


No.

REPORT ON BASIC DESIGN


NURSE EDUCATION FACILITIES
IN
UJUNG PANDANG AND JAKARTA
IN
THE REPUBLIC OF INDONESIA

MARCH 1979

JAPAN INTERNATIONAL COOPERATION AGENCY

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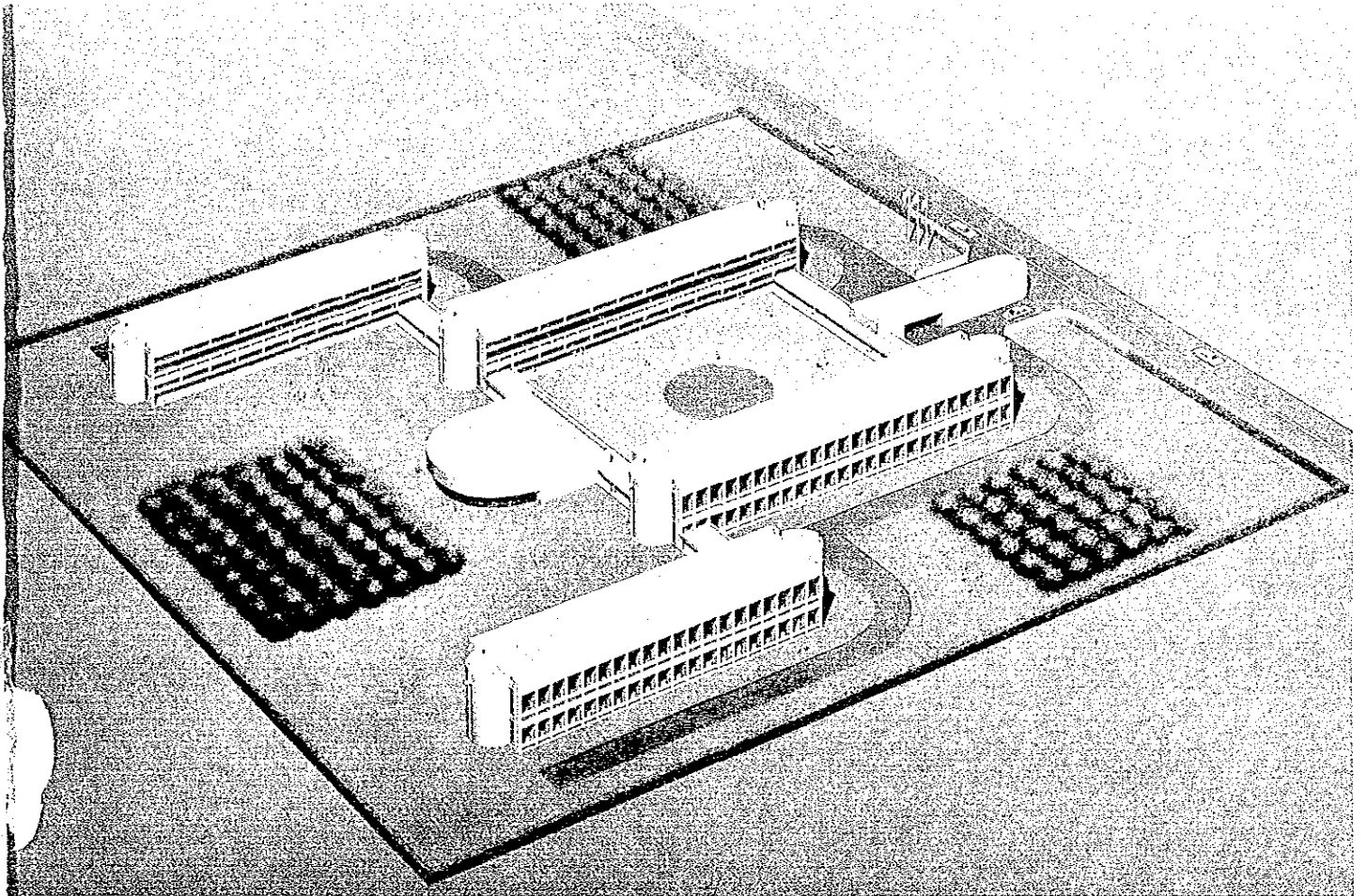
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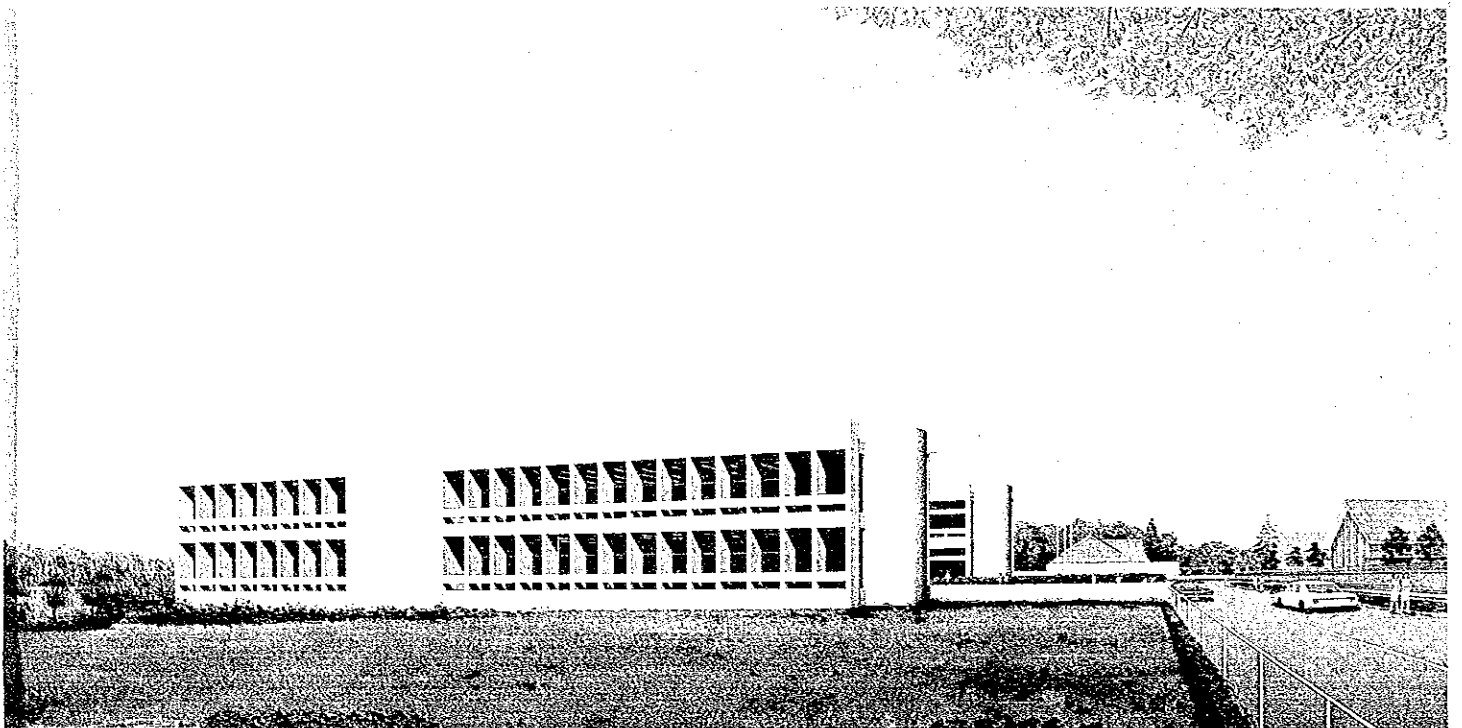
MARCH, 1979

JAPAN INTERNATIONAL COOPERATION AGENCY

國際協力事業団		
受入 月日	84. 5. 16	108
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UJUNG PANDANG (HNTS)



JAKARTA (DCNE)

PREFACE

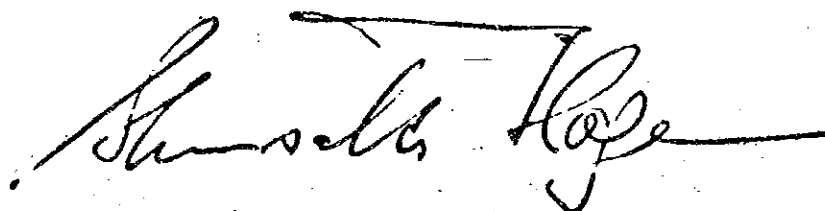
In response to the request of the Government of the Republic of Indonesia, the Government of Japan decided to cooperate in the construction project of Nurse Education Facilities composed of "The Health Nurse Teacher School" in Ujung Pandang and "The Development Center for Nursing Education" in Jakarta in the Republic of Indonesia, and the Japan International Cooperation Agency conducted its basic design.

The objectives of the above mentioned are to educate health nurse teachers who will contribute their health knowledge and technology acquired to the development of nursing education and to develop the nursing education system, curriculum, teaching methods and other techniques by means of training activities and research.

The on-the-spot survey of the project was carried out during the period from 22nd October to 15th November 1978. The basic design based thereupon was duly explained to and approved by the competent authorities concerned of the Republic of Indonesia during the period from 18th February to 1st March 1979 before the current report was finalized.

I would like to express my sincere appreciation to the officers and people concerned of the Republic of Indonesia who have extended close cooperation and assistance to our survey team.

March, 1979

A handwritten signature in black ink, appearing to read 'Shinsaku Hogen', written in a cursive style. The signature is positioned above a horizontal line.

Shinsaku Hogen
President
Japan International Cooperation Agency

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CHAPTER 1: FIELD SURVEY

1-1 OBJECTIVES

At the request of the Government of Indonesia, the Japan International Cooperation Agency (JICA) dispatched a mission to Indonesia for twenty-four days from October 22nd to November 15th to carry out the basic design of the Nurse Education Facilities in the Republic of Indonesia. The objectives of the mission were to hold discussions with the Indonesian Government officials concerned regarding the implementation of this project and to collect the data and information necessary for the basic designing of the facilities including the educational equipment to be constructed in Ujung Pandang, South Sulawesi Province and in Cilandak, Jakarta.

Nikken Sekkei was commissioned as a consultant by JICA and joined the mission to conduct this basic design of the facilities.

1-2 BACKGROUND

Japan's cooperation in medical and health care programs in Indonesia will contribute to the improvement of the people's health and welfare, resulting in strengthening the foundation for social and economic development in Indonesia. The efforts, matching Japan's policy to promote programs overseas to improve people's 'Basic Human Needs,' will help to further the friendly relations between the two Governments. In particular the Government of Japan considered that it was most effective to cooperate in the training of nursing staff to ensure the systematic development of medical and health care. Accordingly a "Preliminary Survey Team for Medical Cooperation" led by Professor Katsunuma was dispatched to Indonesia in July, 1977 to establish the position of a nurse education program in a comprehensive program of technical and economic cooperation.

1. Preliminary Survey Team for Medical Cooperation

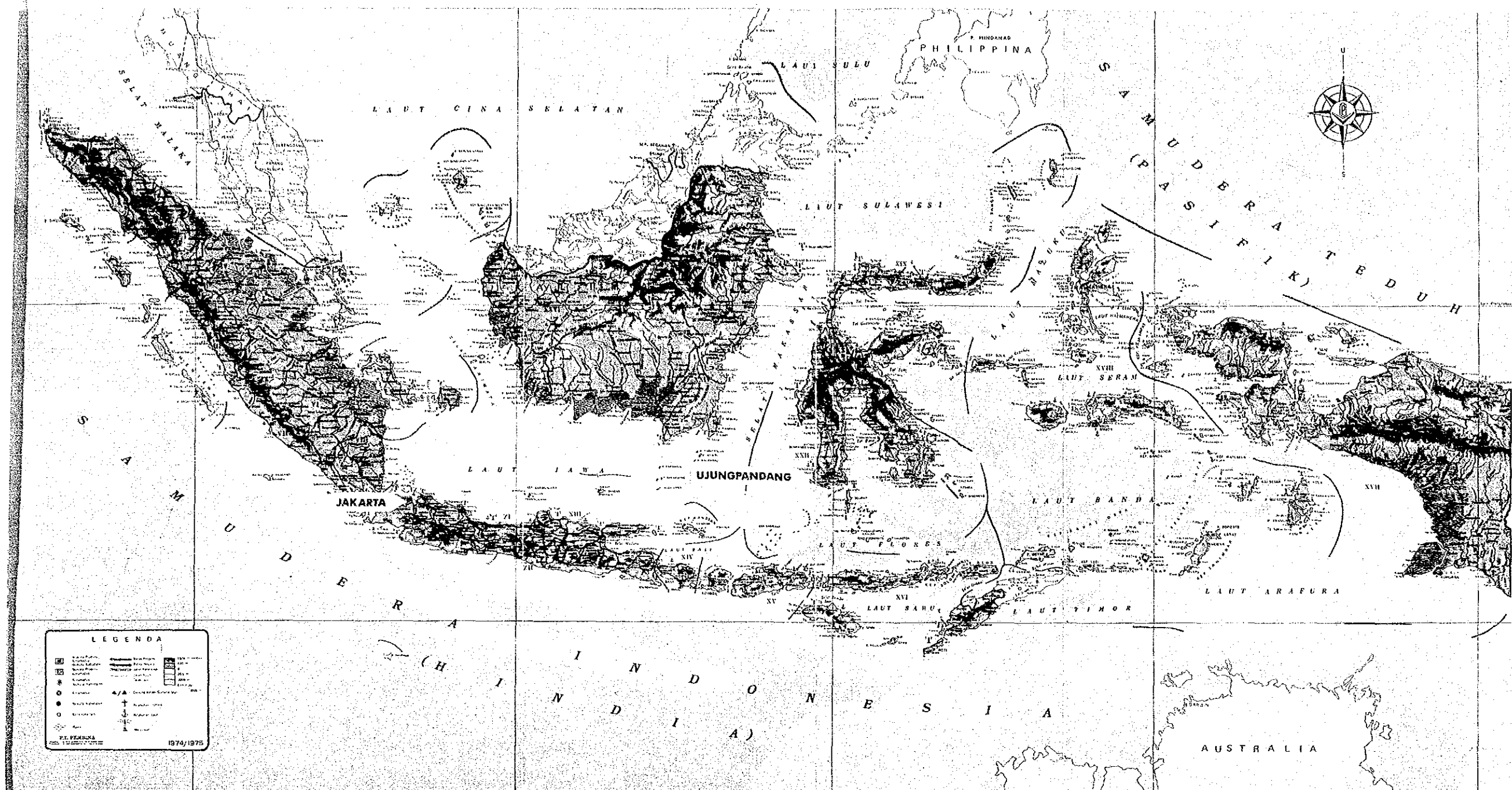
The Government of Indonesia requested the following cooperation from the Japanese Survey Team:

- a. Dispatch of Japanese consultants specialized in the training of nurse teachers to Indonesia
- b. Dispatch of Indonesian officials who are concerned with the training of nurse teachers to Japan
- c. Supply of educational equipment and materials to the four Health Nurse Teachers Schools (HNTS) facilities
- d. Supply of office equipment to the four HNTS facilities
- e. Supply of vehicles to enable HNTS staff to carry out their official duties
- f. Improvement or reconstruction of the four HNTS facilities

As a result of their findings, the Survey Team confirmed the importance of Japan's cooperation in the nurse education program in Indonesia.

2. Dispatch of Experts in Nurse Education and Assistance

Upon the report and suggestion by the Preliminary Survey Team, two experts (Mrs. Nagano and Miss Shimizu) were dispatched to Indonesia for 34 days from Jan. 18 to Feb. 20, 1978 for the purpose of investigating the existing conditions of the nurse education facilities including the four HNTS's. This delegation reported in detail on each facility including the buildings and services, educational equipment, curriculum, number of students and staff and the career performance of graduate students. Whilst making this survey the team received a request from the



INDONESIA

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Government of Indonesia for the complete reconstruction of the Ujung Pandang HNTS and the improvement of the three remaining HNTS facilities with special attention to classrooms, staff accommodation and refectory. In addition the Government of Indonesia requested the supply of audio-visual aids and office equipment, the acceptance of 27 training staff to Japan for teacher training and the provision of Japanese consultants specialized in advising on the choice, preparation and use of educational equipment and materials.

In April of 1978 the Government of Indonesia made a formal request to the Government of Japan for the extension of Grant-in-Aid and technical cooperation to promote the nurse education program.

3. Preliminary Survey Team for Construction Program on the Nurse Education Facilities

Upon the receipt of this request, a third survey team led by Professor Hirayama was dispatched to Indonesia for 14 days from 9th - 22nd August, 1978. As a result of a series of discussions with the Center for Education and Training for the Ministry of Health, R.I., the survey team was asked for the following:

- a. Grant-in-Aid and technical cooperation for the Ujung Pandang HNTS.
- b. Grant-in-Aid and technical cooperation for the establishment of a Development Center for Nursing Education (DCNE) by re-organizing the existing National Training Center (NTC) which belongs to the Center for Education and Training.

The DCNE will belong to the Center for Education and Training and a national organization for nurse education in Indonesia. The DCNE and the Ujung Pandang HNTS form a combined project and the HNTS will function as a model school to use and evaluate the educational materials and techniques to be developed in the DCNE.

The Survey Team investigated the proposed sites, the size of buildings required and equipment to be supplied. They also studied and clarified the disciplines of the experts to be dispatched from Japan with a suitable schedule for their stay, and the possibility of a training program in Japan for Indonesian specialists.

The Survey Team informed the Indonesian side of the following conditions which they would have to meet if the Government of Japan were to extend Grant-in-Aid and technical cooperation;

- a. The cost of the educational buildings and facilities will be borne by the Government of Japan but the Government of Indonesia will have to bear the cost of land acquisition, the provision of electricity, water and drainage services and the construction where necessary of access roads.
- b. As the site proposed for the Ujung Pandang HNTS is low lying and water-logged the Government of Indonesia must make available a suitable alternative site before the dispatch of the fourth survey team.
- c. With regard to technical cooperation the Government of Japan will study and prepare a detailed program and dispatch an Implementation Survey Team.
- d. The Government of Japan will dispatch a Basic Survey Team to investigate work to be carried out under Grant-in-Aid.

4. Basic Survey Team and Implementation Survey Team

As the result of the report made by the 'Preliminary Survey Team for Construction Program of the Nurse Education Facilities' the Ministry of Foreign Affairs, the Ministry of Health and Welfare and the International Nursing Foundation of Japan who accepted advance trainees for one year and was host for several international workshops held a series of discussions and prepared a

detailed program for cooperation between the two Governments. Based on this program the Government of Japan through JICA dispatched two survey teams simultaneously one for basic design and the other for technical cooperation. Because of the characteristics of the project which will include technical cooperation and Grant-in-Aid the two survey teams were led by the same man, Professor Katsunuma.

1-3 BASIC DESIGN SURVEY

1. Meeting with the Government Officials Concerned

Upon arrival at Jakarta the mission visited the Japanese Embassy in Indonesia, Mr. Soejoto, Secretary General to the Minister of Health and the Center for Education and Training, Ministry of Health, R.I. and gave them a detailed explanation of the objectives of the investigations, etc. In Ujung Pandang, the mission visited the Consulate General of Japan, the Governor of South Sulawesi Province and the Regional Office of the Ministry of Health to give the officials concerned the same explanation.

2. Site Investigation

Accompanied by the Indonesian counterparts of the Ministry of Health, the survey team conducted the site investigations at Ujung Pandang and Jakarta. The following points were considered during the site investigations and land analysis:

a. Location

- i. Coordination with city planning
- ii. Relationship of site location to urban area
- iii. Access from highways
- iv. Existence of any obstructions

b. Site Formation and Environment

- i. Size of site in terms of the capacity of the facilities
- ii. Plan formation of site
- iii. Difference in grades and gradient on site
- iv. Scenery, sunshine and prevailing winds
- v. Noise and air pollution

c. Status of Water Supply and Soil Treatment Facilities

- i. Waterworks (service lines and well water)
- ii. Sewage and drainage (how and whether affecting other areas downstream)
- iii. Rainwater drainage (effect on rainwater disposal by the construction of facilities)
- iv. Supply of electricity (service lines and special internal power generation)
- v. Telephone lines
- vi. Supply of city gas

d. Soil Conditions

- i. Soil and geological conditions
- ii. Flood condition and water table level
- iii. Permeability
- iv. Erosion control and the possibility of land-slides
- v. Necessity for, and problems, with site preparation
 - * Earth volume balance
 - * Borrow pit
 - * Suitability for construction

e. Rights and Restraints

- i. Properties to be purchased
- ii. Properties requiring compensation
- iii. How many, and what, restraints against development or building construction

f. Estimation of Required Infrastructural Scale

- i. Site preparation, including drains on site
- ii. Utility services (electricity, water, sewerage and telephones)
- iii. Construction of access roads

3. Findings of the Site Investigations

The Survey Team investigated the five candidate sites for the HNTS in Ujung Pandang, and the one for the DCNE in Jakarta. This was because the site originally proposed by the Ministry of Health was not suitable owing to poor soil conditions and the Preliminary Survey Team had requested that the Government of Indonesia select an alternative site.

The following describes the outline of the five candidate sites including the original one investigated in Ujung Pandang and the one in Jakarta.

a. Proposed Sites for the HNTS in Ujung Pandang

i. Originally Proposed Site (Site No.1)

This site is located about 5 km southeast from the city center (as the crow flies) and lies about 600 m off the main highway. This site is adjacent to the existing HNTS facility within the Health Complex (KOMPLEKS KESEHATAN). Also included in the Health Complex are the Dental Nurse Training School (SPGG) and teaching staff residential buildings. Of the 20 ha Health Complex site about 3 ha is proposed for the HNTS site. At present the land proposed for the site is under rice cultivation. At the time of the preliminary survey the site was observed to be water logged even though it was the dry

season. As the water table was found to be 70 cm below ground level the team was not able to excavate down to the depth of 1.2 m. The soil was found to be clay which would not be considered a suitably stable foundation for the facilities. The existing ground level is below the level of the road and to protect the site from flooding during the rainy season a land fill to at least the level of the access road and preferably higher would be necessary. In addition, to the north and west sides of the proposed site the land is marshy and acts as the catchment area for the surrounding land. The following relates to the present condition of the site.

- The owner of the land is the Ministry of Health so it would not be necessary to purchase the land.
- A land fill is necessary as it is apparent that it is liable to flood during the rainy season.
- The access road to the site from the main highway and all bridges would require widening and strengthening.
- Since there is no city water supply to the site, a well would need to be sunk. The water inspected in an existing well near the site was observed to be abundant though not of good quality.
- A high voltage (12 KV) electricity supply is routed close to the site so it would not be difficult for P.L.N. to provide a service to the site. However, there are frequent power failures in Ujung Pandang due to the poor maintenance of distribution lines and an auxiliary emergency standby generator would be required.
- There is only one telephone line close to the site but according to information provided by the Indonesian counterparts there is insufficient capacity to provide a service to the site.

- ° The most popular fuel in this region is oil. L.P.G. is available but the supply is both expensive and unreliable.

In view of the poor soil conditions observed by the Preliminary Survey Team the Government of Indonesia had been advised to propose an alternative site. As a result of this recommendation four further sites were put forward by the Government of Indonesia and subsequently investigated by this Survey Team.

ii. First Alternative Site (Site No.2)

This site is located in Desa Tetebatu, Pallangga which is a considerable distance south of the city center of Ujung Pandang. The site was proposed by the South Sulawesi Provincial Government. In the opinion of the Survey Team the site was unsuitable because of its remote location and lack of services.

iii. Second Alternative Site (Site No.3)

This site is located far south of Ujung Pandang City in Desa Katanka, Sombaopu and was also proposed by the South Sulawesi Provincial Government. The site was also rejected by the Survey Team for the same reasons as the previous proposed site.

iv. Third Alternative Site (Site No.4)

This site, located in Banta² in the Health Complex, was proposed by the Ministry of Health. The Survey Team felt that this site was unsuitable due to lack of site area and an inconvenient irregularly-shaped boundary.

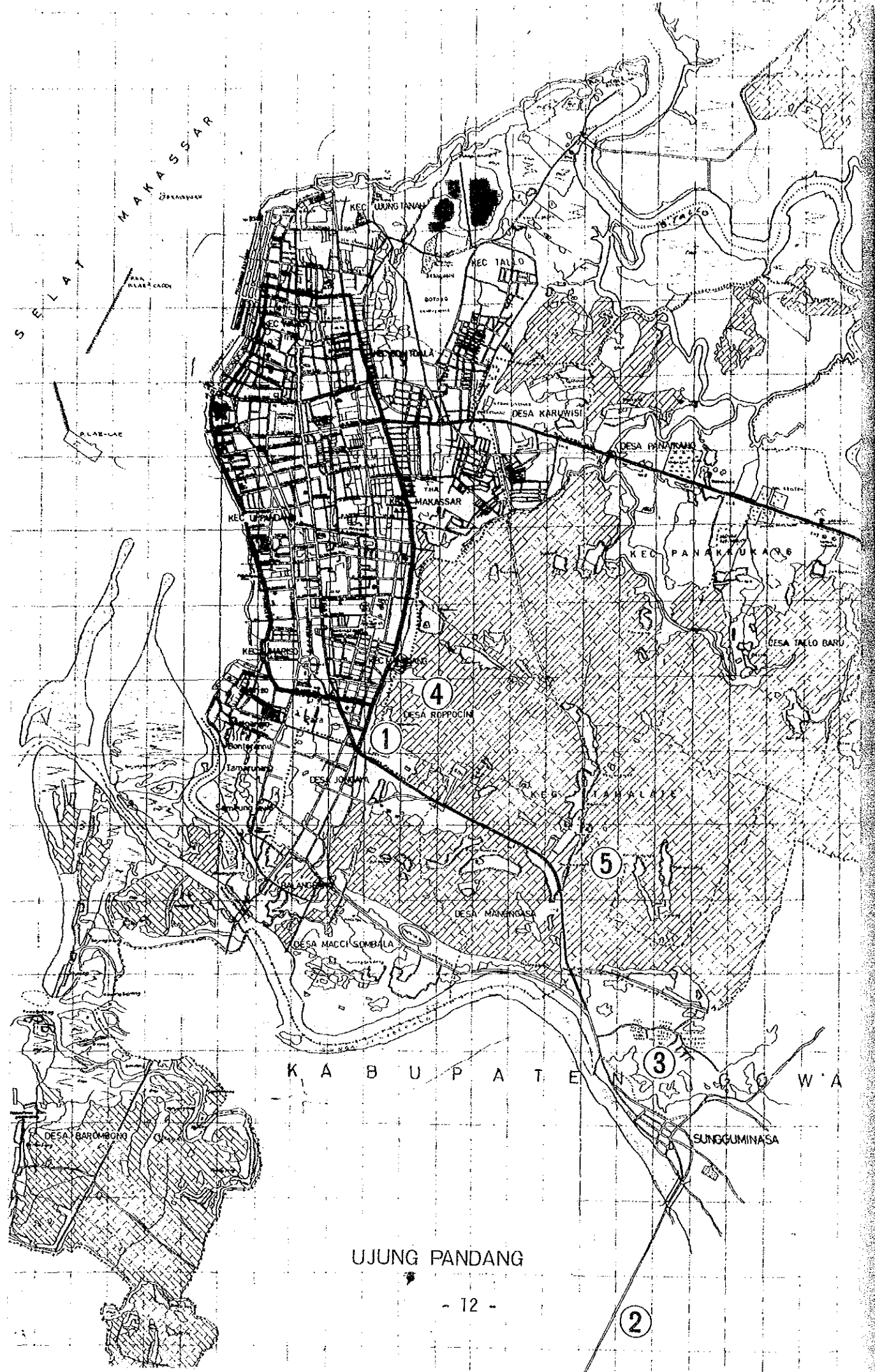
v. Fourth Alternative Site (Site No.5)

This site proposed by the South Sulawesi Provincial Government is located about 5 km southeast of the city center in the Tamarate Region at Tidung, Desa Mangasa. The site is 2 ha (142m x 142m) and is at present under rice cultivation. A provincial college of Education and residential accommodation for teaching staff of the Islamic Institute are planned for the land adjacent to the HNTS site to the northwest and west. In addition, to the north of these two sites, a residential area for veterans (KOMPLEKS PERUMNAS) is now under construction. The following conditions were observed by the Survey Team:

- ° The site is at present under private ownership.
- ° The site will require a general land fill of approx. 1.5 m to raise the ground level to that of the road which is under construction along the veterans housing. This road will be extended and routed to provide access to the site.
- ° The present power line extends to the surrounding area and will be available at the site in the near future.
- ° There is a telephone cable close to the site; however, the existing exchange equipment is at full capacity and more exchange equipment must be installed before a telephone service to the site can be provided.
- ° A city water mains supply is provided on JL. Panakkukang IV which exists 1,500 m to the north of the site and will be available to the site when the new road is extended and the construction of Islamic housing starts.

After these site investigations, the Indonesian counterparts favored the Site No.5. However, the Japanese Survey Team recommended that the originally proposed Site (No.1) be the

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K A B U P A T E N W A

UJUNG PANDANG

2

project site if a guarantee of purchase of the Site No.5 which is a property of private owners could not be procured.

In the Minutes the Indonesian counterparts finally selected Site No.5 and the Japanese Team confirmed their requirement for such guarantee to which the Indonesian counterparts replied an affirmation that the local governor had expressed his ability to complete the purchase of the site by March, 1979. Therefore the Japanese Team agreed to the selection of candidate Site No.5 for the HNTS only on the condition that a written confirmation of purchase be received by the Ministry of Health from the Provincial Governor.

Following the signing of the Minutes in Jakarta on November 3rd the Indonesian counterparts provided the Japanese Team with a set of documents showing the site location and confirmation letter of use of candidate Site No.5 for the purposes of this project. However since there was still no direct confirmation of its purchase by March, 1979 the Japanese Team returned to Ujung Pandang on November 4th to obtain the written confirmation from the Governor of South Sulawesi.

After further site investigations it became apparent that candidate Site No.5 was also being considered as the site for another project (Islamic teachers' housing).

To obtain a letter of confirmation from the Provincial Government it will be necessary for him to write to the Mayor of Ujung Pandang requesting written confirmation of purchase of candidate Site No.5 and receive such written confirmation.

In the light of the above information the Indonesian counterparts proposed an alternative adjacent site as candidate Site No.5 and this was understood to be freely available and there are no problems anticipated in obtaining the various letters of confirmation of purchase.

To avoid further confusion the Japanese Team advised the Governor to use the sketch location map when writing to the Mayor for a letter of confirmation. The Japanese Team decided the alternative candidate Site No.5 upon receipt of the copy letter from the Governor to the Mayor which included a sketch location map.

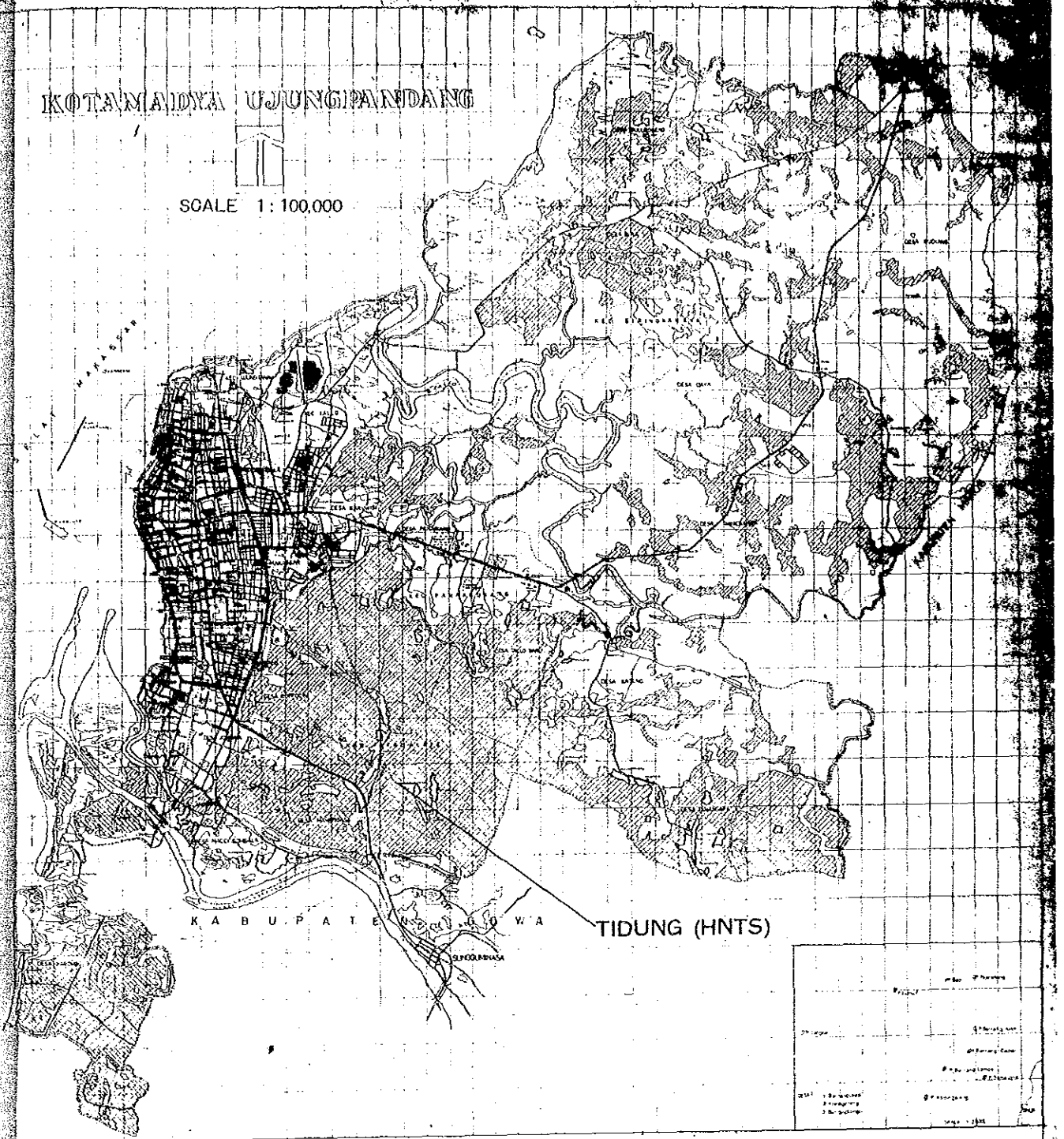
As the next step of the survey, the Japanese Survey Team started the soil investigations at the proposed site after obtaining the permission of the land owners.

In addition to these investigations, the Team carried out research into construction material prices, availability of materials, standards of engineering and techniques, and construction related laws and codes.

KOTAMADYA UJUNG PANDANG



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UJUNG PANDANG (HNIS)

b. Proposed Site for the DCNE in Jakarta

The site proposed by the Indonesian Government is located in JL. Wijaya Kusuma, Cilandak, Jakarta Selatan. The site is located on the opposite side of the road from the existing HNTS in Jakarta. The size of the site is approx. 1.35 ha and is bounded on the north by Perutamina Housing (KOMPLEKS PERUMAHAN R.S.P.P.). The site is located 14 km south from the city center as the crow flies.

The following information refers to the site as existing:

- i. The site is owned by the Ministry of Health.
- ii. There is a 12 KV high tension distribution line along the road at present. In the future it is anticipated that electricity will be provided to the site by an underground 20 KV cable routed under the roadway.
- iii. Since there is no city water supply system available near the site a deep well must be provided. When the Japanese Team investigated the site an existing water table of 7 m below ground level was observed. The quality of the water was apparently good and was used as drinking water by the local residents.
- iv. According to the City Plans the site belongs to the village of PEDUSUNAN and has a planning requirement of 15% site ratio with a two-story height limit. In addition there is a required minimum distance of 10 m back from the road frontage. There are no fire zoning requirements in the area of the site.
- v. There is an existing pond (2,500 m²) at the west end of the site which acts as a collector for the storm water of the site and surrounding land. It will be necessary to provide an alternative means of disposal for the existing drainage system by the use of the side ditches along the roadways

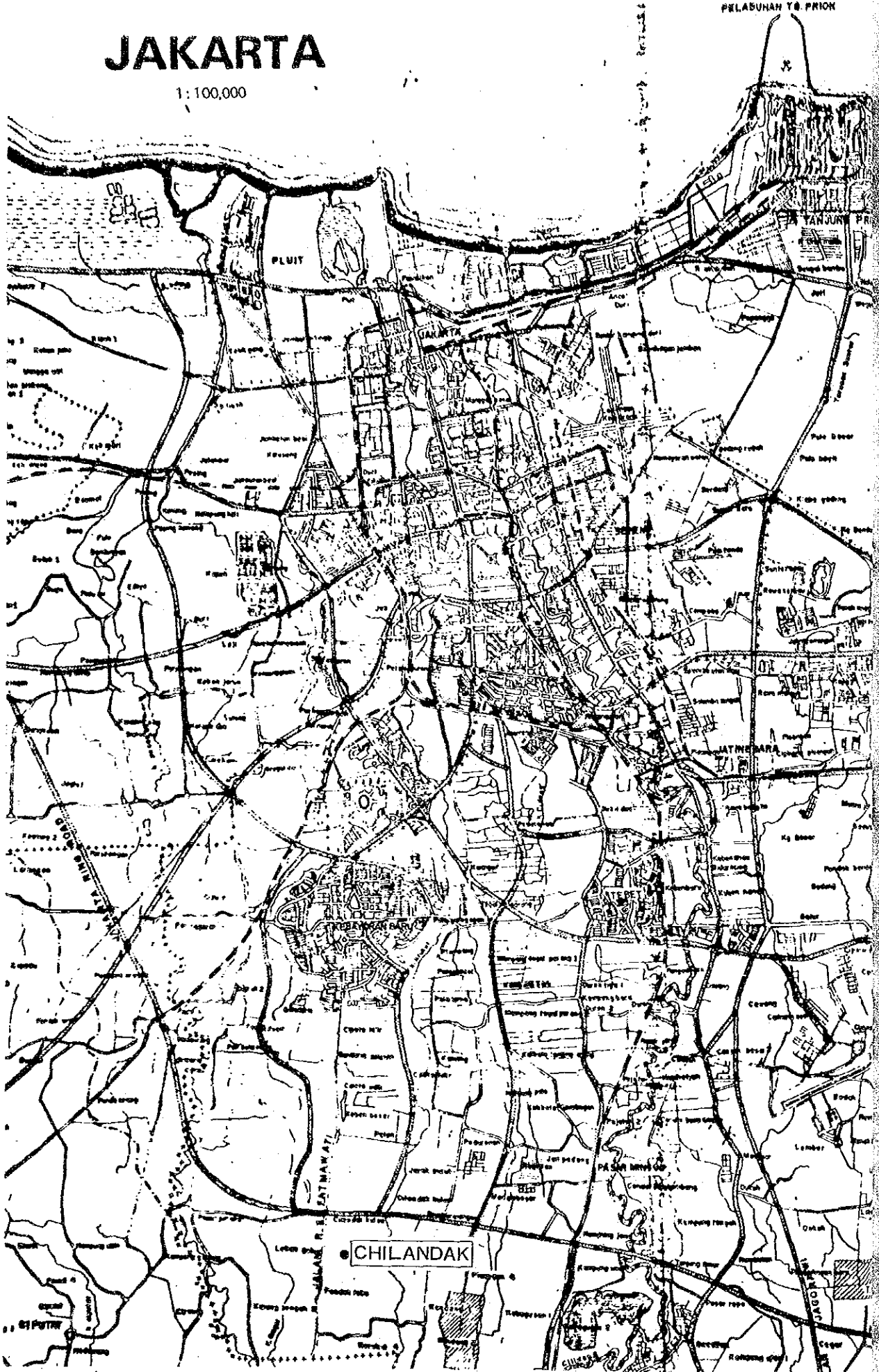
to the south and west of the site.

- vi. The site is at present under grass cultivation. The land generally slopes gently towards the pond end and there is a high point approx. midway along the road boundary of about + 1m. Taking into account the water level of the pond at the end of the dry season it is apparent that under the rainy season conditions the lower part of the site would become flooded. For this reason land fill of 1.5 m will be necessary to bring the site to a level grade. To avoid excessive run-off of rain water onto adjacent sites a suitable storm water gully should be provided along the northern boundary.

JAKARTA

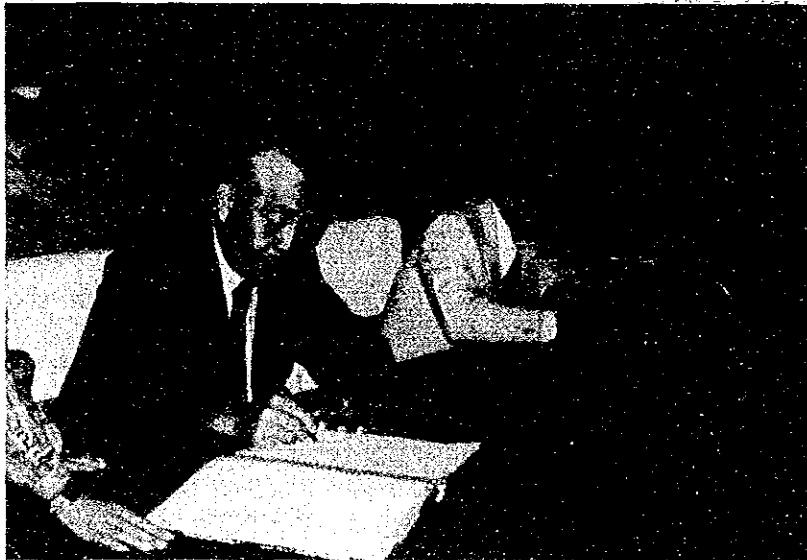
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1-4 EXCHANGE OF THE MINUTES

At the completion of the site investigations, the findings and the discussions held were summarized in the Minutes. In the Minutes signed by Drs. Sutia Anggadihadja (Acting Director of the Center for Education and Training, Ministry of Health) on behalf of the Secretary General and by Professor Haruo Katsunuma (Head of the Japanese Basic Design Survey Team) it was agreed that the site for the HNTS in Ujung Pandang was Site No.5 (Tidung, Desa Mangasa, Tamarate). The Minutes also cover the following: the outline description of the Nurse Education Facilities; the buildings and facilities to be provided by the Government of Japan; and the items whose cost is to be borne by the Government of Indonesia. The full text of the Minutes is shown on the following pages.



M I N U T E S

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THE CONSTRUCTION PROGRAM OF THE NURSE EDUCATION FACILITIES
IN UJUNG PANDANG AND JAKARTA
THE REPUBLIC OF INDONESIA

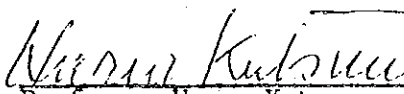
At the request of the Government of the Republic of Indonesia for assistance in establishing the NURSE EDUCATION FACILITIES in Ujung Pandang and Jakarta (hereinafter referred to as "The Facilities"), the Government of Japan through Japan International Cooperation Agency (JICA) has sent a twenty five days survey team headed by Professor Haruo KATSUNUMA (Vice-President of Kyorin University and Professor Emeritus of the University of Tokyo) to conduct the Basic Design Survey on the program from October 22, 1978. The team held a series of discussions and exchanged views with the Indonesian Authorities concerned on the establishment and construction of the Facilities.

Draft Final Report will be expected to be submitted to the Indonesian Authorities in February 1979.

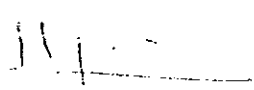
As a result of the survey and discussions, both parties have agreed to recommend to their respective Governments to take the necessary measures toward establishing the Facilities as stated in the Minutes attached herewith.

November 3, 1978

Jakarta, Indonesia


Professor Haruo Katsunuma
Head of the Japanese
Basic Design Survey Team




Mrs. Sutia Anggadihadja
On behalf of Secretary General,
Acting Director of the Center
for Education and Training
Ministry of Health

MINUTES

1. The Facilities to be established will be composed of "The Health Nurse Teacher School" (hereinafter referred to as the HNTS) in Ujung Pandang and "The Development Center for Nursing Education" (hereinafter referred to as the DCNE) in Jakarta.
2. The proposed site for the HNTS will be located at Tidung in Ujung Pandang, South Sulawesi Province. The land of the site is now the property of private owners, but the local government promised and the Indonesian Authorities concerned confirmed that the land shall be made available for the HNTS before the beginning of the next fiscal year.
3. The proposed site for the DCNE will be located at Cilandak in Jakarta. The land is the property of the Ministry of Health.
4. The outline description of the HNTS in Ujung Pandang and the DCNE in Jakarta is attached in Annex I.
5. The Government of Japan will take necessary measures to provide such buildings and equipment for the Facilities as listed in Annex II.
6. The Government of Indonesia will take necessary measures as follows :
 - 6-1 To secure land for the Facilities
 - 6-2 To clear and level the sites before the start of the construction of the Facilities.
 - 6-3 To construct and/or improve access roads to the sites before the start of the construction of the Facilities
 - 6-4 To provide such items necessary for the Facilities as listed in Annex III.

ANNEX I

Outline Description

1. The HNIS in Ujung Pandang

- a. The objectives of the HNIS are to educate health nurse teachers who will contribute their health knowledge and technology acquired to the development of nursing education in Indonesia. The HNIS in Ujung Pandang will replace the existing teacher school and is expected to be a new model of the health nurse teacher schools in the Republic of Indonesia.
- b. The HNIS aims to educate forty (40) students in a regular one-year course and thirty (30) students in short-time retraining courses.

2. The DCNE in Jakarta

- a. The objectives of the DCNE are to develop the nursing education system, curriculum, teaching methods and other techniques by means of training activities and research.
- b. The DCNE will be staffed with several Indonesian experts and their staff who will carry out the above-mentioned activities.

ANNEX II

Buildings and equipment for the Facilities to be provided by the Government of Japan.

1. The HNIS in Ujung Pandang

a. Buildings

(i) Administrative part

(ii) Teaching part

(iii) Dormitory

b. Equipment

Equipment for training health nurse teachers

2. The DCNE in Jakarta

a. Buildings

(i) Administrative and control part

(ii) Research and training part

b. Equipment

Equipment for developing nursing education system

ANNEX III

Items whose cost should be borne by the Government of the Republic of Indonesia.

- a. Power and water supply mains to the buildings, including services for construction use.
- b. Telephone wiring to the buildings
- c. Drainage, sewage and septic tanks
- d. Landscaping, gateway, fence, exterior lighting and pavements
- e. Furniture, rugs and drapes
- f. Building licence fees

1-5 EXPLANATION OF THE BASIC DESIGN

1. Objectives

On the basis of the survey results described in Section 1-3, a basic design was worked out by Nikken Sekkei in Japan and compiled in a report on titled "Report on Basic Design (Draft) - Nurse Education Facilities in Ujung Pandang and Jakarta in the Republic of Indonesia."

The Japan International Cooperation Agency dispatched a survey mission to Indonesia for twelve days from February 18, 1979 to submit and explain the Draft Report and to conduct further investigations necessary for finalizing the basic design.

2. Consultation

The mission made a presentation of the basic design and discussed it with the Indonesian counterparts of the Center for Education and Training, Ministry of Health, R.I. The counterparts agreed in principle to all matters described in the report and explained by the Japanese Survey Team regarding the design of the buildings, facilities and educational equipment except for the following:

- a. Since the proposed site for the HNTS to be purchased by the Government of Indonesia was found to be too small in size for the facilities, the Indonesian side promised to provide additional land for this project by March 15, 1980.
- b. It was found that a new road has been planned to cross the site at the east end from north to south, based on the City Plans prepared by the Town Planning Office of the City of Jakarta. Therefore, the project buildings for the DCNE will be slightly repositioned in a south-westerly direction on the site. The Survey Team requested from their Indonesian counterparts the provision of an accurate ordinance survey showing clearly all details of the site boundaries, the exact position of the proposed road and building lines.

While the survey mission was in Indonesia, the Director of the CET made an official request to the Mayor of the City of Ujung Pandang to provide infrastructure such as an access road and mains water and electricity supply.

The Indonesian officials and the mission confirmed that the scope of the works to be provided by the Indonesian Government and to be provided by the Japanese Government was as per the statement in the Minutes as described in Section 1-4 of this report in spite of the budget prepared by the Indonesian Government.

On the following pages copies are provided of the two letters of confirmation exchanged between the Director of the Center for Education and Training, the Ministry of Health, R.I. Dr. Herman Soesilo, MD, MPH and the Leader of the Japanese Survey Team Mr. Kazuharu Ogura.

MINISTRY OF HEALTH
REPUBLIC OF INDONESIA

Nr. : 266/Um/Diklat/Kes/79.

Jakarta, February 21, 1979.

Encls :

Subject :

Mr. Kazuharu Ogura
Leader
Japanese Survey Team

Dear Mr. Ogura :

Basic Design for the Nurse Education Facilities

This is to confirm that the Center for Education and Training, Ministry of Health, R.I. has received a draft report on the basic design for the above-captioned project prepared, on the basis of the Minutes, by Nikken Sekkei, a consultant for the Japan International Cooperation Agency (JICA).


We hereby in principle agree to all matters described in the report and explained by the Japanese Survey Team regarding the Nurse Education Facilities Project.

The Japanese Survey Team is expected to finalize the report as soon as possible and subsequently to develop the detailed design by such consultant immediately after its finalization of the basic design report.

We understand the Project will be implemented under a Japanese Grant on the basis of the "Exchange of Notes" to be concluded between the Government of Indonesia and Japan regarding all principal matters of the said grant.

We believe this Project will contribute to the further promotion of the friendly relationship between the Government of Indonesia and the Government of Japan.

Very truly yours,


H. Herman Soesilo, MD. MPH

Director
Center for Education and Training
Ministry of Health R.I.



c.c. : Mr. Ichikawa
The Embassy of Japan.

Jakarta, February 27, 1979

Dr. H. Herman Soesilo MPH
Director
Center for Education and Training
Ministry of Health
The Republic of Indonesia

Dear Dr. Soesilo:

The Nurse Education Facilities

This is to acknowledge with thanks receipt of your Letter of Confirmation dated February 21, 1979 for the above-captioned Project.

Following your letter No. 266/Um/Diklat/Kes/79, the Japanese Survey Team will finalize the basic design report immediately after returning to Japan and Nikken Sekkei will proceed to the next stage of developing the detailed design of the Facilities.

We would like to confirm that the Government of Indonesia promised to secure the land for HNTS in Ujung Pandang as attached hereto and to prepare an official topographic map of the HNTS site by March 15, 1979. In addition, it was confirmed by you that the cost for the piece of land which exceeds 2.37 ha will be borne by the Ministry of Health, R.I. We would also like to confirm that the Indonesian Government agreed that the detailed utilization of the proposed land can be decided by the Japanese Survey Team.

You are also requested to prepare an official map of the DCNE site in Jakarta by March 15, 1979.

We hope that you will make efforts to allocate necessary counter budget for the works to be done by the Indonesian Government as agreed in the Minutes dated November 3, 1978.

Taking this opportunity, we thank you for your kind cooperation in discussing with us and in providing with us necessary data and information during our stay in your country.

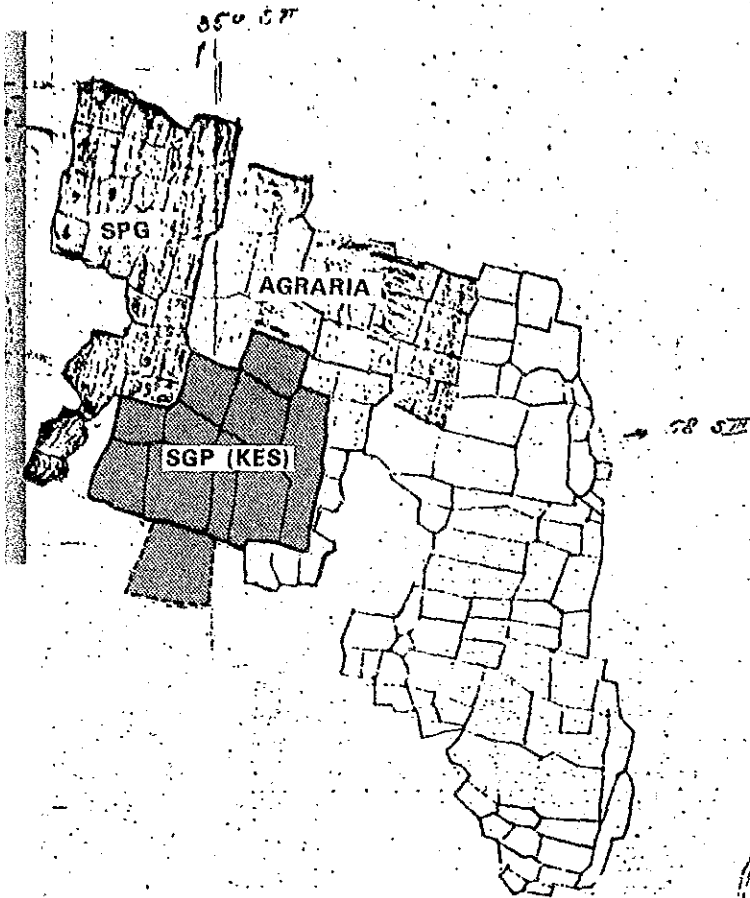
Very truly yours,

Kazuharu Ogura

KAZUHARU OGURA
Leader
Japanese Survey Team

Attach.

c.c. Mr. Ichikawa
The Embassy of Japan



Keterangan.
Penentuan/dan Menetapkan Lokasi
Sekolah Guru Kesehatan Bertada pada
Sebelah Barat: S.P.G. IKIP Ujung Pandang
Sebelah Utara: KOMPLAK AGRARIA
Dan Lokasi Sekolah Guru Kesehatan Pada Warna Kuning

Ujung Pandang, 24 Februari 1979,
KEPALA LINGKUNGAN BAPPENAS

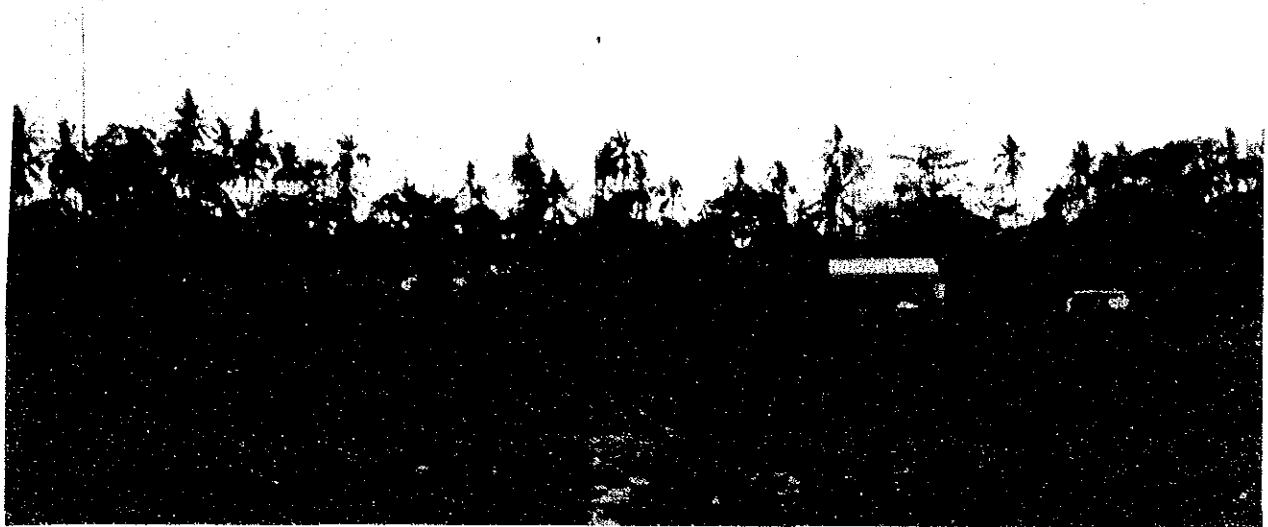
(Abd. Rohim Dg Bani)

27 FEB 79'

Kajukora Ogura



UJUNG PANDANG (HNTS)
TIDUNG AREA

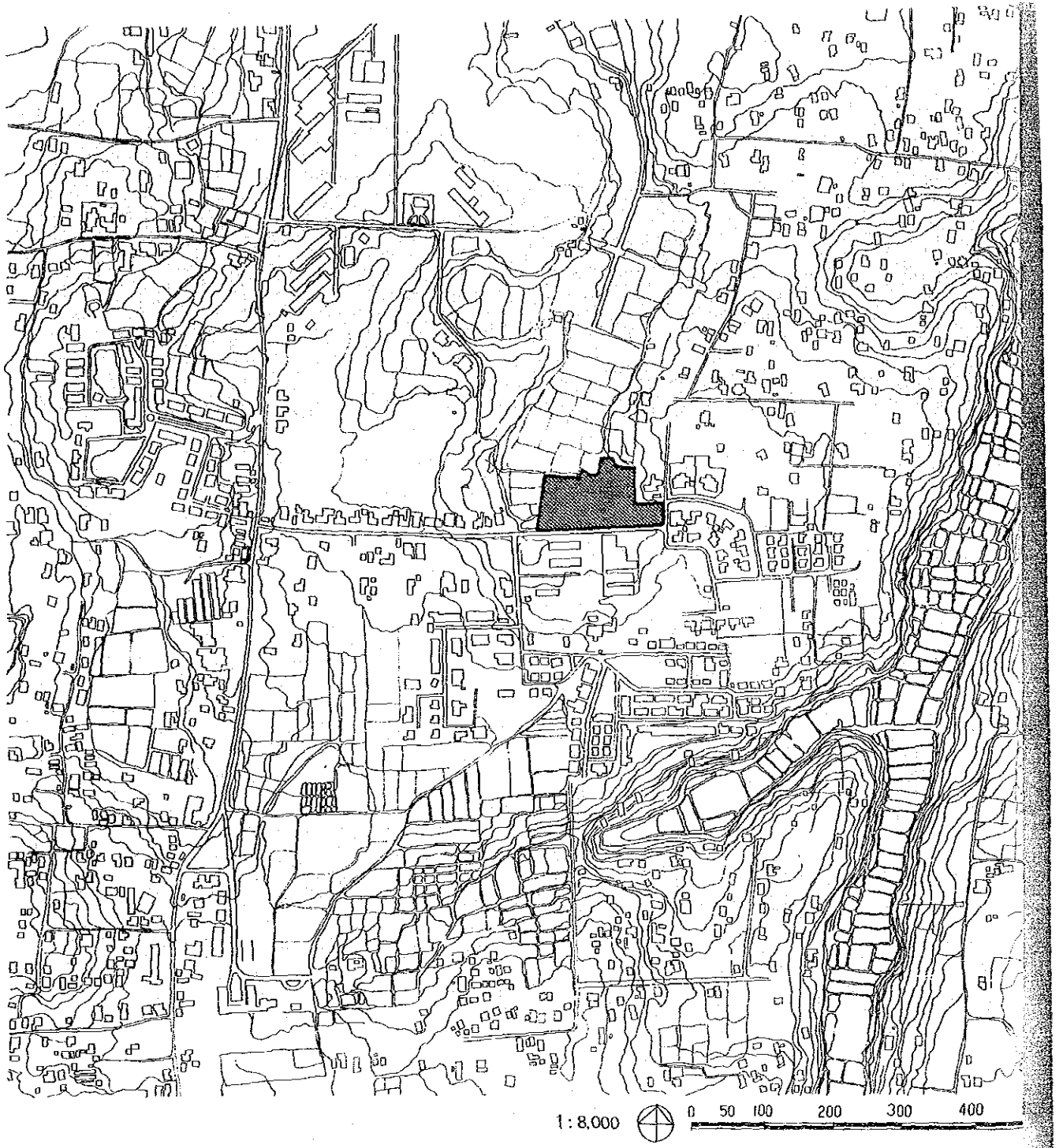


APPROACH/BOUNDARY
(WEST VIEW)



SITE
(SOUTH VIEW)

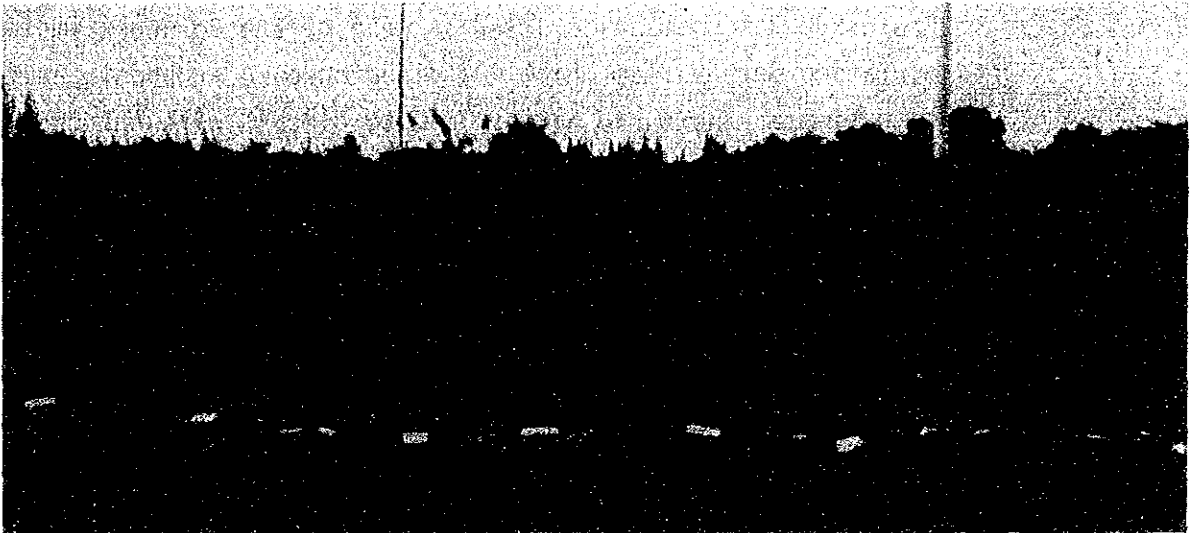
UJUNG PANDANG (HNIS)



JAKARTA (DCNE)
CILANDAK AREA



APPROACH/BOUNDARY
(TOWARD EAST)



SITE
(VIEW FROM THE SOUTHERN ROAD)

JAKARTA (DCNE)

1-6 MEMBERS

1. Survey Mission for Basic Design

Professor Haruo KATSUNUMA (Head)*	Vice-President of Kyorin University and Professor Emeritus of The University of Tokyo
Mr. Nobuya UEDA	Project Architect Nikken Sekkei
Mr. Yukihide NUMAGUCHI	Architect Nikken Sekkei
Mr. Koosaku MAEKAWA	Cost Estimator Nikken Sekkei
Mr. Junso NAKAGAWA	Engineer Nikken Sekkei

* Professor Katsunuma also acted as Head of the Japanese Implementation Survey Team which was dispatched to Indonesia at the same time as the Basic Survey Team to discuss with the Indonesian counterparts the technical cooperation program for Nurse Education. The following is a list of members of the Implementation Survey Team:

Professor Haruo KATSUNUMA (Head)	Vice-President of Kyorin University and Professor Emeritus of The University of Tokyo
Miss Tokiko YOSHIDA	Director National Institute of Nursing Education & Research Ministry of Health & Welfare
Mrs. Sada NAGANO	Managing Director The International Nursing Foundation of Japan
Mr. Fuminori NOFUKU	Medical Cooperation Department Japan International Cooperation Agency

2. Survey Mission for Explaining Basic Design

Mr. Kazuharu OGURA (Head)	Managing Director The International Nursing Foundation of Japan
Mr. Ken INOMATA	Grant Aid Division Grant Aid & Procurement Dept. Japan International Cooperation Agency
Mr. Nobuya UEDA	Project Architect Nikken Sekkei
Mr. Junso NAKAGAWA	Engineer Nikken Sekkei

1-7 DIARY

1. Survey Mission for Basic Design

<u>Date</u>	<u>Day</u>	<u>Description</u>
Oct. 22	Sun.	Tokyo - Jakarta via Singapore Outward flight
23	Mon.	Courtesy call and briefing to the Japanese Embassy Discussion about schedule, field survey, etc. at the Center for Education and Training (PUSDIKLAT)
24	Tue.	Meeting at the Center for Education and Training Center Visit to the proposed site for DCNE in Cilandak
25	Wed.	Courtesy call and briefing to Mr. Soejoto, Secretary General to the Minister of Health Discussion with the Indonesian counterparts about the field survey in Ujung Pandang
26	Thu.	Jakarta - Ujung Pandang Visit to the Regional Office of Ministry of Health Courtesy call and briefing to the Consulate General of Japan Visit to the proposed sites (No. 2, No. 3 and No. 4)
27	Fri.	Discussion with the Indonesian counterparts at the Nurse Teachers School (Sekolah Guru Perawat) Second visit to the proposed site No. 4 for further investigation Courtesy call and briefing to the Governor of South Sulawesi Province
28	sat.	Visit to the proposed site No. 5
29	Sun.	Ujung Pandang - Jakarta
30	Mon.	Discussion with the Indonesian counterparts at PUSDIKLAT about the proposed site for HNTS, programs for DCNE, etc.
31	Tue.	Discussion with the Indonesian counterparts at PUSDIKLAT about the proposed sites for HNTS, programs for DCNE, etc.
Nov. 1	Wed.	Meeting with the Indonesian counterparts at PUSDIKLAT regarding the Minutes

<u>Date</u>	<u>Day</u>	<u>Description</u>
Nov. 2	Thu.	Meeting with the Indonesian counterparts at PUSDIKLAT regarding the Minutes Visit to building construction sites in Jakarta
3	Fri.	Exchange of the Minutes between Drs. Sutia and Prof. Katsunuma Discussion with the Indonesian counterparts about the second trip schedule to Ujung Pandang Visit to building construction sites in Jakarta
4	Sat.	Jakarta - Ujung Pandang
5	Sun.	Surveying at the proposed site No. 5 and neighboring area
6	Mon.	Discussion with the Indonesian counterparts at KANTOR WILAYAH about the site Surveying and determination of locations for test borings at the proposed site for HNTS
7	Tue.	Discussion with the Indonesian counterparts at KANTOR WILAYAH about the site Collecting data on local construction materials and costs
8	Wed.	Discussion with the Indonesian counterparts at KANTOR WILAYAH Visit to the Public Work Division of the City Office, P.L.N. and the City Water Office Start of the soil tests at the proposed site for DCNE in Cilandak Ujung Pandang - Jakarta
9	Thu.	Receipt of a copy of the Confirmation Letter of the site issued by the Governor to the Mayor Surveying at the DCNE site
10	Fri.	Receipt of a copy of the letter asking for permission of the soil test issued by the Chief of KANTOR WILAYAH to the owners of the HNTS site Visit to the Public Work Division of Jakarta City and P.L.N.

<u>Date</u>	<u>Day</u>	<u>Description</u>
Nov. 11	Sat.	Discussion with the Indonesian counterparts at PUSDIKLAT regarding the building design
12	Sun.	Conclusion of the soil test at the DCNE site, Jakarta Start of the soil test at the HNTS site, Ujung Pandang
13	Mon.	Discussion with the Indonesian counterparts at PUSDIKLAT regarding the technical matter Visit to building construction sites in Jakarta Collecting data on construction materials and costs
14	Tue.	Discussion with the Indonesian counterparts at PUSDIKLAT Confirmation of the Record of Meeting by Drs. Sutia and Mr. Ueda regarding the technical matters of the project Briefing at the Japanese Embassy and JICA Jakarta Office
15	Wed.	Jakarta - Tokyo via Hong Kong Return flight

2. Survey Mission for Explaining Basic Design

<u>Date</u>	<u>Day</u>	<u>Description</u>
Feb. 18	Sun.	Tokyo - Jakarta via Singapore Outward flight
19	Mon.	Courtesy call and explanation of the basic design to the Japanese Embassy Meeting with Dr. Herman Soesilo, MPH and other officials concerned at the Center for Education and Training (CET) Explanation of the basic design; discussion about schedule; confirmation of required documents and Indonesian works
20	Tue.	Meeting with Drs. Sutia Anggadihadja and other officials at CET Explanation of the basic design and the procedure of the Grant-in-Aid
21	Wed.	Issue of a letter of confirmation by Dr. Herman Soesilo, MPH; discussion about counter-budget
22	Thu.	Jakarta - Ujung Pandang Explanation of the basic design at KANTOR WILAYAH; discussion about a field survey
23	Fri.	Discussion about the proposed site at KANTOR WILAYAH Courtesy call to the Consulate General of Japan
24	Sat.	Discussion about the proposed site at KANTOR WILAYAH Discussion at the Ujung Pandang HNTS Ujung Pandang - Jakarta
25	Sun.	Discussions about items to be clarified and schedule with the Japanese Embassy and JICA
26	Mon.	Meeting with CET Issue of a letter by the Governor of South Sulawesi Province to Secretary General to the Minister of Health promising to buy additional land for the HNTS Submission of a draft of City Plans by the City of Jakarta to the Japanese Survey Team for the DCNE site

<u>Date</u>	<u>Day</u>	<u>Description</u>
Feb. 27	Tue.	<p>Discussion about the HNTS site at CET</p> <p>Issue of the letter from Mr. Ogura to Dr. Herman Soesilo acknowledging the receipt of Letter of Confirmation and making necessary request to the Indonesian side</p> <p>Receipt of a copy of the letter issued by Dr. Herman Soesilo to the Mayor of Ujung Pandang City requesting the Indonesian work</p>
Feb. 28	Wed.	<p>Discussion about the Indonesian work at CET</p> <p>Submission of the Memorandum from the Survey Team to Drs. Sutia, who issued the letter of its receipt</p> <p>Briefing at the Embassy of Japan and JICA Jakarta Office</p>
Mar. 1	Thu.	Jakarta - Tokyo Return flight

CHAPTER 2: BRIEF DESCRIPTION OF THE NURSE EDUCATION FACILITIES

2-1 GENERAL

Indonesia is composed of over 13,000 islands and has a population of about 130 million, two-thirds of the population live on two islands Java and Bali. 83 % of the population live in rural areas. The Government of Indonesia established a health development program within three consecutive five-year plans (from 1969 to 1974; 1974 - 1979; 1979 - 1984) to promote the health of the people of Indonesia and to establish a foundation for social and economic development. The health development program aims particularly to improve regional medical services. In order to achieve the requirements of this program the number of health staff must be considerably increased as a matter of urgency in view of the very extended nature of the country. Among the health staff, primary health nurses (PK) play a very important role. Following junior high school a further three years training are necessary before a PK is fully qualified. PK staff are stationed at major health centers, maternity homes and health posts in remote rural communities. It is anticipated that they will undertake the following duties:

1. Establishment of the basic requirements needed by the local community to improve health care and implementation of a remedical program to achieve such improvement.
2. Guidance and advice to improve environmental and personnel health, both physical and mental, nutrition control, family planning, child and maternal health, school health and prevention of accidents, health promotion, dental health, etc.
3. Provision of pre- and post-natal care and assistance with births.
4. Provision of first-aid care for accidents.

5. Simple treatment of wounds and injuries.
6. Provision of nursing care for communicative disease and other illness.
7. Maintenance of health records, reports and other administration necessary for the health program.
8. Undertaking of simple clinical examination and collection of specimens where required.

The primary aim of the nurse care program is to provide one PK for each of the 57,800 villages (Desa) with populations of 2,000 - 4,000 inhabitants. Generally the PKs are expected to provide nurse care in their native regions after three years training. By the end of 1983/84 when the third five year plan will be completed it is planned to have 150 primary health nurse schools distributed throughout Indonesia. Each school will train about 100 students at a time. There will be a teacher-student ratio of 1 : 10. The Health Nurse Teacher Schools (Sekolah Guru Perawatan, HNTS) are the teacher training facilities four are now in existence; in Jakarta; Bandung; Surabaya and Ujung Pandang.

2-2 JUSTIFICATION FOR THE NURSE EDUCATION FACILITIES PROJECT

In Indonesia, most of the people live in such a way that may result in the very rapid spread of endemic or communicable diseases such as acute bronchitis, pneumonia, tuberculosis, malaria and skin disease which are responsible for the very short average life expectancy of about 48 years. For this reason, the need is felt, urgently and keenly throughout the country, for primary health nurses who, in the front line of defense against such diseases, will function as described in 2-1 above.

The Government of the Republic of Indonesia is doing its best to achieve this goal by implementing a program to establish 150 nursing schools throughout Indonesia by 1983.

It will be clear that there is a primary need to train teaching staff for these schools and the Government of the Republic of Indonesia requested the Government of Japan to cooperate in improving the nurse education facilities, establishing nurse education system and developing curriculum.

To obtain primary health nurses of high caliber, it is essential that the teachers be fully competent and have the backing and support of the best teaching materials. The Government of Japan, in response to the request of the Government of the Republic of Indonesia, extends its cooperation in setting up and administering the Development Center for Nursing Education (DCNE) in Jakarta where text books and other teaching materials which are now extremely insufficient will be developed and in re-building the Health Nurse Teachers School (HNTS) in Ujung Pandang which will become a 'model institute' making use of the materials developed in the DCNE to enable the staff to appraise the effectiveness of the newly developed materials and ultimately to develop them by themselves.

The Government of Japan believes that this cooperation will greatly

benefit the nurse education program in Indonesia and that this will not only lead to the general improvement of health care for the people of Indonesia but also will ensure the essential improvement in social and economic conditions of the Republic of Indonesia.

2-3 BASIC CONCEPT

1. Objectives

The objectives of the project are to improve the organization for training of the health nurse teachers composed of the four HNTS (in Jakarta, Bandung, Surabaya and Ujung Pandang) and thus increase the quantity and quality of health nurses(PK) under Japanese cooperation of Grant-in-Aid and technical cooperation program.

2. Improvement of the Ujung Pandang HNTS

The HNTS in Ujung Pandang will replace the existing teacher school and is expected to be a new model of the health nurse teacher schools in the Republic of Indonesia.

The outline of the HNTS is as follows:

a. Enrollment Numbers and Course Period

The regular course has an enrollment of 40 students and lasts for one year.

The retraining course has 30 students and lasts for at least a month.

b. Requirements for Admission

The students on the regular course must have spent three years in training for nursing or midwifery after the completion of their nine year general education and must have completed three years of practical experience in these fields.

The students on the retraining course must have completed a teacher training course and must have had experience of teaching in a health nurse school. The students both on regular and retraining courses must also have a recommendation from their Provincial Government.

c. Curriculum (Applied to the existing Ujung Pandang HNTS)

The total educational training hours are 870 per annum.

The main subjects include nursing education, teaching methods, general studies and practical training.

i. Nursing Education

◦ Introduction to nursing	40
◦ Regional nursing	100
◦ Clinical nursing	100
◦ Mental nursing	40
◦ Leadership nursing	40
◦ Health education	40
◦ Epidemiology	60

420 hours

ii. Teaching Methods

◦ Theory of study	60
◦ Techniques	30
◦ Principles of evaluation and its techniques	60
◦ Methodology	120

270 hours

iii. General Studies

◦ Indonesian language	40
◦ English	60
◦ Social anthropology	40
◦ Psychology	40

180 hours

iv. Practical Training

Practical training is done for about 90 hours a month in hospitals, health centers, regional areas, health nurse schools and maternity hospitals.

d. Staffing

The HNTS will be staffed with administrative workers, teachers and Japanese experts.

e. Cost of Education

The cost of training each student will be borne by the Government of Indonesia and will include living expenses.

3. Establishment of the DCNE

a. Objectives of the DCNE

The objectives of the DCNE are to develop the nursing education system, curriculum, teaching methods and other techniques by means of training activities and research.

b. Reorganization

The DCNE will be established by reorganizing the existing National Training Center (NTC) which belongs to the Center for Education and Training (CET).

c. Functions

- i. Preparation and studies on curriculum and guidance for education
- ii. Studies and advice on teaching methods
- iii. Development and advice on teaching materials

- iv. Evaluation and research of education
- v. Evaluation of nursing education programs
- vi. Investigation and research in general for nursing education
- vii. Advice, training and teaching of knowledge in clinical techniques
- viii. Training of present teachers
- ix. Holding seminars
- x. Maintenance and development of books and documents
- xi. Advice and supervision of school management and administration
- xii. Survey and studies of regional health care
- xiii. Establishment of reporting and recording system
- xiv. Accreditation of nursing school
- xv. Studies on national examination and registration system
- xvi. Committee activities

d. Staffing

The DCNE will be staffed with administrative workers, Indonesian counterparts and Japanese experts.

2-4 TECHNICAL COOPERATION PROGRAM

The contents of Japanese cooperation under the technical cooperation program will include the following spread over a five-year period for the HNTS in Ujung Pandang and the DCNE in Jakarta:

1. Supply of educational equipment.
2. Dispatch of Japanese experts to Indonesia for both short and long terms (specialized in nursing education, clinical nursing, public health, audio-visual education, school management and total co-ordination).
3. Acceptance of Indonesian counterparts to Japan for training.

The following describes the details of technical cooperation program to be extended to each facility:

1. HNTS

- a. Advice on school management and administration
 - i. Preparation of guidance and its implementation
 - ii. Advice on use of educational materials
 - iii. Advice on the school management
- b. Evaluation of education
- c. Advice on investigation and analysis of regional health statistics, etc. and then reflecting its result on curriculum
- d. Advice on clinical nursing education
- e. Advice on public health nursing techniques

2. DCNE

- a. Development of curriculum
- b. Development of educational training techniques
 - i. Development of educational materials
 - ° Preparation of audio-visual media
 - ° Editing of text and reference books
 - ii. Teaching method of educational techniques
- c. Evaluation of education
- d. Training of present teachers
- e. Advice on school management and administration

The Record of Discussions on the Japanese Technical Cooperation signed by Drs. Sutia Anggadihadja (Acting Director of the Center for Education and Training, Ministry of Health) on behalf of the Secretary General to the Minister of Health and by Professor Haruo Katsunuma (Vice President of Kyorin University and Professor Emeritus of the University of Tokyo) is attached in Appendix IV.

CHAPTER 3: BASIC DESIGN

3-1 GENERAL DESCRIPTION

This basic design has been worked out on the basis of the three surveys made so far; a preliminary survey in August, 1978, a field survey in October - November, 1978 for the preparation of the basic design and one in February - March, 1979 for explanation of the basic design.

A variety of building requirements were furnished to the team by the Government officials concerned in the Center for Educational and Training (PUSDIKLAT), Department of Health; Regional Office (KANTOR WILAYAH) in Ujung Pandang; and the Health Nurse Teacher Schools in Ujung Pandang and Jakarta. After technical studies these requirements were incorporated into the design concept described in this report.

The Government of Indonesia should undertake a part of the work relating to the present construction project. This work, however, is described briefly in this report where it is related to the function and construction of the proposed buildings.

Cost estimates and a time schedule for construction have also been prepared on the basis of data and information obtained regarding local materials and labor costs, construction time for similar projects, building contractors, regulations and codes and standards of construction techniques. These cost estimates and construction schedule, however, must be further studied in detail since some of the conditions still remain uncertain.

In view of the short time available it is suggested that the construction materials are transported from Japan to Jakarta and Ujung Pandang by the cargo line plying between Port Makassar and Japan via Jakarta. The Government of Indonesia is kindly requested to take all necessary measures to receive these materials and for land transportation (e.g. exemption from customs clearance and provision of space for temporary bonded storage of the materials).

3-2 SUMMARY OF PROJECT

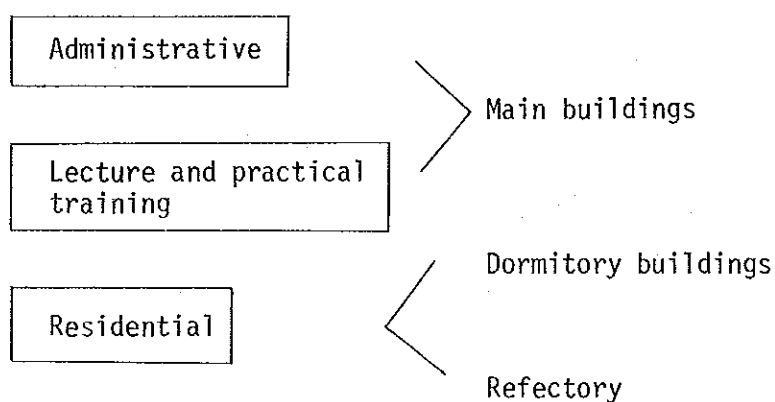
1. General

The Nurse Education Facilities are composed of "The Health Nurse Teacher School" (referred to as the HNTS) in Ujung Pandang and "The Development Center for Nursing Education" (referred to as the DCNE) in Jakarta. Each facility under consideration in this report includes the construction of buildings and the installation of educational equipment.

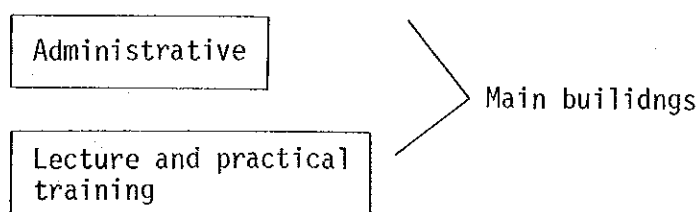
a. Buildings

The proposed buildings for the HNTS and DCNE are connected with each other in a relationship reflecting their functions as follows:

i. HNTS



ii. DCNE



The DCNE under consideration does not include the construction of a dormitory; however, this basic design has been considered with the assumption that a dormitory will be provided on the site by the Government of Indonesia.

b. Educational Equipment

This is the equipment to be installed in laboratories for practical training purposes and includes the following:

i. HNTS

Nursing laboratory equipment
Chemical laboratory equipment
Nutrition laboratory equipment
Audio-visual room equipment
Other special equipment related to the above equipment

ii. DCNE

Nursing laboratory equipment
Chemical laboratory equipment
Audio-visual room equipment (incl. equipment for studio)
Other special equipment related to the above equipment

2. Outline of the Buildings

All the buildings for the HNTS and DCNE are of reinforced concrete. The following are the details of each facility:

a. HNTS

i. Area

Site area:	20,000 m ² (142 m x 142 m)
Total floor area:	4,745.4 m ²

ii. Buildings

◦ Main building			
No. of stories:	Two storied		
Floor area:	First floor	1,043.6 m ²	
	Second floor	1,043.6 m ²	
	Total	2,087.2 m ²	
◦ Dormitory			
No. of stories:	Two storied		
Floor area:	First floor	881.6 m ²	
	Second floor	881.6 m ²	
	Total	1,763.2 m ²	
◦ Refectory			
No. of stories:	Single storied		
Floor area:		274.6 m ²	
◦ Mechanical equipment house			
No. of stories:	Single storied		
Floor area:		185.0 m ²	
◦ Connecting corridor		435.4 m ²	

b. DCNE

i. Area

Site area:	13,500 m ² approx.
Total floor area:	2,300 m ²

ii. Buildings

◦ Main building			
No. of stories:	Two storied		
Floor area:	First floor	1,144.9 m ²	
	Second floor	1,063.9 m ²	
	Total	2,208.8 m ²	
◦ Connecting corridor		91.2 m ²	

3-3 DESIGN PRINCIPLES

The basic design of the buildings and facilities has been prepared on the following principles:

1. The intention and requirements of the Indonesian people who will occupy or utilize the buildings should be taken into consideration, where possible.
2. Local conditions such as natural environment and climatic conditions should be taken into account.
3. The buildings should reflect local customs and modes of living and be easy to use and maintain.
4. The buildings should be designed with due consideration to local construction methods, building trade practice, etc.
5. Local materials should, where possible, be used for the construction of the buildings.
6. The buildings should have a flexible plan layout and be readily adaptable to any future changes in utilization and be so designed as to allow a smooth expansion in the future.
7. The design should be planned to conform to the applicable Japanese regulations and standards and be easily modified to satisfy the local requirements.

3-4 SITE CONDITIONS

1. Location

a. HNTS

Ujung Pandang (Lat. 5°05'S. Long. 119°05'E) faces the Makassar Strait at the south-west tip of Sulawesi Island and is the capital city of South Sulawesi Province with a population of some 650,000. The site proposed by the Indonesian Government, as previously described, is about 5 km southeast from the city center as the 'crow flies.' The land is about 142 m x 142 m in size and at present is under rice cultivation. Before commencement of the project the Indonesian Government are to grade the site to a general level of 1.5 m above the present existing general level. A provincial college of Education and residential accommodation for teaching staff of the Islamic Institute are planned for the land adjacent to the HNTS site to the northwest and west. In addition, to the north of these two sites, a general residential area (KOMPLEKS PERUMNAS) is now under construction. (See site location map page 30)

b. DCNE

Jakarta (Lat. 6°08'S. Long. 106°45'E) is located at the west end of Java Island and is the capital city of the Republic of Indonesia with a population of some 4,650,000. The site of the DCNE lies approx. 14 km as the crow flies due south of the center of Jakarta City. The site proposed by the Indonesian Government is an irregular shape from east to west about 140 m at its longest point and from north to south about 70 m at its widest point. The site lies along the road opposite the existing Jakarta Health Nurse Teachers School (SEKOLAH GRUPPE RAWATAN/KEBIDANAN DAN PERAWAT KESEHATAN MASY).

The site is generally flat but has a marked fall in the north west corner which will require a 1.5 m land fill by the Indonesian Government before construction can commence.

2. Future Plans for the Neighboring Area

a. HNTS

The site and surrounding area are zoned by the Ujung Pandang City as the central residential area. The use of the land for the purposes of the HNTS conforms to the character of this planning zone. Since there are no building regulations or fire zoning for city planning in Ujung Pandang, no statutory restrictions apply to the scale or layout of the buildings.

b. DCNE

The site is located in the Cilandak area which is classified as a villege (PEDUSUNAN) by the City of Jakarta. The City Plan calls for the following development requirements: A 2,500 m² minimum for size of lots to be developed. A maximum site ratio of 15% (There is no fire zoning requirement). Because the site exceeds 5,000 m² special permission prior to development must be obtained from the Governor of Jakarta. All buildings must be set back at least 10 m from the road frontage. Only one or two story developments are permitted in this area.

3. Climatic Conditions

a. HNTS

Ujung Pandang lies in the tropical zone, with a temperature of 25° - 27°C all the year around. In the daytime, the temperature goes up to about 30°C and the humidity to 80%.

Annual rainfall is about 3,000 mm, almost all of which is concentrated in the rainy season between November and April. The maximum monthly rainfall is around 1,100 mm and generally occurs in January. A daily rainfall of 295 mm was recorded in January, 1977 but that was the highest recorded for the last ten years. Unlike the squalls generally observed in tropical zones, in this area it rains continuously for about a week in the rainy season.

The prevailing wind blows in both southeasterly and northwesterly directions. There is an especially strong wind in January which blows from the westerly direction at a speed of 15 m/sec. Usually, however, the breeze has an average speed of 1 - 2 m/sec and a maximum speed of 7 m/sec in the dry season. No evidence of typhoons was found in the local meteorological records.

The following are the basic meteorological data at the site:

i. Temperature

Daily average	24.9° - 26.9°C
Daily maximum	30° - 34.8°C (Sept. and Oct.) 29° - 33°C (Other months)
Daily minimum	19°C - 25°C

ii. Humidity

Mean minimum	54% - 75% (August and September)
Mean maximum	80% - 86% (January - March)

iii. Rainfall^{*}

Annual	3,000 mm approx.
Monthly mean max.	800 - 1,155 mm (December - February)

A monthly rainfall of 1,155 mm recorded in Feb. 1977 is the maximum since 1962.

Daily maximum	295 mm/day (Recorded in Jan. 1977)
Rainy days	19 - 22 days/month (Dec. - Mar.) 7 - 11 days/month (Oct. and Nov., April and May) 2 - 4 days/month (June - September)

* Based on the data recorded between 1962 and 1977.

iv. Wind

Average wind velocity and directions	1.0 - 3.1 m/sec in southeasterly and northwesterly directions
Maximum wind velocity and directions	6.2 - 23.1 m/sec in westerly, northwesterly and easterly directions

b. DCNE

Jakarta also lies in the tropical zone, with a temperature of 25° - 28°C all the year around. In the daytime, the temperature goes up to about 30°C and the humidity to 80%.

Annual rainfall is about 2,000 mm, almost all of which is concentrated in the rainy season between November and March. The maximum monthly rainfall is around 650 mm and generally occurs in January.

The following basic meteorological data was recorded at the site:

i. Temperature

Daily average	25.5° - 27.9°C
---------------	----------------

Daily maximum	32.0° - 34.1°C (Sept. and Oct.) 29.0° - 32.0°C (Other months)
Daily minimum	22.0° - 23.7°C

ii. Humidity

Mean minimum	65% - 75% (Sept. and Oct.)
Mean maximum	80% - 86% (Jan. - Mar.)

iii. Rainfall*

Annual	1,700 mm - 2,200 mm
Monthly mean max.	250 mm - 640 mm (Dec. - Mar.) A monthly rainfall of 646 mm recorded in Jan., 1974 is the maximum since 1967.
Rainy days	15 - 24 days/month (Dec. - Mar.) 10 - 15 days/month (Oct. and Nov., Mar. and May) 2 - 10 days/month (June - Sept.)

* Based on the data recorded between 1971 and 1974.

iv. Wind

Average wind velocity	1.5 - 2.6 m/sec
Maximum wind velocity	3.6 m/sec

4. Soil Conditions

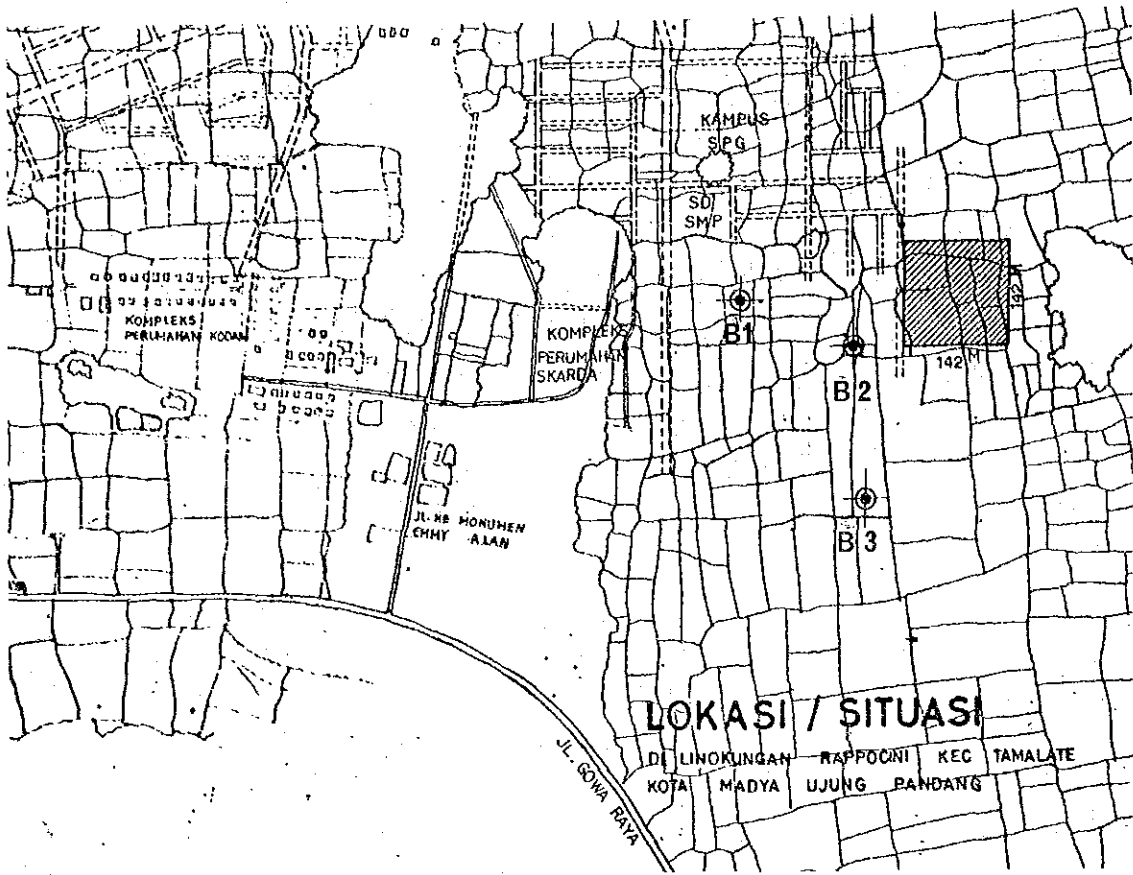
The basic design survey team conducted soil tests at the sites during their survey to determine the type of foundations that would be required for the facilities. The soil tests were carried out by P.T. Soiltest and Foundations at three locations in Ujung Pandang and two locations in Jakarta. The results were presented to the survey team at the beginning of December, 1978. The following summary is based upon them.

a. HNTS

The site is flat rice fields with no marked variation in subsoil strata. At the time the land was surveyed in November, 1978 the surface was dry and a water table was found at 1.5 m below ground level. However, during the rainy season the site is subject to flooding. The locations of the bore holes were chosen to give as wide-spread an indication of subsoil conditions as possible and are shown marked on the plan on page 62. Fig.H-2 shows the results of test bore No. B2. The following are the soil conditions obtained at the site:

<u>Depth</u>	<u>N-value</u>	<u>Material</u>
Down to 4.0 m below G.L.	10 - 25	Silty sand
4 - 7.5 m below G.L.	0 - 6	Silty clay
7.5 m or deeper	50 or more	Sand-stone

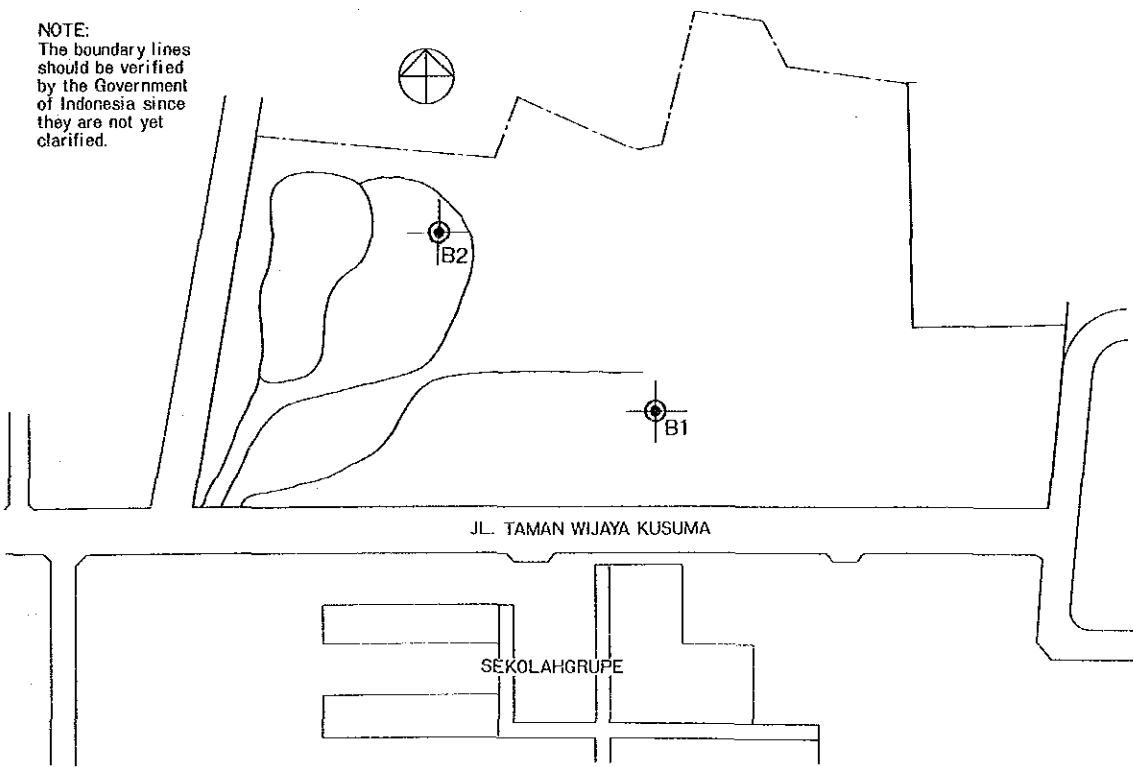
The HNTS buildings will be two storied reinforced concrete structures and thus will not have a very great dead weight/ square meter. Therefore the foundations will be able to stand directly on the silty sand. The design is based upon a land fill of 1.5 m.



UJUNG PANDANG (HNTS)

Fig. H - 1

NOTE:
The boundary lines
should be verified
by the Government
of Indonesia since
they are not yet
clarified.



JAKARTA (DCNE)

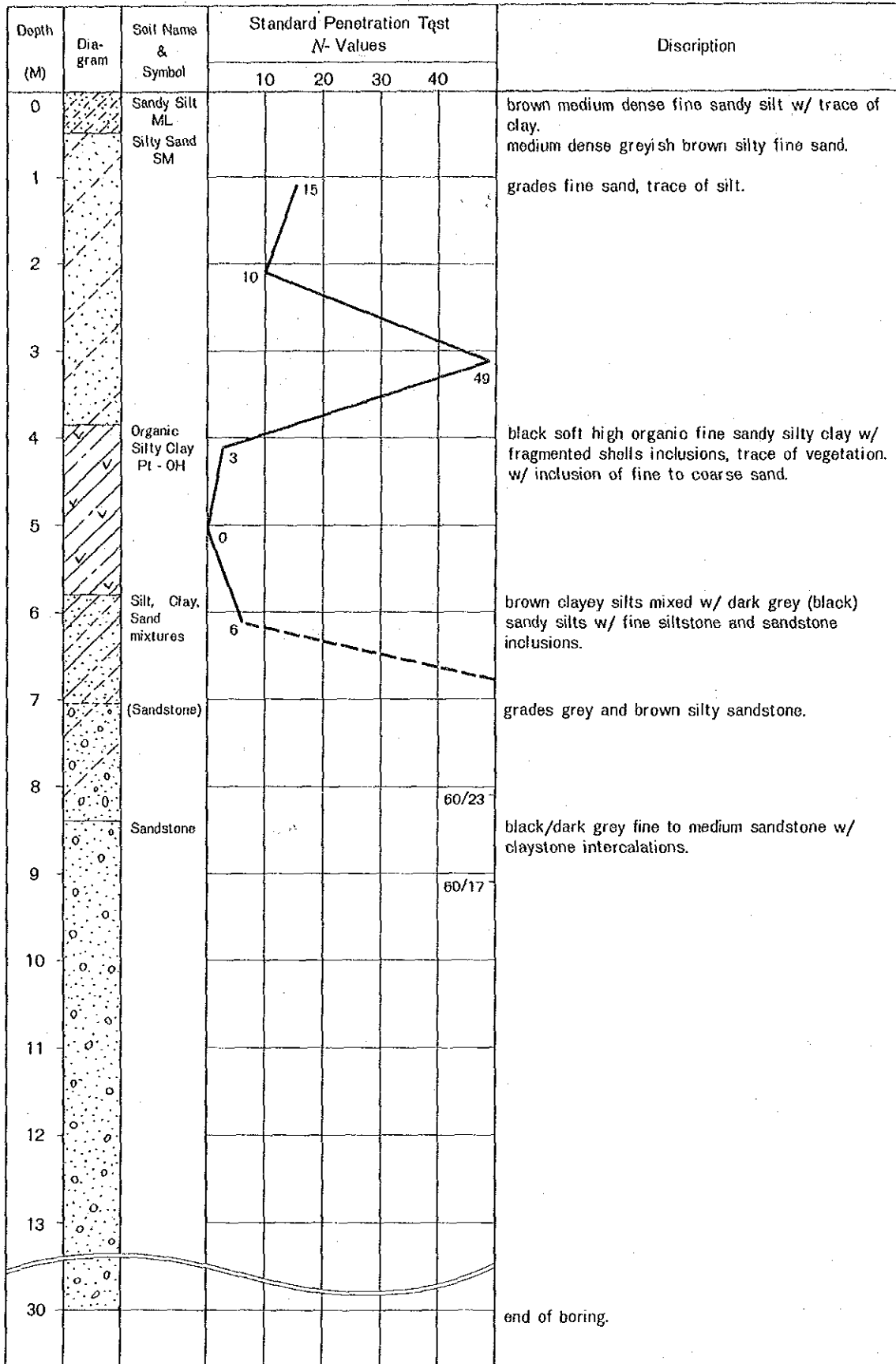
Fig. D - 1

BORING PROFILE

Location : UJUNG PANDANG

Boring No. : B 2

Boring Date : Nov. 14 - 16. 1978.

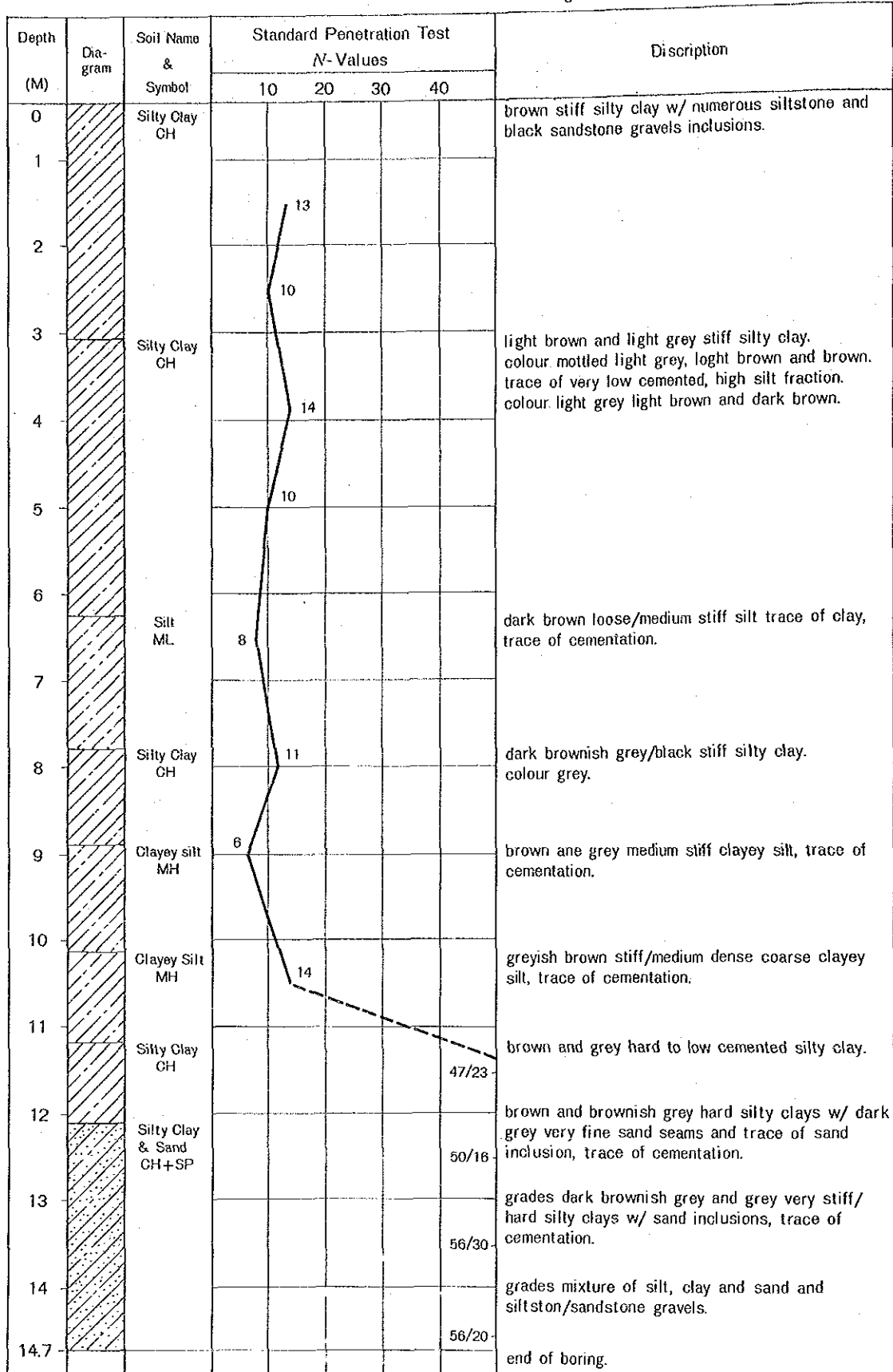


BORING PROFILE

Location : JAKARTA, CHILANDAK

Boring No. : B 1

Boring Date : Nov. 6 - 8, 1978.



b. DCNE

There is an existing pond at the west end of the site as shown in Fig. D-1 and the land generally slopes gently westward. There is also a difference in grade between the northern part and southern part with a range of 0.5 m - 2.5 m along the road. Therefore, during the rainy season the lower land of the northern part is prone to flooding.

The locations of the two test bores as shown on the plan on page 62 were determined with due consideration being given to the building layout.

The core analysis is tabulated on page 64. The following table shows the characteristics of the subsoil obtained at bore holes No. B1 and No. B2.

Bore hole No. B1

<u>Depth</u>	<u>N-value</u>	<u>Materials</u>
Down to 11 m below G.L.	10	Silty clay and clayey silt
11 m or deeper	50	Silty clay with sand

Bore hole No. B2

<u>Depth</u>	<u>N-value</u>	<u>Materials</u>
Down to 3 m below G.L.	13 - 23	Silty clay and clayey silt
3 m - 5 m below G.L.	50 or more	Cemented clayey silt
5 m - 9 m below G.L.	12 - 28	Clayey silt and sandy silt
9 m or deeper	50 or more	Clayey silt and silty clay

The DCNE buildings are single and two storied reinforced concrete structures thus it will not have an excessive dead

weight/square meter. Therefore a raft or strip foundation may be employed bearing directly upon the top strata. However as the site slopes considerably at present and requires a lot of land fill special care will have to be taken to establish the excavation levels for the foundations.

5. Earthquakes

The Indonesian Islands lie in one of the world's zones that are prone to seismic disturbance and there have been in the past many serious earthquakes.

Fig.E-1 is an illustration to show the epicenters classified by depth of the earthquakes recorded in the past.

Fig.E-2 is an illustration showing the zoning of the Indonesian Islands by prevalence of earthquakes into three categories (III most serious; II intermediate; I least activity) to enable suitable design regulations to be administered. South Sulawesi can be seen to be situated in the intermediate zone. West Java is also situated in the intermediate zone.

Figs.E-3 and E-4 are illustrations showing the zoning of the southwestern part of Sulawesi Island and the western part of Java, respectively, by the Modified-Mercalli scale of the earthquakes recorded between 1900 and 1970. It will be seen that Ujung Pandang and Jakarta are situated in the least critical area.

The survey team inspected the most recent seismic records and noted a disturbance of Magnitude 7 in August 1977 (epicenter Bali) and also one of 5.5 in November 1977 (epicenter 1,800 km southeast of Jakarta).

6. Electricity and Telephone Services

a. HNTS

The proposed site is situated within a zone to be developed as a residential area in the City Plan. There is an existing sub-station of P.L.N. (Gardu Induk) 1,500 m to the north of the site

Seismicity Map of Indonesia

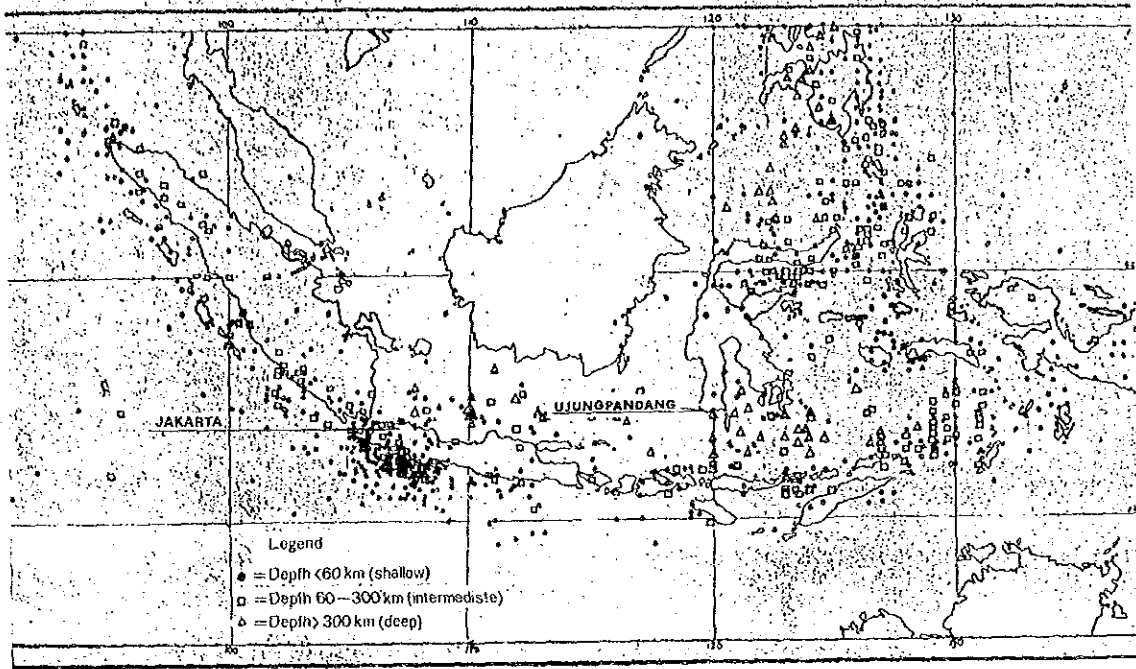


Fig. E-1

PETA DAERAH GEMPA INDONESIA

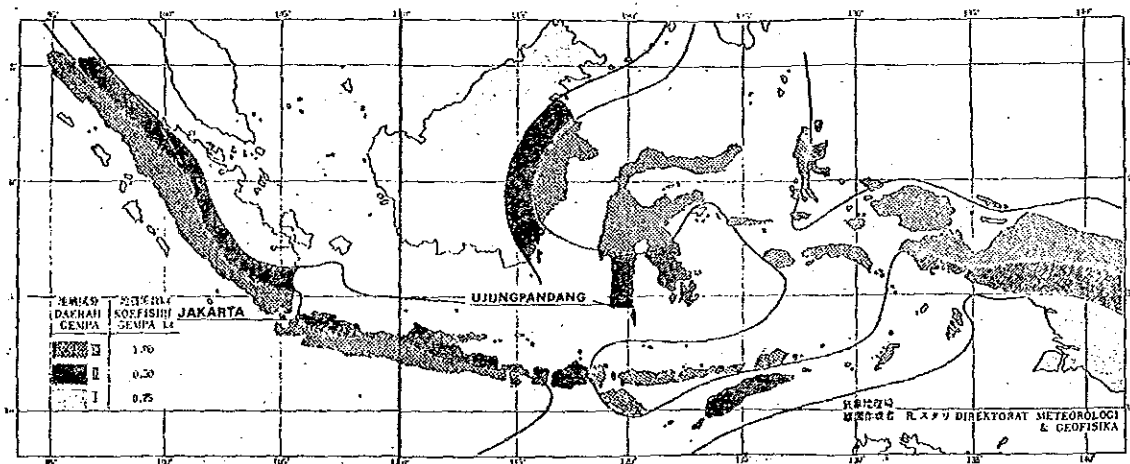


Fig. E-2

PERCEPATAN MAX. GEMPA BUMI DLM GRAVITASI
SELAMA TH. 1900—1970. DI SULAWESI SELATAN

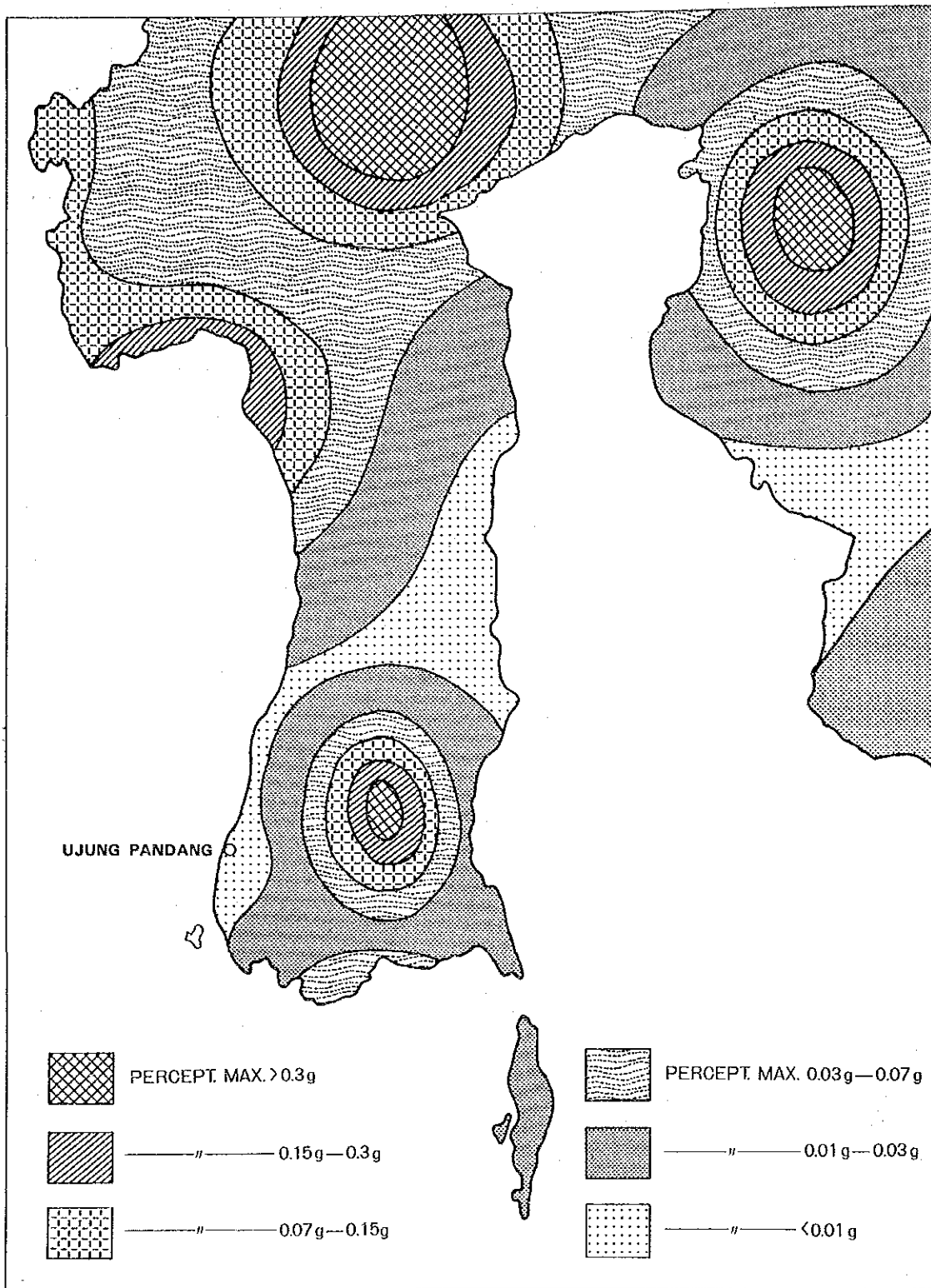


Fig. E-3

PERCEPATAN MAX. GEMPA BUMI DLM GRAVITASI
 SELAMA TH. 1900—1970. DI. JAWA BARAT

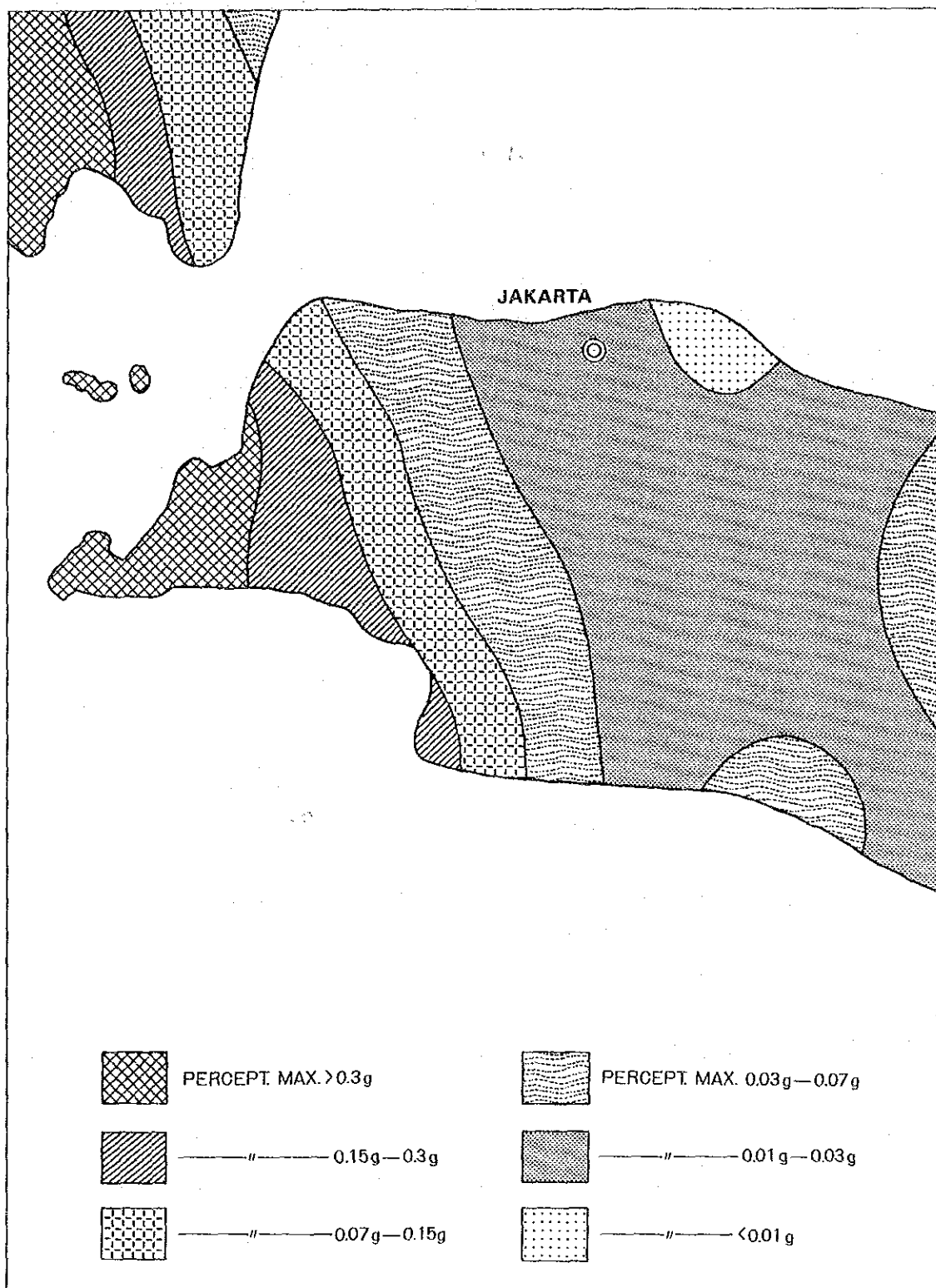


Fig. E-4

and it is anticipated that a high voltage (12 KV) distribution line will be extended towards the site in the near future since there are many development plans around the area.

It is technically feasible to receive power from P.L.N. Even at present, it should be possible to obtain power and telephone services by extending the supply facilities to the site. Although the existing capacity (46 MVA) is sufficient for this city, there are frequent power failures because of the poor maintenance of the distribution lines. Therefore, a standby emergency generator will be needed.

Since telephone lines are distributed near the proposed site, they should be extended several hundred meters, in which case a special fee will be needed. A new telephone exchange is now under construction and no telephone services will be available until the completion of the new telephone exchange.

b. DCNE

Power supply and telephone services have already been provided to the site which is located within the city area. An overhead distribution line of 12 KV voltage is provided along the road in front of the site, but it will be removed in the near future because the distribution voltage will be changed to 20 KV as part of the general improvement scheme of the domestic distribution services in Indonesia. Power supply, therefore, will be provided by underground cables which are to be laid along the same road.

There is no technical reason why the telephone services cannot be provided to the site, but a special fee will be required because of its location which is in an area where a regular service is not available.

7. Water Supply and Waste Disposal Service

a. HNTS

There is a city water supply mains (350 mm ϕ) buried underground

along the highway of JL. Panakkukang IV running from east to west to the north of the proposed site serving the housing complex (KOMPLEKS PERUMNAS). The water supply to the site in the future depends on the progress of the planned access road and the campus scheme for the provincial college of Education. If work on the campus scheme progress ahead of this project, the water supply to the site is unquestionably possible. The supply capacity which used to be 250 - 300 l/sec is now 650 l/sec (with a minimum of 600 l/sec even in the dry season) and will be further upgraded to 1,500 l/sec, which is sufficient to serve the project. However, a well will be required for emergency use. The joint use of city water and well water is practicable. The well water may be found to contain salt if drilled deep so a filtration plant and purifying equipment may be required and will be provided if necessary.

There is no public utility for waste water treatment and existing habitations dispose of soil water by soakaways after primary treatment in septic tanks.

b. DCNE

There are no public water supply facilities serving the site. The present residents depend upon shallow wells (4 - 10 m) for their water requirements and they report the water is sweet and free from brackishness all the year around. The site is located in a residential area, and a well supplying a large amount of water may cause the existing wells around the site to run dry. For this reason, the location and depth of the well must be carefully studied before and during drilling operations.

There is no public utility for waste water treatment and existing habitations dispose of soil water by soakaways after primary treatment in septic tanks.

8. Fuel

Since there is no city gas supply serving the city of Ujung Pandang or Jakarta, oil is generally chosen as domestic fuel. L.P.G. is available but expensive. Moreover, a constant supply of L.P.G. cylinders is not always assured. For these reasons, light oil is the best choice for fuel for cooking and running an emergency generator, although some L.P.G. will be used for training purposes.