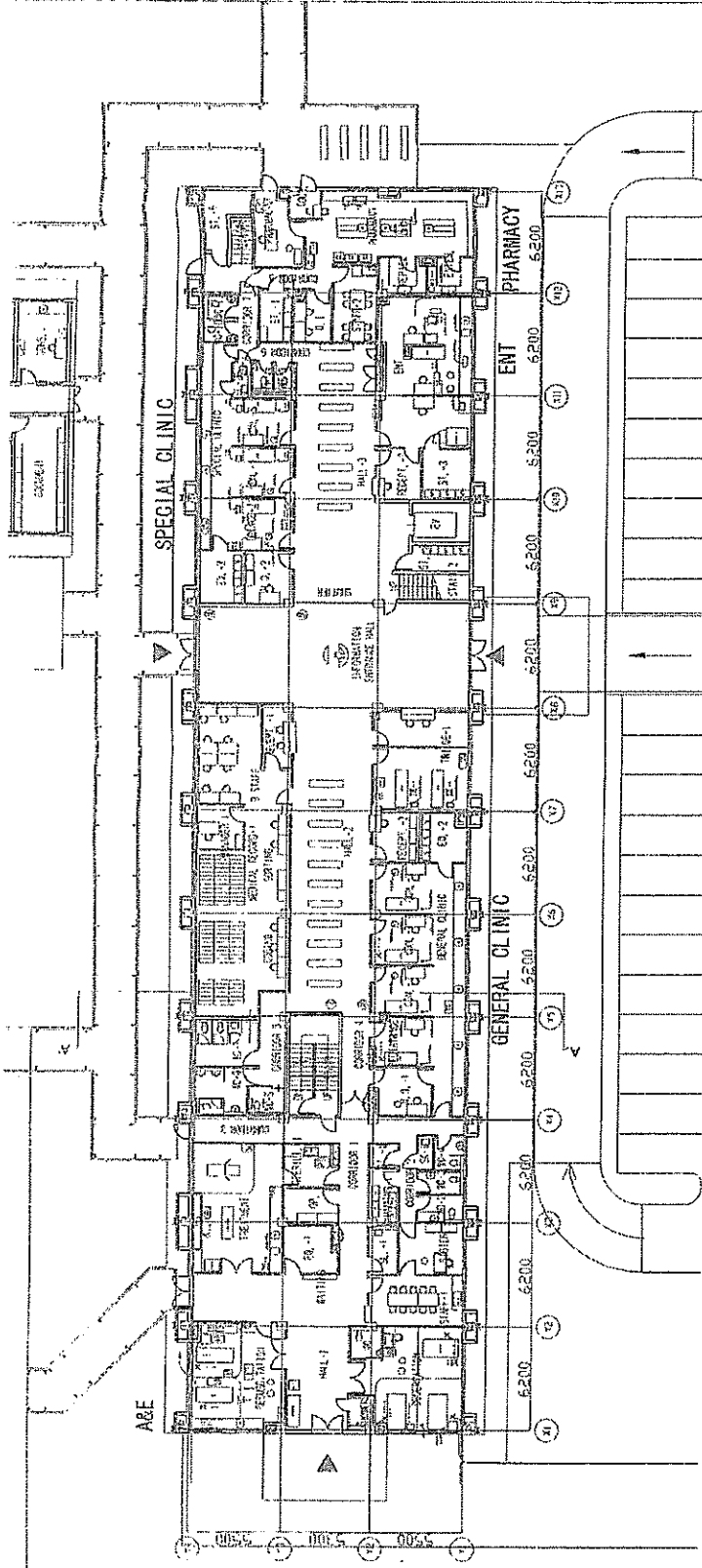
*Note T\$ 1 : Tonga dollars

Outline of the Project

Major project breakdown (total floor area)	Composition of Facilities	Contents of each Composition
Facility (5,108.6 m ²)	O.P.D. New two storied building. 2,280.0 m ²	Basement floor: Pit for Rainwater Reservoir First floor O.P.D.: Waiting Hall. General Clinic. Accident and Emergency, Special Clinic (Internal Medicine, Surgical, ENT). Pharmacy of Outpatients Second floor Antenatal: Waiting Hall. Consulting rooms Administration: Medical Office. Accounts Training: Training room. Lecture room IT Service: IT office. Server room
	O.P.D. ANNEX Renovated single storied building, 582.4 m ²	O.P.D.: Ophthalmology. Diabetes, Physiotherapy
	Dental Unit New single storied building 396.1 m ²	Dental room. Dental tech. room, X-ray room, Machine room. Waiting Space
	Multipurpose New single storied building 126.0 m ²	Waiting Space (Multipurpose use)), Storage for furniture
	Nursing School New single storied building 596.1 m ²	Class room, Simulation room, Library, Computer room. Office
	Mortuary New single storied building 98.4 m ²	Morgue, Hall
	Outside waiting space. Passage with covered Roof 987.7 m ²	Waiting space for Pharmacy of Outpatients. Ophthalmology. Diabetes, Physiotherapy Covered Passage connecting the project facilities and existing facilities
	Ancillary Mechanical Facility New single storied Building 41.9 m ²	City Water pump room, Sewage water pump room, City Water Reservoir Tank. Elevated water reservoir tank, Sewage treatment plant
Medical Equipment	The equipment necessary for the project facilities (Accident and Emergency, General Clinic, Special Clinic, Antenatal, Physiotherapy, Pharmacy of Outpatients, Dental, Nursing School, Mortuary, etc)	

STORAGE

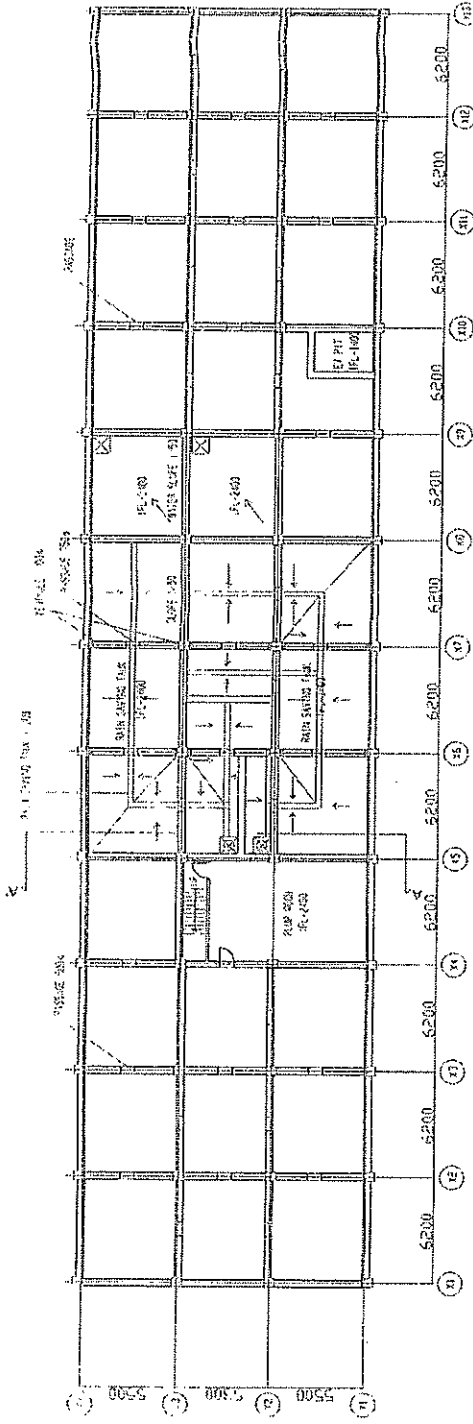
O. P. D. FIRST FLOOR PLAN SCALE 1/300



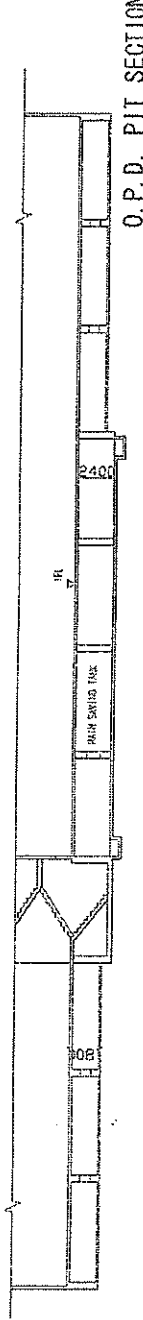
O. P. D. SECOND FLOOR PLAN SCALE 1/300

ABBREVIATION	DESCRIPTION
RECEPT.	RECEPTION
ST. STORAGE	ST. STORAGE
ADM. OVERSIGHT	ADM. OVERSIGHT
ADM. SUITE	ADM. SUITE
ST. 2-1	ST. 2-1
ST. 2-2	ST. 2-2
ST. 2-3	ST. 2-3
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ST. 2-79	ST. 2-79
ST. 2-80	ST. 2-80

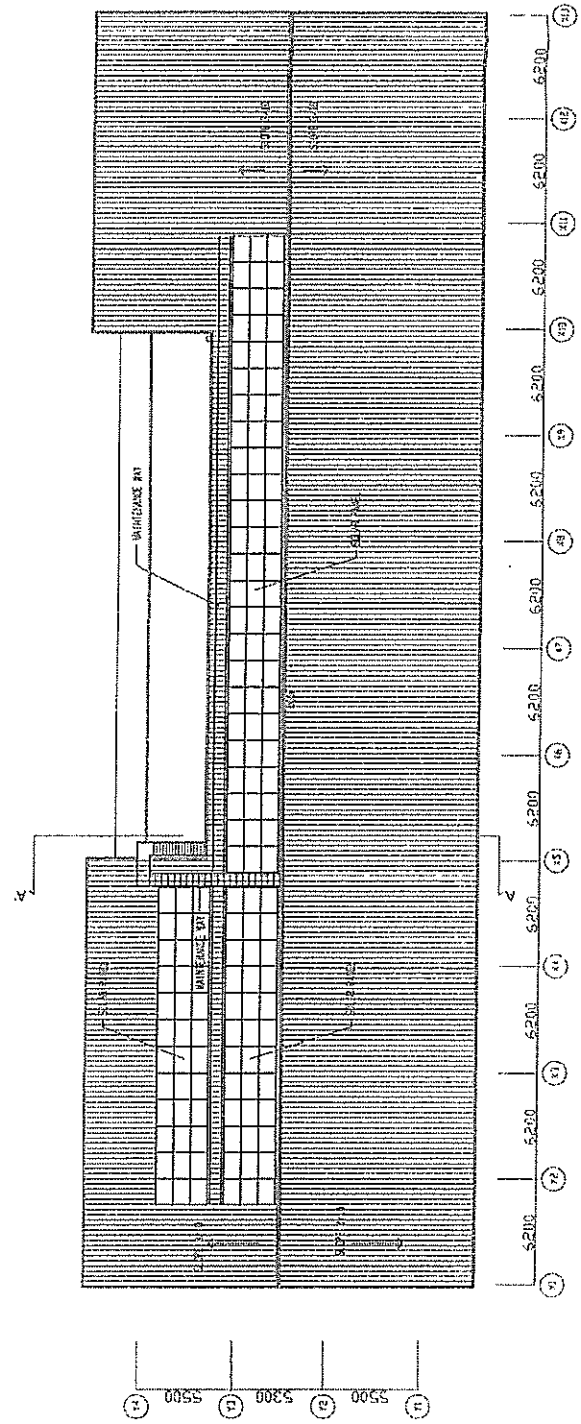
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O.P.D. BASEMENT FLOOR PLAN SCALE 1/300

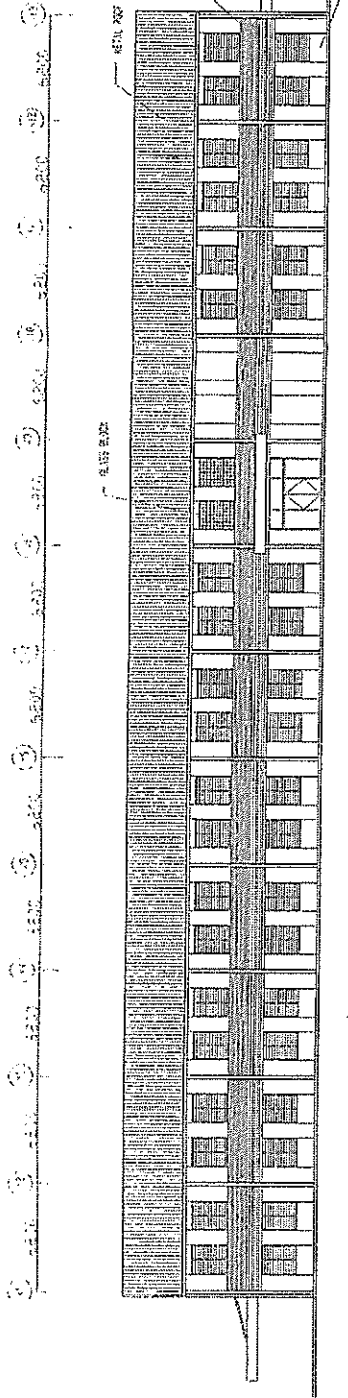


O.P.D. PIT SECTION SCALE 1/300

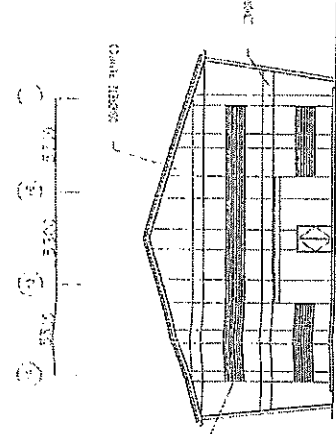


O.P.D. ROOF PLAN SCALE 1/300

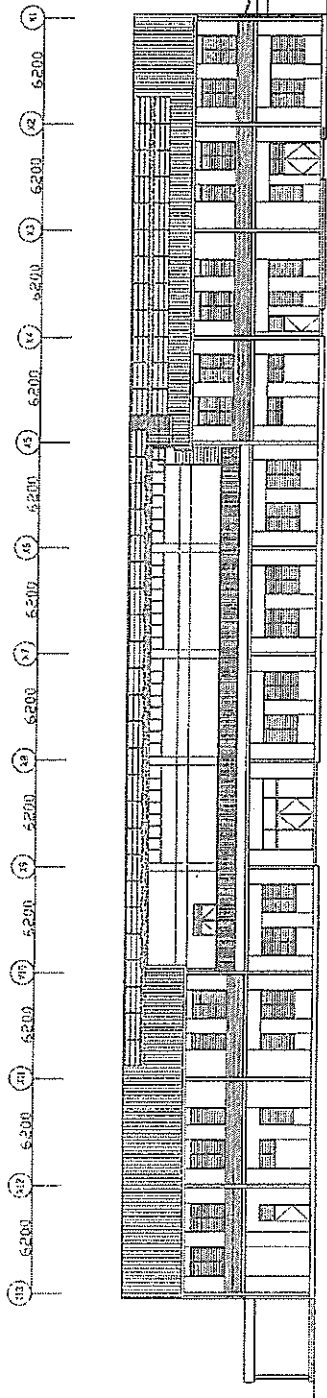
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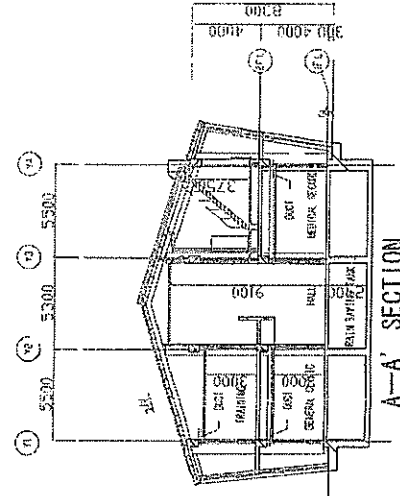
SOUTH-EAST ELEVATION



SOUTH-WEST ELEVATION

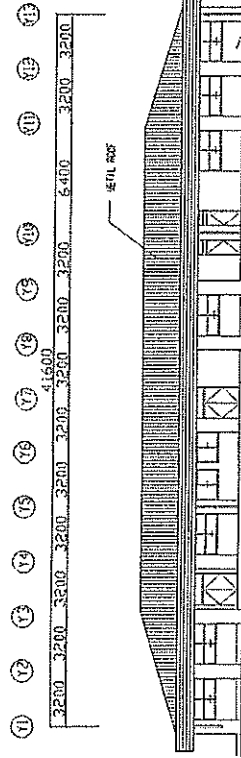


NORTH-WEST ELEVATION

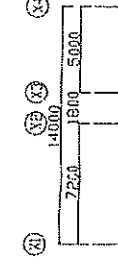


A-A' SECTION

O. P. D. SCALE 1/300

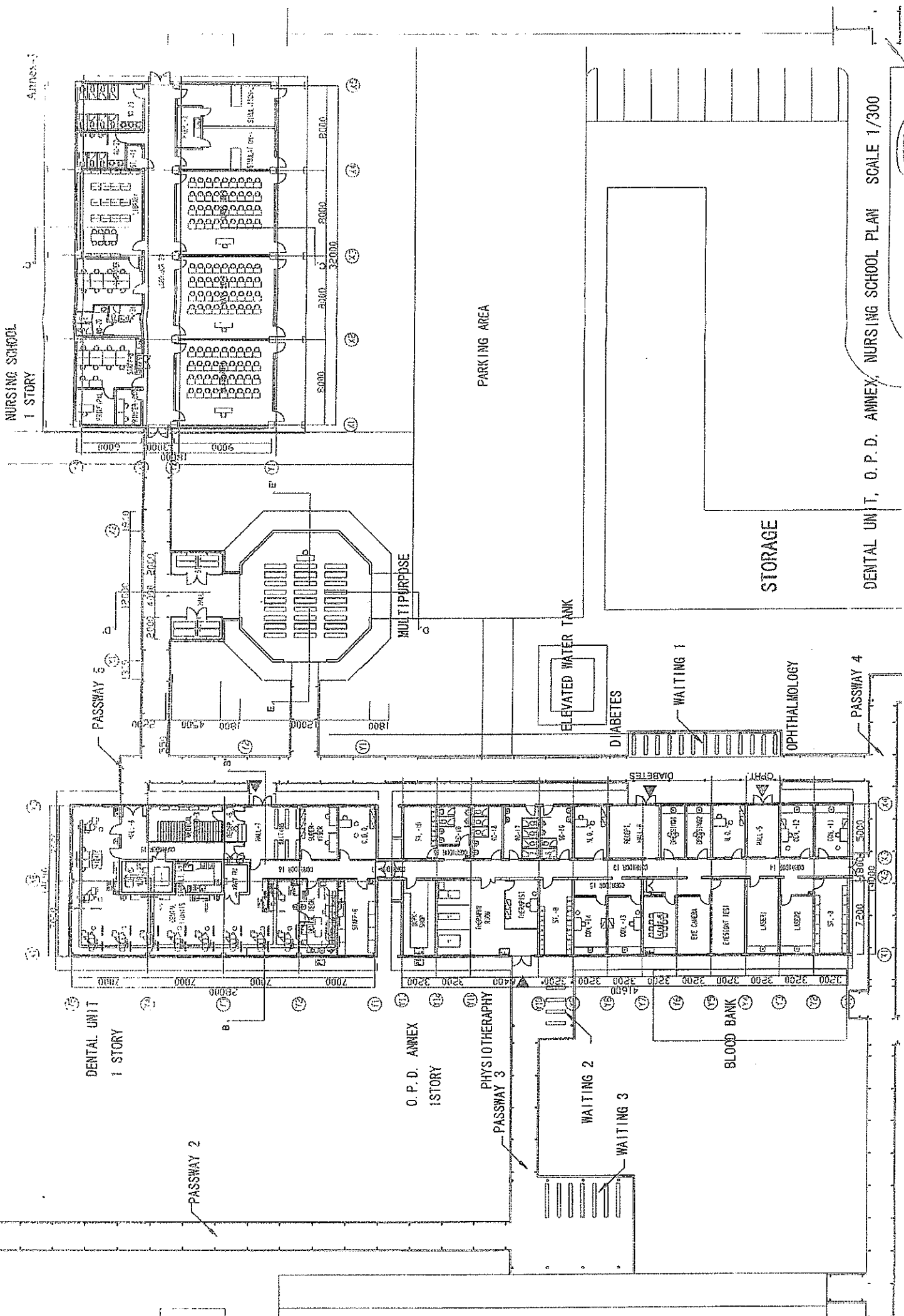


NORTH-EAST ELEVATION



NORTH-WEST ELEVATION

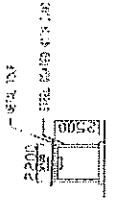
O. P. D. ANNEX SCALE 1/300



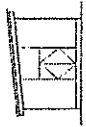
DENTAL UNIT, O. P. D. ANNEX, NURSING SCHOOL PLAN SCALE 1/300



PASSWAY-1~5



PASSWAY-1~3



ELEVATION D



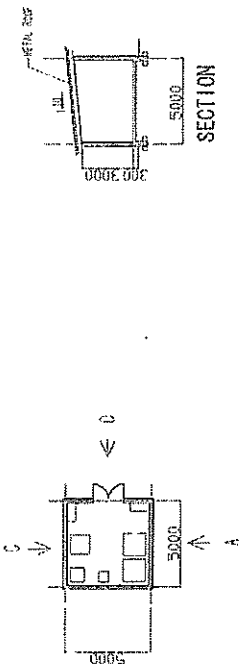
ELEVATION C



ELEVATION B

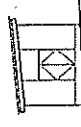


ELEVATION A



SECTION

PUMP RM (CITY WATER) S=1/300



ELEVATION D



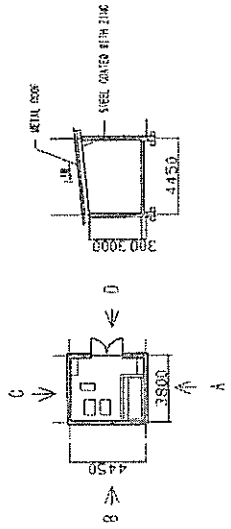
ELEVATION C



ELEVATION B

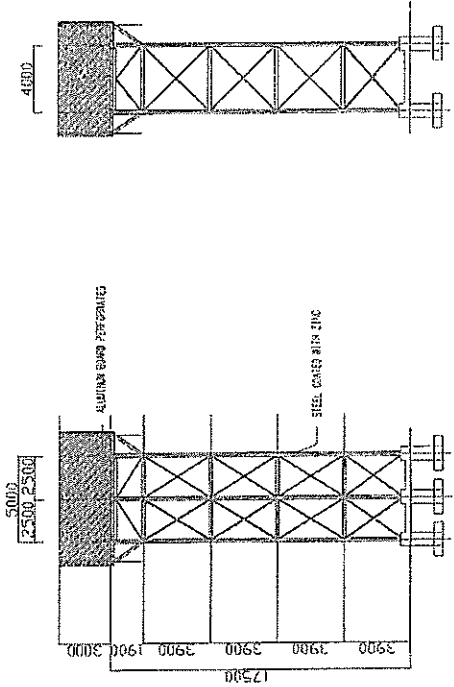


ELEVATION A



FIRST FLOOR PLAN

MR (SEWAGE WATER PUMP ROOM) S=1/300



ELEVATION

SCALE 1:300

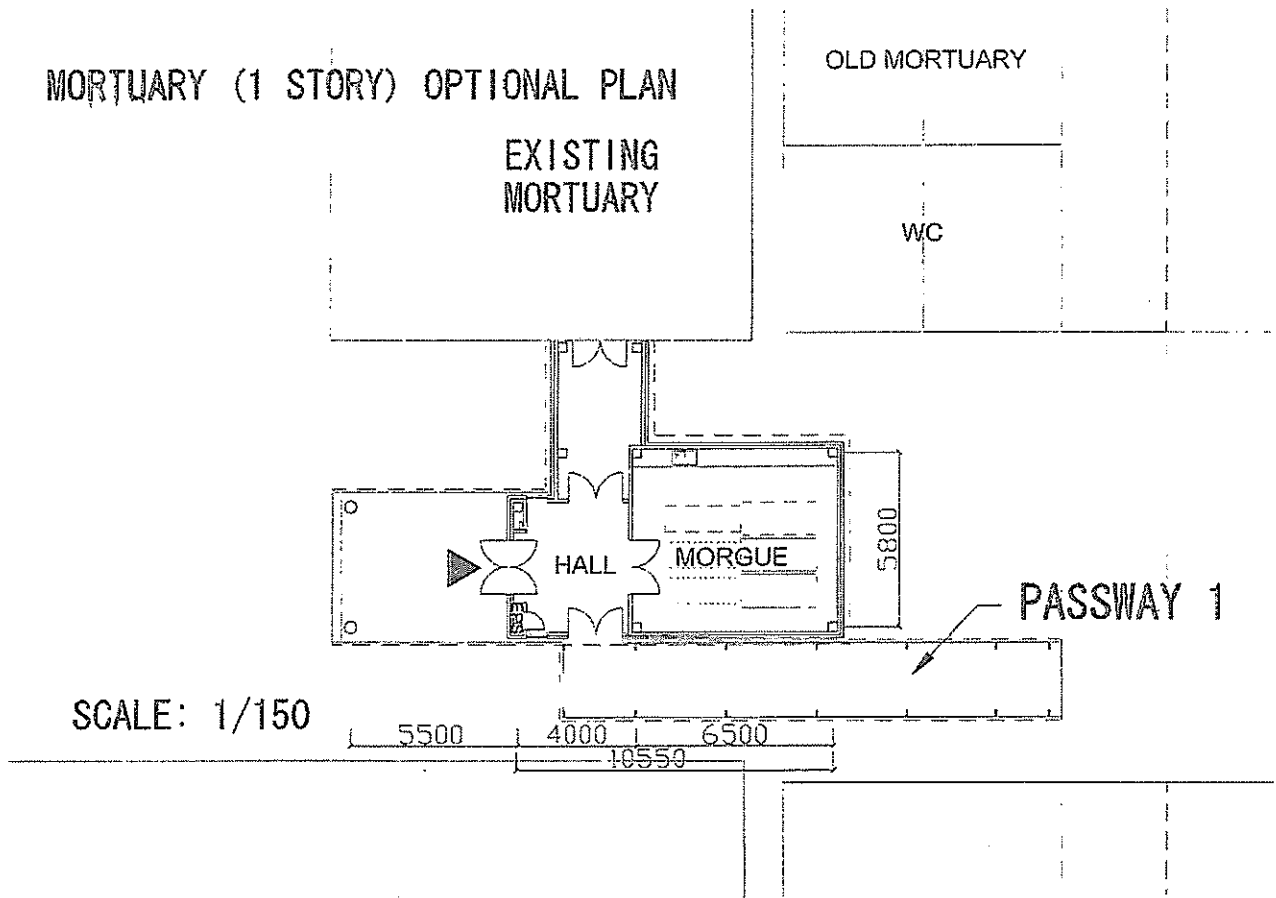
ELEVATED WATER TANK S=1/300

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Mortuary layout change: Expand the area of Morgue

Morgue space will include the capacity of 3 No. of mortuary refrigerator

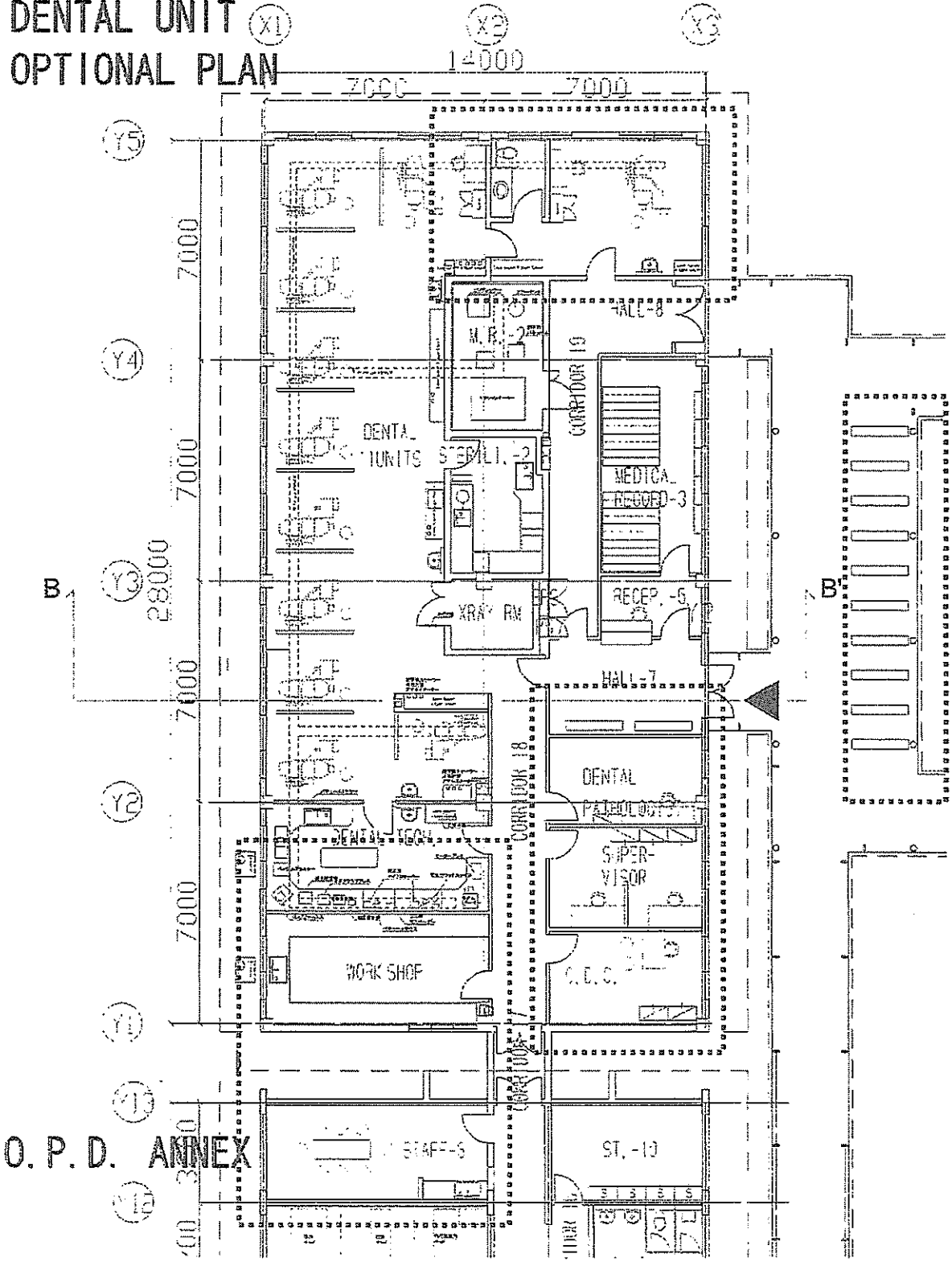
(2 No. of mortuary refrigerator will be included in the Project)



Dental Unit

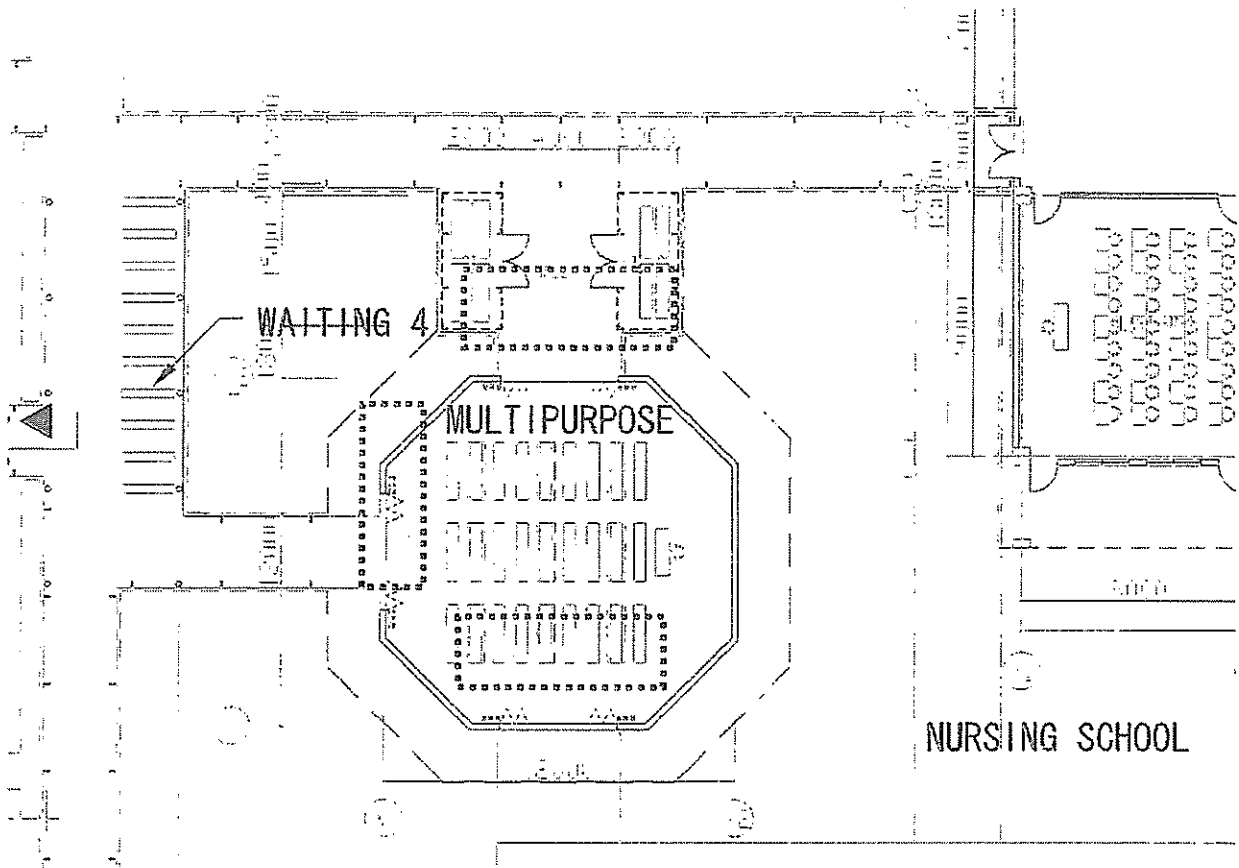
- Additional partition and Toilet for VIP dental clinic
- Additional room for Dental Pathologist
- Change location of Work shop and Staff room
- Outside waiting space for 30 patients

DENTAL UNIT (X1)
OPTIONAL PLAN



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Multipurpose Room
- Additional doors

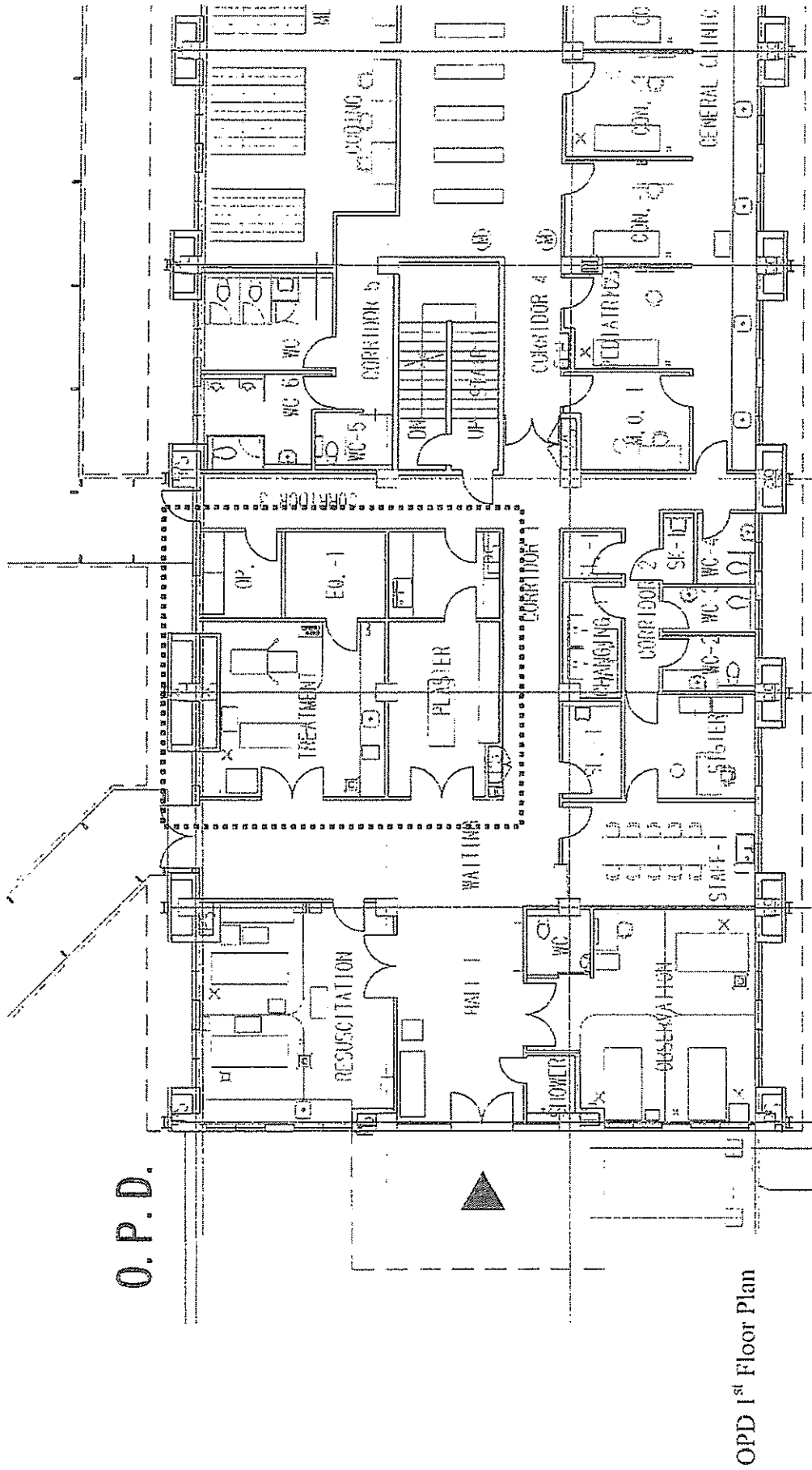


Multipurpose 1st Floor Plan

مدرسة

1. Layout change for Plaster Room

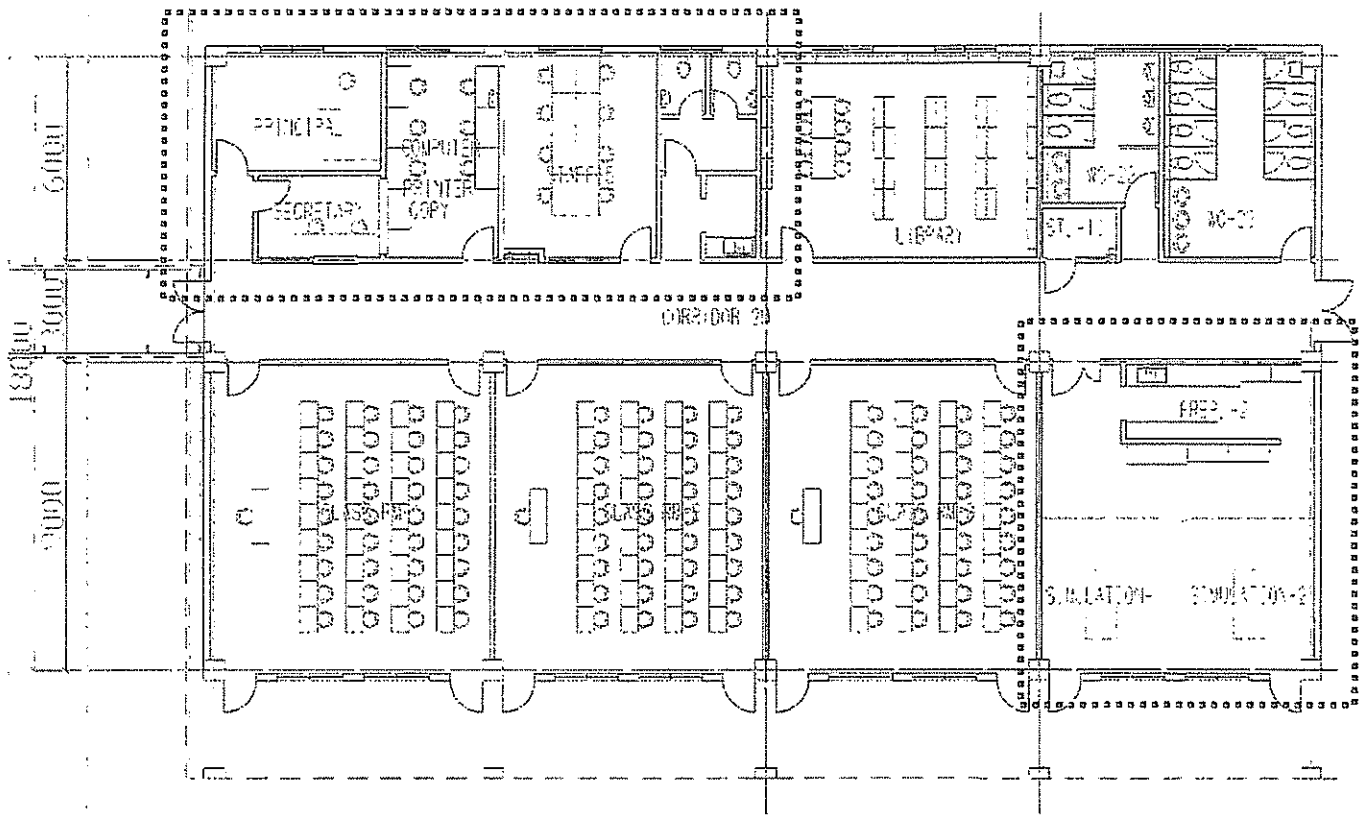
- Treatment and Plaster room layout has changed without any increment of floor area and buildings quantities.



OPD 1st Floor Plan

5. Nursing School

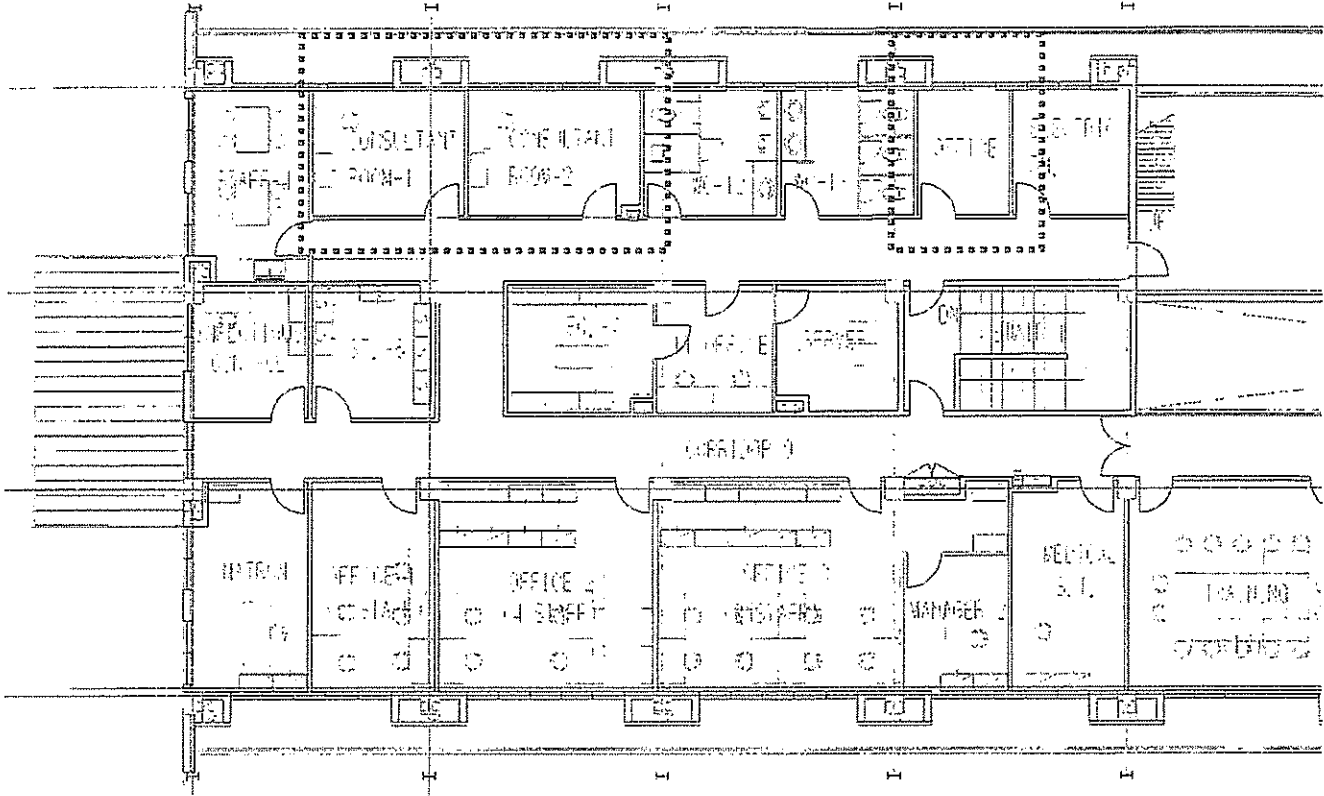
- Layout change for Principal room, Secretary room, Computer room, Staff room and Staff toilet.
- Partition wall of Simulation -1 and 2 shall be changed to Curtain
- Expand room area for Preparation at Simulation



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6. Room name change for Consultant room and Office



OPD 2nd Floor Plan

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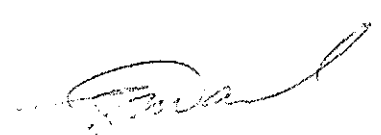
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Equipment List

No.	Name of Equipment	Requested Quantity
1	Defibrillator	1
2	Emergency Cart	1
3	Electrocardiographa	3
4	Patient Monitor	2
5	Nebulizer	3
6	Suction Unit	4
7	Examination Light	8
8	Patient Trolley	2
9	Stretcher	3
10	Tabletop Autoclave	6
11	Weighing Scale, Adult	3
12	Weighing Scale, Infant	4
13	Height Scale	3
14	Mobile Operating Light	1
15	Wheel Chair	2
16	Pulse Oximeter	3
17	Portable Pulse Oximeter	1
18	Infusion Pump	1
19	Portable Glucometer	2
20	IV Stand	10
21	Observation Bed	3
22	Diagnostic Set	6
23	Dressing Trolley	13
24	Sphygomomanometer	8
25	IVF Warmer	1
26	Color Doppler Ultrasound	1
27	Treatment Instrument Set	2
28	Laryngoscope, Adult	1
29	Laryngoscope, Infant	1
30	Tracheotomy Instrument Set	1
31	Resuscitation Bag, Adult	1
32	Resuscitation Bag, Infant	1
33	Film Illuminator	7
34	Oxygen Flowmeter	3
35	Surgical Scrub Station	2
36	Instrument Cabinet	1
37	Examination Table	13
38	Syringe Pump	1
39	ENT Treatment Unit	1
40	ENT Instrument Set	1
41	Audiometer	1
42	Sound Proof Unit	1
43	Tracheal Intubation Fiberscope	1
44	Nasal Polypectomy Instrument Set	1
45	Tonsillectomy Instrument Set	1
46	Laryngectomy Instrument Set	1
47	Cleft Lip Plasty Instrument Set	1
48	Mastoidectomy Instrument Set	1
49	Fetal Doppler	2
50	Fetoscope	7
51	Gynecological Examination Table	3
52	Vaginal Instrument Set	6
53	Therapy Bed	1
54	Cupboard for Dangerous Drugs	1
55	Medical Refrigerator	1
56	Water Distiller, Large	1
57	Water Distiller, Small	1
58	Electronic Balance	1
59	Medicine Trolley	2
60	Small Instrument Set	1
61	Dental Unit	1
62	Dental X-ray Unit	1
63	Panoramic X-ray Unit	1
64	X-ray Film Developer	1

No.	Name of Equipment	Requested Quantity
65	Ultrasonic Scaler	5
66	Amalgamator	5
67	Light Curing Unit	3
68	Extraction Instrument Set	1
69	Dental Instrument Set	3
70	Apex Locator	1
71	OMFS Surgical Instrument Set	1
72	High Speed Micromotor Drill	1
73	OMFS Wiring Instrument Set	1
74	Osteosynthesis Instrument Set	1
75	Exodontia Instrument Set	1
76	Surgical Micromotor	1
77	Model Trimmer	1
78	Resing Curing Unit - Pressure Pot	1
79	Vibrator	1
80	Laboratory Lathe	1
81	Resing Curing Unit	1
82	Vacuum Mixer	1
83	Pencil Sand Blaster	1
84	Thermoplastic Pressure Former	1
85	Laboratory Micromotor	2
86	Centrifugal Casting Machine	1
87	Burnout Furnace	1
88	Hydraulic Flask Press	1
89	Articulator	2
90	Impression Tray	10
91	Flasks Set	13
92	Dental Bunsen Burner	2
93	Electric Wax Knife	1
94	Dust Collector	1
95	Dental Laboratory Instruments	1
96	Anatomical Human Body, Male	1
97	Anatomical Human Body, Female	1
98	Human Skelton	1
99	Circulatory System Model	1
100	Respiratory Organ Model	1
101	Nasal/Throat/Pharynx Model	1
102	Pregnant Uterus Model	1
103	Phantom for Delivery	1
104	Injection Simulator	2
105	Nursing Care Manekin for Patient Care	1
106	Clinical Procedure Training Manekin	1
107	Resuscitation Simulator	1
108	Child Care Simulator	1
109	Pediatric Care Simulator	1
110	Newborn Advance Care Simulator	1
111	Torso Model	1
112	Heart Disease 3D Display Model	1
113	Death of an Artery Model	1
114	Nasogastric Tube Feeding Model	1
115	Heart Model	1
116	Functional Larynx Model	1
117	Brain Model	1
118	Kidev Model	1
119	Skin Section Model	1
120	Median Section of the Head Model	1
121	Functional Heart System Model	1
122	Functional Eye	1
123	Food Pyramid Kit	1
124	Diabetes Teaching Kit	1
125	Chart for Education	1
126	Neonatal Cot	1
127	Nursing Utensils Set	1
128	Binocular Microscope	1
129	Walking Aids	1
130	Bed	2

No.	Name of Equipment	Requested Quantity
131	Examination Instrument Set	1
132	Oxygen Set	1
133	Commode Chair	1
134	TV System	1
135	Cabinet	1
136	Mortuary Refrigerator	2

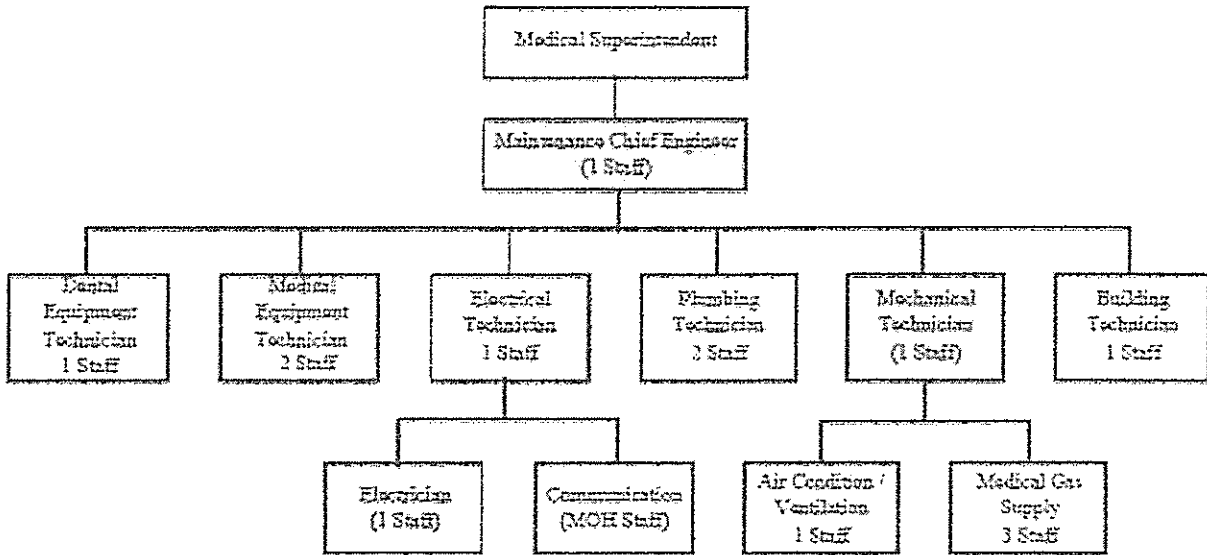


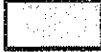
Operation and Maintenance Cost for Facilities and Equipment

(T\$)

Item	Initial fiscal year	Following fiscal years
① Electricity charge	119,955	119,955
② Telephone charge	3,240	3,240
③ Fuel cost of generator	22,680	22,680
④ Water charge	25,650	25,650
⑤ LPG gas charge	2,844	2,844
⑥ Oxygen charge	3,600	3,600
⑦ Major facilities and equipment maintenance cost	0	32,380
⑧ Building maintenance cost	0	20,000
⑨ Solar panel	0	0
⑩ Replacement parts	0	3,200
Subtotal ①~⑩(facility maintenance cost)	177,969	233,549
⑪ Cost of consumables	11,848	11,848
⑫ Cost of spare parts	0	147,971
⑬ Maintenance contract cost	10,511	10,511
小計 ①~⑬(Equipment maintenance cost)	22,359	170,330
Total ①~⑬	200,328	403,879

Maintenance Organization



 To be assigned

Undertakings by the Tonga side

Item	To be completed	Expense (T\$)
(1) Related works preceding the construction works		
① Demolition of the existing medical wards and Rough grading	July 2010	220,000
② Transfer of existing electrical lines in the project areas	July 2010	20,000
③ Temporary relocation of Pharmacy	July 2010	50,000
④ Dismantle deteriorate 300kva transformer	July 2010	50,000
⑤ Temporary Diversion of existing telephone lines including MDF and PBX in the project areas	July 2010	20,000
⑥ Temporary Diversion of existing IT lines and servers in the project areas	July 2010	20,000
⑦ Temporary Diversion of the existing water supply & fire protection system in the project areas	July 2010	30,000
⑧ Temporary Diversion of the existing water drainage system in the project areas	July 2010	20,000
(2) Related works during and after facility construction		
① Road works in areas other than the project site	April 2012 or after	20,000
② Landscaping and planting in the project areas	April 2012 or after	88,000
③ Lead in of the water supply system to the project areas	October 2011	50,000
④ MDF and PBX works for the project facilities and extension of telephone lines up to those facilities	April 2012 or after	220,000
⑤ Transfer of IT lines and servers to the IT rooms of the project facilities	April 2012 or after	20,000
⑥ Transfer of existing furniture equipment to the project facilities	April 2012 or after	50,000
⑦ Install new curtain	April 2012 or after	80,000
⑧ Renovation of the existing O.P.D. after the completion of the current work	April 2012 or after	1,400,000
⑨ Demolition of the existing Nursing School after the completion of the current work	June 2012 or after	110,000
⑩ Transfer of the kitchen and laundry room to the existing diabetes/physiotherapy clinic after completion of the current work	April 2012 or after	100,000
⑪ Renovation of the existing kitchen and laundry areas and conversion into a workshop and storage after the completion of the current work	April 2012 or after	206,950

資料 5 . 事業事前計画表 (基本設計時)

1. 案件名
トンガ王国バイオラ病院改善整備計画 (第2次)
<p>2. 要請の背景 (協力の必要性・位置付け)</p> <p>トンガ王国 (以下、「ト」国) は大洋州に属した大小 172 の島から構成される立憲君主国家である。「ト」国は北部ババウ地域 (Vava'u)、中部ハアパイ地域 (Ha'apai)、南部トンガタプ地域 (Tongatapu) の三つの行政区分からなり、首都は南部の「ト」国最大の島であるトンガタプ島の中心地ヌクアロファ市である。国全体の面積は 700 平方キロメートル (対馬とほぼ同じ)、人口は 101,991 人 (2006 年、トンガ財務計画省統計局)、1 人あたり GNI (国民総所得) は 2,320 米ドル (2007 年世銀) である。</p> <p>「ト」国政府は第 8 次国家開発計画 (2006/7-2008/9) の中で国家ビジョンの一つに保健医療サービスの改善を重点課題としており、「ト」国で唯一の高度医療サービスを行うバイオラ病院の施設・機材の老朽化、手術室数不足、集中治療ベッドの不足などによる医療サービスの質の低下、安全性低下を解消すべく、世界銀行の支援を受けてバイオラ病院全体の改善整備のためのマスタープラン (以下、「M/P」) を策定した。M/P では、同病院全体の新築、改修工事を 6 つに分割してドナーの支援を得て計画を進める方針が示された。同 M/P の第一段階として、2004 年から我が国の無償資金協力により産科病棟・外科病棟・中央診療棟などからなる施設・機材整備が行われ、第二段階として世界銀行の支援により、内科棟・小児科棟・精神病棟などを含む施設・機材整備が行われた。かかる背景の中、「ト」国政府は同 M/P の最終段階として、残る管理・救急・外来棟等の施設の新築・改修の工事とそれらに関連する機材整備について、その実施に対する我が国の無償資金協力を要請してきた。</p>
3. プロジェクト全体計画概要
<p>(1) プロジェクト全体計画の目標</p> <p>バイオラ病院において保健医療サービスが回復・改善され、災害時の医療サービス提供の拠点を確保する</p> <p>《裨益対象の範囲及び規模について》</p> <p>「ト」国全体とその国民約 10 万人</p> <p>(2) プロジェクト全体計画の成果</p> <p>バイオラ病院の<u>施設・機材が整備・調達される</u></p> <p>バイオラ病院の運営体制が整備される</p> <p>(3) プロジェクト全体計画の主要活動</p> <p>ア <u>施設を整備する</u></p> <p>イ <u>機材を調達する</u></p> <p>ウ 上記施設・設備を使用して医療活動を実施する</p> <p>(4) 投入 (インプット)</p> <p>ア <u>日本側 (= 本案件) : 無償資金協力 19.81 億円</u></p>

イ 相手国側

(ア) 本無償資金協力案件の実施に係わる負担額：1.32 億円

(イ) 本無償資金協力案件対象施設の改修後の維持管理経費：年平均 0.12 億円

(5) 実施体制

主管官庁及び実施機関：トンガ王国保健省

4. 無償資金協力案件の内容

(1) サイト

トンガ王国ヌクアロファ市

(2) 概要

- ① バイオラ病院の新設（外来部門、専門外来部門、薬局、産前検診部門、眼科部門、糖尿病部門、理学療法部門、歯科部門、教育・セミナー部門、事務・管理部門、看護学校、霊安室、排水処理プラント（浄化槽機械室）、受水槽設備、雨水利用設備
- ② 上記施設及び既存施設に対する関連機材の調達

(3) 相手国側負担事項

- ① 本計画の施設着工前の関連工事
 - 本計画対象敷地内の既存病棟の解体・整地ならびにその敷地内を通る電線、電話線、IT ケーブル、給水配管などの迂回工事
 - 本計画対象敷地内にある薬局の仮移設
 - 既存 MDF、PBX、サーバーの仮移設
- ② 本計画の施設工事中および完成後の関連工事
 - 「ト」国側で実施する本計画対象敷地外の道路、造園、植栽、カーテン取り付け工事
 - 本計画施設への給水、電話などの引き込み工事
 - 本計画施設への MDF、PBX、サーバー本体の移設ならびに IT ケーブルの接続
 - 既存機材および家具の移動
 - 看護学校の解体、本計画完成後の既存外来棟、糖尿病・理学療法棟、キッチン・ランドリールーム、ワークショップ・倉庫工事の改修

(4) 概算事業費

概算事業費：21.13 億円（無償資金協力 19.81 億円、「ト」国側負担 1.32 億円）

(5) 工期

詳細設計・入札期間を含め約 26 ヶ月（予定）

(6) 貧困、ジェンダー、環境及び社会面の配慮

本計画施設からの排水は現地の排水基準に沿って 30PPM に処理した後に地下浸透式で排水する。

本計画施設からの医療廃棄物は、一般ごみと分別してバイオラ病院が有する高圧滅菌処理機で処理が行われたのち専用施設に廃棄される。

5. 外部要因リスク

「ト」国内の政情・治安が悪化しない。

6. 過去の類似案件からの教訓の活用

完成後の施設の清掃、クリーニング、排水処理施設の定期的なメンテナンスの実施などが行われるよう「ト」国側担当者、責任者とともに設計、計画の内容を詳細かつ繰り返し確認をする。

7. プロジェクト全体計画の事後評価に係る提案

(1) プロジェクト全体計画の目標達成を示す成果指標

項目	現状(2008年)	計画(2014年)
一般外来患者数	66,625人/年	増加する
専門外来患者数	7,173人/年	増加する
歯科患者数	26,321人/年	増加する
看護学校学生数	92人	増加する
海外との交換プログラム数	3件	増加する

(2) その他の成果指標

特になし

(3) 評価のタイミング

施設完工および機材据付完了から2年経過後(2014年)

資料6 . 参考資料 / 入手資料リスト

番号	名 称	形態	オリジナル / コピー	言語	発行機関 (収集先)	発行日
国際援助関連						
1	GOVERNMENT OF TONGA SAVINGRAM FOR COMPLETION OF MASTER PLAN	印刷	印刷データ	英語	DIRECTOR OF HEALTH	2006
2	GOVERNMENT OF TONGA SAVINGRAM FOR DENTAL SECTION	印刷	印刷データ	英語	DIRECTOR OF HEALTH	2007
3	ENHANCING AND STANDARDISING REGIONAL TRAINING PROGRAMMES IN NURSING MAPPING EXERCISE 2007	印刷	印刷データ	英語	JAMES COOK UNIVERSITY	2007
バイオラ病院関連						
4	ACTIVITY OF DENTAL SERVICES, 2004-2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
5	NURSING DIVISION STRUCTURE AND NUMBER IN EACH LEVEL 2009	印刷	印刷データ	英語	VAIOLA HOSPITAL	2009
6	NUMBER OF PATIENTS AT EYE CLINIC 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
7	THEATHER REPORT 2008 NUMBER OF OPERATIONS PER MONTH	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
8	NUMBER OF PATIENTS AT ANTENATAL 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
9	DEATH REGISTRY RECORD SUMMARY-2008, 2009	印刷	印刷データ	英語	VAIOLA HOSPITAL	2009
10	REQUEST MEMO BY OTOLARYNGOLOGY MAR 17. 2009	印刷	オリジナル	英語	VAIOLA HOSPITAL	2009
11	MORTUARY REGISTRY RECORD 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
12	NUMBER OF PRESCRIPTION AT PHARMACY 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
13	E. N. T. SERVICES FOR 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
14	NUMBER OF PATIENTS AT DIABETES 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
15	NUMBER OF SURGICAL WARD ADMIT, SPECIAL CLINIC AND SURGICAL CLINIC 2008	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
16	PAEDIATRIC ADMISSION	印刷	印刷データ	英語	VAIOLA HOSPITAL	2008
17	REQUEST OF PHARMACY	印刷	印刷データ	英語	VAIOLA HOSPITAL	2009
18	SKETCH OF PHARMACY	手書き	オリジナル	英語	VAIOLA HOSPITAL	2009
19	MEMO OF STAFF OF ADMINI	手書き	オリジナル	英語	VAIOLA HOSPITAL	2009
保健省関連						
20	ESTIMATION OF EXPENSE AT MINISTRY OF HEALTH 2007-2009	印刷	印刷データ	英語	MINISTRY OF HEALTH	2007
21	ANNUAL REPORT 2007	データ 印刷	ソフトデータ 印刷データ	英語	GOVERNMENT OF TONGA	2007
22	REPORT OF THE MINISTER OF HEALTH FOR THE YEAR 2005	データ	ソフトデータ	英語	MINISTRY OF HEALTH	2005
23	THE TONGA NATIONAL HEALTH ACCOUNTS FY 2003/2004	データ	ソフトデータ	英語	MINISTRY OF HEALTH	2004
24	REPORT OF THE MINSTER FOR HEALTH FOR THE YEAR 2007	データ	ソフトデータ	英語	MINISTRY OF HEALTH	2007
25	MINISTRY OF HEALTH UPDATED FINANCIAL REPORT	印刷	印刷データ	英語	MINISTRY OF HEALTH	2009
看護学校関連						

番号	名 称	形態	オリジナル/ コピー	言語	発行機関（収集先）	発行日
26	AWARD AND AGREEMENT OF NURSE TRAINEE POSITION AT THE QUEEN SALOTE SCHOOL OF NURSING, MINISTRY OF HEALTH, GOVERNMENT OF TONGA	データ	ソフトデータ	英語	NURSING SCHOOL	
27	QUEEN SALOTE SCHOOL OF NURSING DIPLOMA OF NURSING CURRICULUM DOCUMENT (REVISED) DECEMBER 2002	データ	ソフトデータ	英語	NURSING SCHOOL	2002
28	FEEDBACK ON THE NURSING SCHOOL BUILDING	データ	ソフトデータ	英語	NURSING SCHOOL	2009
29	CURRICULUM OF NURSING SCHOOL	印刷	印刷データ	英語	NURSING SCHOOL	2009
共通資料						
30	CORPORATE PLAN 2007-2009	データ 印刷	ソフトデータ 印刷データ	英語	MINISTRY OF LANDS SURVEY, NATURAL RESOURCES AND ENVIRONMENT	2007
31	GENERAL WARDS-3STORY COMPLEX STRUCTURAL REVIEW, December 2003	データ	ソフトデータ	英語	KRAMER(TONGA) Ltd	2003
32	DEVELOPMENT CREDIT AGREEMENT BETWEEN KINGDOM OF TONGA AND INTERNATIONAL DEVELOPMENT ASSOCIATION DATED SEPTEMBER 24, 2003	データ	ソフトデータ	英語	INTERNATIONAL DEVELOPMENT ASSOCIATION	2003
33	NATIONAL BUILDING CODE OF THE KINGDOM OF TONGA 2007	データ	ソフトデータ	英語	MINISTRY OF WORKS	2007
34	STRATEGIC DEVELOPMENT PLAN EIGHT(SDP8), 2006/07-2008/09	データ	ソフトデータ	英語	CENTRAL PLANNING DEPARTMENT	2006
35	MASTERPLAN FOR THE REDEVELOPMENT OF VAIOLA HOSPITAL IN NUKU'ALOFA, KINGDOM OF TONGA, VERSION 1 JANUARY 2004	データ	ソフトデータ	英語	ALEXANDER AND I LOYD, AUSTRALIA PTY LTD	2004
36	PROGRAM BUDGET ESTIMATE OF THE KINGDOM OF TONGA FOR THE YEAR ENDING 30 JUNE 2009	データ	ソフトデータ	英語	MINISTRY OF FINANCE	2009
37	SAFE HOSPITALS IN EMERGENCIES	印刷	印刷データ	英語	WORLD HEALTH ORGANIZATION	2009
地理・気象関連						
38	MAP OF TONGA TAPU	印刷	印刷データ	英語		