

第 7 章 維持管理計画

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7-1 要員計画

7-1-1 要員

事前調査報告書で述べられているように、PGH側で、OPD建設に伴い新たに医師6名、看護婦74名、計80名の増員計画があるが、OPDの運用をPGH全体の位置づけで考えているため、当然、これら医師看護婦も、OPD専属のかたちはとらず、PGH全体での運営を考えている。

7-1-2 要員人件費

上記要員増加を含めて1989年予算案としてPGH側は9,322,161ペソを考えている。これは1985年度実績の5,971,964ペソに対し5割以上の増加となっている。

7-2 施設の維持管理計画

7-2-1 維持管理計画

OPDが建設されるにともない、当然OPDの施設を維持管理するエンジニアリングスタッフ計画を考慮せねばならない。現在のPGHのエンジニアリングスタッフの現状についてみると、エンジニアの総数は116名であり、Civil/Mechanical/Electrical Engineerから構成されている。エンジニアの下にはアシスタントエンジニアが1,000名以上いる。エンジニアリングセクションのサービス内容は、医療機材の日常点検、建物施設の点検整備、補修、および消耗品の補給リストの作成、等が主なる業務範囲である。

ただ、PGHで保有するエンジニアリングスタッフはPGHだけでなく、UPマニラの他の医学部関連施設 (College of Medicine, College of Public Health, College of Nursing School, College of Dentistry, College of Pharmacy, UP College of Science 等) があり、カバーしている施設総数は、10施設以上であり、PGHを拠点に定期出張巡回サービスを行っている。

本計画が適切に運用されるためにも、エンジニアリングスタッフの確保が必要であるが、現在のスタッフで効率化を図ることにより十分対応が可能と思われるため、OPD用としての増員は行わないものとする。

7-2-2 維持管理費

a) 電気料金

電気料金の体系は基本料金と電力使用量からなり、基本料金の想定を以下の条件で行う。

設備容量 トランス容量 $500 \text{ kVA} \times 2 \text{ 台} = 1,000 \text{ kVA}$

契約電力 $1,000 \text{ kVA} \times \text{Demand} (0.75) \times \text{不等率} (0.6) \times \text{力率} (0.9)$
 $= 405 \text{ kW} \approx 400 \text{ kW}$

-基本料金 (契約電力 400 kW)

$400 \text{ kW} \times \text{P} 12.60 / \text{KW} = 5,040 \text{ ペソ/月} \quad \text{--- ①}$

-電力使用量

$400 \text{ kW} \times 8 \text{ HRS} \times 25 \text{ 日/月} = 80,000 \text{ KWH / 月}$

$80,000 \text{ KWH / 月} \times 0.42 \text{ ペソ/KWhr} = 33,600 \text{ ペソ/月}$

-力率割引 (1%OFF 力率 90%の場合)

$33,600 - 3,360 = 30,240 \text{ ペソ/月} \quad \text{--- ②}$

①+②=35,280ペソ/月

-年間維持管理費

$35,280 \text{ ペソ/月} \times 12 = 423,360 \text{ ペソ/年}$

PGHの場合チャリティが主体なので50%OFFが電力会社との協議で可能であり、電気料金は以下の通りとなる。

$423,360 \times 1/2 = 211,680 \text{ ペソ/年} \quad \text{--- (a)}$

b) 発電機運転維持費

停電回数及び時間を3回/週、1回当たり1時間とする。

$0.168 \text{ Kg / ペソ} \times 860 \text{ ペソ} \times 12 \text{ 回/月} \times 12 \text{ 月/年} \times 0.7 \text{ ペソ/Diesel} \cdot \text{Hr}$
 $= 14,563 \text{ ペソ} = 14,500 \text{ ペソ/年} \quad \text{--- (b)}$

c) 水道・下水道

使用料： $30\text{m}^3/\text{日} \times 25\text{日}/\text{月} = 750\text{m}^3/\text{月}$

① 従量料金： $\sim 25\text{m}^3/\text{月}$ まで定額 $= 111.7\text{ペソ}/\text{月}$

$\frac{25\text{m}^3/\text{月以上 } 4.7075 \text{ ペソ } /\text{m}^3 \times (750-25)}{\text{月}} = 632.3\text{ペソ}/\text{月}$

計 $750 \text{ ペソ}/\text{月}$

② 通貨交換レート調整料金： $750 \text{ ペソ}/\text{月} \times 0.1409 = 106\text{ペソ}/\text{月}$

③ 量水器維持費 $= 6\text{ペソ}/\text{月}$

④ 水道料金合計 $: ① + ② + ③ = 862\text{ペソ}/\text{月} \times 12\text{月} =$

$10,344\text{ペソ}/\text{年}$ —— (c)

⑤ 下水道料金 $: (① + ②) \times 0.6 = 514.4\text{ペソ}/\text{月} \times 12\text{月} =$

$6,168\text{ペソ}/\text{年}$ —— (d)

d) 都市ガス

使用料： $3.75\text{Nm}^3/\text{h} \times 8\text{h}/\text{日} \times 0.2 \times 25\text{日}/\text{月} = 150\text{Nm}^3/\text{月}$

従量料金： $\sim 25\text{Nm}^3/\text{月}$ まで定額 $= 100\text{ペソ}/\text{月}$

$\frac{25\text{Nm}^3/\text{月以上 } 3.5\text{ペソ } /\text{Nm}^3 \times 125}{\text{月}} = 438\text{ペソ}/\text{月}$

計 $538 \text{ ペソ}/\text{月} \times 12\text{月} = 6,456\text{ペソ}/\text{年}$

—— (e)

e) 医療ガス設備、酸素ポンプ

使用料： $14 \text{ 本}/\text{日} \times 25\text{日}/\text{月} = 35 \text{ 本}/\text{月}$

ポンプ交換料金： $135\text{ペソ} \times 35\text{本}/\text{月} = 4,700\text{ペソ}/\text{月} \times 12\text{月} = 56,400\text{ペソ}/\text{年}$

—— (f)

以上より施設の維持管理費の合計は以下の通りである。

$(a) + (b) + (c) + (d) + (e) + (f) =$

$305,548 \text{ ペソ}/\text{年}$

7-2-3 維持補修費

建物および付属設備を維持していく上で、補修費の予算枠は必要であり、その重要な要素として、建屋に対しては、屋根、外壁、建具、内装（天井、壁、床）が該当する。また附帯設備としては、電気、設備関連資機材維持費および消耗品の補充等が不可欠である。

維持費、補修費の予算を決定する要素は日常保守作業のグレードにより大きく、予算的に違ってくるし、一概に想定はできないが、建設コストの資機材調達費に対して、0.6~1.4 %程度の年間予算が補修費として一般的であるので、約1,875,000 ペソが年間の維持補修費となる。

7-3 医療機材の維持管理計画

7-3-1 維持管理計画

a) 機 材

OPDの活動を支える医療機材は、常にその活用の確保を維持する必要がある。

今回、供与が予定される機材のうち画像診断に係る機材、検体検査用機材、手術用機材等はその精度の維持と、患者及び操作要員の安全確保の面や、維持管理費の軽減等に絶えず配慮して計画すべきである。

操作要員に関しては大学付属病院なので適切な対応が可能であろう。しかし、PGHのエンジニアリング・スタッフでは精度や、安全確保の維持が困難であると思われるものについては、医療機材のメンテナンスサービスを外部の専門業者及びメーカーに依頼する必要がある。

特にX線CT装置や病歴管理システムについては外部への依頼が不可欠である。

外部に依頼する方法としては定期保守契約方式と随時サービス契約方式の二通りが考えられる。定期保守契約は定期的実施されるメンテナンスを意味し、定常的に使用される機材及び電気、電子部分の構成の多い機材がその対象になる。また、メカニズム的構成の多い機材で頻繁に利用される機械が随時サービス契約の対象になる。

外部の専門業者およびメーカーに依頼するとはいえ、少なくともPGH内の

メンテナンス部門は日常の保守点検を、以下の機器に対して定期的を実施する必要がある。

- ・ 放射線診断治療用機器
- ・ 超音波診断用機器
- ・ 医用電子診断用機器
- ・ ラボ用機器
- ・ 分析用機器
- ・ 光学用機器類
- ・ 汎用実験用機器
- ・ 手術室用機器
- ・ 歯科用機器
- ・ 消毒滅菌用機器

外部に依頼する定期保守契約、及び随時サービス契約の対象機材を以下に分類する。

・ <u>定期保守契約とするもの</u>	<u>定期サービス回数</u>
1) 放射線機器類	12回/年
2) 臨床検査機器類	24回/年
3) 内視鏡類	6回/年
4) 医用電子機器類	3回/年
5) 病歴管理システム	24回/年
・ <u>随時サービス契約とするもの</u>	
1) 手術室用医用機材類	
2) 消毒滅菌機器類	
3) 光学検査機器類	
4) 歯科治療機器類	

b) 病歴管理及び病院管理部門

病歴管理システムの常時正常な運用を可能とするため、メンテナンスサービスが必要となるが、日常の保守点検は操作担当者が当たる事として、それ以外の部品点検を伴った調整作業については外部との契約によって実行される事とする。以下にその対象機材を示す。

- ・ 病歴管理システム
- ・ パソコン&ワープロ
- ・ タイプライター等事務機器

・ その他事務用機器類

7-3-2 保守契約費

これらにかかる経費は定期保守契約とするもの、随時サービス契約とするものの2種類がある。完成引渡し後、1年間は病院側の明白な誤操作以外は補償期間となるので、2年目より経費の支出を見込まなければならない。

定期保守契約については、以下の様に試算する。

1) 放射線機器類 (39,584×12回/年)	475,000	ペソ
2) 臨床検査機器類 (6,250 ×24回/年)	150,000	ペソ
3) 内視鏡類 (12,500×6 回/年)	75,000	ペソ
4) 医用電子機器類 (25,000×3 回/年)	75,000	ペソ
5) 病歴管理システム (12,500×24回/年)	300,000	ペソ
小計 (1)	1,075,000	ペソ/年

随時サービス契約の経費は以下のように試算する。

1) 手術室用医用機材類	1,700	ペソ×12回	=	20,400	ペソ
2) 消毒滅菌機器類	1,700	ペソ×4回	=	6,800	ペソ
3) 光学検査機器類	2,500	ペソ×12回	=	30,000	ペソ
4) 歯科治療機器類	2,200	ペソ×6回	=	13,200	ペソ
小計 (2)				57,200	ペソ/年

定期保守契約料	小計(1)	1,075,000	ペソ/年
随時サービス契約料	小計(2)	57,200	ペソ/年
合 計		1,132,200	ペソ/年

7-3-3 維持管理費

(消耗品・診断用試薬類)

消耗品、試薬類は日常の医療活動を実質的に支えるものとして必要欠くべからざるものであり、常に各部門での必要量を把握し、定期的に購入・補充する体制を整備しておかねばならない。このためマネジメントコンピュータを導入して

購入、各部門への分配、在庫管理等を有効適切に行なう。

対象とする消耗品、試薬等としては以下の項目があげられる。

- ・ X線用消耗品類
- ・ 医用電子機器用消耗品類
- ・ 臨床検査用ガラス容器類
- ・ “ 診断試薬
- ・ 手術室用部品、消耗品類
- ・ 歯科治療用部品、消耗品類
- ・ 診断治療用医薬品、消耗品
- ・ その他、消毒剤及び雑費

以下に各部門別の維持管理費の試算をおこなう。

診断／検査件数については将来予測される件数を推定し、維持管理費については1件当たり必要となる消耗品、試薬等から推定した。

1) 放射線部門

X線フィルム枚数 (大四切)	100枚/日×250日×55ペソ	= 1,375,000 ペソ
超音波診断装置関係	50人/日×250日×25ペソ	= 312,500 ペソ
X線CT装置	5人/日×250日×600ペソ	= 750,000 ペソ
小計 (1)		<u>2,437,500 ペソ</u>

2) 臨床検査部門

細菌検査	200件/日×250日×24ペソ	= 1,200,000 ペソ
生化学検査	400件/日×250日×15ペソ	= 1,500,000 ペソ
血液検査	200件/日×250日×25ペソ	= 1,250,000 ペソ
一般検査	200件/日×250日×15ペソ	= 750,000 ペソ
血清検査	70件/日×250日×22ペソ	= 385,000 ペソ
病理検査	80件/日×250日×27ペソ	= 540,000 ペソ
小計 (2)		<u>5,625,000 ペソ</u>

3) 生理機能検査部門

内視鏡関係	20人/日×250日×80ペソ	= 400,000 ペソ
呼吸機能検査	20人/日×250日×10ペソ	= 50,000 ペソ

心電図検査	50 人/日×250 日×10ペソ =	125,000 ペソ
脳波計検査	5 人/日×250 日×35ペソ =	43,750 ペソ
筋電図検査	5 人/日×250 日×55ペソ =	68,750 ペソ
ストレス心電図検査	5 人/日×250 日×85ペソ =	106,250 ペソ
視機能検査	20 人/日×250 日×25ペソ =	125,000 ペソ
聴力検査	10 人/日×250 日×15ペソ =	37,500 ペソ
	小 計 (3)	<u>956,250 ペソ</u>

4) 歯科診療部門

外来治療部門	100 人/日×250 日×18ペソ =	450,000 ペソ
(X-Ray 診断を含む)	小 計 (4)	<u>450,000 ペソ</u>

5) 小手術部門

一般外科小手術	15人/日×250 日×75ペソ =	281,250 ペソ
眼科小手術	5人/日×250 日×55ペソ =	68,750 ペソ
耳鼻科小手術	10人/日×250 日×65ペソ =	162,500 ペソ
バイオプシー小手術 (各科)	30人/日×250 日×20ペソ =	150,000 ペソ
	小 計 (5)	<u>662,500 ペソ</u>

医療機材維持管理費 (小計1~5) 合計 10,131,250ペソ/年

上記試算された医療機材維持管理費は基本的に患者からの支払いによってまかなわれるのが原則である。

7-4 維持管理費の合計

以下に各節の維持管理費の試算合計とPGH側で作成したOPDに対する1989年予算案を示す。

OPDの年間維持管理費

単位：ペソ (円)

項 目	試 算	PGH による1989年予算案
1. 要員人件費	9,322,161 (68,797,500)	9,322,161 (68,797,500)
2. 施設運転維持費	306,000 (2,258,300)	587,000 (4,332,100)
3. 施設維持管理費	1,875,000 (13,837,500)	3,464,080 (25,564,900)
4. 医療機材保守費	1,132,200 (8,355,600)	} 12,467,000 (92,006,500)
5. 医療機材維持管理費	10,131,250 (74,768,600)	
合 計	22,766,611 (168,017,500)	25,840,241 (190,701,000)

PGHでは1989年予算に対する収入源を以下のように考えている。

単位：ペソ（円）

1) 患者からの収入	
初 診 料	967,500 (7,140,150)
放 射 線	2,680,500 (19,782,090)
ラ ボ 検 査	7,368,750 (54,381,380)
物 療 検 査	1,141,250 (8,422,430)
歯 科 治 療	441,000 (3,254,580)
手 術	662,500 (4,889,250)
(小 計)	13,261,500 (97,869,880)
2) 政府補助	12,578,741 (92,831,110)
合 計	25,840,241 (190,700,970)

上記の通り、フィリピン側から外来棟の完成する1989年予算案として、約 2,584万ペソ（約19,070万円）の提示があった。このうち半分の約 1,300万ペソ（約 9,600万円）は政府補助であり、残りは患者からの収入で賄うものとしている。

1987年の予算をみると、フィリピン総合病院全体での政府補助金は約12,000万ペソ（約 88,600万円）であり、外来棟はそのうちわずか6%を占めるにすぎない。従って1989年における外来棟に必要な政府補助金が1987年の2倍近くになったとしても、フィリピン総合病院全体の予算規模からみれば、十分対応可能であると判断できる。このため、外来棟の施設内容は維持管理計画の面からも妥当であるものと思われる。

第 8 章 事業評価

第8章 事業評価

フィリピン最上位にあるPGHのOPDであるにも係わらず、老朽化した建物と医療機材により1日1000人を超す患者を処理しており、その機能を十分に果すことが困難な状態となっている。

このため、建物、機材の改善と拡張、及びそのための組織・機構の整備は急務であるといえる。

1) 事業効果

このような状況で2000人/日の外来患者処理能力を有するOPD建設実施に伴う効果として以下のような点があげられる。

- a) 診療規模を現在の約2倍に上げるとともに、巡回医療サービス施設を備えることにより、地域住民への底辺医療サービス向上に大きく貢献する。
- b) Referral病院としてのOPDの機能を果たすことが可能となり、フィリピン最上位病院として適しい内容を持つ。
- c) フィリピン大学医学部付属病院であるPGHの中で施療院的性格を有する外来棟としての教育機能を備えることにより、国内での医療従事者の育成に大きな役割を担うことが可能となり、併せて医療技術の向上に貢献する。
- d) 最適な医療機材、施設をもつことにより、フィリピン公立病院のリーダーとして、モデル病院となりうる内容を持つ。
- e) 以上のような効果により、フィリピンの医療技術の向上及びフィリピン国民の保健衛生面での改善に大きく貢献する。

2) 事業の妥当性

一方問題となってくるのは、これを維持・運営するための医療従事者と維持・管理費の確保である。医療従事者については、一般的事情としてフィリピンの首都であるマニラでかつ最新施設を有する病院で働くことを希望する者が潜在的に多く、又PGH側からOPDの実施に伴う要員計画が提示され、その実現性の高いことが確認された。

維持管理費については、施設、機材の選定に当り最小限のコストで運転・維持を可能とするよう十分な検討がなされ、コストの増加を極力押さえた計画となっている。一方PGHは私立病院とは異なり、主に低所得層を対象としているため、医療収入のみで運営することは

不可能で、国家予算にかなりの部分を頼らざるを得ない。これについては第7章で述べた通り P G H 側で考えている1989年予算案が十分対応可能であり、又その実現性の高いことも確認された。

以上のように本計画の実施により多大な効果が期待でき、その維持管理についても十分実現可能な計画内容であることから、本計画は妥当であり、又国家開発計画の遂行に大きな役割を果たすものと評価することができる。

第9章 結論と提言

第9章 結論と提言

9-1 結 論

全章までの検討から、本件外来棟の建設および医療機材の供与は、日本国からフィリピンに対する無償資金協力の案件として妥当であり、本計画の実施は大きな意義があるものと判断される。

9-2 提 言

本計画実施による効果をより一層確実なものとするために、以下のような点をフィリピン側が実施することを期待する。

- 1) 外来棟は自己完結型として単独で機能できるよう計画しているが、PGH全体が有機的に機能してより効果を高めることが可能となる。このため現在建設中の中央棟をできるだけ早く完成させ、中央診療部門が確立されることが望ましい。
- 2) 本件外来棟の充実には施設内容のみでなく、施設運営面での充実も必要である。次のような点が改善されるべきである。
 - a) OPD担当医療職員数を少なくとも50%増員する
 - b) 医療用品, 消耗品, 医薬品の増加
 - c) 受付, 病歴の管理手法の改善
 - d) 診療時間の1時間繰上げ(午前, 午後とも各1時間)
 - e) 機能障害, ペインクリニック, 外来手術等診療科目の充実
- 3) 維持管理計画に必要な予算確保のため, 患者からの収入増を図る。このため, 施療院的性格を有するOPDとしての診療活動を尊重しつつ, 少しでも維持管理費を確保するために, 一部施設を有効に活用することにより, 幅広い階層の患者を対象とした医療サービスを行なうための努力をすること。

資 料 編

1. 調査団員の構成

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2. フィリピン国関係者リスト

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Dr. Juanito Billoe - Vice Chancellor
Dr. Jose T. Domingo - Vice Chancellor
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Dr. Mario de Villa - Asst. Director for Health Operation
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Dr. Herminio J. Germar - Project Team Member
Elena P. Yu - Project Team Member
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Dr. Robert Lim - Chairman

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Dr. Baltazar V. Reyes - Chairman

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Department of Hospital Dentistry

Dr. Natividad Gervasio - Chairman

Dr. Lucia Valderrama, Dentist

Dr. Agerico Tangco, Dentist

3. 現地調査日程

(1) 基本設計調査団

3月16日(月)	10:00	伊勢団長・三好・生井・金川・桑野・伊澤・乳井各団員 成田発 PR431 にてマニラへ
	14:30	マニラ着
	16:30	マニラ JICA事務所にて宮本所長・大島次長と本調査 ↓ スケジュール打合せ
	17:15	日本大使館にて安達一等書記官と本調査の目的とスケジ ↓ ュール打合せ
	18:00	
3月17日(火)	9:00	NEDA表敬訪問 本調査団の目的とスケジュール説明
	13:30	PGH正式訪問 インセプションレポート提出・説明 ↓ 本調査のスケジュール説明
	17:00	団内打合せ
3月18日(水)	9:00	PGH内 現OPD, ERC視察 ↓
	10:00	PHGにて打合せ NEW CENTRAL BLOCK の施設機能 ↓ PGHのマスタープランについて
	12:15	
	14:00	PGHにて打合せ PGHの経済運営状況・スタッフ状 ↓ 況 現OPDの機能および患者のフローについて
	17:00	
		↓ 団内打合せ
	18:00	

3月19日(木) 9:00 PGH内 現OPD視察
 ↓
 11:30
 12:30 PGH内 手術部門視察
 ↓
 13:30 PGHにて打合せ 無償資金協力のしくみの説明
 ↓
 15:30 現OPDの現有機材の調査
 ↓
 18:00

3月20日(金) 9:00 現OPDの調査 検査部 外来手術部 一般外来外科
 ↓ カルテ保存状況調査
 11:30
 ↓ BFAD現場視察
 13:30
 14:30 現OPD 施設調査
 ↓
 18:00 団内打合せ

3月21日(土) 9:00 PGH内 NEW CENTRAL BLOCK 視察
 ↓
 10:30 PGHにて医療機材リスト打合せ
 ↓
 12:00
 13:00
 ↓ 団内打合せ 資料整理
 17:00

3月22日(日) 10:00 団内打合せ、ヒアリング事項整理
↓
12:00
14:30 斉藤 永瀬 中本団員PR431 にてマニラ着
18:00 団内打合せ・スケジュール調整
↓
19:00

3月23日(月) 9:00 P G H建設のコンサルタントと質疑応答
↓
10:30 現OPD視察 外来受診患者の面接調査
↓
12:00
14:00 ミニッツに署名
↓
15:00
17:00 マニラ J I C A事務所にて宮本所長 大島次長にミニッツの概要説明・今後のスケジュール説明
↓
18:00

3月24日(火) 9:30 NEDAへミニッツの署名報告
↓
10:00
10:30 PGH建設のコンサルタントと打合せ
↓
12:00
14:30 DPWHの各担当者にヒアリング
↓
16:00 PGH各科代表と医療機材内容の協議
↓ ローカルコスト調査
18:00

3月25日(水) 9:00 鹿島建設より建設事情ヒアリング
↓
10:30 PGH各科代表と医療機材内容の協議

12:00 伊勢団長・三好・生井各団員 PR432にて帰国

13:00 銭高組より建設事情ヒアリング
↓
14:30 地元建築家と打合せ

18:00 資料整理 団内打合せ

3月26日(木) 8:00 PHILIPPINE CHILDREN'S MEDICAL CENTER 見学
↓
10:15 NATIONAL LUNG CENTER OF THE PHILIPPINES 見学
↓
11:30 NATIONAL KIDNEY INSTITUTE 見学
↓
12:20
13:45 QURINO MEMORIAL GENERAL HOSPITAL 見学
↓
15:15
15:45 熊谷組より建設事情ヒアリング
↓
17:00 団内打合せ
↓
18:00

3月27日(金) 9:00 BFDA現場見学
↓
12:00
13:00 DPWHの各担当よりヒアリング
↓
15:45 INTERNATIONAL TRADE CENTERの現場にて大成建設より
杭工事についてヒアリング
↓
17:00 団内打合せ
↓
19:00

3月28日(土) 10:00 P.G.HのSITE OFFICEにてD.P.W.H各担当と打合せ
各種資料請求

↓

12:00 O.P.D敷地周辺インフラ調査

13:00 団内にて打合せ 各種報告書整理

↓

19:00

3月29日(日) 10:00 団内打合せ 各自資料整理

↓

14:00

15:00 各自報告書作成

↓

17:00

3月30日(月) 8:15 HOSPITAL OF MANILA 見学

↓

10:45 現O.P.Dの各種検査 診察部門の平面形状調査

↓

12:00 インフラ関連官庁と協議

13:30 MAKATI MEDICAL CENTER 見学

↓

15:15 DATABANKにて打合せ 建設資材のコスト入手

↓

16:00 FOUNDATION SPECIALISTにて杭工事についてヒアリング

↓

17:15 地元建築家と建設資材労、務費についてヒアリング

↓

19:00

3月31日(火) 9:00 電気・設備 各オーソリティよりヒアリング
↓
11:00 中央棟担当のコンサルタントよりヒアリング
↓
12:00 PGHにて新OPDのブロックプラン提示・説明

13:15 電気・設備 各オーソリティよりヒアリング
↓
14:45 PHILIPPINE NORMAL COLLEGE 見学
↓
17:00 団内打合せ 資料整理
↓
18:30

4月1日(水) 8:45 報告書原稿整理 ローカルコスト入手
↓
12:00 ローカルのメーカー調査
13:00 団内打合せ
↓
15:00 PGH SITE OFFICE にてDPWH打合せ コスト入手
↓
17:30 地元建築家よりヒアリング
↓
19:00

4月2日(木) 8:45 団内打合せ 載荷試験用仕様書作成
↓
12:00 PGHにて新OPDのブロックプランについて協議
13:00 NEDAにて資料収集
↓
15:45 PGHにて打合せ 載荷試験衣類 平面形状打合せ
↓
17:30 PGH SITE OFFICEにてDPWH打合せ
↓
18:30

4月3日(金) 8:45 団内打合せ 必要資料の再確認
↓
12:00 ローカルのメーカー調査
13:45 マニラ JICA事務所にて大島次長に調査結果報告
↓
14:30 日本大使館にて安達一等書記官に調査結果報告
↓
15:30 PGHにて必要資料入手
↓ 載荷試験のスケジュール確認
17:00 団内打合せ
↓
18:30

4月4日(土) 9:00 団内打合せ, 資料整理
↓
12:00
12:30 ホテル発 15:00 PR432にて帰国
15:00 金川, 桑野, 斉藤, 永瀬, 中本, 伊澤, 乳井, 各団員
PR432にて帰国

(2) ドラフト説明

6月15日(月) 10:00 伊勢団長・生井・金川・桑野・乳井各団員
成田発 PR431 にてマニラへ
14:30 マニラ着
16:30 マニラ JICA 事務所にて大島次長に
↓ ドラフト概要説明, スケジュール打合せ
17:30
6月16日(火) 9:00 団内打合せ
↓
11:30
14:00 P G H 側にドラフト内容説明
↓
17:00
6月17日(水) フィリピン側責任範囲, 予算確認
6月18日(木) 9:00 各科配置打合せ
↓
17:00
6月19日(金) 9:00 各科配置打合せ
↓
11:30
12:00 ミニッツ署名
↓
13:00
14:00 各科配置打合せ
↓
17:00

6月20日(土) 伊勢団長, 生井団員帰国
9:00 金川・桑野・乳井団員 P G H 中央棟視察
↓
11:30
14:00 調査結果とりまとめ
↓
17:00
6月21日(日) 基本設計最終調整, 調査結果とりまとめ
6月22日(月) 9:00 P G H と最終打合せ
↓
10:00
14:20 P R 4 3 2 にて金川・桑野・乳井団員帰国

4. 要 請 書

CONSTRUCTION AND EQUIPPING
OF
THE OUT-PATIENT DEPARTMENT
THE PHILIPPINE GENERAL HOSPITAL

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1. Project Title
 2. Project Proponent
 3. Background and Rationale
 4. Development Agenda
 5. Objectives
 6. Strategies
 7. Benefits
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- B. Number of Medical Researches Completed and On-Going at PGH
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- C. Physical Plans for the New OPD
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- E. List of Existing Serviceable Equipment at OPD
- F. Maintenance and Other Operating Expenditures of the OPD
- G. Proposed Additional Personnel for the OPD

A. PGH OUT-PATIENT DEPARTMENT:

ITS ORIGINS AND PRESENT STATE

A. 1.0 HISTORY OF THE PHILIPPINE GENERAL HOSPITAL OUT-PATIENT

DEPARTMENT (1910 - 1985)

The Philippine General Hospital (PGH) Out-Patient Department, (OPD) started out with dispensary/out-patient work by responding to calls of government beneficiaries and private patients and attending to the patrons of the free dispensary and clinic. This free dispensary and clinic was formerly conducted at the St. Paul's Hospital by the staff of the Medical College but transferred to the PGH in January 1, 1911.

The clinic was then divided into three sections, namely:

(1) medical tuberculosis, obstetrical, skin, children, neurology and genito-urinary clinics with 50-150 patients, flocking in daily; (2) the EENT clinic and (3) the surgical clinics. As early as its first few years of operation, the OPD was already faced with the basic problems be setting fee dispensary work such as the proper selection/qualification of patients as charity cases, how far charity should extend to those in actual need of certain medical supplies/items, number of hours the busy physicians should devote to out-patient work, etc.

Overcoming these odds, the OPD attended to the medical needs of 24,335 patients during its first year of operation and this figure almost tripled until 1914 when it grew to 66,993. With the new regulations, however, of requiring a twenty centavo ticket for patients who were able to pay, the number

of cases did not grow as rapidly. In 1923, a nominal fee of P0.05 (later increased to P0.20) was charged against free patients to cover part of the cost of medicines dispensed at the PGH Pharmacy and this created a recorded decrease of patients by 2,049. Despite these recorded decrease in patient load, the average number of patients treated daily still grew from 82 in 1910 to 459 in 1924 and to 594 in 1932.

The continuing rise in the patient treatment at PGH thus necessitated the extension of one of the wings of the dispensary in 1928. With an allotment of P50,000. the dispensary addition to the southwest end was completed in 1929 and occupied a ground space of 337 m². This led to an enlargement of the EENT clinic which enabled it to have a laboratory of its own and accommodated 14 patients of treatment at one time. Formerly one of the most congested clinics, it became divided into two sections namely, ophthalmology, and oterhinolaryngology, holding clinics separately in the afternoon and morning respectively. Similarly, the gynecology clinic was expanded, the dental clinic relocated from the dispensary building to the newly built annex, and the surgical clinic transferred to the entire ground floor of the dispensary additional.

In 1939, the Dispensary had to undergo another construction which was completed and formally inaugurated on Nov. 12, 1940 by the President of the Philippines (Commonwealth). The new building consisted of three (3) stories - mainly an additional adjoining the old section and the south annex.

With the outbreak of World War II, the dispensary continued its work despite the bombing and even during the Japanese Occupation. All clinics were functioning in spite of the shortage of medicine and supplies. Funds available from the War Damage Commission allowed the reconstruction of the destroyed parts of the dispensary in 1948.

Under Executive Order 391, effective January 1, 1951 the Philippine General Hospital was reorganized but continued under the supervision and control of UPS. Fifty one positions were abolished and the Dispensary clerical section was merged with the Statistics and Record Section and was renamed the General Records Section.

In 1953, the Diabetic and Thyroid Clinics were added as Medical Specialties and in 1955, the following specially clinics are opened. Obstetrics-Post Partum Clinic, Surgery, Neurology, Gynecology-Sterility and Fertility, and the EENT. Lacrimal Apparatus Clinic. The year 1958 likewise saw the organization of the audiology, allergy and nasopharyngeal clinics.

The out-patient department presently takes care of ambulatory cases, screens patients before admission to the hospital; serves as a follow-up station discharged patients, and acts a venue for the teaching training of medical and nursing students and those from allied medical science, schools. Clinics are held morning and afternoon by the medical, surgical, pediatrics, EENT, and dental department while obstetrics and gynocology hold clinics in the morning. Specialty clinics are held on definite days of the week, as scheduled and patients are seen by appointment.

2.0 OPD CONCEPT OF ORGANIZATION

General:

The Out-Patient Department belongs to the Department of Family Medicine of PGH with the OPD staff reporting directly to the Department Chairman. There is an OPD Service coordinator who takes charge of all administrative matters relative to OPD operations. He coordinates with the various clinical departments for the formulation of clinical Out-Patient program and administrative rules for their medical- staff and trainees. He is directly responsible for the operation of the infirmary, and Family Medicine clinic (Triage and Follow-up) and exercise administrative supervision over the clinical out-patient sections of the various PGH Departments. He is also responsible for the provision and control of the non-human resources needed in the OPD.

Linkage with other Department:

- 2.1 In each clinical section there is a medical staff and trainees rendering professional medical consultation and treatment service to Out-Patients supervised by a consultant-in-charge. There is a head nurse responsible for the unit management and supervision as well as clinical functions.
- 2.2 The Nursing service department is responsible for the development and formulation of nursing program in the OPD and provision of the required nursing personnel for each OPD clinic/session.

- 2.3 The office and custodian services division is responsible for the provision of custodian service workers and the maintenance of cleanliness and sanitation of the OPD.
- 2.4 The medical records division is responsible for the registration of patients and safekeeping of records.
- 2.5 On the matters of policy, the Assistant Director for Health Operations acts/decides particularly on problems involving more than one hospital unit. Depending upon the nature of the problem, he may call on a standing committee consisting of hospital officials to act on the problem at hand.

3.0 OPD OPERATIONAL CONCEPT

The basic flow of activities in the OPD are as follows:

3.1 Patient Reception and Registration

Old and new patients in need of ambulatory care registered at the OPD Admitting Section, after which they are directed as follows: New patients - to the OPD Triage; old patients to the specialty clinic where they have been previously scheduled. At this state, a patient Case Record has been initially accomplished and the Patient Card already issued for each new patient.

3.2 Initial Medical Attention and Screening of New Patients

All new patients are given initial medical attention at the OPD Triage for screening purposes. Following then, the approved guidelines on disposition, the patient may be:

3.2.1 Given a referral to his health center for his subsequent medical requirements and send home,
or

3.2.2 Referred to the general clinic of a specialty department.

3.3 Care of Patients in the General Clinic of a Specialty Department

Patients seen in the general clinic of a specialty department include referrals from the OPD Triage, or

another department and the old patients of the clinic/department. At this point, the patient is placed under further medical assessment and treatment. Additional data/documents are entered/attached to the patient's chart. At the end of a session, the patient maybe:

- 3.3.1 Given instructions and scheduled for a follow-up visit to the same clinic; or
- 3.3.2 Referred to another department's general clinic; or
- 3.3.3 Referred to a specialty clinic of the department

3.4 Patient Care in a Specialty Clinic

In a specialty clinic, a patient is placed under specialized diagnostic procedures and/or given specialized out-patient treatment. These are undertaken either as the actual set of curative measures or as a work-up prior to surgical operations and/or the patient's admission to a ward.

The results of this stage include:

- 3.4.1 Patients worked up for admission
- 3.4.2 Patients treated and cured

4.0 PRESENT NEEDS

The OPD just like all the other units of the hospital is not without the major problems of the institutions. Perennial problems of lack of equipment and instruments, insufficient medical supplies, scarcity of personnel to handle daily

transactions, minimal space allocation, deficiency in other support resources continue to hinder the efficient delivery of ambulatory services leading to queuing of patients. Moreover, the need to reaffirm the importance of the OPD in relation to the goals of the bigger organization still clouds the smooth coordination among hospital personnel. In this regard in all effort to put the OPD in its proper perspective, PGH has identified the following problems or needs for improvement in its OPD:

4.1 On the Clinical/Academic Programs

4.1.1 There is a need to emphasize the importance of the OPD in the training/academic programs of all the clinical department. Also, there is a need to reorient the staff to such importance.

4.1.2 There is a need for an in-depth review of the OPD component of the clinical/academic programs especially in light of the present status of the PGH Development Project.

4.1.2.1 There is a need to redefine the objectives of all clinical departments with regard to their out-patient activities.

4.1.2.2 There is a need to identify which programs should belong to OPD and which of these programs should be centralized and expanded into the OPD Complex.

4.2 On the OPD Support Resources

- 4.2.1 There is a need to build a modern OPD Complex that will accommodate at least 2,000 patients per day as planned for the new PGH.
- 4.2.2 There is a need for additional/replacement of equipment and instruments; a need for repair of serviceable ones.
- 4.2.3 There is a need to increase the allocation of medical supplies.
- 4.2.4 There is a need for further review of OPD space allocation for purposes of maximization.

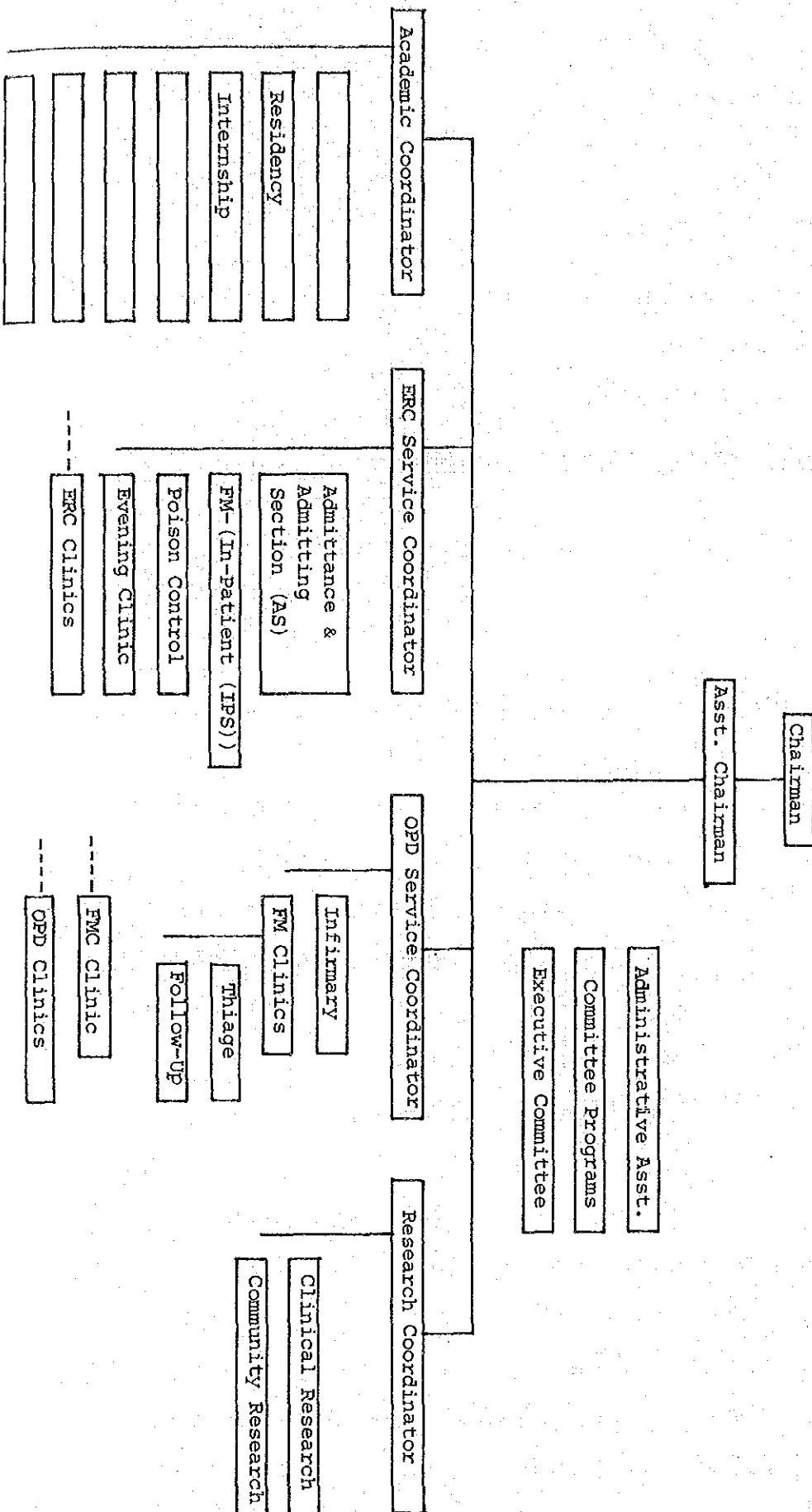
4.3 On the Administration of OPD

- 4.3.1 There is a need to define the operating guidelines regarding the administration of the academic and other patient-oriented programs/activities.
- 4.3.2 There is a need to redefine the duties and authorities of the key positions in the OPD, e.g. the Nurse Supervisor, the Head Nurse, the Consultant-in-charge of a section, etc.
- 4.3.3 There is a need to appoint/designate the OPD Administrator who shall be responsible for the planning, supervision, and control of administrative matters relative to OPD operations.
- 4.3.4 There is a need to review the present OPD personnel complement for purposes of maximum manpower allocation.

DEPARTMENT OF FAMILY MEDICINE

ORGANIZATIONAL CHART

1985



B. PROJECT PROPOSAL FOR THE JAPANESE GOVERNMENT

Concept Paper

=====

1. PROJECT TITLE : Construction and Equipping of the
OUT-PATIENT DEPARTMENT, Philippine
General Hospital
2. PROJECT PROPONENT : Philippine General Hospital
3. BACKGROUND AND RATIONALE

The Philippine General Hospital (PGH) is a national resource in health. Established 75 years ago "to provide medical and surgical care to non-infective diseases among the general population", the PGH has also been mandated to undertake teaching-training and research in medicine. As such, it is often referred to as a medical center.

Table 1 shows the output of the PGH Medical Center in 1984 demonstrating its strategic roles.

Table 2 shows the 5 inter-related functional components, each performing a primary role and all contributing to the overall task of a hospital system. Despite the establishment of the other government hospitals in different parts of the country, from those performing primary health care as the health units, secondary medical care as the provincial hospitals and tertiary medical services as the specialty centers, the PGH remains the premier hospital of the government.

In preparing PGH to cope up with the health and medical care needs of the Filipino people of the future, the Board of PGH officially approved and supported the current expansion and renovation.

PGH is currently concerned with two major agendas:

1. Expansion and renovation of the physical facilities, and
2. Development and institutionalization of mechanisms for organizational growth and viability. Central to this is the establishment of extra-governmental source of funds to help attain self-sufficiency in the provision of medical services to the indigent Filipino patients.

These concerns are made of imperative by the following:

1. Medical care needs of an expanding population
2. Advances in medical science and technology
3. Policy decisions of the national leadership to adopt Primary Health Care as the key strategy in achieving health for all, restructuring the health care system and the recently announced plan to upgrade the country's facilities for health and medical services.
4. Decreasing opportunities in foreign countries specially in the USA for advanced training in medicine and health professions.
5. Health re-awakening among the medical educators and practitioners to the need for shifting from disease to health and from curative to preventive medicine.
6. The effects of time on the physical facilities of the 75 years old PGH.

4. DEVELOPMENT AGENDA

Cognizant of the continuing need for PGH to be relevant and truly effective in its mandated roles, it has adopted a developmental philosophy in contributing to the resolution of the three universal problems facing the health and medical care system. These problems are (a) increasing cost of medical services, (b) access to medical services, and (c) appropriateness of the health and medical programs.

In hastening the attainment of the expansion and upgrading of the PGH, this concept paper on the Out-Patient Department is specifically written and presented. It is strongly supportive of what is currently being undertaken in the Philippine General Hospital as explicitly presented in Table 2.

5. OBJECTIVES

To expand the facilities of the Out-Patient Department of the PGH.

More specifically, to build a 10,000 sq.m. OPD which is self-contained with the basic facilities for an effective and efficient out-patient care of a daily 2,000 ambulatory cases from 9 in the morning to 10 in the evening. Equally important, the new OPD will function as a support facility to the Outreached Health Units, meaning the medical and health team with appropriate transportation and basic facilities will leave the hospital and be physically present in the health units located in various parts of

Metro Manila. In this role, the OPD will only provide health and medical services beyond the expertise of the health workers but train the later and at the same time provide health information drives through audio-visual means. Finally, the third function of the new OPD is to undertake operation research to formulate, test and institutionalize innovative means of health and medical care appropriate for the rural and urban Philippines. These three functions make the envisioned OPD truly new and innovative!

Specifically, the new OPD will have the following:

1. For ambulatory care in the OPD:
 - a. Consultation for patients referred from the health centers and other hospitals.
 - b. Diagnostic and therapeutic radiology, diagnostic laboratories.
 - c. Minor surgeries and selected cases of major surgeries on an Out-Patient basis (strategy to cost containment) without endangering the life of the patient.
 - d. Pharmacy
 - e. Same consultation facilities for indigent patients shall also be used for pay-patients are different schedules.
 - f. Waiting areas for patients, specially for the indigents shall be provided audio-visual facilities on health education and self-care.
 - g. Computerization of administration, records keeping and retrieval system.

2. Out-Reached Health Services:

- a. Mobile clinics with fluoroscopic and minor surgical procedures.
- b. Health education information audio-visuals for community.
- c. Training of health workers of the health units
- d. Transportation facilities for medical and health teams of the PGH to include the medical students of the UP College of Medicine.

3. Facilities for Operation Research - innovative ways for health conservation and promotion in support of the Primary Health Care Strategy of the Ministry of Health.

6. STRATEGIES

1. The OPD Project Proposal to NEDA for a Japanese Grant in Aid (JICA) has been submitted to Japanese Government officially.

2. Formulate the Functional Plans which will be inputs to the Architectural and Engineering Plans and the identification of the medical and other essential equipment including ambulances, mobile clinics and transportation facilities.

3. Cost (Japanese Grant in Aid)

Building

Equipment

Total

7. BENEFITS

Beyond the realization of another important component of a hospital system engaged in health and medical care of people and patients, training of future medical and health professionals, and solutions to technical and operational health problems, the "new OPD concept" will help resolve the three crucial problems facing the health care system which are (a) increasing cost of medical care, (b) access to health and medical services and (c) irrelevance of many of the present health and medical progress.

As the interface between the community on the one hand and the hospital on the other, the new OPD shall work on the following:

1. Change the undue dependence of people on hospitals for their medical needs and to begin relying of themselves - self-reliance.
2. Expand physical presence especially of government physicians in communities outside of the hospital and thus increase accessibility to them.
3. With increased interactions between the health workers and the people in communities, better identification of the real and true needs of people relative to their health and disease shall be realized.

8. Table 1. 1984 PGH ACCOMPLISHMENTS IN THE PURSUIT OF ITS THREE

FUNCTIONS

Functions	Group Totals	Totals
A. Patient Care		
Total Number of Patients Attended to		325,111 (1)
B. Teaching-Training		
Total Number of Students Trained		1,281
Undergraduate Medical Students	420 (2)	
Medical Interns	165	
Residents and Fellows	361 (3)	
Nursing Students	39	
Dietetic Residents	18	
Nutrition Students	48	
Pharmacy Interns	52	
Dental Externs	71	
Medical Technology Externs	55	
Medical Social Worker Students	3	
Physical Therapy Interns	39	
Occupational Therapy Interns	10	
C. Research		
Total Number for Projects for 1984		409 (4)

(1) 319,113 (98.0%) were indigent and 5,976 (2.0%) were pay-patients.

(2) Exposure to hospital training starts during the second until the fourth year medical educations.

(3) 114 completed training in 1984 as new medical specialist.

(4) 173 projects were completed in 1984.

9. Table 2. MAJOR COMPONENTS OF A HOSPITAL SYSTEM

FUNCTIONS/ACTIVITIES	HOSPITAL COMPONENT
1. ENTRY/SEPARATION POINT of Non-Emergency Ambulatory Patients	OUT-PATIENT DEPARTMENT (1)
2. ENTRY/SEPARATION POINT of VERY-ILL, Emergency Patients Requiring Life-Saving Medical Services	EMERGENCY ROOM COMPLEX (2)
3. Nursing-Care Facilities Where Patients are confined in the Hospital	NURSING-CARE PAVILIONS (3)
4. DIAGNOSTIC/TREATMENT Shared-Services	DIAGNOSTIC-THERAPEUTIC RADIOLOGY, DIAGNOSTIC LABORATORIES, PHARMACY, NUCLEAR MEDICINE LABS., OPERATING ROOM COMPLEX, ANESTHESIA, RECOVERY ROOMS, INTENSIVE CARE UNIT, LABOR-DELIVERY ROOMS, NURSERY (4)
5. ADMINISTRATIVE AND OTHER SUPPORT	ADMINISTRATION, MEDICAL-SUPPORT SERVICE COMPLEX, KITCHEN-DIE-TRAY (5)

(1) OPD PROJECT PROPOSAL TO NEDA, March 1985

(2) Awaiting Funding : P40 Millions.

(3) Nursing Care for Indigence Patients Funded with P200 Million Social Security Loan to University of the Philippines to be paid by the PGH Foundation (Project is 95% Completed as Aug. 25, 1985).

Nursing Care for Pay-Patients included in the Government Funding for the 7-Storey Central Block building to be housed in the last 4 Floors: This is central to the aspiration of Incentives to Medical and other hospital personnel.

(4) Under construction with financial support from the national government. Located in the first 3 floors of the 7-Storey Central Block Building, this will help PGH Centralize and Strategically deploy common and shared facilities leading to more institutional and productivity.

LIST OF ANNEXES

- A. The Average Number of PGH Trainees Per Year
1977-81

- B. Number of Medical Researches Completed and On-Going in PGH
1977-81

- C. Physical Plans for the New PGH-OPD
 - C1 - Summary of Present Floor Area
 - C2 - Proposed Section Requirements
 - C3 - Proposed Floor Plans for OPD (Preliminary)
 - C4 - OPD Location Map (within PGH)

- D. List of Additional New Equipment

- E. List of Existing Serviceable Equipment at OPD

- F. Maintenance and Other Operating Expenditures of the OPD

- G. Proposed Additional Personnel for the OPD

ANNEX A

THE AVERAGE NUMBER OF PGH TRAINEES PER YEAR 1977-81

Undergraduate medical students (2nd-4th year medicine)	420
Interns	148
Postgraduate Specialization (Residency)	237
Fellows	118

Other Health Workers Trained

Dentistry Fellows	8
Dentistry Externs	4
Pharmacy Students	50
Nursing Students	344
Postgraduate Nursing Trainees	188
Postgraduate Medical Technicians	17
X-ray Technicians	15
Social Work Students	11
Dietetic Interns	117
Nutrition Students	137
Occupational/Physical Therapy Trainees	20

ANNEX B

NUMBER OF MEDICAL RESEARCHES, COMPLETED AND ONGOING IN PGH, 1977-81

<u>SPECIALITY AND STATUS OF RESEARCH</u>	<u>YEAR AND QUANTITY</u>				
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Dept. of Medicine					
- Completed	28	23	27	3	27
- Ongoing	100	62	49	84	84
Dept. of Pediatrics					
- Completed	1	17	12	17	10
- Ongoing	11	23	21	17	17
Dept. of Surgery (incl. Anesthesiology)					
- Completed	13	10	16	25	27
- Ongoing	28	19	20	21	28
Dept. of OB-Gyne					
- Completed	5	4	3	18	4
- Ongoing	14	22	8	10	22
Dept. of Psychiatry					
- Completed	1	0	1	2	4
- Ongoing	4	2	1	0	0
Dept. of Eye					
- Completed	29	41	46	27	59
- Ongoing	59	55	19	55	68
Dept. of ENT					
- Completed	7	7	3	18	17
- Ongoing	12	13	3	0	0
Dept. of Orthopedics					
- Completed	2	2	1	4	9
- Ongoing	3	5	5	6	0
Dept. of Radiology					
- Completed	0	0	1	2	1
- Ongoing	DNA	3	2	1	0
Dept. of Rehabilitation-Medicine					
- Completed	1	2	3	4	
- Ongoing	9	6	2	1	1
Dept. of Family Medicine					
- Completed	8	6	29	29	15
- Ongoing	8	19	DNA	16	16
Dept. of Dental					
- Completed	DNA	DNA	DNA	2	0
- Ongoing	DNA	DNA	DNA	0	2
TOTAL					
- Completed	95	112	142	151	174
- Ongoing	243	229	130	211	234

Legend:

1. Completed refers to researches which were completed during the given year.
2. Ongoing refers to those which were still being undertaken as of the last day of the given year.
3. DNA means data not available.

ANNEX C1

SUMMARY OF PRESENT FLOOR AREA

OPD

<u>Unit/Section</u>	<u>Existing</u>
Medicine	334.21 M2
OB-Gyne	198.75
Dentistry	187.74
Eye	83.16
E.N.T.	57.42
Q.I. Extension	151.09
Surgery	282.96
Pediatrics	193.59
Family Medicine	214.65
C.I.	85.24
Rehab Medicine	50.03
Orthopedics	44.10
Medical Records Division	
Outpatient Section	166.53
Admitting Section	97.99

Total 2,156.46 M2

ANNEX C2

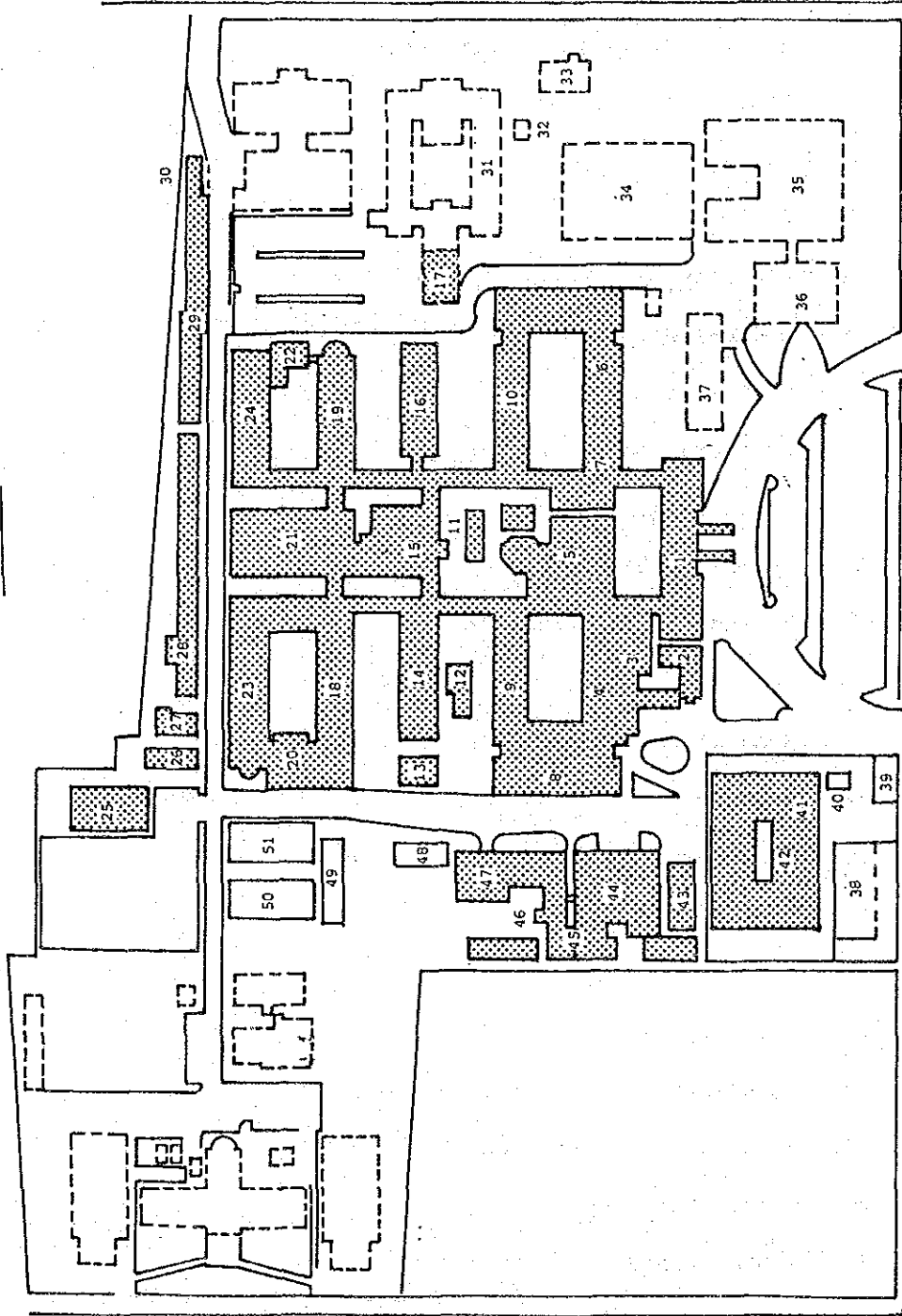
PROPOSED SECTION REQUIREMENTS

1. Radiology & Cancer
 2. Laboratories
 3. Nuclear Medicine
 4. OR
 5. Integrated Critical Care Units
 6. Diagnostic Laboratories
 7. Family Medicine
 8. Dietary
 9. Pharmacy
 10. Medical Records
 11. Central Sterile Supply
 12. Delivery Room
 13. Medical Illustration
 14. Pay Patient Services
 15. Biomedical & Physics
 16. Dental
 17. Rehabilitation Medicine
 18. Surgery
 19. OB-Gynecology
 20. Pediatrics
 21. Ophthalmology
 22. Otolaryngology
 23. Psychiatry
 24. Medical Social Service
 25. Office Services
 26. Administration
- Total 10,000 sq.m.

ANNEX C4

LEGEND:

1. ADMINISTRATION BUILDING
2. BLOOD BANK
3. TRAIGE
4. WARDS 7 & 8
5. SURGERY
6. WARDS 3 & 4
7. PHIL. EYE RESEARCH
8. EMERGENCY ROOM COMPLEX
9. WARDS 9 & 10
10. WARDS 5 & 6
11. POWER HOUSE
12. CENTRAL SUPPLY
13. MALNUTRITION BUILDING
14. WARDS 11 & 12
15. OLD KITCHEN
16. SCIENCE HALL
17. COBALT
18. WARDS 14A & 14B
19. WARDS 21 & 22
20. NURSERY
21. DIETARY BUILDING
22. LABORATORY
23. WARDS 17 & 18
24. WARDS 19 & 20
25. DORM 3
26. DORM 3 ANNEX
27. SOCIAL HALL
28. REHABILITATION MED. & WARDS 23 & 24
29. ORTHOPEDICS ANNEX
30. UP MAINTENANCE
31. CANCER INSTITUTE
32. REST HOUSE
33. DIRECTOR'S COTTAGE
34. TENNIS COURT
35. NURSES HOME
36. DORM 1
37. CHAPEL
38. REST HOUSE
39. WAITING SHED
40. GUARD HOUSE
41. PHARMACY
42. DISPENSARY
43. FAMILY PLANNING CENTER
44. ENGINEERING
45. TRANSPORTATION
46. MAINTAINANCE
47. SUPPLY STATION
48. PURCHASING
49. SAMP STUDENT HALL
50. DORMS
51. BASKETBALL COURT



PHILIPPINE GENERAL HOSPITAL FACILITY LAY OUT

ANNEX F

MAINTENANCE AND OTHER OPERATING EXPENDITURES

OF THE PGH

Incremental Requirements

Housekeeping	P 123,258.48
Office Supplies	62,396.16
Construction and Gasoline	88,372.24
Linen Materials	34,648.72
	<hr/>
TOTAL:	P 308,657.

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ANNEX G

PROPOSED ADDITIONAL PERSONNEL
FOR THE PGH OPD

	<u>Position Title</u>	<u>Number</u>	<u>Annual Budget Requirements</u>
A.	Resident Staff		
	1. Resident Physician I	8	P 221,856
	2. Resident Physician II	8	221,856
	3. Resident Physician III	8	221,856
B.	Nursing Staff		
	1. Head Nurse	1	14,582
	2. Staff Nurse	26	325,166
	3. Clinic Clerk	9	79,488
	4. Nursing Attendant	3	23,976
	5. Institution Worker	3	20,664
C.	Administrative Staff		
	1. Public Assistant	1	10,260
	2. Clerk Typist	1	9,756
	3. Clerk	2	17,664
		<hr/>	<hr/>
	TOTAL	70	P 1,167,064
		<hr/>	<hr/>

Based on existing salary rates

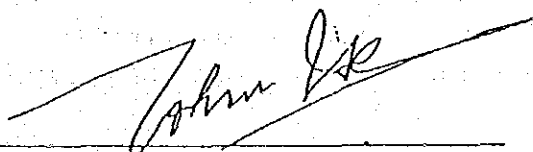
Source of Data : Budget Division, PGH

MINUTES OF DISCUSSIONS
ON
THE BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION
OF
THE OUT-PATIENT DEPARTMENT,
PHILIPPINE GENERAL HOSPITAL
IN
THE REPUBLIC OF THE PHILIPPINES

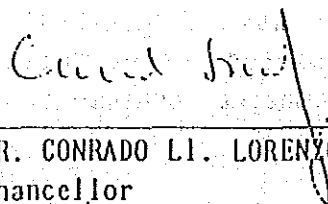
In response to the request made by the Government of the Republic of the Philippines for Grant Aid for the Project for Construction of the Out-Patient Department, Philippine General Hospital (hereinafter referred to as "The Project"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the Japan International Cooperation Agency (JICA) to send a Basic Design Study Team headed by Dr. Toru ISE, Managing Director, Experts Dispatch Services Division, International Medical Cooperation Department, National Medical Center, Ministry of Health and Welfare to the Philippines from March 16 to April 4, 1987.

The Team had a series of discussions with the Authorities concerned of the Government of the Republic of the Philippines and conducted a field survey in Manila. As the result of the study, both parties have agreed to recommend to their respective Governments that the major points of understandings reached between them as attached herewith should be examined towards the realization of the Project.

Manila, March 23, 1987



DR. TORU ISE
Leader
The Basic Design Study Team
Japan International Cooperation
Agency (JICA)



DR. CONRADO LI. LORENZO, JR.
Chancellor
University of the Philippines Manila

ATTACHMENT

1. The objectives of the Project is to establish a new Out-Patient Department (OPD) of the Philippine General Hospital (PGH) which will provide an integrated function for medical services for out-patient care and medical education through construction of out-patient building, and supply and installation of medical equipment.
2. The Project site is located at the north-east side of New Central Block of the PGH, Manila City as seen in Annex I. The whole site area which is owned by the University of the Philippines System is 8,500 square meters.
3. The functions of the OPD are as follows:
 - (1) To provide the basic functions for an effective and efficient out-patient care of a daily 2,000 ambulatory cases.
 - (2) To provide the teaching and training functions for future medical and health professionals.
 - (3) To provide the out-reached health services for example using ambulances.
 - (4) To undertake operation research for formulating health and medical care of the rural and urban areas in the Philippines.
4. The University of the Philippines System is responsible for the administration and execution of the Project.
5. The Japanese Study Team will convey to the Government of Japan the desire of the Government of the Republic of the Philippines that the former takes necessary measures to cooperate by providing the buildings and other items listed in Annex II within the scope of Japanese economic cooperation programme in grant form.
6. The Philippine side has understood Japan's Grant Aid System explained by the Team which includes a principal of use of a Japanese Consultant Firm, a Japanese General Contractor for the construction of building and a Japanese Supplier for the provision of medical equipment. (6)

17

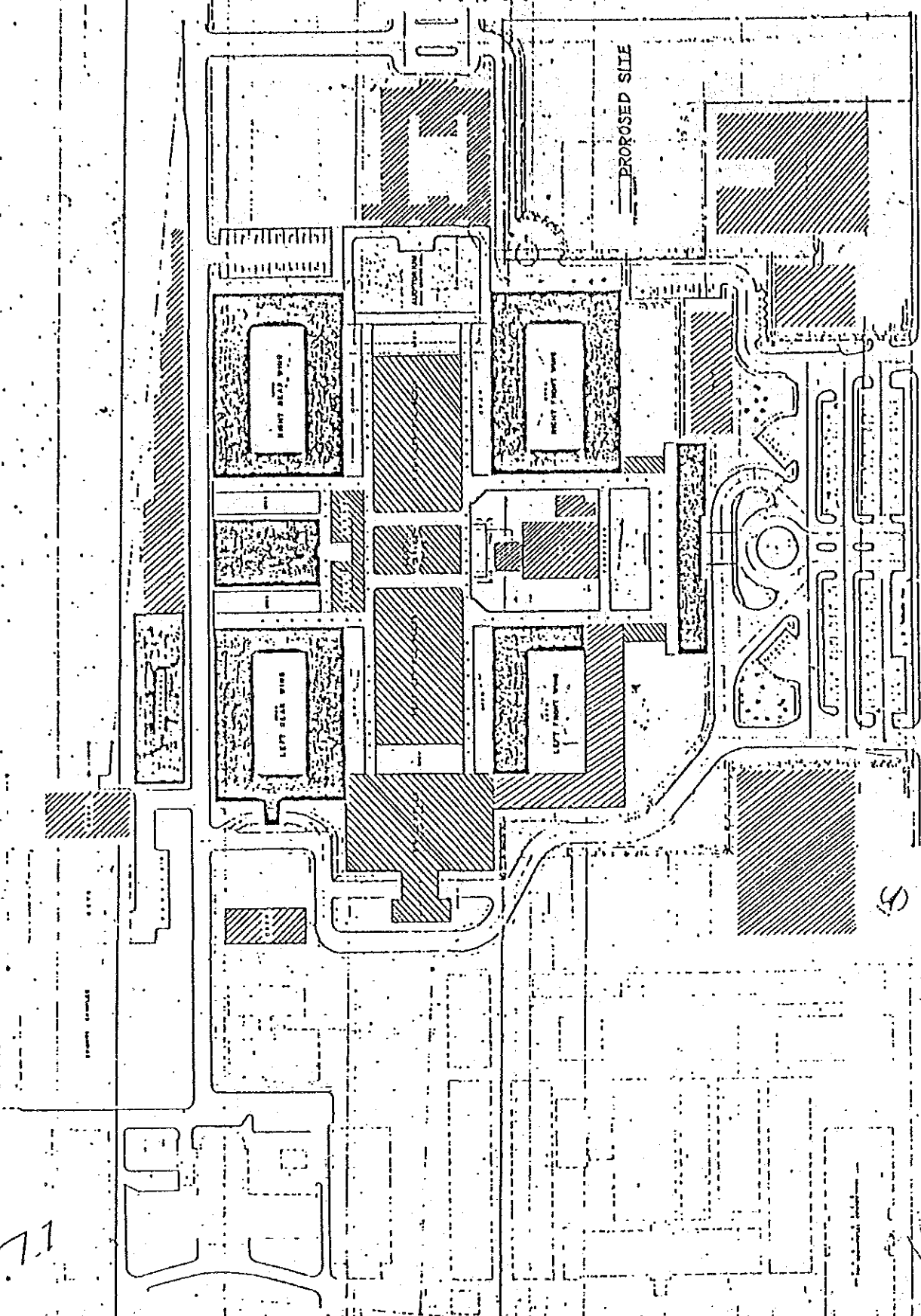
7. The Government of the Republic of the Philippines will take necessary measures listed in Annex III on condition that the Grant Aid would be extended to the Project.

8. Both sides have confirmed that the Basic Design for the Project will be studied and designed based on the latest Master Plan of the PGH Expansion-Renovation Project (as attached in Annex I) presented and explained by the Philippine side.

7.1

LEGEND:

[Symbol]	D	[Symbol]	[Symbol]
[Symbol]	[Symbol]	[Symbol]	[Symbol]



SITE DEVELOPMENT PLAN

SITE DEVELOPMENT PLAN

7.1

ANNEX II

THE REQUEST MADE BY THE GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES

- 1.. Construction of the Out-Patient Department of the Philippine General Hospital with the facilities of the following sections:
 - (1) Medicine
 - (2) Surgery Clinic
 - (3) Pediatrics
 - (4) Obstetrics and Gynecology
 - (5) Orthopedics
 - (6) Otorhinolaryngology
 - (7) Ophthalmology
 - (8) Dental Clinic
 - (9) Rehabilitation
 - (10) Psychiatry
 - (11) Family Medicine
 - (12) Radiology
 - (13) Laboratory
 - (14) ECG
 - (15) Pharmacy
 - (16) CSSD
 - (17) Medical Record
 - (18) Medical Illustration/Graphic
 - (19) Medical Social Services
 - (20) Operating Complex
 - (21) Anesthesia Complex including Pain Clinic
 - (22) Engineering and Technical Services
 - (23) Administration Services

2. Provision of equipment and materials to the above mentioned facilities such as:
 - (1) Medical equipment
 - (2) Surgical equipment
 - (3) Gynecology and Obstetrics equipment
 - (4) Pediatric equipment
 - (5) Teaching equipment
 - (6) Others

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ANNEX III

MAJOR UNDERTAKINGS TO BE TAKEN BY THE PHILIPPINE SIDE

1. To secure the site for the Project.
2. To clear, level and reclaim the site prior to the commencement of the construction.
3. To undertake incidental out-door work such as gardening, fencing gates and exterior lighting in and around the site.
4. To construct the access road to the site prior to the commencement of the construction as needed.
5. To provide facilities for distribution of electricity, water supply, telephone, drainage and other incidental facilities before the commencement of the Project.
 - (1) Electricity distributing line to the site;
 - (2) City water distribution main to the site;
 - (3) Drainage city main to the site;
 - (4) Telephone trunk line to the main distribution panel of building.
6. To provide general furnitures such as carpets, curtains, tables, chairs and others.
7. To bear commissions to the Japanese foreign exchange bank for the banking services upon the Banking Arrangement.
8. To take necessary measures for customs clearance of the materials and equipment brought for the Project at the port of disemberkation.
9. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the Republic of the Philippines with respect to the supply of the products and services under the Verified Contracts.
10. To accord Japanese nationals whose services may be required in connection with the supply of products and the services under the verified contract such facilities as may be necessary for their entry into the Philippines and stay therein for the performance of their work.

7.2

11. To maintain and use properly and effectively those facilities constructed and equipment purchased under the Grant.
12. To bear all the expenses other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and the installation of the equipment. ✓

7.1

MINUTES OF DISCUSSIONS

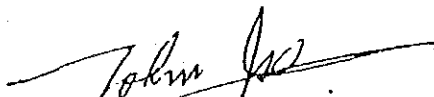
ON
THE DRAFT REPORT OF THE BASIC DESIGN STUDY
ON
THE PROJECT FOR CONSTRUCTION
OF
THE OUT-PATIENT DEPARTMENT,
PHILIPPINE GENERAL HOSPITAL
IN
THE REPUBLIC OF THE PHILIPPINES

At the request of the Government of the Republic of the Philippines for Grant Aid for the Project for Construction of the Out-Patient Department, Philippine General Hospital(hereinafter referred to as "The Project"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the study to the Japan International Cooperation Agency (JICA) . JICA sent the Basic Design Study Team headed by Dr. Toru ISE, Managing Director, Experts Dispatch Services Division, International Medical Cooperation Department, National Medical Center, Ministry of Health and Welfare to the Philippines from March 16 to April 4, 1987.

As the result of the survey and discussions, JICA prepared a Draft Final Report on the study and dispatched a Mission to explain and discuss the Report starting from June 15 to June 22, 1987.

Both parties had a series of discussions on the Report and have agreed to recommend to their respective Governments that the major points of understanding reached between them, attached herewith, should be examined towards the realization of the Project.

Manila, June 19, 1987



DR. TORU ISE
Leader
The Basic Design Study Team
Japan International Cooperation
Agency(JICA)



DR. ERNESTO G. TABUJARA
Officer-in-Charge
Office of the President
University of the Philippines System

ATTACHMENT

1. The Philippine side principally has agreed to the basic design proposed in the Draft Final Report (with minor but appropriate alterations in design, facilities and equipment, mutually agreed upon to be incorporated in the Final Report).
2. The Final Reports (10 copies in English) on the Project will be submitted to the Philippine side by the end of July, 1987.
3. The Philippine side understood the system of Japan's Grant Aid Programme and confirmed the arrangements to be taken by the Government of the Republic of the Philippines for the realization of the Project as agreed upon in the "Minutes of Discussions" dated March 23, 1987.
4. The Government of the Republic of the Philippines will release the necessary budget at the proper time in conjunction with the Japanese side construction.

E. O. Santos

J. J.

6. 視察病院リスト

・ PHILIPPINE CHILDREN'S MEDICAL CENTER

フィリピンを代表する小児病院 鉄筋コンクリート造2階建

6つのウィングに分かれており、3ウィングがPAY-PATIENTS用、3ウィングがCharity用、延床面積約70,000㎡ 巨大である。

しかし、スペースに比して、医療機材の数量が不足、とくに前処理用、周辺用機材の整備不足

外来部門の患者は、1日 150 ~ 180人

救急部門の患者は 1日 30 ~ 50人

・ NATIONAL LUNG CENTER OF THE PHILIPPINES

鉄筋コンクリート造2階建 地下1階中庭をもつ、2つのブロックで構成されている 1階のロビーはトップライトのある吹抜け空間 PGHとは比べものにならない現代建築

事務部門は1階にあり、一部の事務処理にパソコンを利用。

ランニングコストのかかる医療機材を設備しているにもかかわらず、活用されていない。今回のOPDの設計には何ら役に立たない

外来部門の患者 1日 100人程度

救急部門の患者 1日 15人~20人

全館完全空調方式を採用

・ NATIONAL KIDNEY INSTITUTE

鉄筋コンクリート造2階建 一部地下1階 中庭を持つ六角形平面をした現代建築 腎臓移植を前提とした人工透析が治療の主体

患者数 1日 200 ~ 300人

移植手術件数 1年 約50case

腎臓疾患看護ユニット12台を有し、1日7人に人工透析をほどこす。RO供給は、セントラル方式を採用

全館空調方式採用

・ QURINO MEMORIAL GENERAL HOSPITAL

鉄筋コンクリート造 2階建 中廊下を持つ長方形平面をしている
ケソン市にありメディカルセンター（県立病院）に位置づけられる
取扱い患者はほとんどがCharity 医療機材はきわめて貧困
しかし、医療スタッフの創意工夫で、現有機材の能力を上回る患者を収容・治療している。1986年 J I C A の無償資金協力で一部の医療機材が整備された。

今回の O P D と取扱う患者が類似しており、見学は大変参考となった。

外来患者数 1日 約 500人

手術件数 1日 5 cases

ベット数 200床 占有率 100%以上 1つのベットを2人以上で共有していることが多い

スタッフ数 医師 49人

コンサルタント 21人

看護婦 59人

検査技術者 8人

・ MAKATI MEDICAL CENTER

鉄筋コンクリート造 8階建 地下1階 中廊下のある長方形平面
マカティーコマーシャルセンター地区にある現代建築
本館は全館空調方式採用

各医師が診察室をもっており紹介患者の診療のみを受け持つ

外来診療部門はB1階にあり charity patients を診療している

スペースも狭く 環境も悪い 自然換気方式

患者数 1日 約 100人

・ HOSPITAL OF MANILA

鉄筋コンクリート造 4階建 中廊下のある長方形平面の組合せ

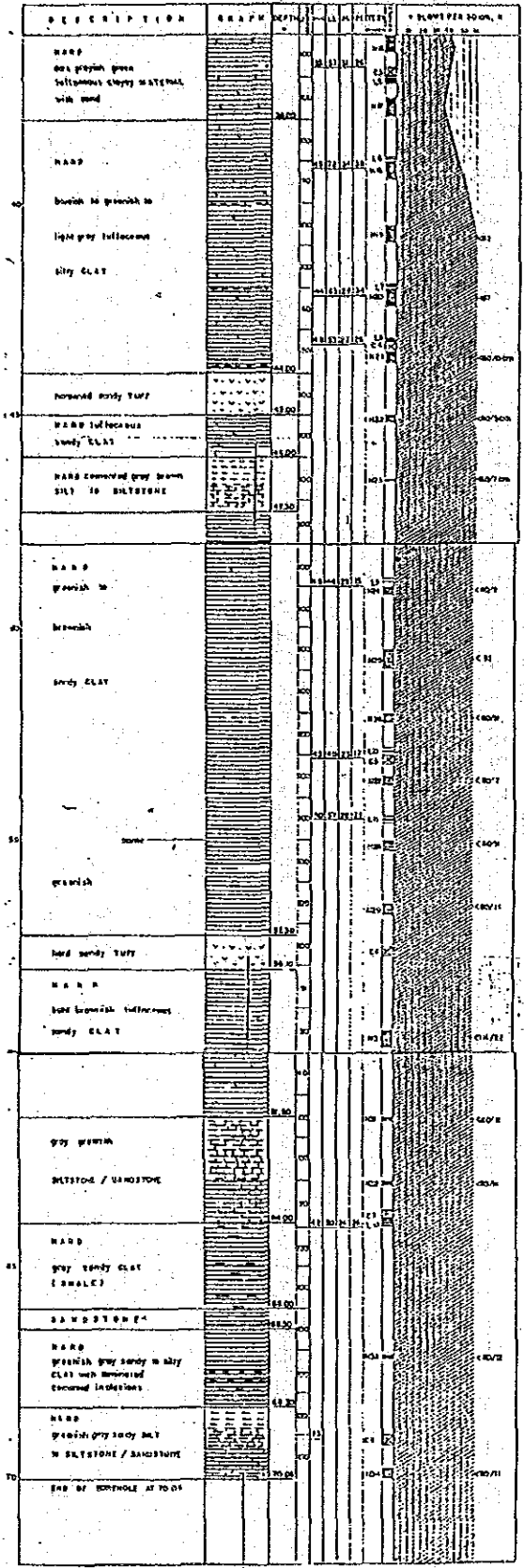
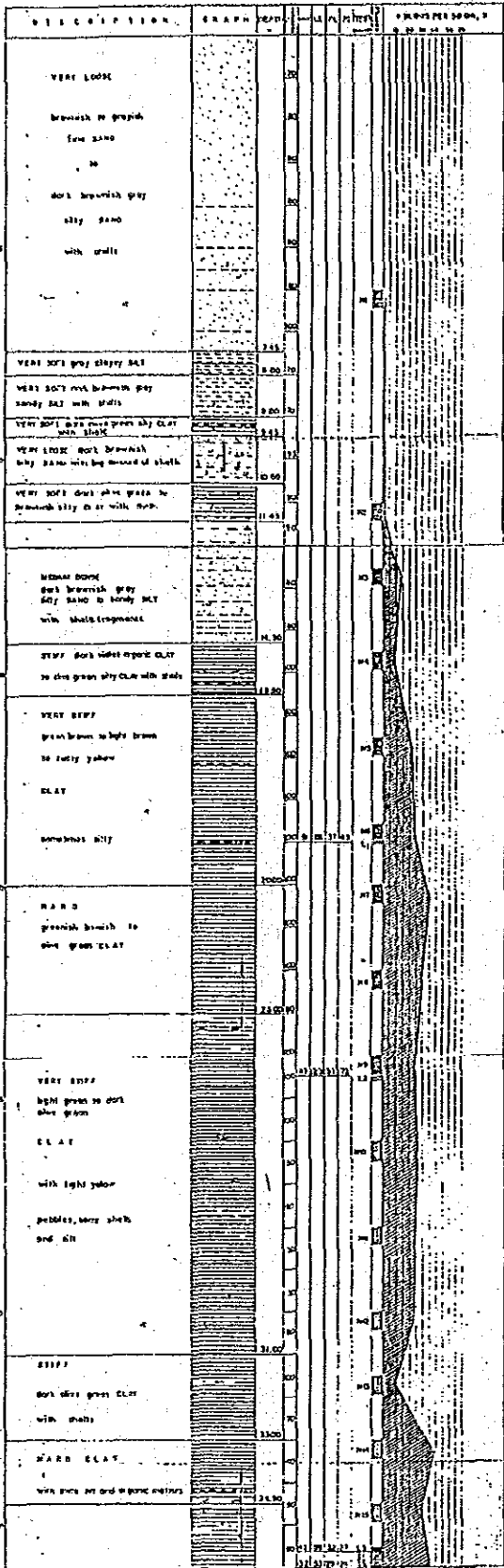
7. 敷地内地盤調査データ

PGHの敷地内において、4カ所で、ボーリングが実施されており、報告書が出されている。この4カ所のうち、2カ所が今回の、OPDの敷地内においてのものであり、残りの2カ所が中央棟の敷地内におけるものである。いずれの地点においても、地表面から非常にゆるい砂が5～6mの層厚で存在し（N値1～5）、それ以深は、シルト又は、シルト質粘土等で、N値は1から30と深さ方向にほぼ比例しており、G.L. -40.0m 付近からN値50前後のかなり硬い粘性土層が続いている。以下にボーリング位置図・柱状図および想定地盤断面図を示す。又、OPDの敷地内で、平板載荷試験を実施したので、その結果も示す。

BORING LOG & GEOTECHNICAL DATA

PROJECT: PROPOSED FSN COMPLEX
 LOCATION: FSN TACT AVE. N AINLA
 ORIGINAL SURFACE ELEVATION: ASSUMED 0

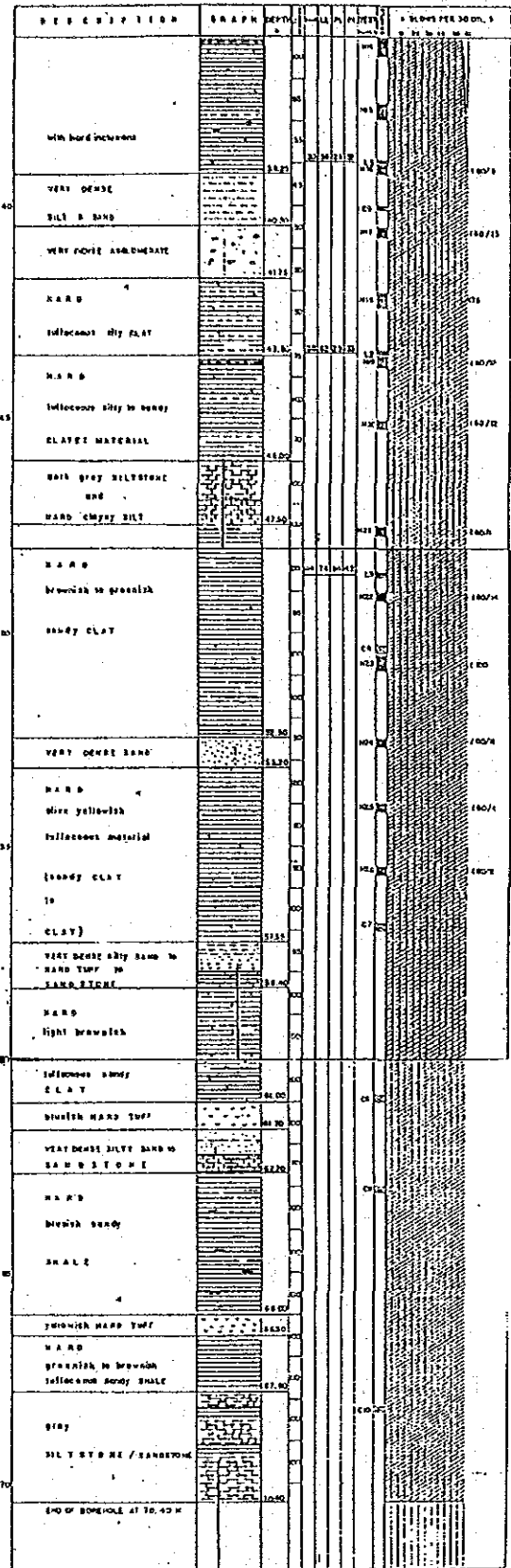
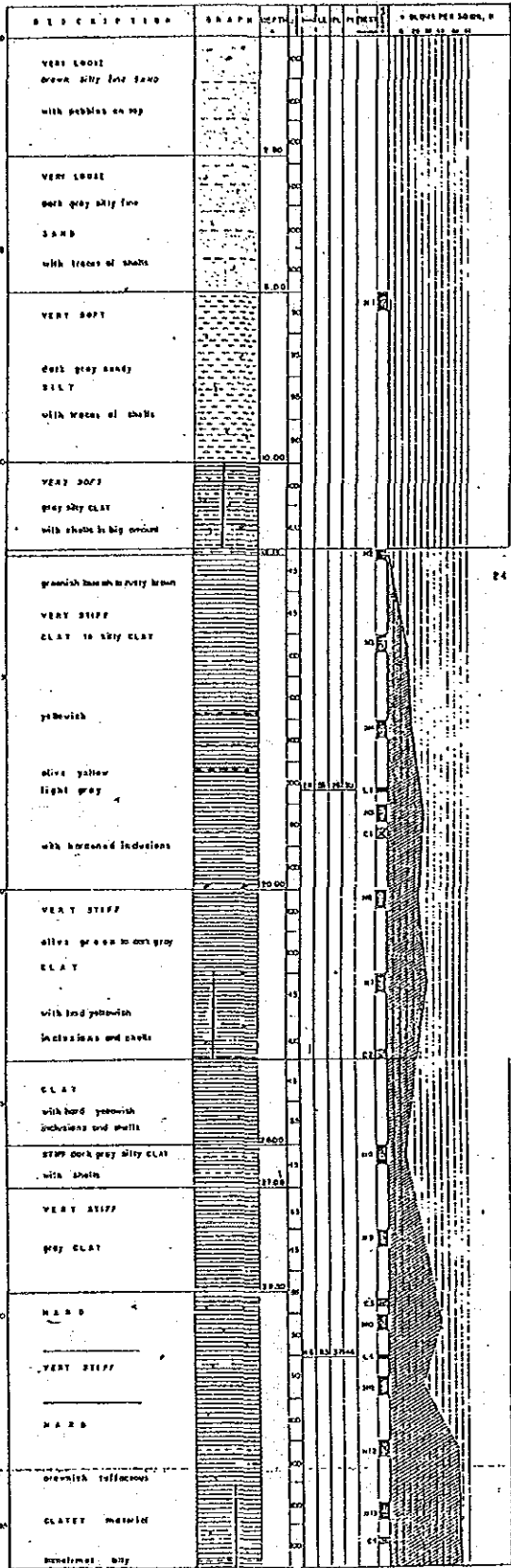
SPRINKLE NO. _____
 DRILLING METHOD: ROTARY DRILL
 DATE COMPLETED: DEC. 1, 1961

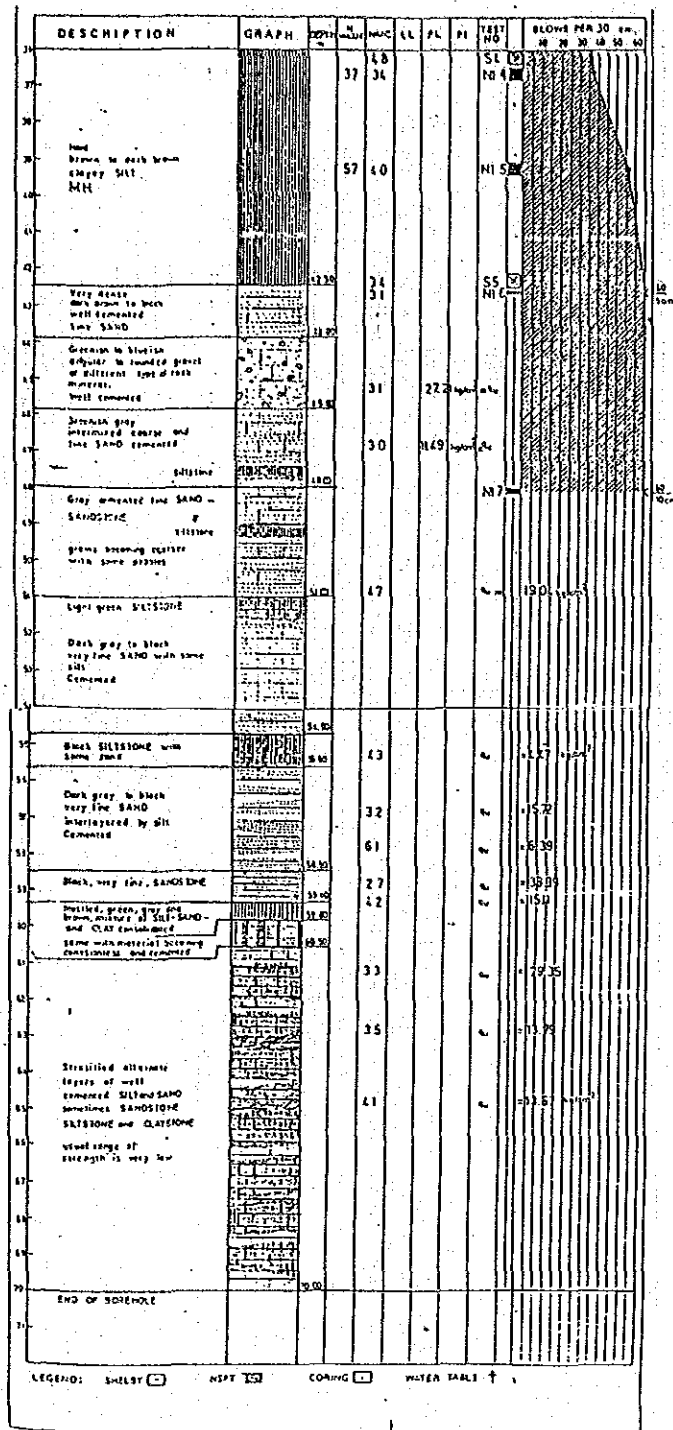
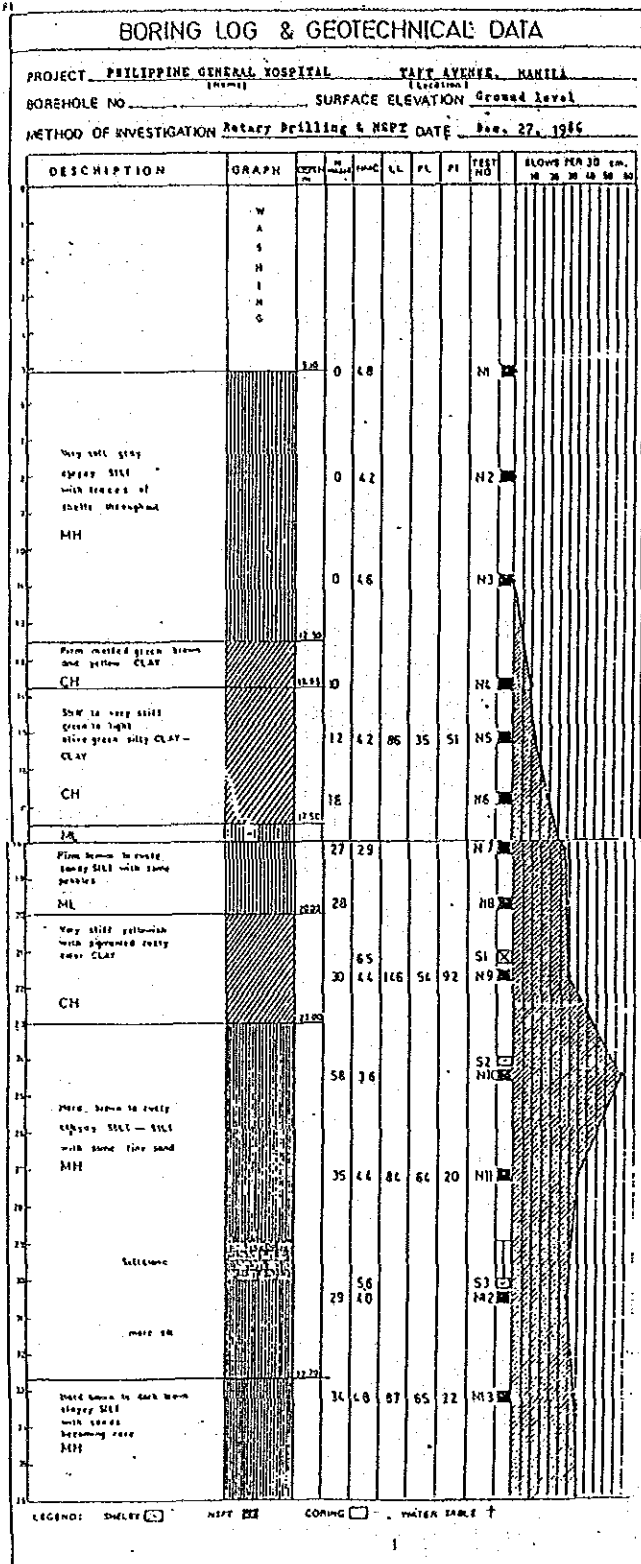


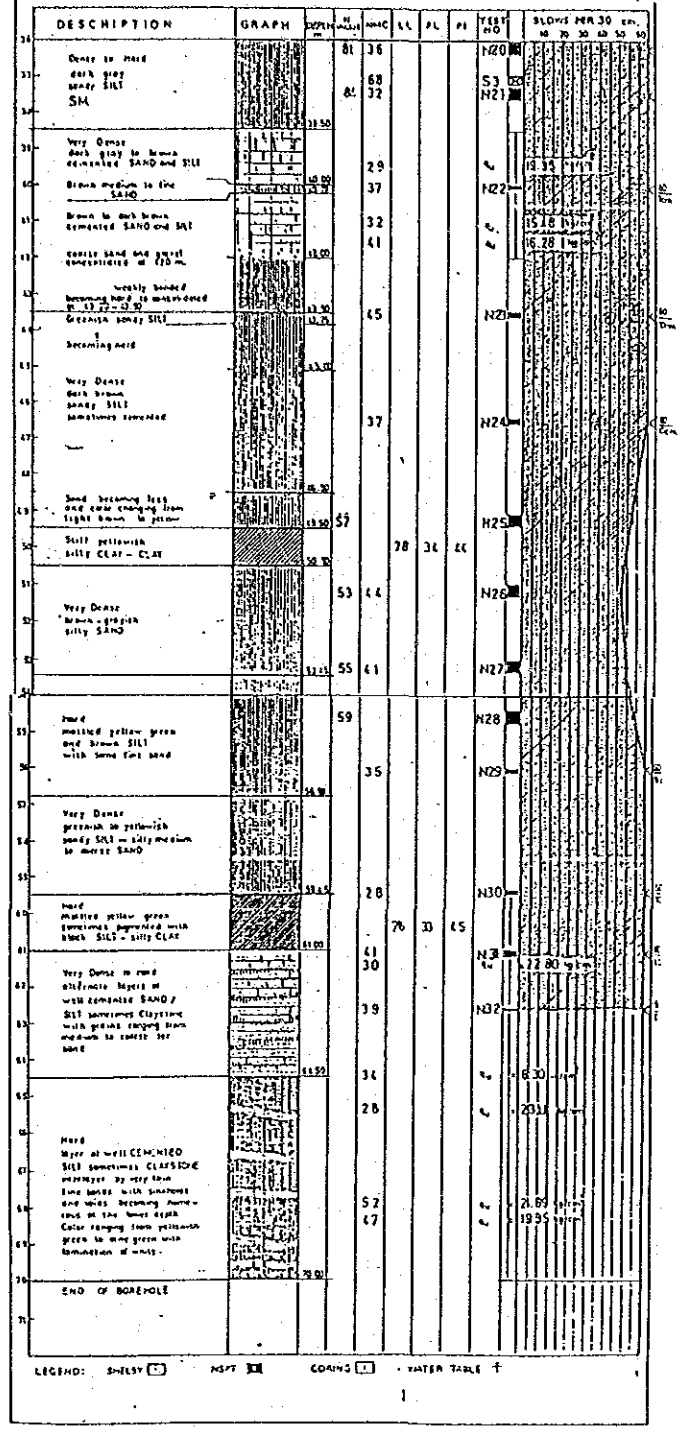
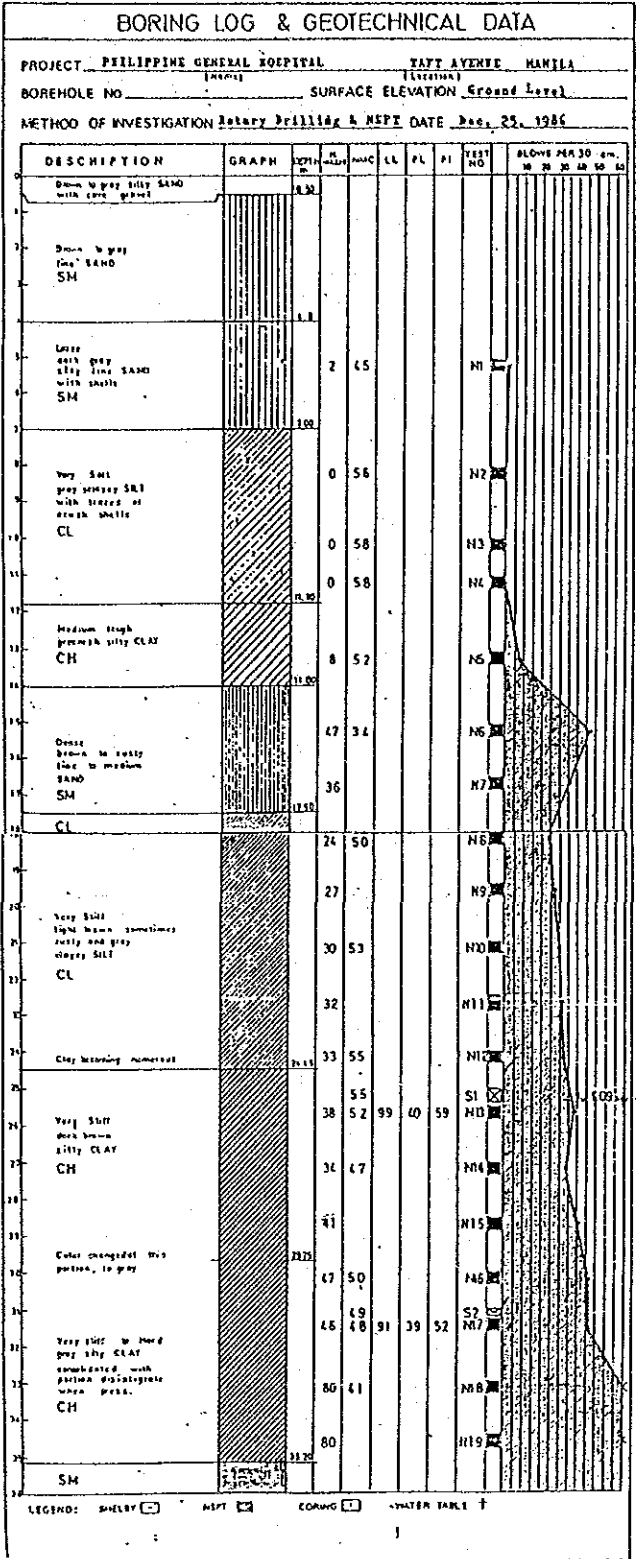
BORING LOG & GEOTECHNICAL DATA

PROJECT: PROPOSED PHL COMPLEX
 LOCATION: FRN. FACT. AVE., HANILA
 GROUND SURFACE ELEVATION: ASRMEF 0

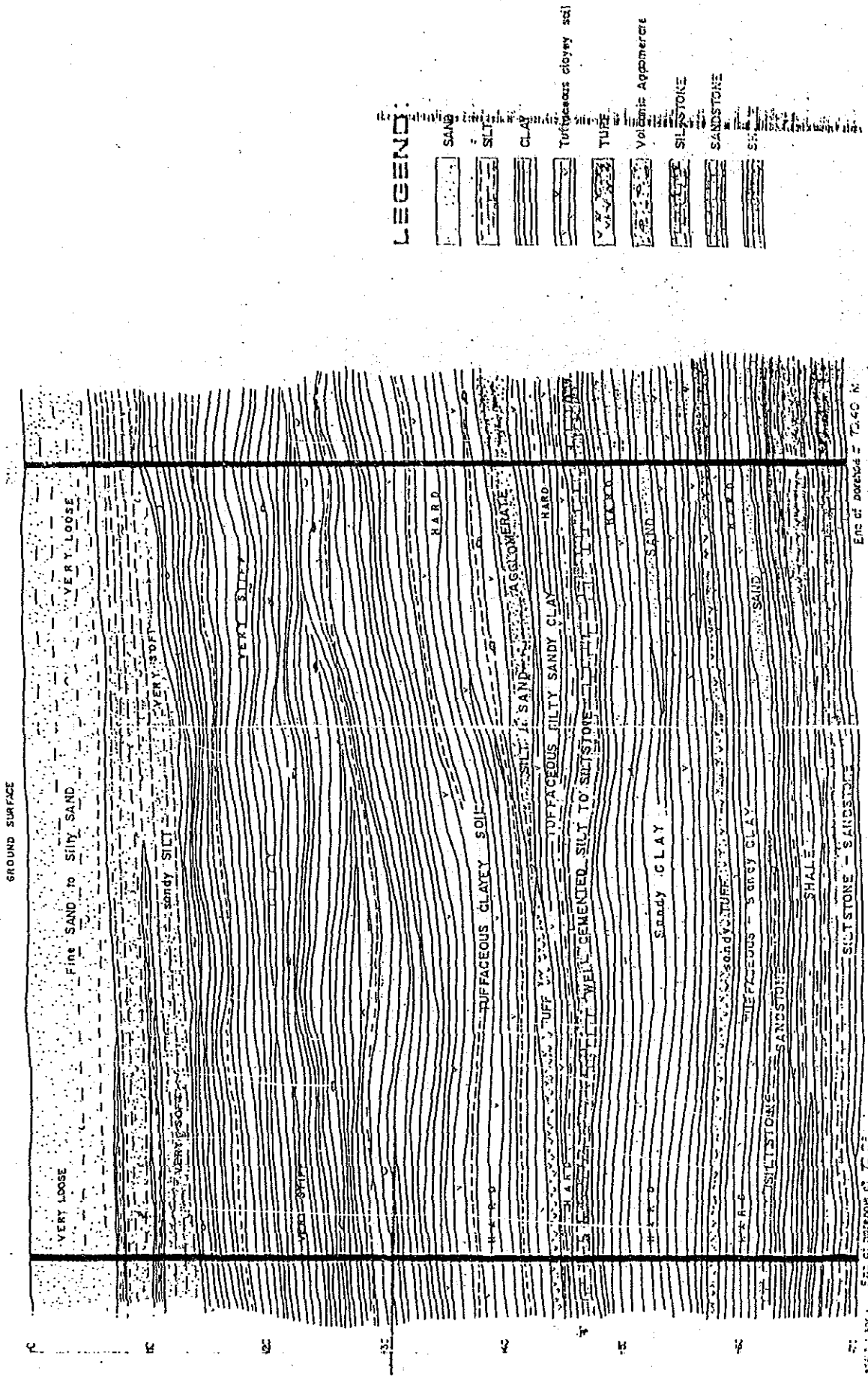
BORING NO. _____
 BOREHOLE METHOD: ROTARY SHFT
 DATE COMPLETED: DEC 10, 1962

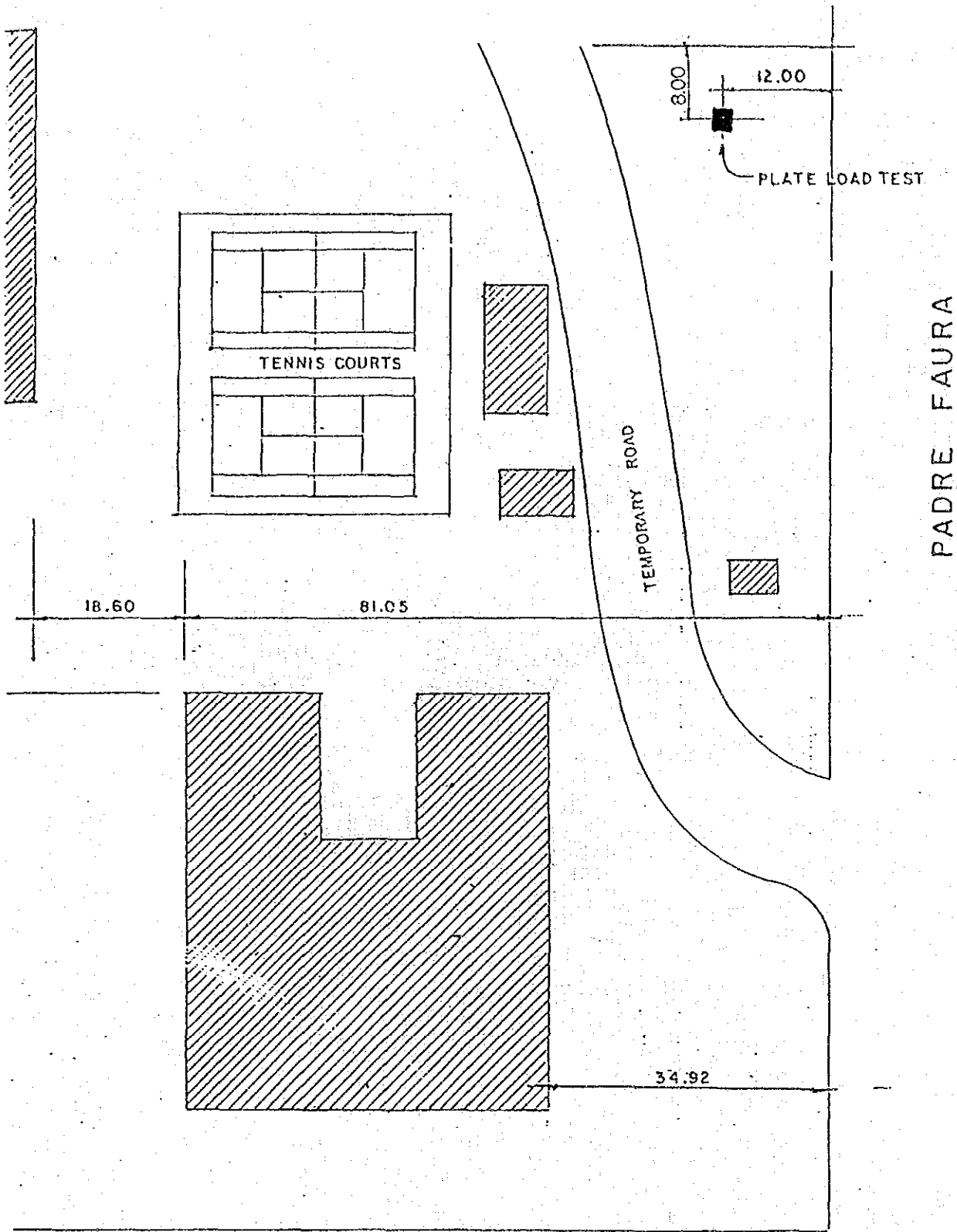






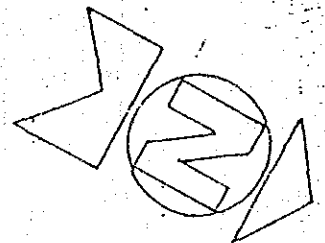
GEOLOGICAL PROFILE THROUGH

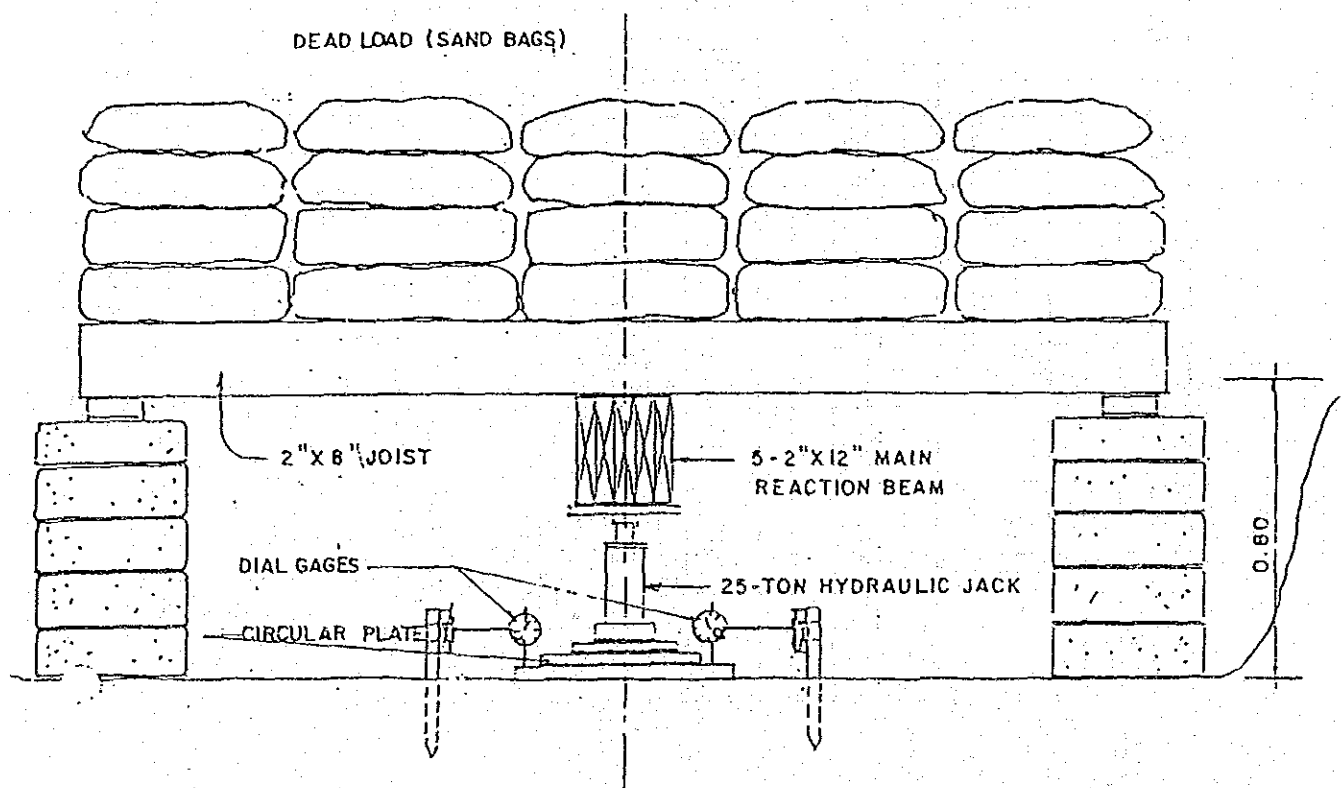
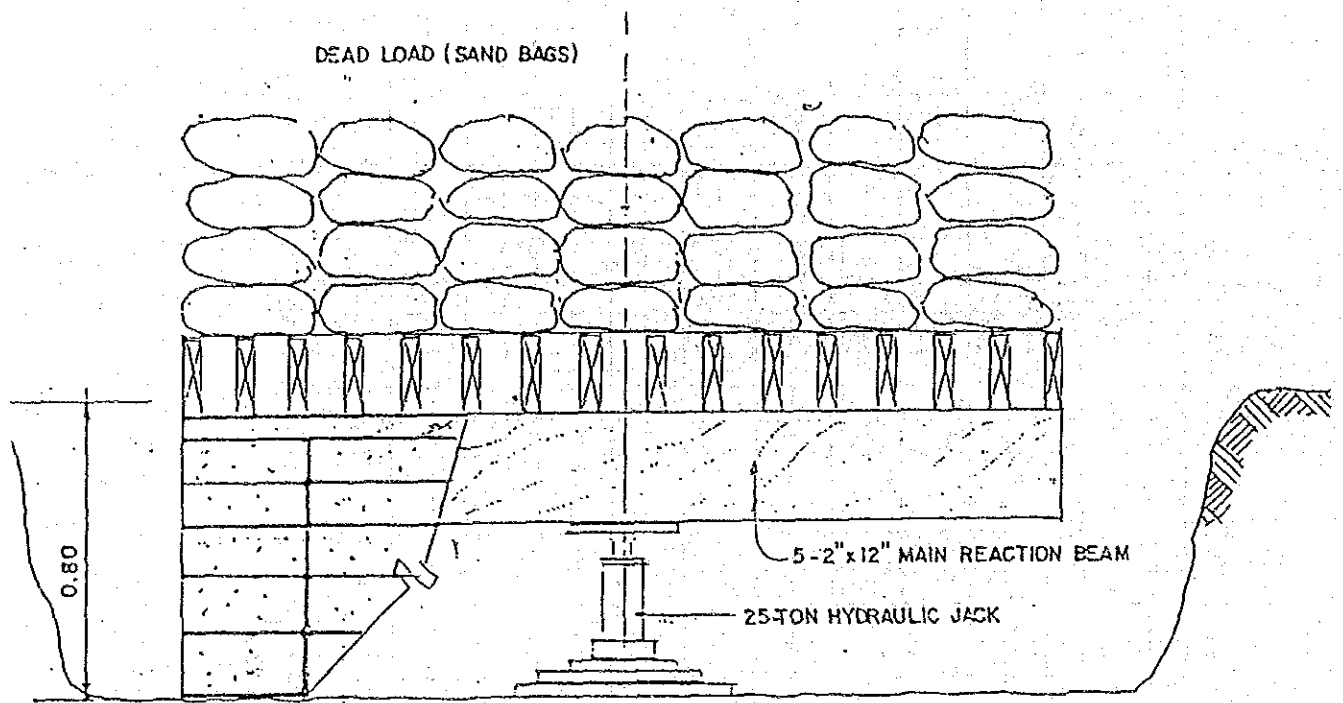


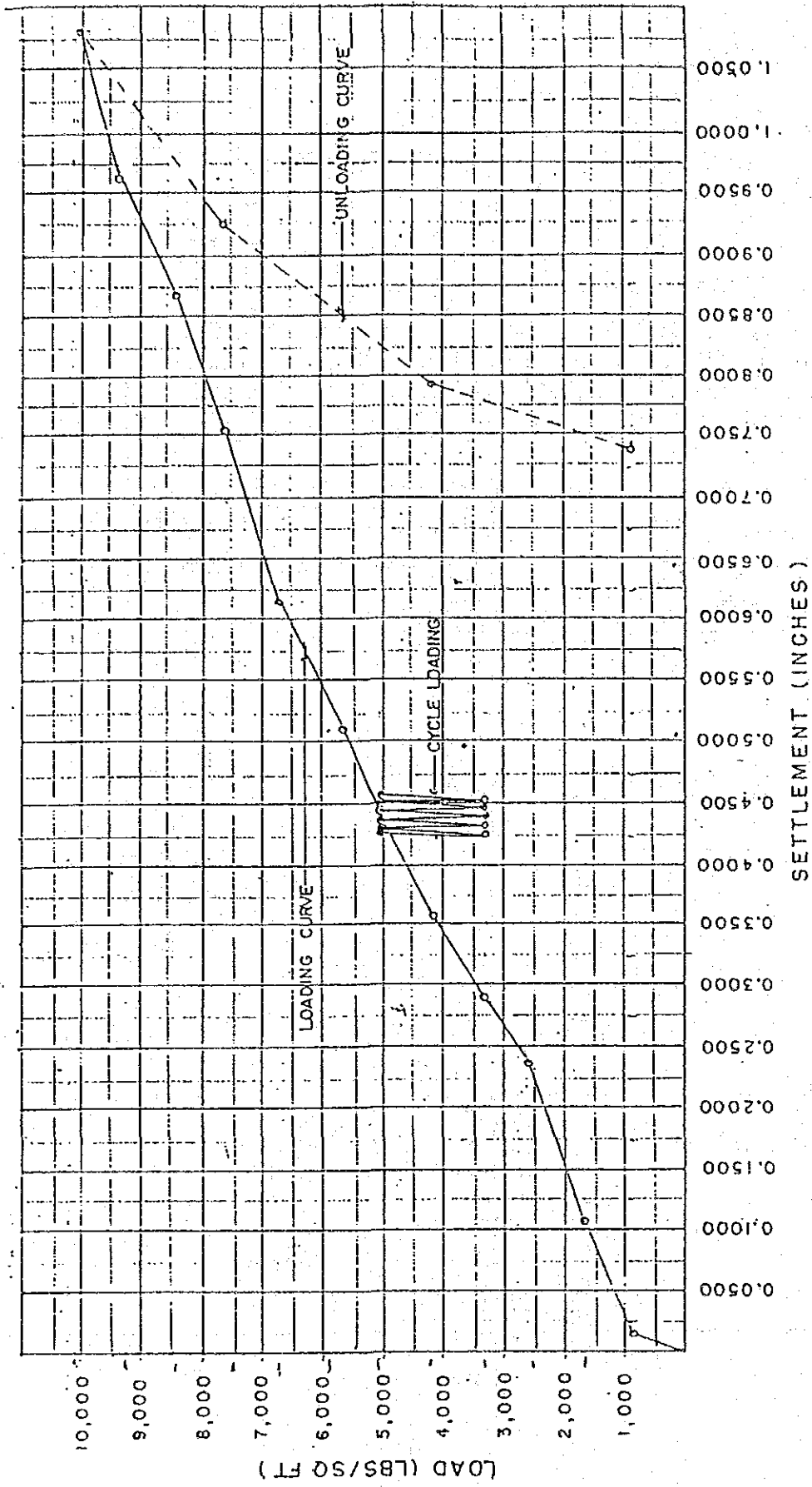


TAFT AVENUE

載荷試驗廣度測量







LOAD - SETTLEMENT CURVE

J. M. GARCIA & ASSOCIATES

Engineers • Architects • Consultants
51 Buendia Ave., Makati, M. M.
Tel. No. 87-51-57

PROJECT <u>THE OUT-PATIENT DEPT. PGH</u> LOCATION <u>Padre Faura, PGH Compound</u> SUPERVISOR <u>J. F. GARCIA</u> RECORDER <u>G. P. RUAN</u>	DATE STARTED <u>April 28, 1987</u> DATE COMPLETED <u>April 30, 1987</u> PLATE LOAD TEST NO. <u>U</u> PILE DESIGNATION NO. _____	JOB NO. _____ SHEET NO. <u>1</u> OF <u>4</u> PILE TESTED _____
---	--	--

DATE	TIME	LOAD INCREMENT (lb/ft ²)	TOTAL LOAD (lb/ft ²)	GAGE READING BEFORE LOADING (Left Right)	GAGE READING AFTER LOADING (Left Right)	TIME INTERVAL (min.)	SETTLEMENT	TOTAL CUMULATIVE	REBOUND	REMARKS
6-28-87	1:30	2650 lbs	2650 lbs	0.951 0.981	0.916 0.916		0.0333	0.0333		843.53 DSF
	:40				0.917 0.915		0.0010	0.0343		
	:50				0.916 0.915		0.0005	0.0348		
	2:00				0.915 0.915		0.0005	0.0353		
	:30				0.915 0.915		0	0.0353		
	:20				0.915 0.915		0	0.0353		
	2:30	2650 lbs	5300 lbs		0.915 0.915		0	0.0353		
	:40				0.877 0.805		0.0725	0.1078		867.04 DSF
	:50				0.872 0.802		0.0065	0.1143		
	3:00				0.871 0.795		0.0075	0.1218		
	:10				0.870 0.795		0.0010	0.1228		
	:20				0.870 0.795		0.0005	0.1233		
	3:30	2650 lbs	7950 lbs		0.870 0.795		0	0.1233		
	:40				0.880 0.856		0.0065	0.1298		2530.50 PSF
	:50				0.879 0.842		0.0110	0.1408		
	4:00				0.880 0.835		0.0065	0.1473		
	:10				0.880 0.837		0.0025	0.1498		
	:20				0.887 0.830		0.0015	0.1513		
	4:30	2650 lbs	10600 lbs		0.886 0.826		0.0015	0.1528		
	:40				0.886 0.827		0.0005	0.1533		1774.06 DSF
	:50				0.885 0.827		0.0015	0.1548		
	5:00				0.885 0.828		0	0.1548		
	:10				0.885 0.829		0.0005	0.1553		
	:20				0.886 0.829		0	0.1553		
	:30				0.886 0.829		0	0.1553		

Note: Area of 24" RD. bearing Plate = 3.14 Ft² Each increment, Load is 2650 lbs = 843.5 lbs/ft.sq.
3.14 ft.sq.

J. M. GARCIA & ASSOCIATES

Engineers • Architects • Consultants
51 Buendia Ave., Makati, M. M.
Tel. No. 87-51-57

PROJECT <u>THE OUT-PATIENT DEPT. PGH</u> LOCATION <u>Padre Faura, PGH Compound</u> SUPERVISOR <u>J. F. GARCIA</u> RECORDER <u>G. P. RUAN</u>	DATE STARTED <u>April 28, 1987</u> DATE COMPLETED <u>April 30, 1987</u> PLATE LOAD TEST NO. <u>1</u> PILE DESIGNATION NO. _____	JOB NO. _____ SHEET NO. <u>2</u> OF <u>4</u> PILE TESTED _____
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DATE	TIME	LOAD INCREMENT (lb/ft ²)	TOTAL LOAD (lb/ft ²)	GAGE READING BEFORE LOADING (Left Right)	GAGE READING AFTER LOADING (Left Right)	TIME INTERVAL (min.)	SETTLEMENT	TOTAL CUMULATIVE	REBOUND	REMARKS
6-28-87	5:30	2550 lbs	13,250 lbs	0.756 0.579	0.675 0.507		0.0770	0.3595		6217.63 DSF
	:40				0.677 0.501		0.0015	0.3610		
	:50				0.677 0.501		0	0.3610		
	6:00				0.676 0.501		0.0005	0.3615		
	:10				0.676 0.501		0	0.3615		
	:20				0.675 0.500		0.0010	0.3625		
	:30				0.677 0.495		0.0015	0.3640		
	6:40	2550 lbs	15,800 lbs		0.674 0.495		0.0005	0.3645		
	:50				0.599 0.425		0.0715	0.4360		5961.13 DSF
	7:00				0.598 0.424		0.0015	0.4375		
	:10				0.598 0.424		0	0.4380		
	:20				0.596 0.424		0	0.4380		
	:30				0.595 0.423		0.0010	0.4390		
	7:40				0.595 0.423		0	0.4390		
	:50	15,300 lbs	30,600 lbs		0.595 0.423		0.0015	0.4405		1774.06 DSF
	8:00	15,300 "	45,900 "		0.593 0.415		0.0065	0.4470		5061.13
	:10	15,300 "	61,200 "		0.594 0.415		0.0005	0.4475		1774.06
	:20	15,300 "	76,500 "		0.590 0.418		0.0025	0.4500		5061.13
	:30	15,300 "	91,800 "		0.591 0.415		0.0010	0.4510		1774.06
	:40	15,300 "	107,100 "		0.587 0.415		0.0035	0.4545		5061.13
	:50	15,300 "	122,400 "		0.582 0.415		0.0015	0.4560		1774.06
	8:50	15,300 "	137,700 "		0.581 0.415		0.0010	0.4570		5061.13
	9:00	15,300 "	153,000 "		0.575 0.415		0.0005	0.4575		1774.06
	:10	15,300 "	168,300 "		0.493 0.397		0.0831	0.5406		5061.13
	:20	15,300 lbs	183,600 lbs		0.488 0.390		0.0035	0.5441		5904.65 DSF
	:30				0.487 0.390		0.0005	0.5446		

J. M. GARCIA & ASSOCIATES

Engineers • Architects • Consultants
51 Buendia Ave., Makati, M. M.
Tel. No. 87-51-57

PROJECT INC <u>OUT-PATIENT DEPT. BLDG.</u>	DATE STARTED <u>April 26, 1987</u>	JOB NO. <u>1</u>
LOCATION <u>Padre Faura, RCM Compound</u>	DATE COMPLETED <u>April 30, 1987</u>	SHEET NO. <u>1</u> OF <u>1</u>
SUPERVISOR <u>J.M. Garcia</u>	PLATE LOAD TEST NO. <u>1</u>	PILE TESTED _____
RECORDER <u>B.P. BUAK</u>	PILE DESIGNATION NO. _____	

DATE	TIME	LOAD INCREMENT (tons)	TOTAL LOAD (tons)	CAGE READING BEFORE LOADING (Left Right)	CAGE READING AFTER LOADING (Left Right)	TIME INTERVAL (hrs.)	SETTLEMENT	TOTAL CUMULATIVE	REBOUND	REMARKS
4-26-87	0:50			C. 087 C. 300	0.405 0.305		0	C. 5.15		
	10:00				0.405 0.305		0.0010	C. 5.25		
	10:10				0.485 0.390		0	C. 5.125		
	10:20	2550 lbs	21,200 lbs		0.487 0.390		0.0005	C. 5.17		
	10:30				0.360 0.305		0.0020	C. 5.55		6700 lbs
	10:40				0.357 0.305		0.0020	C. 6.175		
	10:50				0.357 0.305		0	C. 6.175		
11:00	11:00				0.356 0.305		0.0005	C. 6.180		
	11:10				0.356 0.305		0	C. 6.180		
	11:20				0.355 0.307		0.0010	C. 6.190		
	11:30				0.355 0.307		0	C. 6.190		
	11:40	2550 lbs	23,850 lbs		0.202 0.177		0.1415	C. 7.605		7500 lbs
	11:50				0.200 0.176		0.0015	C. 7.620		
	12:00				0.200 0.176		0	C. 7.620		
4-26-87	12:00				0.198 0.176		0.0005	C. 7.625		
	12:10				0.198 0.176		0.0005	C. 7.630		
	12:20				0.199 0.175		0	C. 7.630		
	12:30				0.197 0.176		0.0015	C. 7.645		
	12:40	2550 lbs	26,500 lbs		0.195 0.174		0.0005	C. 7.650		
	12:50				0.096 0.077		0.1075	C. 8.605		8400 lbs
	1:00				0.084 0.076		0.0015	C. 8.700		
	1:10				0.083 0.076		0.0005	C. 8.705		
	1:20				0.083 0.075		0.0005	C. 8.710		
	1:30				0.083 0.075		0	C. 8.710		
	1:40				0.083 0.075		0	C. 8.710		
	1:50				0.083 0.075		0	C. 8.710		

J. M. GARCIA & ASSOCIATES

Engineers • Architects • Consultants
51 Buendia Ave., Makati, M. M.
Tel. No. 87-51-57

PROJECT INC <u>OUT-PATIENT DEPT. BLDG.</u>	DATE STARTED <u>April 26, 1987</u>	JOB NO. <u>1</u>
LOCATION <u>Padre Faura, RCM Compound</u>	DATE COMPLETED <u>April 30, 1987</u>	SHEET NO. <u>6</u> OF <u>6</u>
SUPERVISOR <u>J.M. Garcia</u>	PLATE LOAD TEST NO. <u>1</u>	PILE TESTED _____
RECORDER <u>G.P. BUAK</u>	PILE DESIGNATION NO. _____	

DATE	TIME	LOAD INCREMENT (tons)	TOTAL LOAD (tons)	CAGE READING BEFORE LOADING (Left Right)	CAGE READING AFTER LOADING (Left Right)	TIME INTERVAL (hrs.)	SETTLEMENT	TOTAL CUMULATIVE	REBOUND	REMARKS
4-28-87	1:50 AM	2550 lbs	25,150 lbs	C. 0831 C. 075	*0.982 0.984		0.0010	C. 9.620		5,776.73 PSI
	2:00				*0.990 0.983		0.0015	C. 9.635		
	2:10				*0.985 0.983		0.0005	C. 9.640		
	2:20				*0.985 0.982		0.0005	C. 9.645		
	2:30				*0.985 0.982		0	C. 9.645		
	2:40				*0.985 0.982		0.0005	C. 9.650		
	2:50	2550 lbs	31,800 lbs		*0.867 0.860		0.1215	C. 10.865		10,122.25 PSI
	3:00				*0.865 0.850		0.0005	C. 10.870		
	3:10				*0.866 0.850		0.0005	C. 10.875		
	3:20				*0.866 0.850		0.0015	C. 10.890		
	3:30				*0.865 0.850		0.0005	C. 10.895		
	3:40				*0.864 0.850		0.0005	C. 10.900		
	3:50	7950 lbs	23,830		0.026 0.026		0.1640	C. 9.250		7500 lbs
	4:00				0.026 0.026		0	C. 9.250		
	4:10				0.026 0.026		0	C. 9.250		
	4:20				0.026 0.026		0	C. 9.250		
	4:29	10,600 lbs	13,250 lbs		0.357 0.154		0.1305	C. 7.945		6212.61 PSI
	4:30				0.357 0.154		0	C. 7.945		
	4:40				0.357 0.154		0	C. 7.945		
	4:50				0.357 0.154		0	C. 7.945		
	5:00	10,600 lbs	2650 lbs		0.211 0.207		0.0535	C. 7.715		863.52 PSI
	5:10				0.211 0.207		0	C. 7.715		
	5:20				0.211 0.207		0	C. 7.715		
	5:30				0.211 0.207		0	C. 7.715		
	5:40				0.212 0.207		0.0010	C. 7.700		

8. 水質調査データ

8-1. National Standards for Drinking Water, 1978

Parameter	Max. Permissible	Parameter	Max. Permissible
Turbidity	5 units	Organic Chemicals	
Color	5 unit (s) **	Synthetic	
Odor	Unobjectionable	Detergents (MBAS)	0.5
Threshold odor number	Not more than 3	Oil & Grease	Nil
Taste	Unobjectionable		
Total Solids	500 (s)	Persistent Pesticides	
pH	6.5 - 8.5	Aldrin	0.001
Phenolic substances	0.001	DDT	0.05
		Dieldrin	0.001
		Chlordane	0.003
		Endrin	0.0002
		Heptachlor	0.0001
		Lindane	0.004
		Toxaphane	0.005
		Methoxychlor	0.1
		2,4-D	0.1
		2,4,5-T	0.01
		PCB	Nil
		Other Chemicals	
		Calcium	75
		Chloride	200 (s)
		Magnesium	50 (s)
		Nitrate (NO ₃)	30
		Sulfate	200 (s)
		Hydrogen sulfide	0.05 (s)
Radioactive Subs.			
Gross Alpha	3 pCi/l		
Gross Beta	30 pCi/l		
Trace Elements			
Arsenic	0.05		
Barium	1.0		
Cadmium	0.01		
Chromium	0.05		
Copper	1.0		
Cyanide	0.05		
Fluoride	0.6		
Iron	0.3 - 1.0 (s)		
Lead	0.05		
Manganese	0.5 (s)		
Mercury	0.002		
Selenium	0.01		
Zinc	5.0 (s)		

* All units are in mg/l unless, otherwise stated.

** (s) - Secondary standards ; compliance with the standard and analysis are not obligatory.

8-2. Sample Water Analysis of Tap Water at Herran-Taft
Near PGH of February 9, 1987

pH	6.90	units
Taste	bland	
Color	5.00	units
Odor	nil	units
Turbidity	3.55	units
T - Alkalinity	56.00	mg/L
Bicarbonates	68.30	mg/L
Acidity	6.00	mg/L
Free CO ₂	5.30	mg/L
Chlorides	6.00	mg/L
Iron	0.05	mg/L
Hardness	56.00	mg/L
Residual Chlorine	0.30	mg/L

8-3. Sample Water Analysis of Balara Filtration Plant, Quezon City

	August, 1986 (Ave.)		January, 1987 (Ave.)	
	Raw	Finished	Raw	Finished
PH	7.36	6.92	7.34	7.16
Turbidity	25.56	2.53	7.06	2.77
Acid	7.39	9.29	5.32	4.88
Alkalinity	44.34	38.67	59.69	56.54
Hardness	45.75	42.90	51.59	52.0
Chlorides	6.04	6.98	8.74	11.41
Iron	0.1	0.1	0.09	0.08
Residual Chlorine	-	0.76	-	0.75
Remarks	Rainy Season		Dry Season	

9. 医療統計データ

	Estimate			Targets			Annual average	
	1986	1987	1988	1989	1990	1991	1992	1987-92
POPULATION								
Total population level (million persons) ^a	56.0	57.4	58.7	60.1	61.5	62.9	64.3	
Population growth rate (%)	2.44	2.41	2.38	2.34	2.30	2.26	2.21	2.32
Urban population (share to total population)	40.5	41.0	41.6	42.1	42.7	43.2	43.8	42.7 ^b
Rural population (share to total population)	59.5	59.0	58.4	57.9	57.3	56.8	56.2	53.3
Population density (persons/sq.km.)	186.7	191.2	195.7	200.3	204.9	209.6	214.2	202.7
Health								
Life expectancy (in years) ^a	63.4	63.7	64.0	64.3	64.6	64.9	65.2	64.3
Crude birth rate (per 1,000 population) ^a	31.7	31.3	30.8	30.3	29.8	29.2	28.6	30.0
Crude death rate (per 1,000 population) ^a	7.8	7.6	7.5	7.4	7.2	7.1	7.0	7.3
Infant (below 1 year) mortality rate (per 1,000 live birth) ^a	55.5	54.2	52.9	51.6	50.3	49.0	47.8	51.0
Child (aged 1-4) mortality rate (per 1,000 population)	4.9	4.7	4.5	4.3	4.1	3.9	3.7	4.2
Maternal mortality rate (per 1,000 live birth)	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.8
Nutrition								
Percentage of preschool children with weight less than 75% of standard weight-for-age ^b	21.7	20.3	18.8	17.4	16.0	14.5	13.0	16.7
Percentage of schoolchildren aged 7-10 years old with weight less than 90% of standard height-for-age ^c	13.1	12.7	12.3	11.8	11.3	10.8	10.3	11.5
Percentage of schoolchildren aged 7-10 years old with weight less than 75% of standard weight-for-age ^c	14.1	13.2	12.2	11.2	10.3	9.4	8.4	10.8
(growth rate)								
Health Infrastructure Program								
Hospital bed requirement (in '000)	95.5	101.0	106.5	112.0	117.5	123.0	128.5	4.9
Ratio to population	1:581	1:570	1:554	1:539	1:527	1:515	1:504	-
RHU requirement	2,041	2,226	2,401	2,566	2,721	2,866	3,001	6.2
Ratio to population	1:27,507	1:25,852	1:24,563	1:23,549	1:22,747	1:22,114	1:21,618	-
BHS requirement	7,991	8,065	8,164	8,198	8,257	8,311	8,360	0.7
Ratio to population	1:7,026	1:7,135	1:7,224	1:7,371	1:7,496	1:7,626	1:7,761	-
Manpower Development Program								
No. of physicians	8,965	9,430	9,918	10,431	10,971	11,539	12,137	5.2
Ratio to population	1:6,098	1:5,939	1:5,783	1:5,761	1:5,604	1:5,448	1:5,294	-
No. of nurses	10,705	10,994	11,290	11,594	11,907	12,228	12,558	2.7
Ratio to population	1:5,107	1:5,094	1:5,080	1:5,183	1:5,163	1:5,141	1:5,117	-
No. of midwives	9,903	10,015	10,129	10,244	10,360	10,377	10,596	1.1
Rate to population	1:5,520	1:5,592	1:5,662	1:5,868	1:5,934	1:6,001	1:6,064	-

10. PGH財務データ

10-1 Actual Budgetary Hospital Management Cost

University of the Philippines Manila
ACCOUNTING SERVICES DIVISION

Statement of Expenditures by Unit
December, 1986

Unit : Philippine General Hospital

	To Date Last Year	
	General Fund	Revolving Fund
1) Personal Services		
Salaries	30,192,281.74	
Incentive	6,632,245.78	
Salary Adjustment Fund/NCC 27,35	4,820,860.52	
Salary Adjustment Fund/NCC 41	-	
Commutation	1,235,041.99	
Wages	922,108.07	
Training & Personnel Improvement	52,554.07	
Honorarium		
Consultants	73,787.65	
Allowances		
Representation & Transportation Allow.	114,854.68	
Hazard Pay	68,257.41	
Difficulty Pay	93,142.54	
Incentive	200,899.39	
Union and Laundry	1,510,783.54	
Subsistence	251,340.00	
Night Work Diff.	75,477.15	
Bonus/13th Month Pay	5,872,964.42	
Overtime Pay	-	
Cost of Living Allowance	8,578,740.05	
COLA/NCC 41	-	
SUB-TOTAL	60,695,339.00	0.00
2) Maintenance & Operating Expenses		
Traveling -- Foreign	1,200.00	
Local	2,942.40	
Telephone	62,638.08	688,395.86
Telegram & Stamps	2,000.00	
Transportation	4,000.00	
Security Services	79,090.00	674,529.97
Laundry Services	212,154.23	879,292.40
Janitorial Services	18,499.36	
Repair and Maintenance	5,222,901.27	252,044.95
Subscriptions	690.07	1,561.64
Fidelity Bond Premiums	3,992.22	4,622.84
Insurance Premiums	7,695.66	1,715.00
Fees & Licenses	-	4,237.00
Vehicle Registration	10,500.00	-
Advertising & Publication	-	19,459.00
Printing & Binding	20,029.90	16,354.55

	To Date Last Year	
	General Fund	Revolving Fund
Board & Lodging	7,032.00	25,744.90
Computer Usage	10,000.00	27,710.02
Xerox, Maintenance Service & Others	220,596.64	39,128.82
Drugs & Medicines	4,140,644.50	488,633.30
Chemicals & Reagents	1,718,473.37	-
Medical & Laboratory Supplies	4,472,769.17	34,888.07
X-ray Films	921,907.43	-
Oxygen & Derivatives	6,350,636.67	-
Foodstuffs	3,905,277.96	235,051.62
Commissary Supplies	1,177,513.73	-
Subsistence	1,977,260.28	-
Housekeeping Supplies	640,242.91	44,012.42
Office Supplies	918,034.46	162,943.25
Construction & Other Maint. Supplies	504,788.55	194,570.25
Linen Materials	838,662.50	-
Gas	117,018.05	449,620.94
Semi- Expendable Supplies	-	-
Other Express	2,407.50	180.00
Rents	349,891.52	27,318.72
Loan Repayment	-	-
Water	2,040,339.27	2,500,887.05
Light	334,168.04	362,845.67
Gasoline	270,228.44	60,465.18
Repairs & Servicing of Motor Vehicles	3,745.00	792.00
Spare Parts for Motor Vehicles	86,658.82	36,059.58
Representation Expenses	7,380.00	-
SUB-TOTAL	36,664,000.00	7,233,095.00
Equipment	-	100,000.00
Building & Structure Outlay	751,041.00	-
TOTAL CAPITAL OUTLAY	751,041.00	100,000.00
GRAND TOTAL	98,110,380.00	7,333,095.00

10-2 Average Payroll Amount

1. Physicians		
1.1	Medical Consultants	P 2,753,088.00
1.2	Resident Physicians	5,608,800.00
	SUB-TOTAL	8,361,888.00

2. Nurses		
2.1	Nurse Supervisor	41,292.00
2.2	Head Nurse	237,612.00
2.3	Staff Nurse	390,612.00
2.4	Nursing Attendant	234,012.00
	SUB-TOTAL	903,528.00

3.	Clerk	156,336.00
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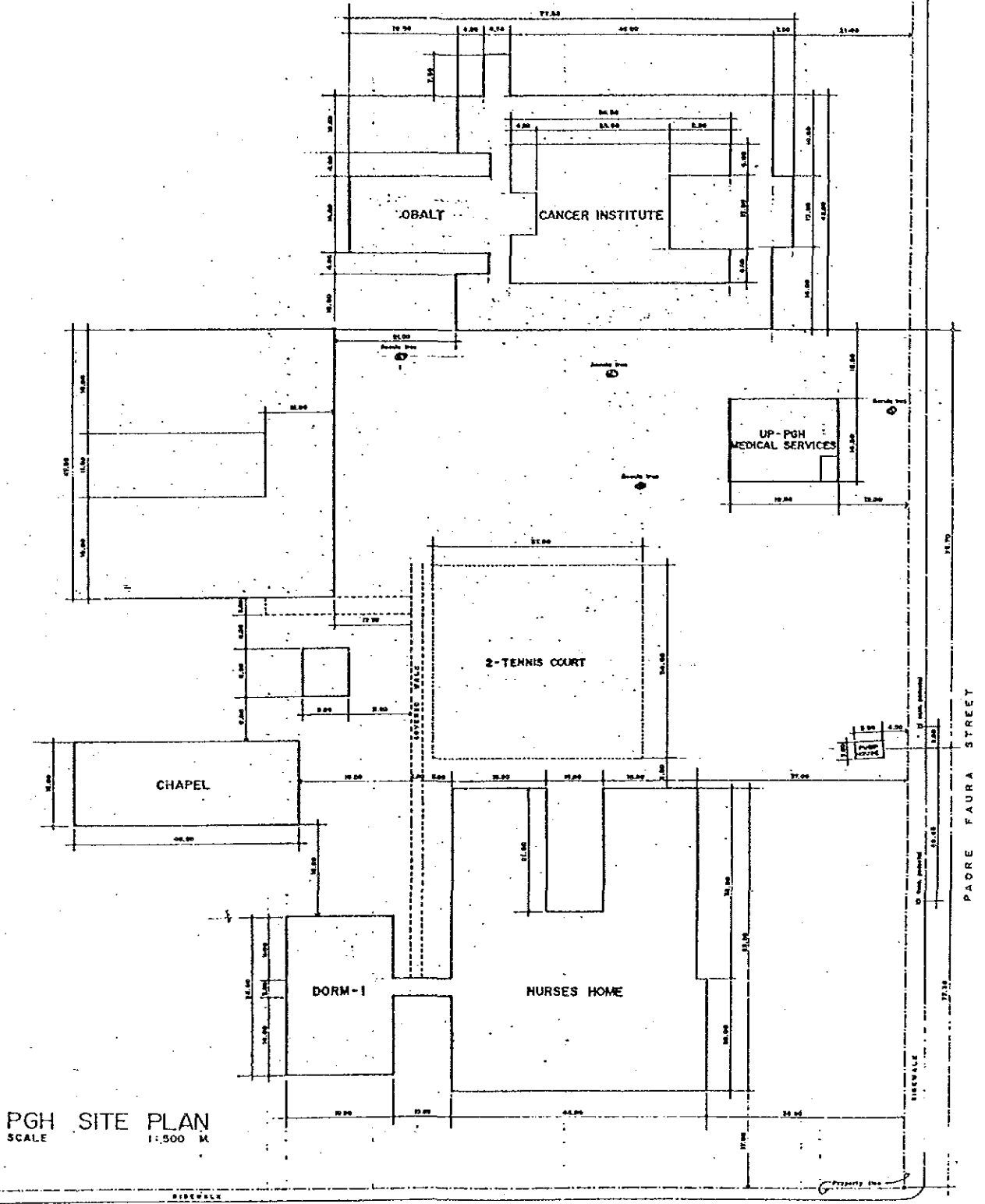
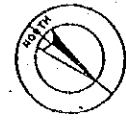
4.	Other Personnel (Institutio Worker)	178,248.00
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	GRAND TOTAL (for OPD Personnel)	P 9,600,000.00
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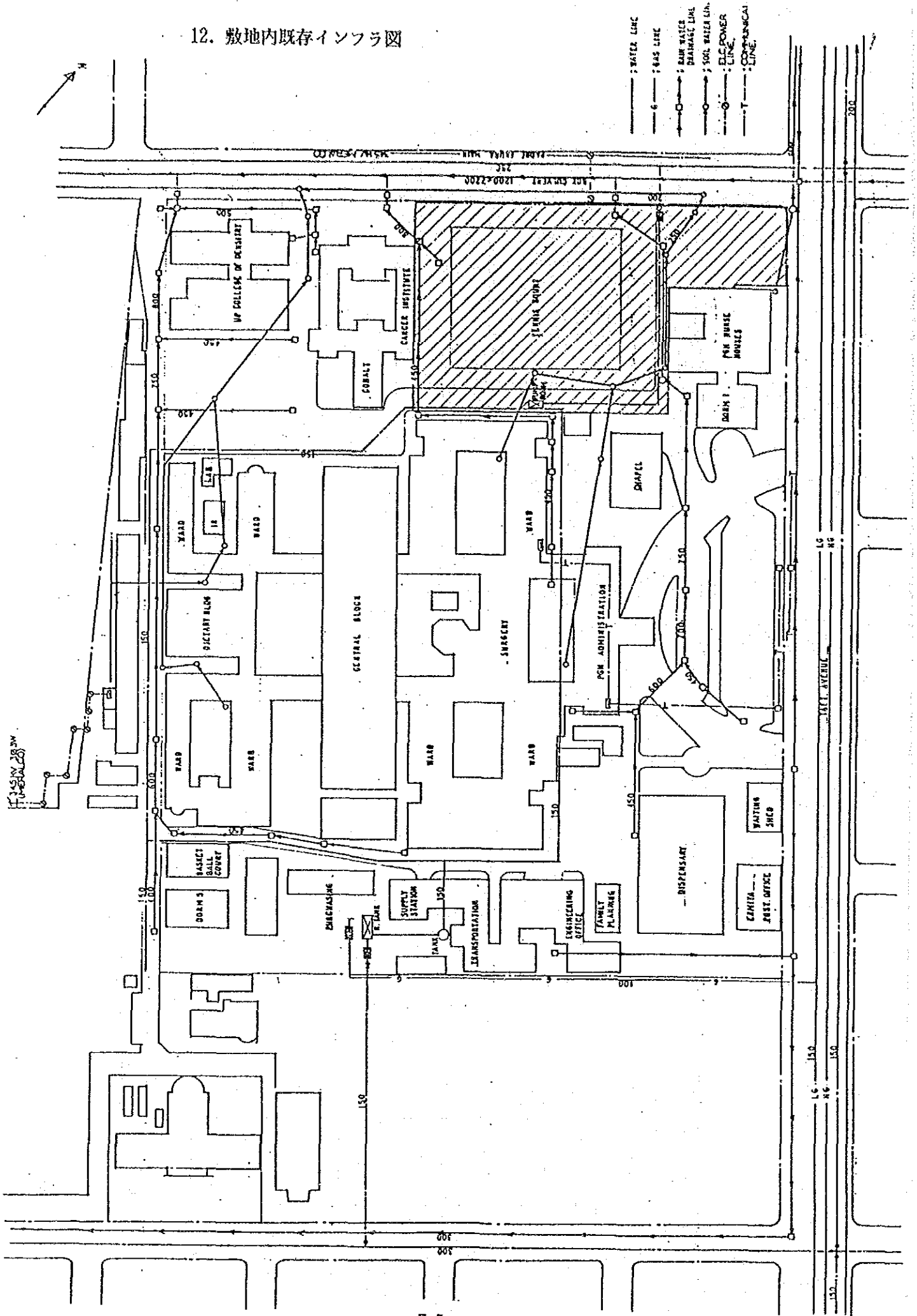
10-3 Additional Requirement for The New OPD
 Philippine General Hospital
 Department of Family Medicine

Particulars	Amount
Salaries	2,595,480
Other Allowances	
Union Allowance	38,100
Laundry Allowance	45,720
Cost of Living Allowance	697,800
SUB-TOTAL	781,620
Total Personal Services	3,377,028
Maintenance & Other Oper. Expenditures	1,403,279
Grand Total	4,780,307
Proposed Income	6,220,206

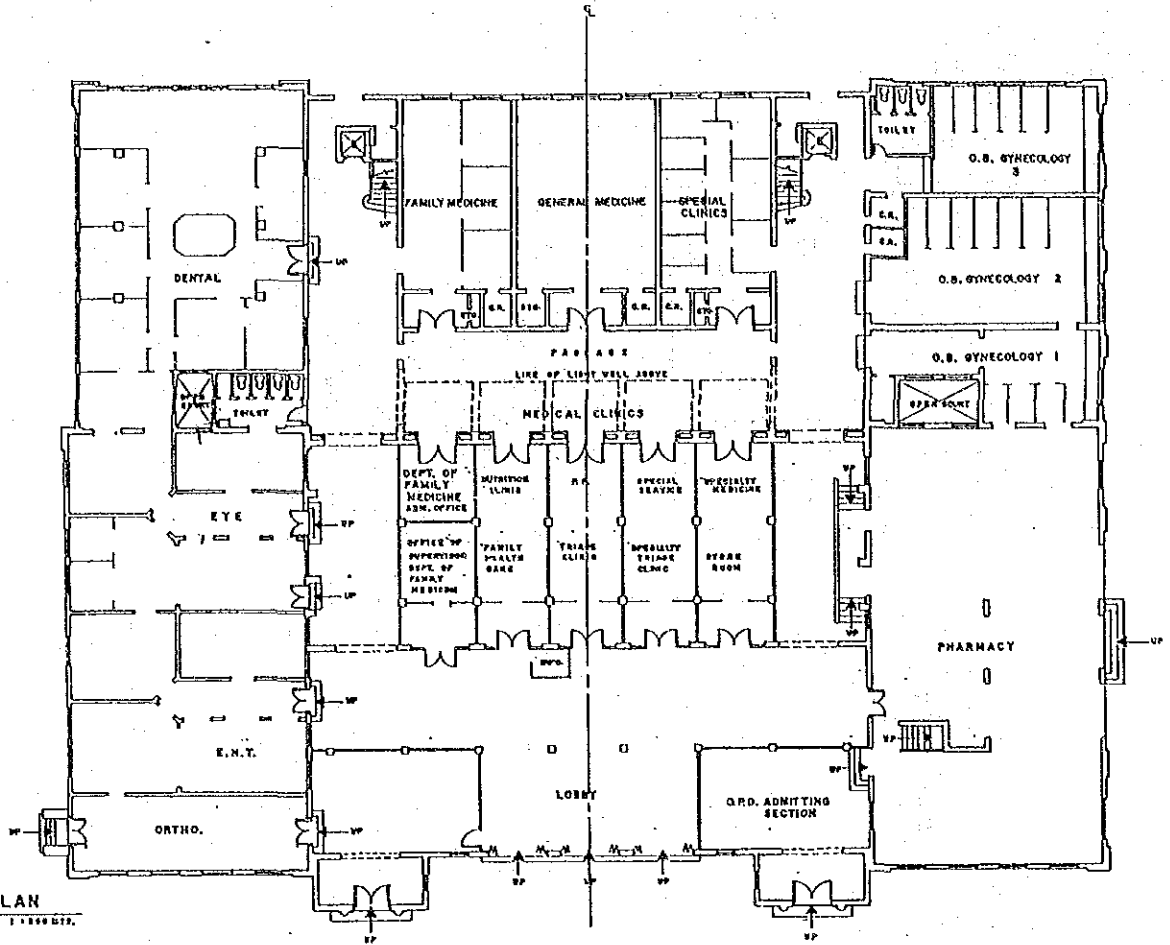
11. 敷地実測図



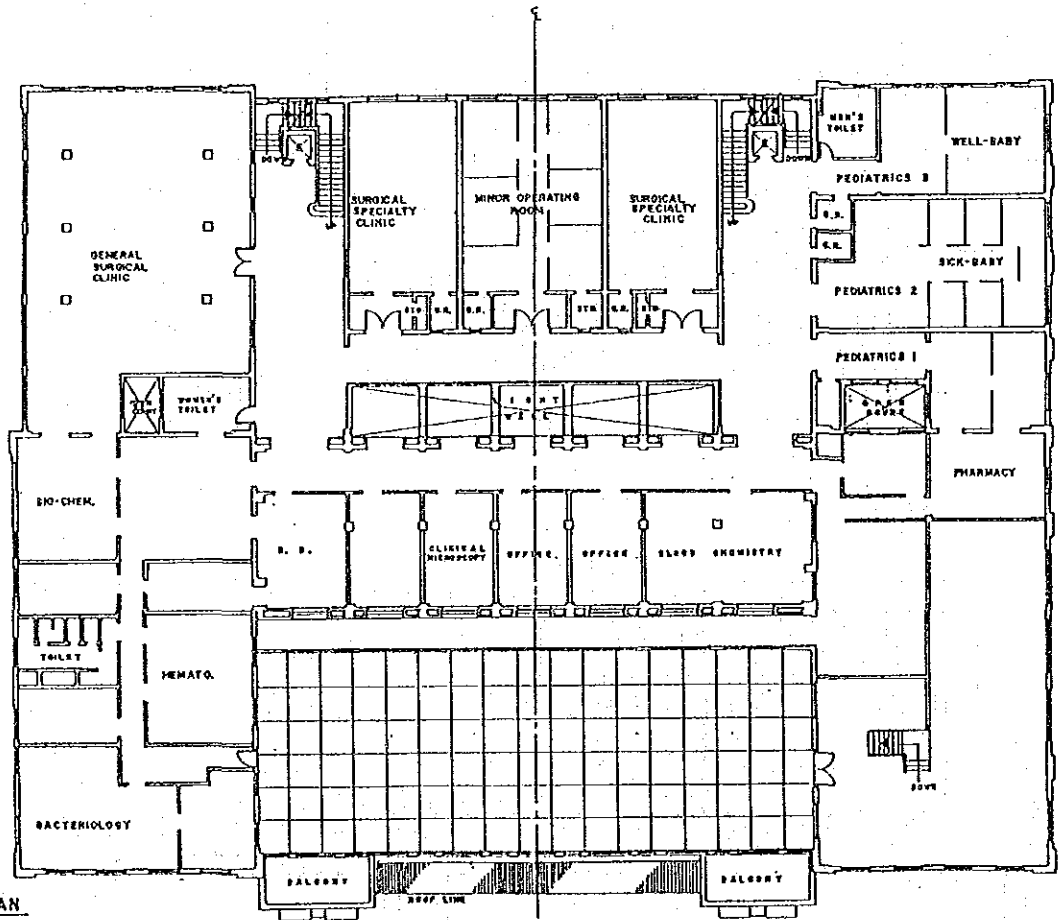
12. 敷地内既存インフラ図



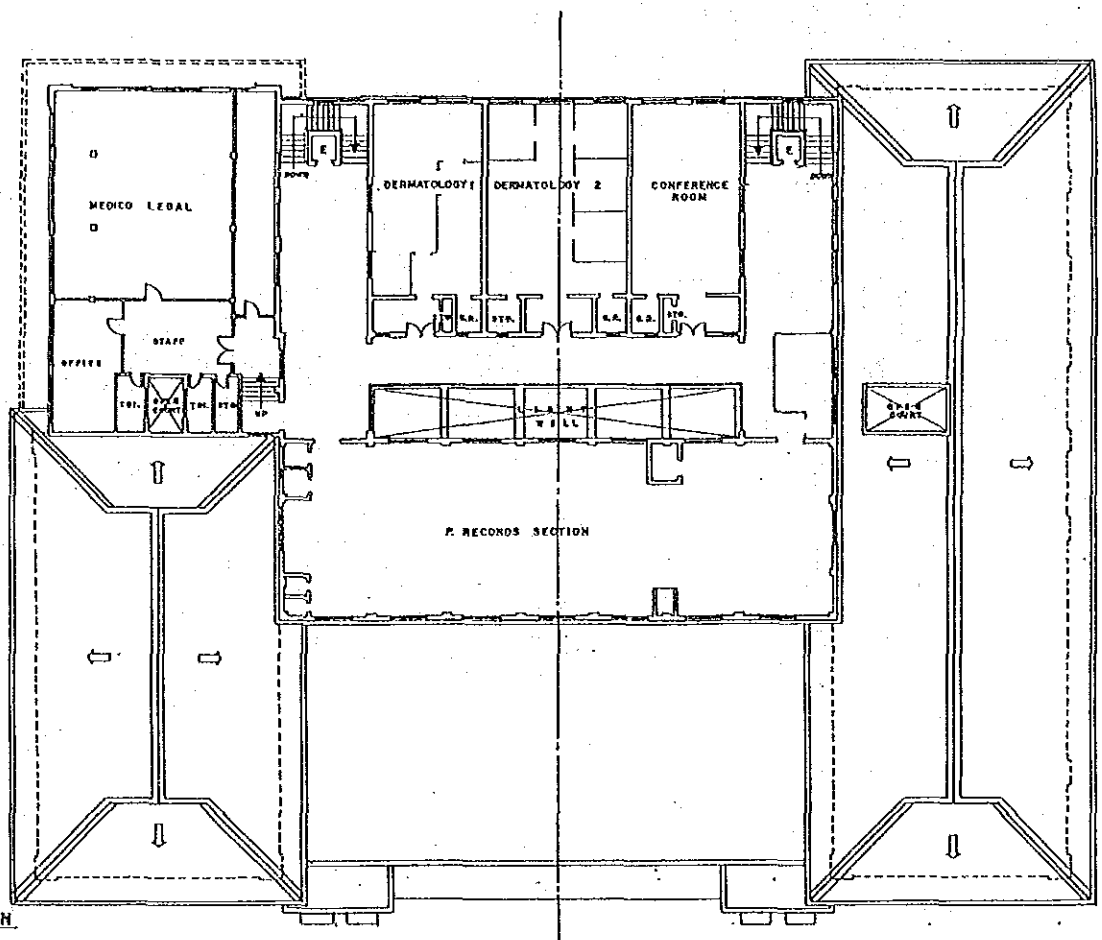
13. 既存OPD平面图



FIRST FLOOR PLAN
SCALE 1:200 M.P.S.

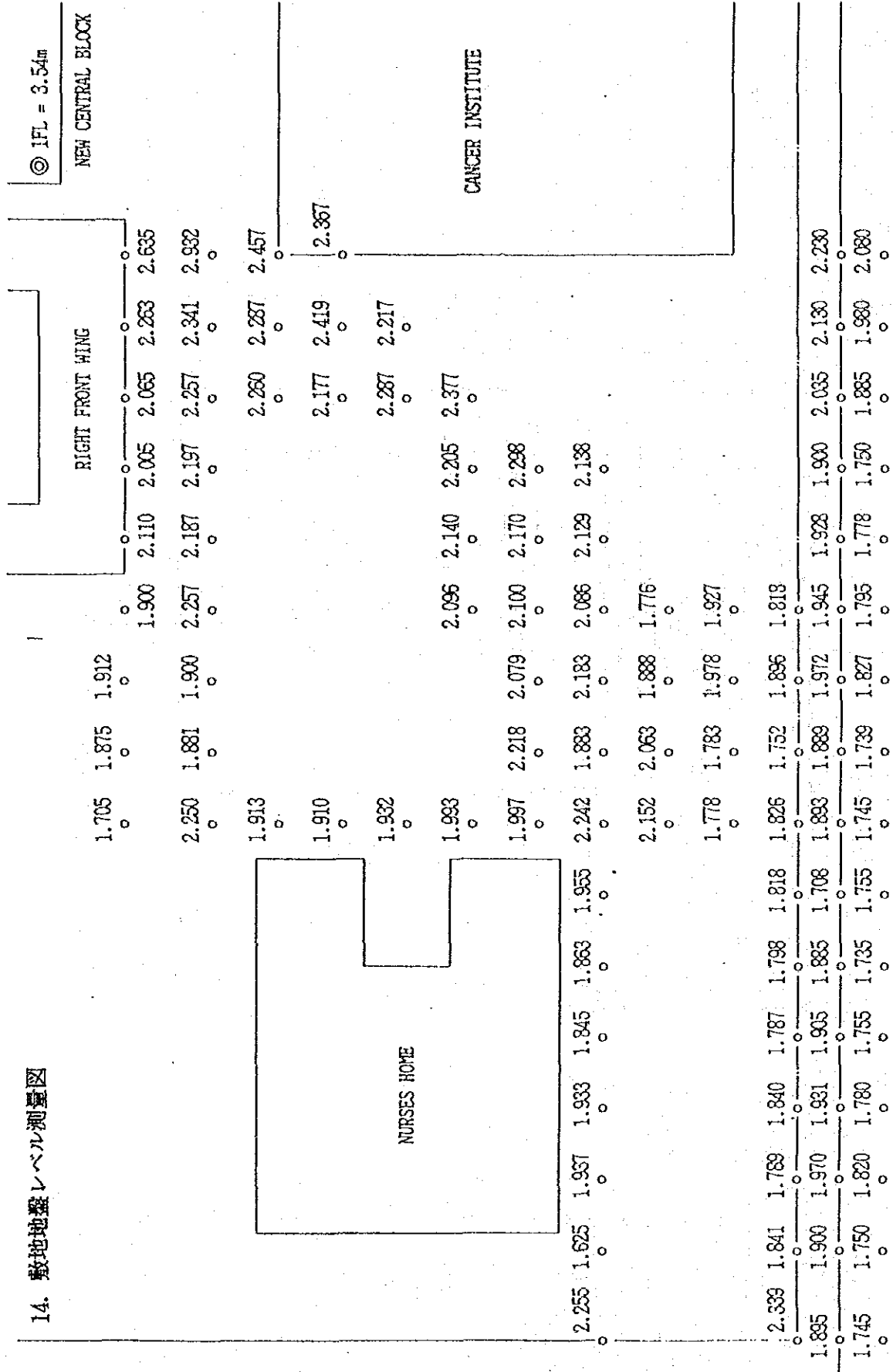


SECOND FLOOR PLAN
SCALE 1:200 M.P.S.




THIRD FLOOR PLAN
 SCALE 1/8" = 1'-0"

14. 敷地地盤レベル測量図



JICA