(II-8) Major Ferdinando E. Marcos Veteran Regional Hospital

1) Existing Buildings

A two-storied wooden main building constructed in 1945, a one-storied out-patient building and a ward are arranged like the letter "u", with the main building in the center. Behind them, a dining hall guest house, garage, nurse dormitory and laboratory are arranged side by side through connecting corridors, forming a small space against the main building. The hospital is located on a hilltop. It is higher than the school adjacent to it on the right by about 10m. There is little flat portion, and since buildings occupy the site fully, no land for extension can be obtained.

2) New Site

It is planned to level the mid-slope of a hill 3km apart from the existing hospital, and to construct a new hospital there. Already, a hospital with 200 beds is being constructed by BPW, and the main building containing the clinics, dental department, administration and 106 sickbeds is 80% constructed. The main building is of three-storied reinforced concrete construction, and the total floor area is about 4,600m². The entire building is planned to be centrally air-conditioned, with vacuum piping and oxygen piping arranged for each sick-room. This will be the best equipped hospital among the hospitals surveyed in the Philippines. The BPW plan covers a ward, dining hall, nurse school, residences and quarters for doctors and nurses, and services building, but is not covered by the budget.

For the site, the mid-slope of the hill was cut and the cut soil was pressed to the valley side, for levelling. However, since the retaining wall for filled portion and the retaining wall for the face of cut slope are not constructed, the face of the slope collapsed due to rain, and the portion in the rear of the building now being constructed was filled with sediment up to the second floor level, and the filling flowed away. The levelling work is very imperfect.

The site is surrounded by paddy fields in front and on both sides, and by a slightly elevated hill to the back. The scenery of paddy fields spreading in front and mountains far away as seen from sickrooms is a most suitable environment to confort patients.

Old hospital complex



New hospital building in new site (under construction)

II-8 MAJOR. F. MARCOS MEMORIAL HOSPITAL

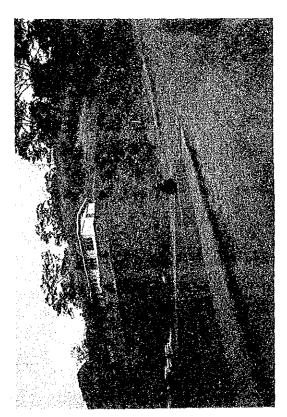
(II-9) Magsaysay General Hospital

This hospital, too, was constructed on the site created by cutting and levelling the mid-slope of a mountain. The scenery of the country and overlapping mountains of Bambang seen from this height can smoothe patients, but the paucity of flat area at the site greatly affects the arrangement of buildings. This cross-shoped hospital is small, being a one-storied building of reinforced concrete construction with 50 sickbeds. In 1976, it was constructed in the new site, but the exfoliation of paint on the roof and the soil of the external walls are conspicuous. A nurse dormitory will be completed this year on the south of the hospital, one step higher on the mid-slope of the mountain. In addition, there is an annex containing a garage and power room, at the back. All buildings are of one-storied reinforced concrete construction.

View to tennis court



Main building



Nurse dormitory

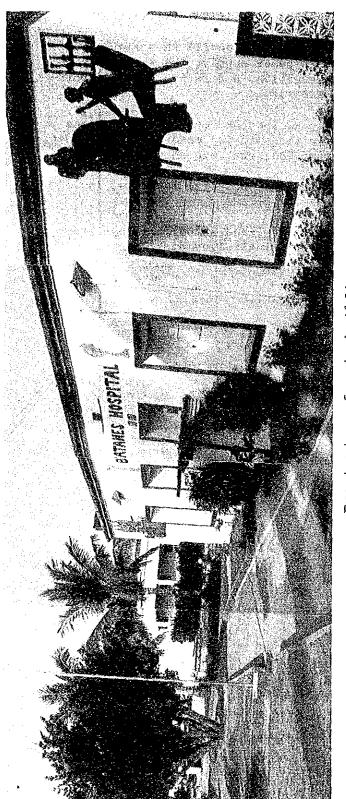
(II-10) Batanes Provincial Hospital

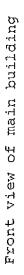
This hospital, located along a trunk road connecting an airport with a port in this island has buildings with thick walls peculiar to this island. Walls as thick as 40 to 50cm with stones fixed by lime are widely used by old private houses in this district. This district is in the route of the typhoons which arise in the typhoon season every year, and probably because of the damage experienced from typhoons, houses with thick walls must have been built. The thickness of the walls is also used to intercept the sunlight and to protect doors and windows from the damage of wind. However, since the roofs are covered with palm fronds, they seem to be often blown away by wind.

The hospital was constructed in 1946 with the aid of the USA, and was extended 4 times since then, to be enlarged to the present scale. The main building is of one-story reinforced concrete construction, partially two-storied. The walls are as thick as 50 to 80cm. For external windows and entrance doors, "gate bars" are hooked outside, using the thickness of walls, to protect the openings from wind and any flying materials. At the back of the main building is a building containing a dining room, laundry and power room, and further behind is a ward, the construction of which is now being suspended. It is a one-storied building of reinforced concrete construction with 50 beds and $270m^2$ area. With only the skeleton and roof completed, the construction has been suspended for 2 years. Therefore, the galvanized iron roof sheet generates red rust.

The site is located in a block in which the Provincial Office, BPW branch office and public facilities such as school are situated. With the entrance in the south, it has a trapezoid form long toward the north. Generally, the south side is higher than the north side, and the difference of height is about 2.0m. The area is about 3,500m², and buildings occupy the site fully, with no land for extension.

Therefore, the planning of extension or renovation must be made, by disposing of the existing facilities.







New building (not completed)

- 2. Present Infrastructure Situation (Electric facilities)
 - 1) Table 1 (Region I) and Table 2 (Region II) show whether or not the hospital receives a power supply, the rate system, monthly average power consumption, and future power corporation plans, by hospital facility.
 - 2) Capacity, working conditions, load and operation time zone of each generator, and the transmission conditions, oil cost, monthly average oil consumption, etc. are shown.
 - 3) The telecommunication is shown by hospital facility, in reference to local calls and toll calls.
 - 4) The back power, service capacity, and number of lines are shown by hospital facility by single-line diagrams in Fig. 3(1) to (18).

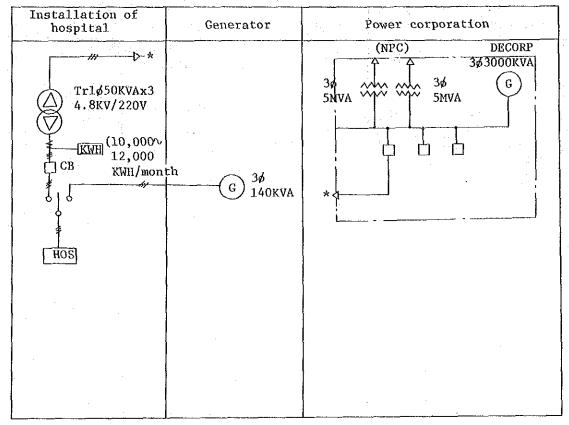


	:	Power s	supply				Generato	r	•		Communication
Items Hospital Name	Cooperation name	Charge system (KWH)	Average of monthly power (KWHr)	Future planning	Capacities phase	Condition	Loads	Driving hours	Diesel Cost	Consumption L/month	Outside call
CACAYAN REGIONAL HOSPITAL	CAGELCO (Private Franchise)	1st 15 9,50 Excess 0.75	5,680	P.F → N.P.C	140KVA 3ø (1969)	Out of order (Since 6.78)	Lighting air condition X-Ray	Power failure 2 times/day 30 minutes 21 hours	1.31/2		Cagayan ↔ Manila = Via RCPI Cagayan Vicinity = Retelco (semi Gor't
(REGIONAL MENTAL) NON EXISTING	CAGELCO (")	the same Cagayan					None				the same Cagayan
KALINGA APAYAO PROVINCIAL HOSPITAL	KAELCO (P.Franchise)	1st 15 15 Excess 0.98	845	Condition Whole day supply power failure everyday, 12hrs	6KVA, 20KVA 1¢, 1¢ (74), (74)	6KVA, 20KVA Out of order since 2years ago	6KVA, 20KVA Private lighting Lighting X-Ray Water. P.	Power failure time av 12hrs/day	1.34/%		Kapayao ↔ Manila = RCPI telegram
APARRI EMERGENCY HOSPITAL	CAGELCO II (P.Franchise)	1st 10 12.5 Excess 12	92	CAGELOCO II Service time am 8:00 ∿ pm 12:00	10кw 3¢ (77)	Bad condition always under repair	Lighting X-Ray Med. eq't	Power failure 2 times/day 2 hrs 8 ws	1.2 ∿ 1.5/Å	1,260%	Aparri ↔ Manila = Retelco (4/1.79) Aparri Vicinity = Retelco (")
ISABELA PROVINCIAL HOSPITAL	-	None	<u> </u>	It will be supplied by 1980 years	62.5KVA,25KVA 3¢, 1¢ (62), (50)	Good	62.5KVA, 25KVA X-Ray General Air Con.lighting Lighting	pm 6:00 ∿ am 6:00	1.32/%	540%	Isabela ↔ Manila = Ratelco Isabela Vicinity = Ratelco
QUIRINO PROVINCIAL HOSPITAL		None		It will be supplied by 1980 years	9KVA 1¢ (73)	Good	Lighting X-Ray Med. eq't	am 8:00 ∿ am 12:00 pm 6:00 ∿ pm 12:00	1.34/%	840%	Quirino ↔ Manila = RCPI (by telegram) Quirino Vicinity = No telephone
IFUGAO PROVINCIAL HOSPITAL		None		It will be supplied by N.P.C (1980)		6KVA,18KVA,13KVA out good good of order	6KVA,18KVA,36KVA Lighting Air Con Lighting X-Ray	pm 6:00 pm 11:00	1.65/%		Ifugao ↔ Manila = RCPI telegram Ifugao Vicinity = No communication
MAJ. MARCOS VETERAN MEMORIAL HOSPITAL	MAGAELCO (P.Franchise)	1.39 KWHr Discount system 20%	1,516	It will be supplied by N.P.C 5 years after	25KVA 3¢ (75)	Good	Lighting X-Ray Med. eq't	Power failure almost none	1.3/%		Bayombong ↔ Manila = Retelco Bayombong Vicinity = Retelco
NUEVA VIZCAYA PROVINCIAL HOSPITAL		None ———		NUVELCO (1985)	35KVA 3¢ (1975)	Out of order (Since 11.79)	Lighting X-Ray Med. eq't	pm 6:00 ∿ am 6:00	1.53/%	1 or 2 drum/month (1 drum 200%)	Bambang ↔ Manila = Telegram Bambang Vicinity = No telephone system
BATAMES PROVINCIAL HOSPITAL	BASELCO 50KW (N.P.C) (pm 4 or 5 ∿ pm 9:10)	4	None supplied-		25KVA, 12KVA 3ø, 1ø (1972),(1973)	25KVA out of order (4 years ago)	O.P lighting X-Ray		Tow times price of Manira (Trans- portation)		Air mail or radio communication

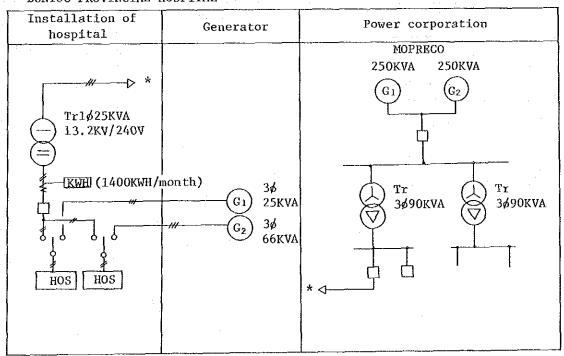
R.C.P.I Radio communication Philippine Incorporation

	Andrew Transcription of the second se	D			T	- Description			i canac dhanainn de dallamini e candidi		
Items		Power supply	Γ.:	1		1	Generator	T	1	4	Communication
Hospital Name	Cooperation name	Charge system (KWH)	Average of monthly power (KWH)	Future planning	Capacity phase	Condition	Loads	Driving hours	Diesel cost	Transformer capacity	Outside call
PANGASINAN PROVINCIAL HOSPITAL	DECORP	lst 600, 0.375 Next 600, 0.39 " 1,200, 0.4 Excess 2,400, 0.41 25%, 3% (dis)	10,000 ∿ 12,000	Project-ex't 3MVA sub 1981 ∿ 1984, Barangays	140KVA 3ø	Good	Stand by whole loads	Power failure	1.81/1	1¢ 50 × 2KVA 4,800V/220V	Easy
BONTOC PROVINCIAL HOSPITAL	MOPRECO (Private Franchise) pm 6:00vpm 12:00	lst 15, 10.65 Excess 0.71	1,000		25KVA, 66KW 3ø, 3ø	Good	3¢, 3¢ (25) (66KVA) Lighting, X-Ray	pm 12:00 ∿ am 7:00 (3¢, 25KVA)	1.71/2	1¢ 25KVA 13.2KV/240V	Bontoc → Baguio (p.c) Telegram
BAGUIO GENERAL HOSPITAL	BENECO (N.P.C)	1st 15, 5.0 Excess 0.32 +0.015 "	25,000 ~ 23,000	Reserved power 2,000KW	50KVA, 70KW 3ø, 3ø	50KVA, 75KVA Good out of order (Since 1 year)	50KVA,75KVA Whole lighting Medical, eq't	Power failure am 8:00 ∿ pm 5:00 2 monthly	1.50/2	1¢ 25KVA 1¢ 100KVA 1¢ 50KVA × 3 1¢ 50KVA 1¢ 50KVA 2.3KV/240/110V	Easy
BENGUET PROVINCIAL	BENECO	The same system			. 1	Nor	ne		(1.5/1)	1ø 50KVA	Easy
HOSPITAL	(N.P.C)	of Baguio		Power f Rair season	ailure 3 ∿ 4 tí 3 days c		Dry season	1 time/week 2 ∿ 4 hours)		2.4KV/220/110V	
LA UNION PROVINCIAL HOSPITAL	LUECO (N.P.C)	1st 100 46.15 Excess 100 0.44 (dis 5%)	10,620		15K₩ 1ø	Out of order since 2 years ago	Lighting		1.26/&	1¢ 50KVA 16KV/220V	Easy
ABRA PROVINCIAL HOSPITAL	ABRECO (N.P.C)	1st 15 8.50 Excess 0.57	4,365		Power	failure Twice a week	None		(1.25/2)	1¢ 25KVA 7.62KV/240V	Easy
GABRIELA SILANG PROVINCIAL HOSPITAL	1SECO (N.P.C)	1st 12 6 Excess 0.48	5,000		25KVA 3ø	Good	Lighting Air condition X-Ray	Power failure sometimes 2 hours typhoon (1 ~ 2 days)	(1.25/%)	1¢ 15KVA 13.2KV/240V Include other residence	Easy
DON MARIANO MEMORIAL HOSPITAL (REGIONAL)	INEC (N.P.C)	0.50	8,000	All barangays 1982 years	50KVA 3∳ (1973)	Good	Lighting air condition Medical, eq't X-Ray	2 times/week (10 hours) Energy con- servation maintenance	(1.27/%)	1¢ 15KVA × 3 13.2KV/220/110V	Easy
ILOCOS NORTE PROVINCIAL HOSPITAL	INEC (N.P.C)	1st 0.45 Excess 0.40	700 6,100 6,800 (MAIN, ANNEX)	All barangays 1982 years	4KVA lø (portable)	Out of order (1 year ago)	Lighting X-Ray	3 times/week (8 hours)	(1.28/%)	1¢ 37KVA 13.2KV/220V	Easy

PANGASINAN PROVINCIAL HOSPITAL



BONTOC PROVINCIAL HOSPITAL



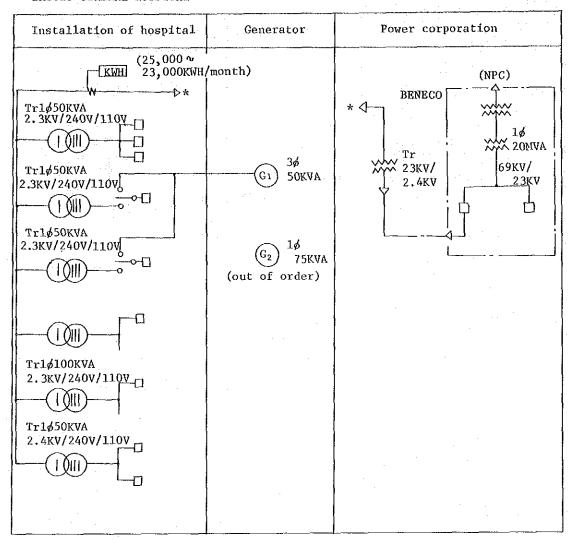
ABRA PROVINCIAL HOSPITAL

Installation of hospital	Generator	Power corporation
Tr1¢25KVA 7.62KV/240V (KWH) (4365KWH /month)		ABRECO Tr 5000MVA/ 7.62KV

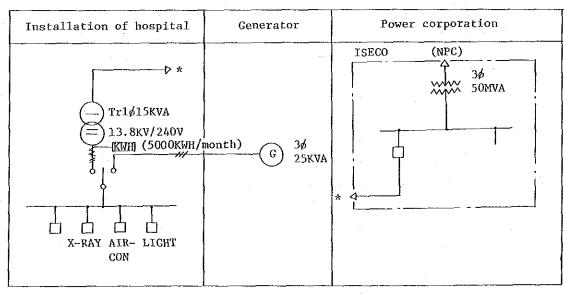
BENGUET PROVINCIAL HOSPITAL

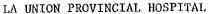
Installation of hospital	Generator	Power corporation
Tr1\$50KVA 2.4KV/220V/ 110V CKWH 110V X-RAY LIGHT HEAT ANNEX		BENECO (NPC) WWW 23KV/2.4KV

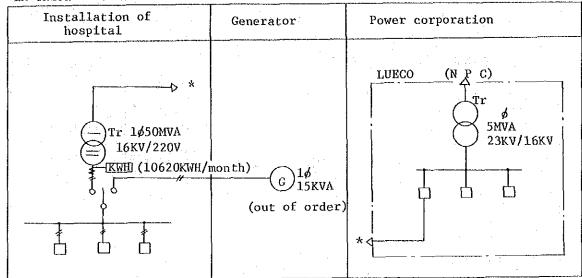
BAGU10 GENERAL HOSPITAL

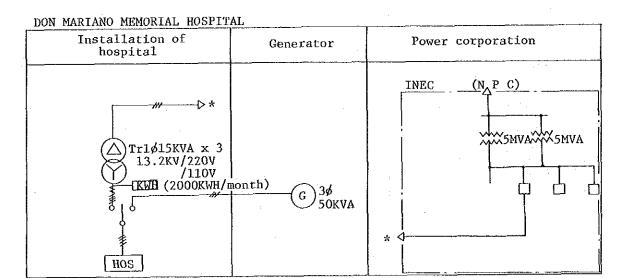


GABRIELA SILANG PROVINCIAL HOSPITAL

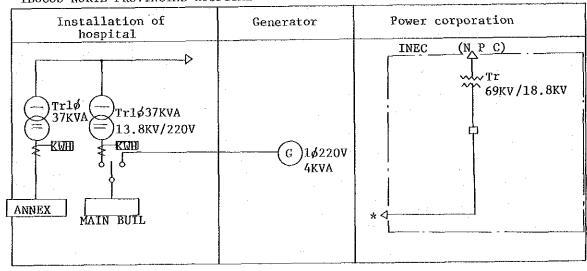




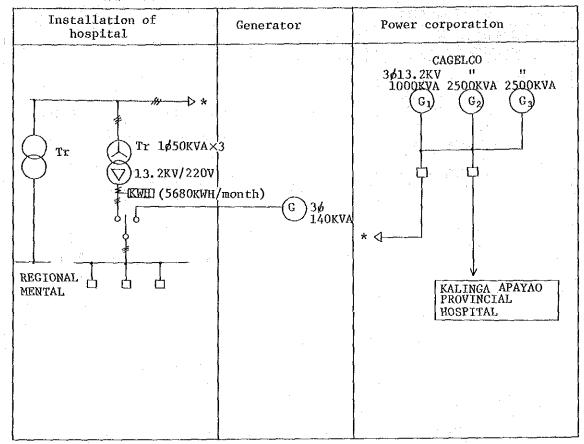




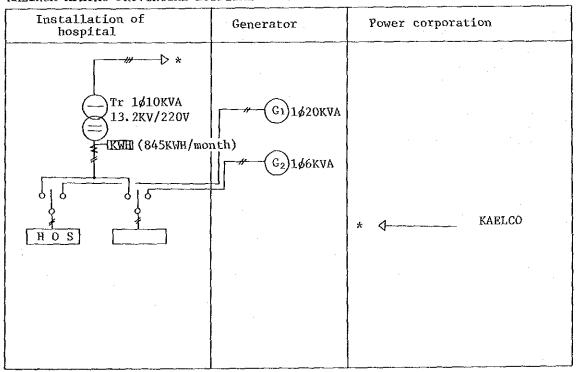
ILOCOS NORTE PROVINCIAL HOSPITAL



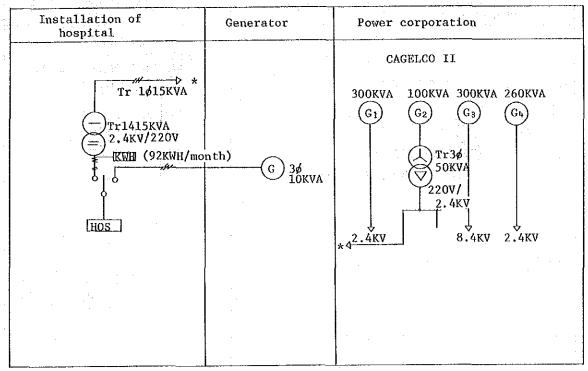
CAGAYAN REGIONAL HOSPITAL



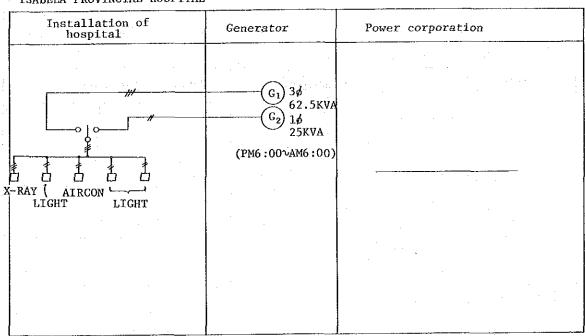
KALINGA APAYAO PROVINCIAL HOSPITAL



APARRI EMERGENCY HOSPITAL



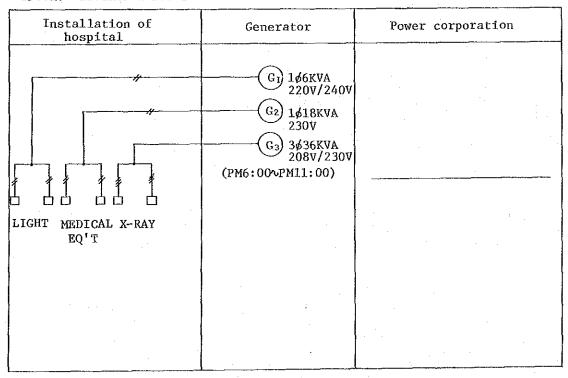
ISABELA PROVINCIAL HOSPITAL



QUIRINO PROVINCIAL HOSPITAL

Installation of hospital	Generator	Power corporation
//	G 1¢ 9KVA	
LIGHT X-RAY FREEZER		

IFUGAO PROVINCIAL HOSPITAL



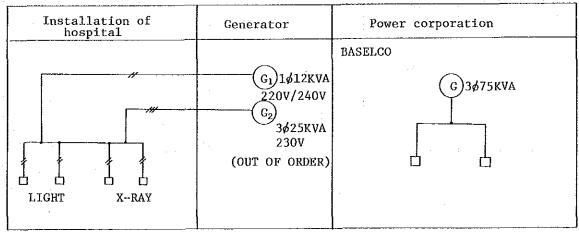
MAJ, MARCOS MEMORIAL HOSPITAL

Installation of hospital	Generator	Power corporation	1
KWH (1516KWH/mo	nth) G 3ø25KVA 220V/270V	MAGAELCO * ◆	

NUEVA VIZCAYA PROVINCIAL HOSPITAL

Installation of hospital	Generator	Power corporation	
	G 3ø 35KVA		
LIGHT X-RAY MEDICAL			
			· .

BATANES PROVINCIAL HOSPITAL



Water Supply, etc.

The following important matters could not be clarified definitely in this survey.

- o Conditions of ground water sources in and around each site.
- o Places and routes to and through which drainage is discharged from the vicinity of each site.
- o Measured data and piping routes of water supply and drainage to and from existing facilities.

Of the above, we had requested the Philippines beforehand to obtain data concerning matters (1) and (3), but due to various circumstances, they could not be obtained, and neither, during the field survey, could such data be obtained for the following reasons: that the survey time was too short, only several hours per hospital, that there are no data on the water veins in and around project hospital sites, and that no special water supply and drainage engineers are posted in the respective hospitals, not enabling to prepare measured data and piping drawings for existing equipment. Therefore, with regard to these matters, judgement was made from the situations known within the limited time, and when this project is executed, another study will have to be made.

1) Water Supply

The water supply sources and quantities of water are as described in 2-4. As the water supply method in the site, an elevated water tank is mostly used, and direct connection of piping is also used to some extent. Water is not treated by hospitals which are supplied from public waterworks, but some of the hospitals which have their own water sources do chlorinate.

As for the water supply by hospital, see Table "Present Situations of Water Supply".

2) Hot Water Supply

In most of Regions I and II, the temperature is sufficiently high that hot water is not required generally and, therefore, no hospitals other than Baguio have hot water supply equipment. Even in the mountainous district such as Mountain Province where the maximum temperature is about 25°C, few hospitals have hot water supply equipment. Among the project hospitals covered by the survey of this time, only Baguio uses individual electric water heaters. However, the hospitals now being constructed tend to have hot water supply equipment, and Don Mariano Marcos Memorial Hospital and Maj. Marcos Veteran Memorial Hospital have such equipment.

3) Drainage

As described in 2-4, all the hospitals use septic tanks, except Baguio which has public sewage facilities.

With regard to drainage equipment by hospital, see Table "Present Situations of Drainage".

4) Air Conditioning and Ventilation

As understood from data from the respective districts maximum temperatures are 35 to 40°C in most districts, excluding mountainous districts. Nevertheless, no hospitals have central air conditioning equipment, and air-cooled window type individual packaged air conditioners are used, only for some rooms. Most rooms have the windows opened, for natural ventilation. The architectural style is, of course, tropical, with contrivances made to have better natural ventilation and to suppress the rise of room temperature to some extent by raising the ceiling. However, the hospitals now being constructed are made multistoried, and increasingly use mechanical air conditioning and ventilation equipment.

Regarding air conditioning equipment by hospital, see Table "Present Situation of Air Conditioning".

5) Kitchen

In almost all the hospitals, buildings are superannuated, and kitchen space is small. The source is mainly LPG. But Batanes uses kerosene since LPG is supplied only once a year to the island, and Nueva Vizcaya uses wood-burning ovens, Cooking appliances used are mostly gas ovens and wood ovens. Since water is not available sufficiently as mentioned above, there seems to be trouble in washing food materials and tableware. Due to the difference in living style and unstable supply of electricity, freezers and refrigerators are not utilized sufficiently.

6) Laundry

About half of the project hospitals do not have their own laundry, using subcontract laundries or washing in rivers, etc. Laundries which are existant in the superannuated, and cramped. No hospitals have driers, and drying is made exclusively under sunlight. Few hospitals use mechanical force for washing, and even if they have washing machines, the machines having broken down are left as they are, posing a problem for maintenance of machines and apparatuses.

7) Medical-use Gas and LPG

The use of a central piping system is limited to some rooms such as ICU of a few hospitals. In the other cases, they bring gas cylinders into rooms.

LPG is now mainly used as a heat source in the kitchen, and a place for gas cylinders is provided outdoors near the kitchen. Some hospitals have gas lamps using LPG, because of there being no supply of electricity.

8) Incineration

The collection service of the local government is used or pits are dug in the site, for incineration. No hospitals were found to have incinerators in this study. As for incineration equipment by hospital, see Table "Present Situation of Incineration".

9) Fire Protection

The nearest fire station is located within a range of 0.05 to $7 \mathrm{km}$ from each hospital, though there is no fire station in five locations in Region II.

With regard to the fire extinguishing equipment in the hospital, no hospitals have automatic fire protection equipment such as sprinkler apparatus, or hydrants. They are equipped with portable extinguishers (dry chemical type).

Table "Present Situation of Water Supply"

Name of hospital	Owner of water source	Water source	Water supply system	Quantity of water	Remarks
PANGASINAN	Nospital	Well	P(E), PCT	o	Well + pressure tank system in the hospital of the new site. The capacity is small.
BONTOC	Waterworks Bureau	Spring	WT	×	Because the capacity of distri- bution facilities is insuf- ficient.
BAGUIO	Waterworks Bureau	Spring	DC WT (for dormitory)	×	With hot water supply equipment (individual electric water heaters). No problem due to a future project of the Water- works Bureau
BENGUET	Hospital Waterworks Bureau	Well Transport by tank lorry	WT	×	
LA UNION	Hospital	Well	P(E), WT	Δ	Chlorinated. Future project of the Water- works Bureau
ABRA	Hospital	Well	P(E), WT	×	Only one out of the two wells is used.
GABRIELA- SILANG	Hospital Waterworks Bureau	Well Transport by tank lorry	P(E), WT	×	Well water is used for toilets and washing only, due to the poor quality of the water.
DON M. MARCOS	Warterwork: Bureau		P(E), Wr DC	o	For the existing buildings. A deep well is provided for the building now being con- structed.
1LOCOS NORTE	Hospital	Well	P(E), WT	: ×	
CAGAYAN	Hospital	Well	P(E), WT	. 0	For the existing site. Chlorinated.
KALINGA- APAYAO	Nospital Public	Well Spring	P(E), WT DC	×	Water of the spring is ex- hausted in the dry season.
APARRI	Hospital	Well	P(E), WT	×	For the existing site.
ISABELA	Hospital	Well	P(G), WT	×	At present, no supply from the Waterworks Bureau
QUIRINO	Hospital Public	Well Spring	P(M) WT	×	A well being constructed by BPW.
IFUGAO	Waterworks Bureau	Spring	WT	×	Because the capacity of dis- tribution facilities is insuf- ficient. For the existing site.
MAJ. MARCOS	Hospital	Well	P(E), WT	×	For the existing site. Chlorinated
NUEVA VIZCAYA	Hospital	Well Spring	P(G), DC WT	×	
BATANES	Hospital Waterworks Bureau	Well Spring	P(M) WT, DC	×	Because the capacity of dis- tribution facilities of Waterworks Bureau is insuf- ficient.

Symbols of water

supply systems:

P(E): Electric pump P(G): Gasoline pump P(M): Manual pump

Table "Present Situation of Drainage"

		· · · · · · · · · · · · · · · · · · ·	
Name of hospital	Treatment equipment	Discharged to	Remarks
PANGASINAN	SEPTIC TANK	STREET SEWERAGE	For the existing site. Sterilized by lysol. Septic tank also in the new site.
BONTOC	п	OPEN CANAL → RIVER	Septic tank is being con- structed for the building being constructed.
BAGUIO	DIRECTLY CONNECTED TO PUBLIC SEWAGE PIPE		Discharged into holes and rivers without treatment from public sewage tanks.
BENGUET	SEPTIC TANK	OPEN CANAL	
LA UNION	,1	INFILTRATION IN THE SITE	
ABRA	ll.	OPEN CANAL → RICE FIELD	
GABRIELA SILANG	II		
DON M. MARCOS	11	OPEN CANAL	For the existing buildings.
ILOCOS NORTE	11	RICE FIELD	
CAGAYAN	tt	STREET SEWERAGE	For the existing site
KALINGA -APAYAO	11	OPEN CANAL	
APARRI	in	11	For the existing site
ISABELA	11	11	
QUIRINO	п		
I FUGAO	ti	OPEN CANAL	For the existing buildings.
MAJ. MARCOS	. ti	STREET SEWERAGE	
NUEVA VIZCAYA	31	OPEN CANAL	
BATANES	: 11	f1	

Table "Present Situation of Air Conditioning"

Name of hospital	System	Name of room	Remarks
PANGASINAN	WINDOW-TYPE	OR,DR,NS,ICU,OF	
BONTOC	Non		
BAGUIO	:: Non		
BENGUET	Non		
LA UNION	WINDOW-TYPE	OR	
ABRA	l I	OR, DR, NS, OF	
GABRIELA SILANG	. 11	OR,WD,OF	
DON M.MARCOS	11	OR,DR,OF,LI,NS,LB,SR	
ILOCOS NORTE	н	OR,WD,OF	
CAGAYAN	H.	OR,DR,X-RAY,OF	
KALINGA -APAYAO	Non		
APARRI	Non		
ISABELA	WINDOW-TYPE	OR	
QUIRINO	Non		
IFUGAO	WINDOW-TYPE	OR,OF	
MAJ. MARCOS	11	OR,OF	
NUEVA VIZCAYA	ti	OR	
BATANES	Non		

OR: OPERATING RM

DR: DELIVERY RM

NS: NURSERY OF: OFFICE

WD: WARD

LI: LIBRARY LB: LABORATORY

SR: SUPPLY RM

Table "Present Situations of Incineration"

Name of hospital	Incineration method	Remarks
PANGASINAN	Collected by the municipal system	For the existing site
BONTOC	Incinerated in an open pit	
BAGUIO	Collected by DPS	
BENGUET	Incinerated in an open pit	
LA UNION	Collected by the municipal system	
ABRA	Incinerated in an open pit	
GABRIELA- SILANG	Incinerated in an open pit	
DON M.MARCOS	Dumped in dug holes.	For the existing buildings
ILOCOS NORTE	Incinerated in an open pit	
CAGAYAN	Collected by the municipal system and incinerated in an open pit	For the existing site
KALINGA -APAYAO	Incinerated in an open pit	
APARRI	н	For the existing site
ISABELA	rı	
QUIRINO	tt	
I FUGAO	n	For the existing site
MAJ. MARCOS	11	
NUEVA VIZCAYA	11	
BATANES	Incinerated in drum cans.	

4. Roads

(I-1) Pangasinan

Pangasinan excels in the development of roads in Region I. The present hospital is accessible in about 15 minutes from the city center and $10 \sim 15$ minutes from nearby hospitals. A paved road is available from the hospital to the new site, and no problems seem to exist in respect to the road conditions.

(I-2) Bontoc

A top-grade national route runs from Baguio to Lagawe by way of Bontoc. As it is situated in a mountain area, there is much difference in height, and this road is not well paved. It takes six to eight hours from Baguio. Landslides take place in the rainy season, occasionally disrupting roads over long periods. Buses run from Baguio at a rate of one service a day. In the city, the use of Jeepneys is popular.

(I-3) Baguio

The road conditions are favorable in Baguio, which is a famous summer resort in the Luzon. The hospital is situated practically at the center of the city and accessible in about two hours from Dagupan City and Benguet in about 10 minutes by car.

(I-4) Benguet

The hospital is situated along a top-grade national highway and accessible in about half a hour from the city center. The hospital site is apt to be flooded in the rainy season.

(I-5) La Union

The hospital faces a top-grade national highway and is accessible in about five minutes from the city center, one-and-a-half hours from Dagupan City, two hours from Baguio and two hours from Vigan.

(I-6) Abra

This hospital is situated along a top-grade national highway, and convenient means of transport are available. The roads in this province are least developed in Region I, and no roads leading to the north and Region II are avilable.

(I-7) Gabriela Silang

The hospital is situated along a second-class national highway and accessible in about five minutes from the city center, and about two hours from San Fernando and Laoag.

(I-8) Don Mariano Marcos

The hospital is situated along a prefectural road and accessible in about 10 minutes from the city center, and one hour from Vigan.

(I-9) Ilocos Norte

The hospital is situated along a top-grade national highway and accessible in about 10 minutes from the city center, and about two hours from Vigan.

(II-1) Cagayan Regional

The hospital is situated practically at the center of the city, and the roads in the city are well developed. The hospital is accessible in one hour from Isabela and one-and-a-half hours from Tabuk.

(II-3) Kalinga-Apayao

Situated along a top-grade national highway, the hospital is accessible in about five minutes from the city center. As this district is situated in a mountain area, the roads are least developed like Quirino. The hospital is accessible in one-and-a-half hours from Tuguegarao.

(II-4) Aparri

Accessible in about 5 minutes from the city center, the hospital is situated near Aparri Airport. The road leading to the city center is not paved. Accessible in 15 minutes from Camalanugan.

(II-5) Isabela

Situated near a top-grade national highway, the hospital is accessible in about five minutes from the city center and one hour from Taguegarao. There is a well developed road network in the western part of Isabela Province but practically none in the eastern side.

(II-6) Quirino

The hospital is situated about 20 km down south from the main route (top-grade national highway) of Region II. This road section is not paved, muddy in the rainy season bust dusty in the dry season. The new site is situated about 3 km further north from the city and along the unpaved top-grade national highway

which leads to Bontoc by way of Banae. The hospital is accessible in one-and-a-half hours from Bayombon and two hours from Cabarroguis.

(II-8) Maj. F. Marcos

The hospital is situated near the main route (top-grade national highway) of Region II and accessible in 20 minutes from Bambang.

(II-9) Nueva Vizcaya

The hospital is situated near the main route (top-grade national highway) of Region II and accessible in 5 \circ 6 hours from Manila.

(II-10) Batanes

The hospital is situated at the center of the island, and the roads are well developed. Three flights a week are available, connecting Manila by way of Laoag and La Union. Transport to and from nearby islets depends on motorboats. There is a wooden pier at the city center, and it takes one hour to reach Sabtang Island and Dequey Island. An emergency hospital is available on Mayan Island, accessible in about four hours. However, typhoons greatly damage means of transport every year.