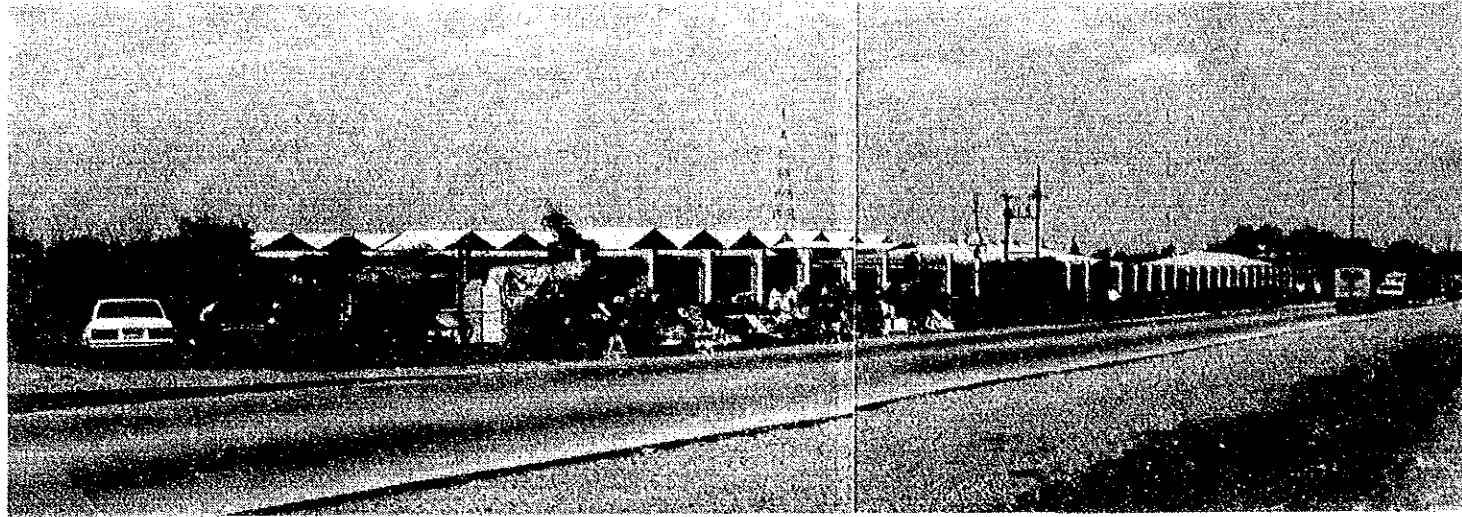
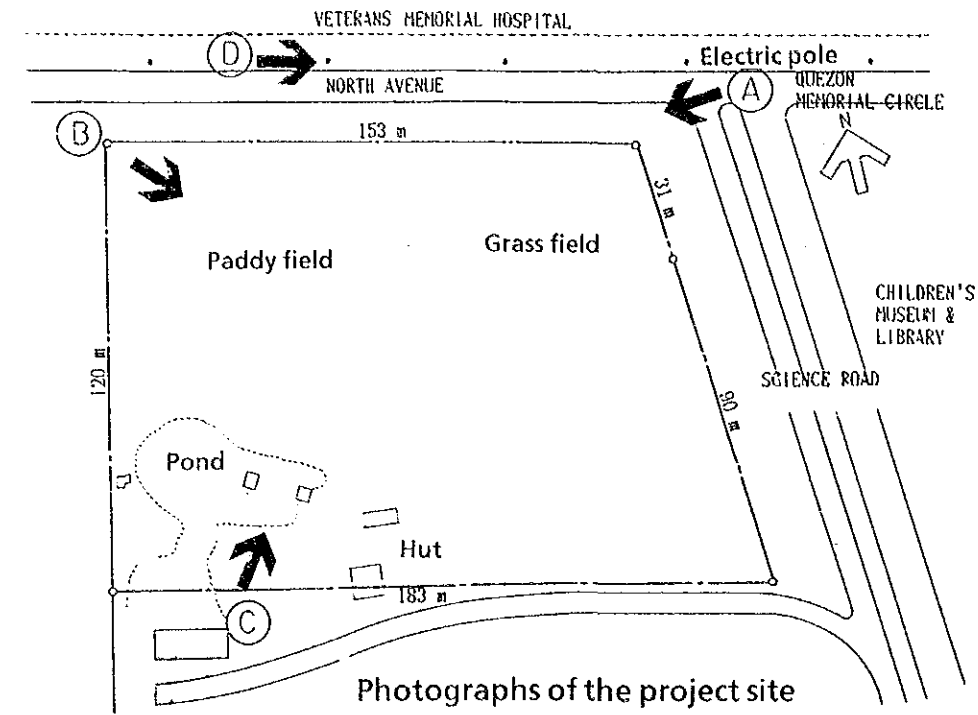


**APPENDIX 6. Reference Data of Construction Site**



Ⓐ Front side of the site



Photographs of the project site



Ⓑ Panoramic view of the site



Ⓒ Existing hut and pond



Ⓓ Electric pole

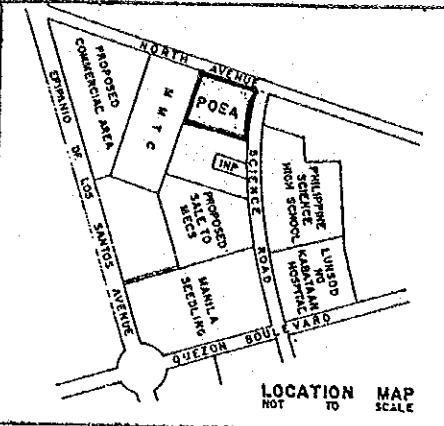




CORNER	BEARING	DISTANCE	COORDINATES	
			NORTHINGS	EASTINGS
1	N 11° 37' E	120.69	20,163.39	26,940.48
2	S 77° 23' E	153.12	20,281.61	26,944.78
3	S 01° 04' E	31.02	20,248.16	27,114.20
4	S 03° 43' E	90.64	20,217.15	27,114.78
5	N 78° 59' W	183.60	20,126.68	27,123.66
1			20,163.39	26,940.48

BM NO.	ELEV.	COORDINATES		DESCRIPTION
		NORTHINGS	EASTINGS	
1	49.34	20,256.13	27,078.70	X-MARKED WITH RED PAINT ON CHG FENCE.
2	47.05	20,250.35	26,948.18	TRAPEZOIDAL CONC. MON. 15x20x40 CM. SET 35 CM. IN THE GROUND WITH CONC. NAIL ON TOP.
3	49.05	20,248.48	27,108.48	TRAPEZOIDAL CONC. MON. 15x20x40 CM. SET 35 CM. IN THE GROUND WITH CONC. NAIL ON TOP.
4	49.99	20,128.21	27,119.14	TRAPEZOIDAL CONC. MON. 15x20x40 CM. SET 35 CM. IN THE GROUND WITH CONC. NAIL ON TOP.

- LEGEND:**
- TRANSVERSE STATION/CORNERS
  - BENCH MARK
  - STEEL ELECTRIC POST
  - NIPA HUT
  - CHG FENCE
  - BAMBOO CLUSTER
  - COMMERCIAL TREES
  - WATER METER
  - POND
  - EXISTING ASPHALT



**RCG CONSULT**  
R.C.G. BLDG., 1770 NICANOR GARCIA STREET  
MAKATI, METRO MANILA, PHILIPPINES

**DOMINADOR J. PASCUA**  
TRANSFORMER  
**LEONARDO V. REVUELTA**  
LEVELMAN  
**PETER V. MANZANO**  
COMPUTER/PLOTTER

**Engr. Danilo E. Oueda**  
PROJECT DIRECTOR

**Antonio A. Marsueto**  
GEODETIC ENGINEER  
REG. NO.: 2 DATE ISSUED: JULY 29, 1965  
PTR NO.: 8989221 DATE ISSUED: JAN. 4, 1985

TITLE:  
**TOPOGRAPHIC MAP**  
SCALE: 1:400 M.

PROJECT:  
**POEA**  
LOT NO.: 38-48-1A-3A  
PSO NO.: 22007  
TCF NO.: 310271  
LOCATION: NORTH AVENUE, DULAMAN, QUEZON CITY, M.M.



PROJECT : GEOTECHNICAL INVESTIGATION  
SUBJECT : GEOTECHNICAL INVESTIGATION REPORT  
LOCATION : POEA LOT NO. 3B-4B-1A-3A Diliman, Quezon City

-----

## 1.0 INTRODUCTION

This Soils and Materials Report describes the geotechnical investigations undertaken within the 20,000 sq.m. area of the Philippine Overseas Employment Agency in front of the Philippine Veterans Memorial Hospital, and adjacent to the Metro Manila Transit on the eastern side, and KKK self help project on the southern side of the lot.

## 2.0 GEOLOGY OF QUEZON CITY

The eastern part of the Metro Manila deltaic plain which extends to Quezon City, and Novaliches and south to as far as Cavite is exposed to a thick sequence of well bedded tuff and tuffaceous clastics known as the Guadalupe formation. Bedding planes regionally dip from 5 to 10 degrees to the west. The bulk of the formation consists of lithified volcanic ash lapilli and crystal sands. Beds rich in sand not directly derived from volcanic activity are common especially in the upper stratigraphic section. They are generally compacted and slightly lithified or cemented by precipitated silica and or clay. Thick beds or partly welded agglomeratic tuff occur, sporadically specifically from the Blue Ridge Vicinity in Quezon City.

## 3.0 INVESTIGATION CARRIED OUT

The project site is enclosed by a concrete wall on the west side, bounded by the Metro Manila Transit, on the North side bounded by the North Road, and on the east side bounded by the Science Road, and open on the south side. The land is utilized as a rice paddy during the rainy days and vegetable plantation during summer.

3.1 Six (6) drill holes were undertaken by rotary wash boring using the RCG Consult, Inc. Mechanical type drilling rig, standard sub-surface exploration equipment with high pressure pump, split spoon for soil sampling, to represent every 1.5 meter strata and penetration testing accessories. Boring logs and summary of test results attached herewith includes the visual description of the different soil formation and materials encountered.

#### 4.0 STANDARD PENETRATION TEST

The penetration test is performed by lowering the split tube sampler to the bottom of the cleaned drill hole, it is given a few taps to set it. Then the sampler is driven continuously for 18 inches (0.457 m) penetration. This is accomplished by dropping a 140 lbs. (63.6 kgs.) weight through a distance of 30 inches (0.75 m) over and over again. The number of drops or blows it takes to drive the sampler is recorded. Separate counts are made for the second 6 inches (0.15 m) and the third 6 inches (0.15 m) of penetration with the first 6 inches (0.15 m) considered to be a seating drive. The sum of the second and third counts is the penetration resistance. A penetration of less than 1 ft. (0.30 m) for 100 blows is considered already a refusal.

#### 5.0 SUB-SURFACE CONDITION

The soil deposit encountered at the proposed site is composed of silty clay and sandy clay on the top strata, but hard compact sandy clay with partly welded or cemented agglomerate. This has exhibited a high penetration resistance of the split spoon at 1.5 meters and 3.00 meters depth on all 6 holes specially common to the Guadalupe formation or soft adobe. The thickness of this formation has not been determined.

#### 6.0 INVESTIGATION RESULTS

Penetration resistance results on the layers of soil materials encountered are as follows:



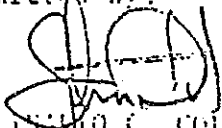
BOREHOLE  
NO.

DEPTH

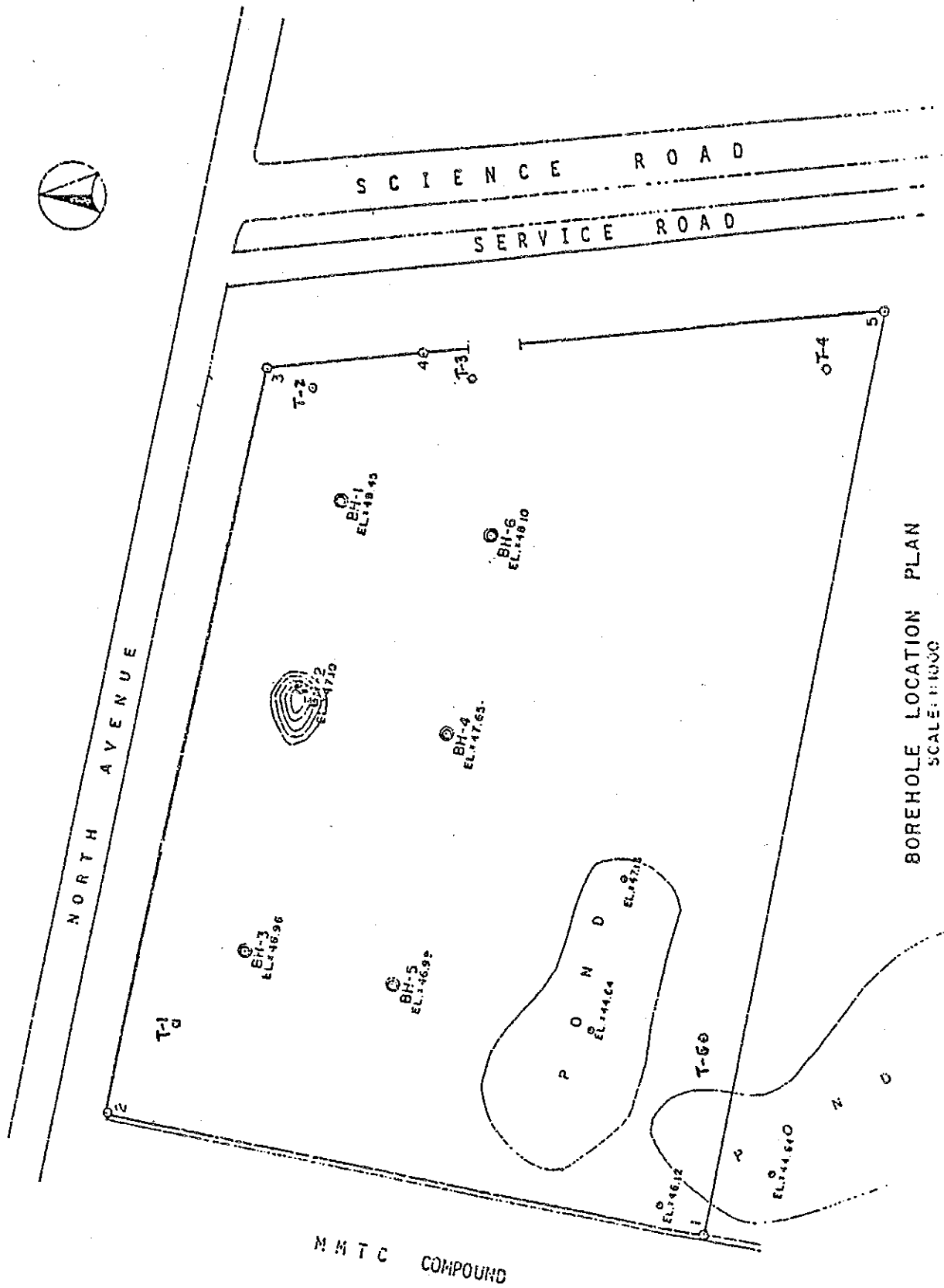
STANDARD PENETRATION  
TEST (N-BLOWS)

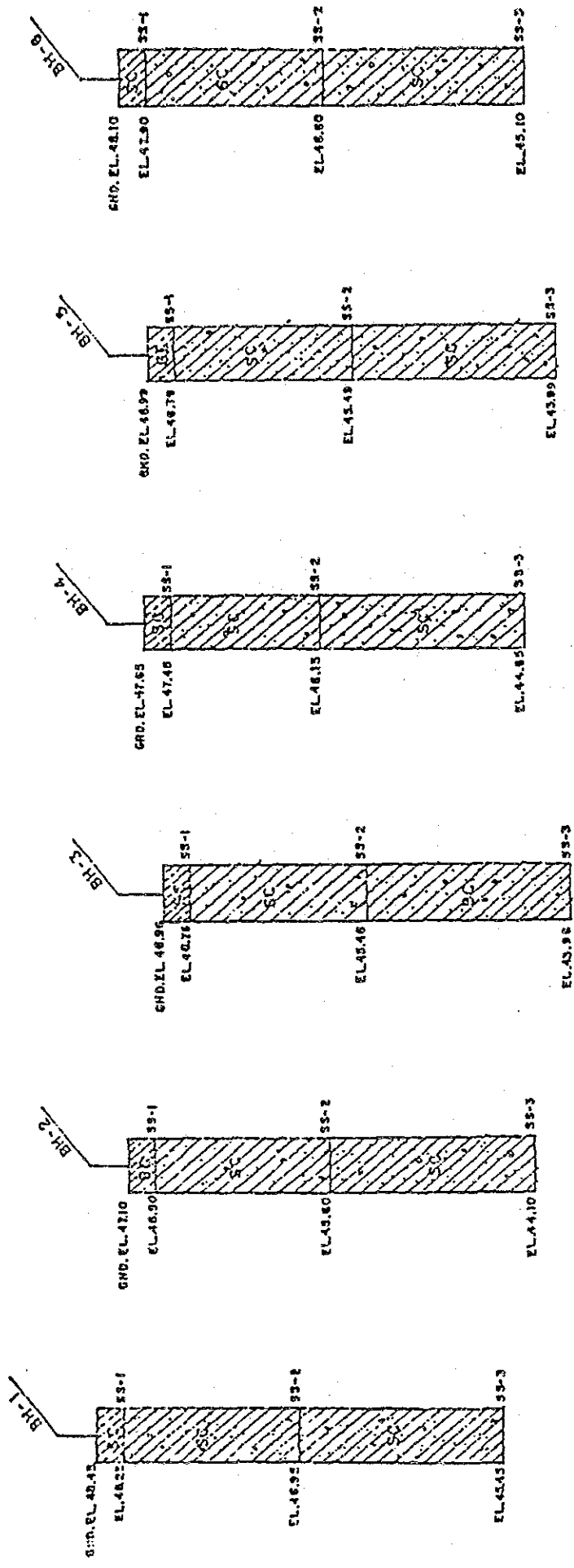
1	1.50 m	54/6
	3.00 m	56/5
	Total depth of borehole	3.00 m
2.	1.50 m	61/9
	3.00 m	60/7
	Total depth of borehole	3.00 m
3.	1.50 m	62/8
	3.00 m	60/5
	Total depth of borehole	3.00 m
4.	1.50 m	60/8
	3.00 m	62/9
	Total depth of borehole	3.00 m
5.	1.50 m	104
	3.00 m	64/9
	Total depth of borehole	3.00 m
6.	1.50 m	109
	3.00 m	60/7
	Total depth of borehole	3.00 m

Submitted by:



APOLINARIO C. COLASITO  
Chief Geotechnical Service  
RCG Consult, Inc.





SUB-SOIL PROFILE  
Scale: 1:100 M.

BH-1

DEPTH (M)	SOIL DESCRIPTION	N - BLOWS				ATTERBERG LIQUIDITY LIMIT (%)				SOIL OTHER TEST
		20	40	60	80	20	40	60	80	
0.20	Brownish, gray Silty clay soil									SC
1.50	Pale brown hard sandy clay with broken adobe fragments									SC
3.00	Pale brown hard sandy clay with broken adobe fragments									SC
	End of Hole									

BH-2

DEPTH (M)	SOIL DESCRIPTION	N-BLOWS				ATTERBERG LIMIT % WATER CONTENT %				SOIL OTHER TEST
		20	40	60	80	20	40	60	80	
0.20	Brownish gray silty clay soil									SC
1.50	Grayish brown very dense sandy clay with broken soft rocks fragments (cobble)									SC
3.00	Grayish brown very dense sandy clay with broken soft rocks fragments (cobble)									SC
	End of Hole									

BH-3

DEPTH (M)	SOIL DESCRIPTION	N-BLOWS				ATTERBERG LIMIT % WATER CONTENT %				SOIL OTHER TEST
		20	40	60	80	20	40	60	80	
0.20	Brownish gray silty clay soil									SC
1.50	Grayish brown very dense sand clay soils with broken rocks (adobe) fragments									SC
3.00	Grayish brown very dense sand clay soil with broken rocks (adobe) fragments									SC
	End of hole									

BH-4

DEPTH (M)	SOIL DESCRIPTION	N-BLOWS				ATTERBERG LIMIT % WATER CONTENT %				SOIL OTHER TEST
		20	40	60	80	20	40	60	80	
0.20	Brownish gray silty clay soil									SC
1.50	Grayish brown very dense sandy clay with broken rocks fragments (adobe)									SC
3.00	Grayish brown very dense sandy clay with broken fragments									SC
	End of hole									

DH-5

DEPTH (M)	SOIL DESCRIPTION	N-BLOWS			ATTERBERG LIMIT % WATER CONTENT %				SOIL OTHER TEST
		20	40	60	20	40	60	80	
0.20	Brownish gray silty clay soil								CL
1.50	Grayish brown very dense sandy clay with traces of broken rock fragments (adobe)								SC
3.00	Grayish brown very dense sandy clay with broken rock fragments (adobe)								SC
	End of hole								



BH-6

DEPTH (M)	SOIL DESCRIPTION	N. BLOWS			ATTERBERG LIMIT % WATER CONTENT %				SOIL OTHER TEST
		20	40	60	20	40	60	80	
0.20	Brownish gray silty clay soil								SC
1.50	Grayish brown dense sandy clay with traces of broken rock fragments								SC
3.00	Grayish brown dense clay with trace of broken rock fragments								SC
	End of hole								



## **APPENDIX 7. Collected Data**

REQUIREMENT OF FULL-TIME PERSONNELS IN CSHC

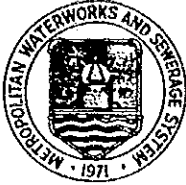
OFFICE	JICA LONG-TERM EXPERT	LINE PERSONNEL	SUPPORT PERSONNEL
1. Executive Director's Office	(1)	2 → 5	6 → 7
Executive Director		1	
Chief Adviser	(1)		
Deputy Executive Director		1	
Secretary/Clerk			3
Messenger			1
Driver			2
2. Administrative Division	(1)	8	8
Chief of the Division		1	
Coordinator of Experts	(1)		
Secretary			1
a) Chief, Finance & Budget Sec. (Budget Officer)		1	
Budget Analyst		1	
Budget Cashier		1	
Accountant		1	
Property and Supply Officer		1	
Clerk			1
b) Chief Administrative Sec. (Personnel Officer)		1	
Mechanical Technician			1
Electrical Technician			1
Clerk			1
c) Chief, Dormitory		1	
Caretaker			3
3. Training & Public Information Division	(1)	21	9
Chief of the Division		1	
Expert on Training & Education	(1)		
Secretary			1
Driver			2
a) Chief, Training Coordination Section		1	
Training Coordinator		4	
(Occ. Safety, Ind. Hygiene, Medicine, Labor Inspector etc.)			
Clerk			1
b) Chief, Audio-visual Education Section		1	
Audio-visual Editor		1	
Audio Visual Cameraman		1	
Audio Visual Engineer		1	
Audio Visual Aide			1
Clerk			1
c) Chief, Public Information Section		1	
Editor		1	
Photographer		1	
Illustrator		1	
Printing Engineer			
Printing Aide			1
Displayer of Museum		1	
Librarian		1	
Clerk			1
d) Chief, Electronic Data Processing Section		1	
System Analyst		1	
Data Programmer		1	
Clerk			1
4. Medical Control Division	(4) { Long Time (1) Short Time (3)	21	14
Chief of the Division		1	
Expert on Occ. Medicine	(1)		
Expert on Clinical Technology	(1)		
Expert on X-ray Technology	(1)		

} Move To 1.

OFFICE	JICA LONG-TERM EXPERT	LINE PERSONNEL	SUPPORT PERSONNEL
Expert on Bacteria Cultivation	(1)		
Secretary			1
Driver			4
a) Chief, Medical Examination Section		1	
Industrial Physician		4	
Industrial Nurse		4	
Medical Examination Aide			4
Clerk			2
b) Chief, Diagnostic Laboratory		1	
Clinical Technologist		4	
X-ray Technologist		4	
Bacteria Cultivation Technologist		2	
Medical Examination Aide			2
Clerk			1
* See below			
4. Safety Control Division	(1)	11	10
Chief of the Division		1	
Expert on Occ. Safety	(1)		
Secretary			1
Driver			1
a) Chief, Safety Test Section		1	
Senior Safety Engineer (boiler, other safety device)		2	
Junior Safety Engineer - do -		2	
Safety Test Aide			2
Clerk			1
b) Chief, Safety Research & Survey Section		1	
Researcher		4	
(Machinery, Chemistry, Civil Engineering, Electricity)			
Research Aide			4
Clerk			1
5. Environment Control Division	(1)	17	13
Chief of the Division		1	
Expert on Working Environment	(1)		
Measurement			
Secretary			1
Driver			3
a) Chief, Working Environment Section		1	
Senior Measurement Expert		5	
(dust, metals, organic solvents, other chemical, physical factors)			
Junior Measurement Expert		5	
( - do - )			
Measurement Aide			5
Clerk			1
b) Chief, Industrial Hygiene Section		1	
Senior Industrial Hygienist		2	
(Respirator, Environmental Improvement)			
Junior Industrial Hygienist		2	
( - do - )			
Industrial Hygiene Aide			2
Clerk			1
(In the Future) TOTAL	(9) ← (6) + Short Time	79	60
* c) Medical Research Section			
Chief, Medical Research Section		1	
Medical Researchers		3	
Clerk			1
TOTAL		83	61

CABLE ADDRESS:  
"MWSS"

IN REPLY PLEASE REFER TO \_\_\_\_\_  
TEL. NOS. 95-32-11 TO 29



REPUBLIC OF THE PHILIPPINES  
**METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM**  
KATIPUNAN ROAD, BALARA, QUEZON CITY

11 December 1984

TO : The Department Manager, North Collection  
The Department Manager, South Collection

THRU: The AGM for Commercial and Customer Service *new 17/11/84*

FROM: The Department Manager, Computer Service Center

RE : Computation of the Currency Exchange Rate Adjustment (CERA)

-----

The CERA is an adjustment to the water rate "authorized for the MWSS... to equip it at managing its foreign debt service, on the basis of an adjustment factor of 0.0056202 for every ₱0.10 upward or downward fluctuation in the exchange rate " (see Attachment - 1).

The formula for CERA on a cu.m. basis is:

$$\text{cera} = \frac{\text{Forex} (\text{FOREX} - 18)}{0.1} \times 0.0056202$$

Where: cera - Currency Adjustment/cu.m.

FOREX - Foreign Exchange

In the computation of the water bill, the following formulas are used:

1) Non-sewered services

$$\text{Billed Amount} = (\text{RATE} + \text{cera}) \times \text{CONS} \times 1.1$$

2) Services with Water & Sewer

$$\text{Billed Amount} = (\text{RATE} + \text{cera}) \times \text{CONS} \times 1.6$$

3) Sewer only

$$\text{Billed Amount} = (\text{RATE} + \text{cera}) \times \text{CONS} \times 0.6$$

Note: Light bills are not affected by the CERA.

Where: Rate - Rate/cu.m. for the month  
cera - CERA/cu.m. for the month  
CONS - effective consumption

The CERA was applied to the water bill effective 16 November 1984, corresponding with the October 16 to November 15 consumption (the peso was allowed to float on 16 October 1984, according to CORPLAN).

- 2 -

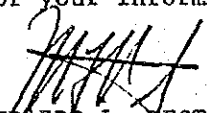
The CURRENCY ADJ printed in the bill receipt is cema x CONS, for the purpose of informing the customers only.

On November 16 and every 16th of the month thereafter, the CORPLAN Staff shall be providing the CSC with the averaged exchange rate of the immediate 30 day period.

The FOREX value provided by CORPLAN for November was P19.9910/US\$, with the corresponding CERA of approx. 01118/cubic meter.

To facilitate processing of adjustments and response to customer complaints, the CSC shall provide the Collection Departments with the values of FOREX Nnd ceras once they are received from CORPLAN.

For your information.

  
MEDARDO L. WESTAÑO  
Department Manager, CSC

Attachment: a/s

**METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM**  
Katipunan Road, Balara, Quezon City

**SCHEDULE OF WATER RATES BY MONTH AND BY SERVICE PIPE**

TYPE OF SERVICE/ CONSUMPTION RANGE	MAY 16 -	JUN 16 -	JUL 16 -	AUG 16 -	SEP 16 -	OCT 16 -
	JUN 15/85	JUL 15/85	AUG 15/85	SEP 15/85	OCT 15/85	NOV 15/85
<b>DOMESTIC USERS</b>						
Up to 15 Cu. M.	P 10.85*	P 11.00*	P 11.45*	P 11.85*	P 12.45*	P 13.10*
16 to 20 Cu. M.	18.45*	18.85*	19.55*	20.25*	21.20*	22.20*
21 to 25 Cu. M.	27.95*	28.55*	29.70*	30.80*	32.15*	33.55*
26 to 30 Cu. M.	41.10*	42.15*	43.75*	45.35*	47.20*	49.05*
31 to 50 Cu. M.	1.6905x	1.7375x	1.8045x	1.8715x	1.9460x	2.0205x
51 to 70 Cu. M.	2.1425x	2.2025x	2.2825x	2.3625x	2.4475x	2.5325x
71 to 100 Cu. M.	2.6825x	2.7600x	2.8575x	2.9550x	3.0535x	3.1520x
101 Cu. M. & above	3.4095x	3.5050x	3.6215x	3.7380x	3.8520x	3.9660x
<b>COMMERCIAL USERS</b>						
Up to 25 Cu. M.	86.65*	89.05*	92.00*	94.90*	97.75*	100.60*
26 to 1000 Cu. M.	3.4660x	3.5625x	3.6790x	3.7955x	3.9095x	4.0235x
1001 Cu. M. & above	4.1810x	4.2975x	4.4340x	4.5705x	4.7005x	4.8305x
<b>INDUSTRIAL USERS</b>						
Up to 25 Cu. M.	118.40*	121.35*	124.75*	128.15*	131.40*	134.65*
26 to 1000 Cu. M.	4.7360x	4.8525x	4.9890x	5.1255x	5.2555x	5.3855x
1001 Cu. M. & above	5.5835x	5.7200x	5.8765x	6.0330x	6.1790x	6.3250x
SEA TRANSPORT	9.0775x	9.3665x	9.6755x	9.9845x	10.2935x	10.6025x
RAW WATER	1.0250x	1.0400x	1.0750x	1.1100x	1.1450x	1.1800x

LEGEND: \*-Flat Rate      ADD: 10% for Environmental Charge  
x-Per Cu. M.              50% for Sewer Service  
   Currency Exchange Rate Adjustment  
   Service Charge (CERA)

**METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM**  
Katipunan Road, Balara, Quezon City

**SCHEDULE OF WATER RATES BY MONTH AND BY SERVICE PIPE**

TYPE OF SERVICE/ CONSUMPTION RANGE	NOV 16 -	DEC 16/85	JAN 16 -	FEB 16 -	MAR 16 -	APR 16 -
	DEC 15/85	JAN 15/86	FEB 15/86	MAR 15/86	APR 15/86	MAY 15/86
<b>DOMESTIC USERS</b>						
Up to 15 Cu. M.	P 13.75*	P 14.35*	P 14.95*	P 15.60*	P 16.25*	P 16.85*
16 to 20 Cu. M.	23.20*	24.20*	25.15*	26.15*	27.15*	28.15*
21 to 25 Cu. M.	34.90*	36.25*	37.65*	39.00*	40.35*	41.75*
26 to 30 Cu. M.	50.90*	52.75*	54.60*	56.45*	58.30*	60.15*
31 to 50 Cu. M.	2.0950x	2.1695x	2.2440x	2.3185x	2.3930x	2.4675x
51 to 70 Cu. M.	2.6175x	2.7025x	2.7875x	2.8725x	2.9575x	3.0425x
71 to 100 Cu. M.	3.2505x	3.3490x	3.4475x	3.5460x	3.6445x	3.7430x
101 Cu. M. & above	4.0800x	4.1940x	4.3080x	4.4220x	4.5360x	4.6500x
<b>COMMERCIAL USERS</b>						
Up to 25 Cu. M.	103.45*	106.30*	109.15*	112.00*	114.85*	117.70*
26 to 1000 Cu. M.	4.1375x	4.2515x	4.3655x	4.4795x	4.5935x	4.7075x
1001 Cu. M. & above	4.9605x	5.0905x	5.2205x	5.3505x	5.4805x	5.6105x
<b>INDUSTRIAL USERS</b>						
Up to 25 Cu. M.	137.90*	141.15*	144.40*	147.65*	150.90*	154.15*
26 to 1000 Cu. M.	5.5155x	5.6455x	5.7755x	5.9055x	6.0355x	6.1655x
1001 Cu. M. & above	6.4710x	6.6170x	6.7630x	6.9090x	7.0550x	7.2010x
SEA TRANSPORT	10.9115x	11.2205x	11.5295x	11.8385x	12.1475x	12.4565x
RAW WATER	1.2150x	1.2500x	1.2850	1.3200x	1.3550x	1.3900x

LEGEND: \*-Flat Rate      ADD: 10% for Environmental Charge  
x-Per Cu. M.              50% for Sewer Service  
   Currency Exchange Rate Adjustment  
   Service Charge (CERA)



## **APPENDIX 8. Others**

## Data for Operation and Maintenance Cost

### 1. Personnel Expenses

#### 1) Governing board

Perdiems and representation allowances of the  
Chairman and 6 Board members P 420,000  
Discretionary Fund of the Chairman at P 70,000  
and Board members at P 25,000 each 220,000

2) Line personnel  $3,500 \text{ P/mo.} \times 13 \text{ mo.} \times 83 = 3,776,500$

3) Support personnel  $2,000 \text{ P/mo.} \times 13 \text{ mo.} \times 61 = 1,586,000$

#### 4) Contractural workers and consultants

$2,500 \text{ P/mo.} \times 13 \text{ mo.} \times 4 = 130,000$

Total 6,132,500 P/Year

### 2. Utility Running Cost

#### 1) Electricity

Facility service hour ..... 8 hours per day and 25 days per month

Average loading rate to the maximum electric power is assumed to be 60%.

#### (1) Estimated electric load capacity

For lighting and receptacles 300 kw

For machineries and equipment 200 kw

---

Total 500 kw

Electric power for contract =  $500 \text{ kw} \times 0.6 = 300 \text{ kw}$

(Demand factor is 0.6)

$300 \text{ kw} \times 0.6 \times 8\text{h/day} \times 25\text{days/mo.} = 36,000 \text{ kwh/mo.}$

#### (2) Electric charge

a. Demand charge  $300 \text{ kw} \times 12.6 \text{ P/kw} = 3,780 \text{ P/mo.}$

b. Energy charge  $36,000 \text{ kwh/mo.} \times 0.25 \text{ P/kwh} = 9,000 \text{ P/mo.}$

a~b Sub-total 12,780 P/mo.

c. CERA  $12,780 \text{ P/mo.} \times 0.3206 = 4,097 \text{ P/mo.}$

d. Generation charge  $36,00 \text{ kwh/mo.} \times 1.877 \text{ P/kwh} = 67,572 \text{ P/mo.}$

84,449 P/mo. → 85,000 P/mo.

e. Total  $85,000\text{P/mo.} \times 12\text{mo.} = \underline{1,020,000\text{ P/Year}}$

2) Water Service

Service days ..... 25 days per month

Average water consumption rate to the maximum one is assumed to be 80%.

(1) Water consumption quantity

$$60\text{m}^3/\text{day} \times 25\text{days}/\text{mo.} \times 0.8 = 1,200\text{ m}^3/\text{mo.}$$

(2) Water consumption charge

a. Basic charge  $1,200\text{m}^3/\text{mo.} \times 4.7075\text{P/m}^3 = 5,649\text{ P/mo.}$

b. Environmental charge  $5,649\text{ P/mo.} \times 0.1 = 565\text{ P/mo.}$

c. CERA  $1,200\text{ m}^3/\text{mo.} \times 0.654\text{ P/m}^3 = 785\text{ P/mo.}$

$6,999\text{ P/mo.} \rightarrow 7,000\text{ P/mo.}$

d. Total  $7,000\text{P/mo.} \times 12\text{mo.} = \underline{84,000\text{ P/Year}}$

3) LP Gas

Service days ..... 25 days per month

For Kitchen ..... 500 meals per day

(1) Gas consumption quantity

$$500\text{meals}/\text{day} \times 25\text{days}/\text{mo.} \times 600\text{kcal}/\text{meal} \div 12,000\text{kcal}/\text{kg} = 625\text{ kg}/\text{mo.}$$

$$200,000\text{ kcal}/\text{day} \times 25\text{days}/\text{mo.} \div 12,000\text{ kcal}/\text{kg} = 417\text{ kg}/\text{mo.}$$

Total  $1,042\text{kg}/\text{mo.}$

(2) LP Gas consumption charge

$$1,042\text{ kg}/\text{mo.} \times 10\text{ P}/\text{kg} = 10,420\text{ P/mo.}$$

$$10,420\text{P/mo.} \times 12\text{mo.} = \underline{125,040} \rightarrow \underline{125,000\text{P/Year}}$$

3. Building Maintenance Cost (Assumed to be about 0.1% of initial cost)

$150,000\text{ P/Year}$

4. Equipment Maintenance Cost (Assumed to be about 5% of initial cost)

$3,600,000\text{ P/Year}$

5. Miscellaneous Cost (Assumed to be 5% of sum of item 1 to 4)

$\underline{555,000\text{ P/Year}}$





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