海技協資（海七）73－10

REPORT ON THE ESTABLISHMENT OF THE SULAWESI INDUSTRIAL VOCATIONAL TRAINING CENTRE IN INDONESIA

OCTOBER 1973

OVERSEAS TECHNICAL COOPERATION AGENCY

Government of Japan

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FOREWORD

In compliance with the request raised by the Government of the Republic of the Indonesia, the Government of Japan decided to dispatch the survey mission for the detail studies in establishment of the Sulawesi Industrial Vocational Training Centre in Ujung Pandang, South Sulawesi, following the previously dispatched Preliminary Survey Mission for 24 days from October 16, 1972, which had been intended to make feasibility study as well as to formulate basic policies for the said objective.

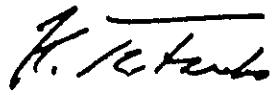
The Overseas Technical Cooperation Agency, being entrusted by the Government, organized the survey mission comprising six (6) members headed by Mr. Hajime Hosomi, Head of Training Division, the Vocational Training Bureau, Ministry of Labour, and dispatched it to Indonesia.

The members of the mission selected are exactly same as those dispatched before by virtue of the consideration of the Ministry of Labour. The participation of Mr. Teruaki Sakuma, proposed team leader of the Centre, in the current survey in the middle part of the schedule will be of benefit in the future activities as he could have observed the Indonesian state of vocational training as well as living conditions of the people in Ujung Pandang city.

The Indonesian Government, basing on the already submitted "Summary Report by the Japanese Preliminary Study Team on Establishment of a Vocational Training Centre in Indonesia" as well as on the explanation made to Excellency Sadli, Minister of Manpower, has commenced the preparations such as preservation of construction site of the Centre and construction schedule, with the initial budget of Rp. 178 million.

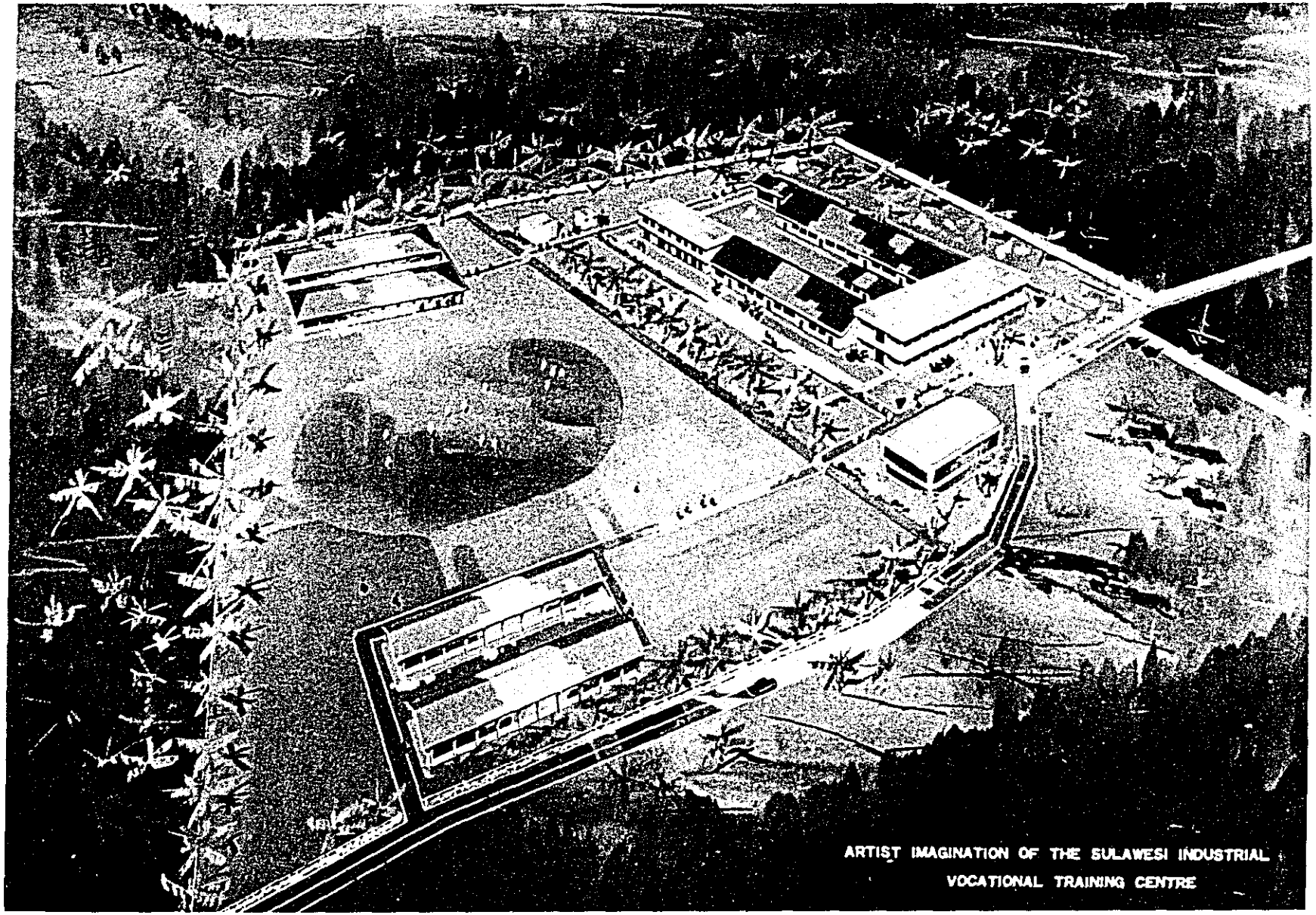
The current mission, under the above-situations, made specification documents for equipment to be provided by Japan, for layouts of centre building and workshops and long-term schedule for centre construction and its operation. The Record of Discussions was signed. The report here now presented is the one describing the activities of the Mission.

It is my sincere wish that the report be guidline to the construction and operation of the Sulawesi Industrial Vocational Training Centre and that Japan's technical cooperation prove to be contributive.



Keiichi Tatsuke
Director General,
Overseas Technical Cooperation Agency

October, 1973



ARTIST IMAGINATION OF THE SULAWESI INDUSTRIAL VOCATIONAL TRAINING CENTRE

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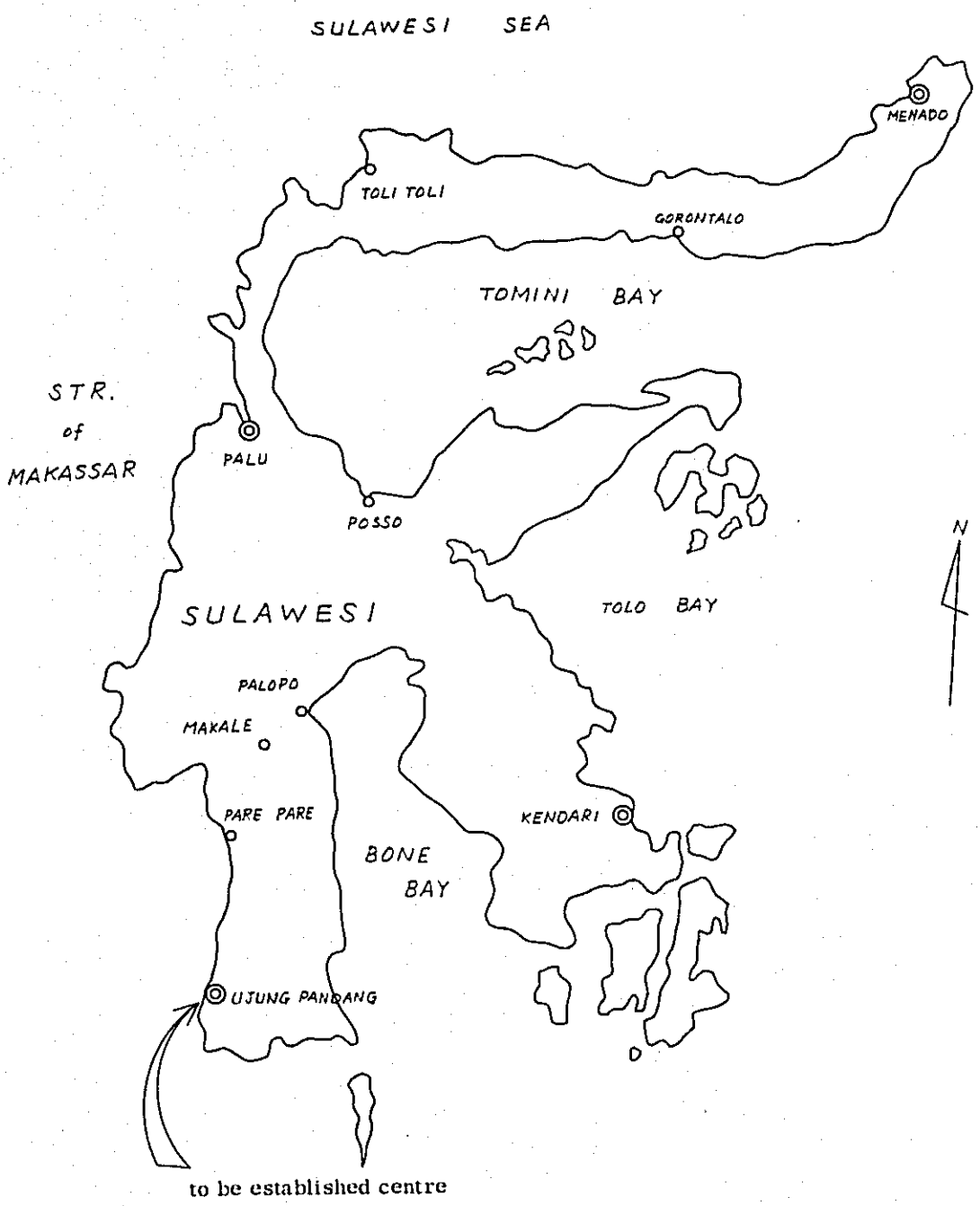


CHAPTER I ORGANIZATION OF THE SURVEY MISSION

The Japanese Implementation Survey Mission was organized to have a detail discussion for establishing the vocational training centre in Ujung Pandang, South Sulawesi, following the previously dispatched preliminary survey mission for 24 days from October 16, 1972 whose assignments were to check the possibility of establishing the said centre as well as to study the feasibility of Japan's technical cooperation.

The Ministry of Foreign Affairs informed to OTCA that Indonesian Government wished to have the same members as the previous mission in order to obtain the fruitful results in a limited period of survey. Basing on this request, OTCA organized the mission with exactly same members as the previous mission by virtue of the special consideration of Ministry of Labour. Due to the bugetary constraint, the proposed team leader of the Centre could not attend the whole period of the survey. Nonetheless, the participation of the proposed team leader would be beneficial for the future successful operations of the Centre and thus be note-worthy here.

The successful completion of the survey depended much on the co-operation and considerations of Department of Manpower, Transmigration and Cooperatives and the agencies concerned and therefore the sincere gratitude is extended to those concerned.

The gratitude is also extended to the Indonesian Counterpart Officials on the Establishment of the Ujung Pandang Vocational Training Centre who accompanied the Mission throughout the survey period and took the trouble of coordination and interpretation with various offices.

The composition of the Mission is shown below.

Members of the Mission

Head	Mr. Hajime HOSOMI	Head of Training Division, Vocational Training Bureau, Ministry of Labour, Government of Japan.
Member	Mr. Teruaki SAKUMA	Deputy head of the International Labour Affairs Division, Ministry of Labour, Government of Japan.

Member	Mr. Akira KIKUTA	Head of Administrative Division, Vocational Training Department, Employment Promotion Project Corporation.
Member	Mr. Junichiro YAGI	Section chief of Training Standard Section, Training Division, Vocational Training Bureau, Ministry of Labour, Government of Japan.
Member	Mr. Seizaburo HOSHI	Trade Skill Test Officer ofTrade Skill Test Division, Vocational Training Bureau, Ministry of Labour, Government of Japan.
Member	Mr. Norio MATSUZAWA	Staff of Overseas Centres Division, External Operations Department, Overseas Technical Cooperation Agency.

CHAPTER II THE OUTLINE OF THE PROCEDURES OF NEGOTIATIONS AND SURVEY

(1) The outline of the prcedures of negotiations and survey

The outline of the procedures before signing the Record of Discussions, which was the prime objective of the Mission, is as shown below.

The Indonesian Government revealed that the below-listed "Indonesian Counterpart Officials on the Establishment of the Ujung Pandang Vocational Training Centre" had been set up and that the officials were to prepare and cope with the negotiations thereafter.

List of the Officials

Head	Mr. R. Hardono	Division Head of Training Facilities Development, Directorate of Vocational Training and Managerial Development, Department of Manpower, Transmigration and Cooperatives, Republic of Indonesia
Member	Mr. A. Soebyanto	Division Head of Training Systems, Directorate of Vocational Training and Managerial Development, Department of Manpower, Transmigration and Cooperatives, Republic of Indonesia
Member	Mr. H. Aburisman	Division Head of Planning Instructors Training and Highly Skilled Manpower, Directorate of Vocational Training and Managerial Development
Member	Mr. N. P. L. Taruan	Staff of Planning Instructors Training and Highly Skilled Manpower, Directorate of Vocational Training and Managerial Development
Member	Mr. Soebandi	Staff of Training Facilities Development

		Division, Directorate of Vocational Training and Managerial Development
Member	Mr. M. Suryanegara	Staff of Vocational Development and Special Skills Division, Directorate of Vocational Training and Managerial Development
Member	Mr. M. Wahju	Staff of Foreign Technical Cooperation Division, Bureau of Foreign Relations and Informations, Department of Manpower, Transmigration and Cooperatives
Member	Mr. G. Djoko Oetojo	Staff of Foreign Technical Cooperation Division, Bureau of Foreign Relations and Informations, Department of Manpower, Transmigration and Cooperatives

The following problems were raised during the negotiations and discussions with the Mission.

a. The budget for vocational training centre

The budget sum and its component allocated for 1973 fiscal year for the vocationsl training centre under the Department of Manpower, Transmigration and Cooperatives are as follows.

i)	Remuneration of land (5 ha)	Rp. 12,500,000. -
ii)	Mapping, measuring and sounding of land	Rp. 2,000,000. -
iii)	Building construction (workshop) 1,000 m. sq.	Rp. 30,000,000. -
iv)	Road construction (1,000 m. sq.)	Rp. 4,000,000. -
v)	Fencing, guardhouse and temporary electrical installation	Rp. 1,650,000. -
vi)	Purchasing of one vehicle (jeep)	Rp. 2,000,000. -

vii)	Local handling cost	Rp.	7,500,000. -
viii)	Electrical installation (partial) to be connected to the state electricity	Rp.	10,500,000. -
ix)	Training of Indonesian instructors	Rp.	3,000,000. -
x)	Inspection and supervising budget	Rp.	1,700,000. -
xi)	Administration cost	Rp.	150,000. -
	Total	Rp.	75,000,000

b. Training courses in vocational training centre

Basic courses are the same courses as those decided at the time of preliminary survey, namely metalworking, electric, woodworking, building and auto mechanic. Request were given to the advanced courses as follows.

i) The radio repair course is involved in the advanced courses. However in view of the change of situations in Ujung Pandang city that TV transmitting station was recently installed and that the demand number of TV receiver will seemingly increase, TV repair course is to be added, thus changing the curriculum into that for radio-TV repair course.

ii) Though the curriculum of internal combustion engine repair is to include small type marine engine repair, the repair of transmission including marine screw and of shaft is to be added.

Taking into considerations the above request, the following conclusions are reached.

i) Radio-TV repair course is newly added as one of the advanced courses.

ii) Though the training in the repair of small type marine transmission and shaft is judged needed, budgetary measures for dispatching Japanese experts and for equipment donation is hardly realised. Accordingly, the working model of energy transmission mechanism through engine to screw will be donated as a prototype. And when training is required for Indonesian counterpart instructors in Japan, the necessary cooperation will be provided. Therefore, no particular description of this course

will be made on the Record of Discussions, implying that the expression of internal combustion engine includes this.

c. The Japanese experts

Japanese Experts were to be composed of one (1) team leader, one (1) or more experts in each of five (5) trades and one (1) liaison officer. The Indonesian Government requests to have one (1) expert in metal working in view of the importance of welding and this request was accepted.

As for the title of Japanese experts, what was called co-project manager is now changed to team leader since BAPPENAS uses this unanimously. And what was called coordinator is also changed to liaison officer in order to express its position clearly.

d. Facilities granted to the Japanese experts

Facilities to be granted to Japanese experts are approved in line with those listed in draft of the Record of Discussions.

e. Equipment and machineries to be provided by the Government of Japan

As was indicated in item b. above, TV receiver set was added since radio-TV repair course is newly added (see Annex IV of the Record of Discussions). Besides, Video-Tape Recorder was also added in view of its usefulness in the practical training under the condision that education media are foreign languages.

f. Training in Japan for Indonesian Counterpart instructors

Indonesian counterpart instructors totalling 20 in all of five (5) trades are to recieve trainings. As for this fiscal year, approximately 10 counterpart instructors are to be collected at Ujung Pandang and trained under Bandung Industrial Vocational Training and Managerial Centre for six (6) months. Thereafter they will be trained in Japan for six (6) months to one (1) year. As for the number of trainees in Japan, the Mission considered one (1) trainee in each of trade, but Indonesian Government insisted to have two (2) counterpart instructors as trainees for each of Japanese experts in view of other cases of vocational training centres. The Mission declared to endeavour to meet the request.

g. Claim to Japanese Experts

Understanding was reached in line with the draft of the Record of Discussions.

h. Contributions of the Government of the Republic of Indonesia

i) The Mission understood the number of staffs shown in Annex V of the Record of Discussions is the one when all the training courses start at the vocational training centre.

ii) As for the site, the Mission found no problem when it made studies in training facilities, area required for workshops and buidling allocation. The compensation charges for five (5) hectares are listed up in this fiscal year as shown in a. i) in this Chapter. Building expenses are also allocated in a. iii), this Chapter, for 1,000 m^2 construction site. In this fiscal year, the building for workshop of metal working course is to be constructed and the other buildings in the next year or thereafter.

iii) The rooms for counterpart instructors and for tools are to be installed and therefore the expression was improved to imply this.

iv) As for housing for Japanese experts, the Indonesian Government proposed to construct houses in the site of vocational training centre -the construction will start in 1976 fiscal year after finishing the construction of main building, workshops and the other annexes-. However Japanese Mission counter-proposed either to construct the houses for Japanese experts at Indonesian expenses or to rent houses in city area since the site for centre is far remote from the residential area and therefore difficult place for experts to live together with their families, as known from the example of Palembang Industrial Vocational Training Centre.

i. Responsibilities of Indonesian Project Manager, Director and of Japanese Team Leader

Three categories of responsibility is clarified.

i) Indonesian Project Manager will have responsibility both under construction of vocational training centre and before commence-

ment of training courses,

ii) Indonesian Director will have responsibility for operating the vocational training centre, and

iii) Japanese team leader will have responsibility for technical matters.

j. Mutual consultation

The Indonesian Government agreed with the draft of the Record of Discussions.

k. Period of Japanese cooperation

The Indonesian Government agreed with the draft of the Record of Discussions.

The discussions were held on each of the above items and the Record of Discussions was re-written on 11, June 1973. On 12, June 1973, Discussions, amendments and finally signature were made.

(2) The Record of Discussions

Record of Discussions between the Japanese Implementation Survey Mission and the Authorities Concerned of the Government of the Republic of Indonesia concerning the Establishment of the Vocational Training Centre in South Sulawesi, Indonesia.

Attached hereto is the Record of Discussions between the Japanese Implementation Survey Mission and the authorities concerned of the Government of the Republic of Indonesia concerning the establishment of Vocational Training Centre in South Sulawesi of the Republic of Indonesia.

At the request of the Government of the Republic of Indonesia for the Japanese Government to cooperate in establishing the vocational training centre at Ujung Pandang in South Sulawesi, Indonesia, the Overseas Technical Cooperation Agency (OTCA), entrusted with the execution of the technical cooperation by the Government of Japan, organized the Preliminary Survey Mission, headed by Mr. Hajime Hosomi, Head of Training Division, the Vocational Training Bureau, the Ministry of Labour, the Government of Japan, which visited the Republic of Indonesia for 24 days beginning from 16th October 1972, for the purpose of studying the details of the project and studying whether it would be appropriate to extend Japan's technical assistance to the project.

On the basis of the report of the afore-said Mission submitted to the Government of Japan, recommending that Japanese technical assistance to the project would be extended, the Implementation Survey Mission was organized by OTCA for the purpose of discussing with the authorities concerned of the Government of the Republic of Indonesia all technical matters concerning the establishment of vocational training centre at Ujung Pandang.

The Mission, headed by Mr. Hajime Hosomi, stayed in Indonesia from 28th May 1973, to make a basic plan for the Japanese cooperation in this project, and conducted a survey on the area for the project and also exchanged views and had a series of discussions in Djakarta with the authorities concerned of the Government of the Republic of Indonesia concerning the project.

As a result of the survey and discussions between the Mission and the Indonesian authorities concerned, the two parties came to the conclusion that the above cooperation should start from fiscal year of 1973.

Though the matters recorded herein shall be binding legally neither on the Government of Japan nor the Government of the Republic of Indonesia, the gist of this Record of Discussions including its Annexes is understood to serve as the basis of the Agreement concerning the establishment of vocational training centre to be concluded at the earliest convenience between the two Governments.

Djakarta, dated the 12th June, 1973

For the Overseas Technical Cooperation Agency

(Hajime Hosomi)

Head of the Japanese Implementation Survey Mission

For the Government of the Republic of Indonesia

(Ir. Drs. Danang D. Josdonegoro)

Director of Vocational and Managerial Development Department of Manpower, Transmigration and Cooperatives The Government of the Republic of Indonesia

Record of Discussions

The Japanese Implementation Survey Mission and the authorities concerned of Indonesia, agreeing on the cooperation in establishing the Industrial Vocational Training Centre at Ujung Pandang in South Sulawesi have reached the following conclusions.

1. The name and the function of the Centre

(1) The proposed Industrial Vocational Training Centre shall be established at Panaikang, Ujung Pandang in South Sulawesi and shall be called "The Sulawesi Industrial Vocational Training Centre" (hereinafter referred to as the "Centre")

(2) The function of the Centre shall be to render practical and theoretical training for skilled workers who will be contributing to the industrial development and increase of the productivities for the industries concerned in the Republic of Indonesia.

(3) The following trades of technical training shall be given at the Centre.

a) Metalworking
b) Electric
c) Woodworking
d) Building
e) Auto Mechanic

(4) The standards of skill and knowledge rendered by the Centre shall be that of a general skilled worker without specialized abilities.

2. Training courses to be offered at the Centre

(1) The basic courses and the advanced courses are to be set up at the Centre for those who have no skill and for those who have finished the basic courses or have already a certain standard of skill respectively. The basic courses and the advanced courses shall be as follows:

The basic courses	The advanced courses
a) Metalworking	Machine-work including forging, machine-tool-work and bench-work. Sheetmetal-work, welding and gas cutting. Piping-work and fitting.
b) Electric	Electric machinery repair. House installation wiring. Radio and TV repair.
c) Woodworking	Furnitures. Fixtures.
d) Building	Roofconstruction. Bricklaying and reinforcement. Plastering.
e) Auto mechanic	Automobile repair including motercycle. Internal combustion engine repair including small type marine engine.

(2) The basic courses and the advanced courses shall have six (6) months duration. The separation of advanced courses into two periods (each with maximum three months duration) shall be conceivable in the future whenever the necessity arises.

(3) Such training system should be introduced to have the effective training in the Centre as to enable those who completed the six (6) months basic course and have been employed for a few years, to attend the advanced course, and also those who completed their basic course to attend the advanced course successively if they want.

(4) Qualification of the trainees to be admitted to the Centre shall be at least of those who have completed six (6) years primary education. Potential candidates for training in the Centre shall be as follows:

a) Those who have no skill including the un-employed
b) workers from Government and Private enterprises
c) the self-employed
d) others

(5) The number of trainees shall be up to fifty (50) persons in each trade and up to two hundred and fifty (250) persons in total.

3. The Japanese experts attached to the Centre

In accordance with the laws and regulations in force in Japan, the Government of Japan shall take necessary measures to provide at its own expense the requisite services of Japanese experts as listed in Annex I.

(1) The Government of Japan shall pay the necessary expenditure, including their salaries and transportation cost between the two countries.

(2) The Japanese experts consisting of one Team Leader and experts shall be dispached to the Centre.

(3) The Japanese Team Leader and the Japanese experts shall exercise the functions as listed in Annex II.

4. Facilities granted to the Japanese experts

The Japanese experts mentioned above and their families shall be granted the privileges, exernptions and benefits as listed in Annex III which are to be no less favorable than those granted to the experts under the Colombo Plan or international organizations such as the United Nations serving in the Republic of Indonesia under similar circumstances.

5. Equipment and machinery to be provided by the Government of Japan

In accordance with laws and regulations in force in Japan, the Government of Japan shall take necessary measures to provide at its own expense such equipment, machinery and other materials as listed in Annex IV.

(1) The goods referred to above shall become the property of the Government of the Republic of Indonesia upon being delivered c. i. f. , at any airport of port in Indonesia to the authorities concerned of the Republic of Indonesia.

(2) The goods referred to above shall be utilized exclusively for the operation of the Centre with the advice of the Team Leader.

(3) The goods referred to above shall be subject to the mutual consultation between Japanese and Indonesian side, for the purpose of successful transportation to and installation at the Centre.

6. Training of the Indonesian counterpart instructor in Japan

The Government of Japan shall take necessary measures to grant the awards to the suitable number of the counterpart instructors engaged in the Centre for technical training in Japan under the Colombo Plan Technical Cooperation Scheme, for a certain period after at least six (6) months necessary training as the counterpart instructor in Indonesia. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the Indonesian counterpart instructor through technical training in Japan under the Colombo Plan Technical Scheme will be utilized for the Sulawesi Industrial Vocational Training Centre.

7. Claims against the Japanese experts

The Government of the Republic of Indonesia undertakes to indemnify the Japanese experts against any civil liability arising from acts performed in the discharge of their official functions in the Republic of Indonesia, except for liability arising from the wilful misconduct or gross neglignece of the Japanese experts.

8. Contributions of the Government of the Republic of Indonesia

(1) The Government of the Republic of Indonesia shall take necessary measures to provide at its own expense:

a) the services of the Indonesian staff as listed in Annex V

b) requisite land and buildings, including those listed in Annex VI as well as incidental facilities required therefor

c) supply or replacement of equipment, machinery, tools, spare parts and other materials necessary for the operation of the Centre which shall be available in the Republic of Indonesia.

d) convenient residencies in Ujung Pandang for the Japanese

experts

e) facilities for the Japanese experts' official travels within the Republic of Indonesia including official travel expenses

(2) The Government of the Republic of Indonesia shall undertake necessary measures to meet:

a) expenses necessary for construction works of the Centre

b) expenses necessary for the transportation of the goods provided by Japan as well as for their installation, operation and maintenance

c) customs duties and any other charges, if any, as may be imposed upon the goods provided by Japan in the Republic of Indonesia

d) all running expenses necessary for the operation of the Centre

9. Responsibilities of the Japanese Team Leader and the Indonesian Project Manager and Director

(1) Director General of the Department of Manpower, the Government of the Republic of Indonesia, shall have the over-all responsibility for the implementation of the project.

(2) The Japanese Team Leader and the Indonesian Project Manager as well as the Director shall work in mutual consultation between the both sides for the purpose of advancing the objectives of the Centre and successfully promoting Japanese-Indonesian cooperation through the Centre. The Indonesian Project Manager shall be responsible for the construction of the Centrel and the Director for the operation of the Centre, while the Japanese Team Leader shall be responsible for the technical matters.

10. Mutual Consultation

There will be mutual consultation between the two Governments for

the purpose of advancing the objectives of the Centre and further promoting Japanese-Indonesian cooperation in operating the Centre.

11. Period of Japanese cooperation

The period of the Japanese cooperation in the operation of the Centre shall be four (4) years in principle, but it may be extened for a further specified period by an agreement between the Government of Japan and the Government of the Republic of Indonesia.

Annex I

Japanese Experts

		number
(1)	Team Leader	1
(2)	Expert on:	
	Metalworking (one expert for welding)	2
	Electric	1
	Woodworking	1
	Building	1
	Auto mechanic	1
(3)	Liaison officer	1

Annex II

Functions of the Japanese Team Leader and the Japanese experts

(1) Functions of the Japanese Team Leader

a) Advice for manpower development in and around the State of Sulawesi

b) Over-all advice and cooperation pertaining to the operation of the Centre

c) Over-all advice and cooperation to installation, operation and maintenance of equipment to be provided by the Government of Japan

d) Planning and cooperation concerning the selection and fostering of Indonesian counterpart instructors

e) Instruction and coordination for planning of training programs

f) Advice and cooperation for preparing and application of training curricula

g) Other instruction activities

(2) Functions of the Japanese experts

a) Planning of training programmes and conducting training activities in each training course

b) Preparation and development of training curricula in each training course

c) Fostering Indonesian counterpart instructors in each training course

d) Advice and cooperation to the technical matters on installation, operation and maintenance of equipment to be provided by the Government of Japan

e) Other duties directed by the Japanese Team Leader

Annex III

Privileges, Exemptions and Benefits

(1) Income tax:

The Japanese experts and their families are exempted from income tax.

(2) Customs duty:

The Japanese experts and their families shall be permitted to import for the duration of their stay free from import and export duties and any other charges in respect to reasonably necessary personal and household effects; such articles should include for each household one motor vehicle, one refrigerator, one deepfreezer, two air-conditioner, one television set, one radio, one record player, one type recorder, other minor electric appliances and optical instruments which may be brought into indonesia from abroad. Also, the Japanese experts and their families shall be permitted to import, free of duty, reasonable amount of medicaments, foodstuffs, beverages and other personal requirements for daily use.

(3) Medical facilities:

Free local medical services and facilities to the Japanese experts and their families should be provided.

Annex IV

Equipment, Machinery, Tools, Spare Parts and other Materials

(1) Metalworking

Bench-work	(Bench type drilling machine, Shaper, Pedestal drilling machine, tools and instruments, etc.)
Machine-work	(Lathe, Universal milling machine, Vertical milling machine, Pedestal drilling machine, Bench type drilling machine, Shaper, Universal cylindrical grinding machine, Surface grinding machine, tools and instruments, etc.)
Sheetmetal-work and welding	(Shearing machine, Bending machine, A. C. arc. welder, Engine welder, Acetylene gas generator, Gas cutting apparatus, tools and instruments, etc.)
Forging	(Air hammer, Heat treatment equipment, Hardness tester, tools and instruments, etc.)

(2) Electric

House installation and wiring	(Switch board, tools and instruments, etc.)
Electric machinery repair	(Electric motor, Generator, Transformer, Coil winding machine, Tester, tools and instruments, etc.)
Radio repair	(Oscilloscope, Tester, Vacuum tube voltmeter, Radio, TV, Recordplayer, tools and instruments, etc.)

(3)	Woodworking	
	Furnitures and fixtures	(Hand planer, Surfacer, Band sawing machine, Ban saw sharpener, Circular sawing machine, Circular saw sharpener, Electric hand planer, tools and instruments, etc.)
(4)	Building	
	Bricklaying and plastering	(Pot mixer, Belt conveyer, Rammer, tools and instruments, etc.)
(5)	Auto mechanic	
	Automobile repair	(Vehicles for teaching, Speed meter tester, Brake tester, Lift, Electro Tester, Infrared rays stand, Steam cleaner, tools and instruments, etc.)
	Internal combustion engine repair	(Engine dynamo meter, Crankshaft grinder, Cylinder boring machine, Stationary honring machine, Diesel injection pump tester, Tester, tools and instruments, etc.)
(6)	Audio-visual aids	
		16 mm projector, Slide projector, Overhead projector, Films and slides, V. T. R., etc.
(7)	Non-utility generator	
		Dieselengine generator, etc.

Annex V

Indonesian staff

		number
(1)	Director	1
(2)	Assistant Director	2
(3)	Counterpart instructor	20
(4)	Administrative staff	
	Administrative officer	1
	Secretary	2
	Clerk	4
	Typist	4
	Draftsman	3
	Workshop Attendent	5
	Storekeeper	2
	Messenger	2
	Guard	2
	Driver	2
	Janitor	2
	Caterer for kichin	2

Annex VI

Land and buildings

(1) Land:

The site for the vocational training centre; more than five (5) ha.

(2) Buildings:

(A) Main building

1) Director's room

2) Team Leader's room

3) Office

4) Expert's room

5) Reception room

6) Conference room

7) Bath room

8) Dressing room

9) Theory room

10) Library

11) Exhibition room

12) Audio-Visual room

13) Drawing room

14) Others (Hall, Store, etc.)

(B) Workshops

Metalworking workshop with counterpart instructor's room and tool room

1) Bench-work workshop

2) Machine-work workshop

3) Sheetmetal-work, welding and gas cutting workshop

4) Forging workshop

5) Precision measuring room

Electric workshop with counterpart instructor's room and tool room

1) House installation wiring workshop

2) Electric machinery repair workshop

3) Radio and TV repair workshop

4) Electrical testing room

Woodworking workshop with counterpart

instructor's room and tool room

1) Woodworking machine workshop

2) Woodworking assembling workshop

3) Wood painting workshop

Building workshop with counterpart instructor's

room and tool room

1) Roofconstruction workshop

2) Bricklaying and plastering workshop

3) Reinforcement workshop

Auto mechanic workshop with counterpart instructor's room and tool room

1) Automobile repair workshop

2) Internal combustion engine repair workshop

3) Metal painting workshop

(C) Acetylene gas generator room

(D) Oil store

(E) Material store

(F) Non utility generator room

(G) Garage

(H) Gymnasium

(I) Dormitory

(J) House for counterpart instructors

CHAPTER III THE CONCEPTION OF ESTABLISHMENT OF VOCATIONAL TRAINING CENTRE

Basing on the survey and discussions above-mentioned, the understanding and conclusion between Indonesian and Japanese sides was reached for the Sulawesi Industrial Vocational Training Centre, the outline of which is mentioned below.

(1) Training courses

The training courses at the vocational training centre are classified, as was done at the time of preliminary survey, into basic courses which contain the overall cirricula needed for specific trades and the advanced courses which enable those who finished the basic courses or those who are actually working in the specific field to enhance the technical skills and knowledges. The names of the courses are listed below.

The basic courses	The advanced courses
a) Metalworking	Machine-work including forging, machine-tool-work and bench-work. Sheetmetal-work, welding and gas cutting. Piping-work and fitting.
b) Electric	Electric machinery repair. House installation wiring. Radio and TV repair.
c) Woodworking	Furnitures. Fixtures.
d) Building	Roofconstruction. Bricklaying and reinforcement. Plastering.
e) Auto mechnic	Automobile repair including motorcycle. Internal combustion engine repair including small type marine engine.

As for radio repair course in the electric filed, it is modified into radio-TV repair course in view of the change of situation that TV transmitting station was installed, entailing the TV repair technique. Request

was also raised that the advanced course for enabling the acquisition of energy transmission mechanism repair through engine to screw of small type ships be included in the curricula of internal combustion engine repair course. To meet this request, the prototype is to be provided by the Japanese Government and the establishment of a new advanced course to cover this field is not considered for the time being.

Moreover, the meeting was held with the construction constractor in Ujung Pandang city to check the technical level, which was surveyed at the time of preliminary survey. The shortage of technical men needed for construction of iron structures was disclosed at this meeting and a new request was given that the training course in this field be established. The mission said the establishment of the course would be considered in future.

Basing on the above discussions, the training courses held at the vocational training centre are same as those listed in the report of preliminary study except two courses. Namely, as shown in Record of Discussions, radio repair course, an advanced course in electric field, is modified into radio-TV repair course and the internal combustion engine course, an advanced course in auto-mechanic trade, into the one including small type marine engine.

(2) Targets of trainings

As for targets of trainings, what are modified in this current discussions compared with those at the time of preliminary survey are as follows.

In the electric trade, the target of acquisition of technique to dissolve and assemble TV set (mono-color) is newly added. In automechanic trade, the acquisition of technique to repair small type marine engine, transmission, shaft and screw is added. Moreover, technique of using the tester necessary for auto-repair and internal combustion engine repair is added in view of the establishment of a joint venture with a Japanese auto-mobile maker in Ujung Pandang city. At the time of preliminary survey, this target was set at the level that the engine parts, brake instruments, erectrical parts are repaired without frequent use of tester.

(3) Training period

The training period of six (6) month basic course and six (6) month advanced course are decided tentatively at the time of preliminary survey. The Indonesian Government proposed that the decision of training period for each of the training courses be made after the arrivals of the Japanese experts. The proposal was approved by the Japanese mission.

(4) Number of the trainees

At the time of preliminary survey, total number of trainees were set at 250 for all of five (5) trades of the training, 50 each for one (1) trade of the training and the number allocated for basic and advanced courses in each training trade was to be considered with flexibility. This current survey and discussion affirmed the previous decision.

(5) Equipment to be provided by the Japanese Government

As described in the report of preliminary survey, equipment to be installed in the vocational training centre are mainly composed of basic machinery for processing. In view of targets of training and number of trainees mentioned in (2) and (4) above, attention was given to that one (1) machine for each trainee be materialized, if the machine was meant to enable the trainee to acquire the basic technique.

In consideration of the future role of vocational training centre as a pilot plant in the industrial area in and around Ujung Pandang city, those machinery which are less needed at present are also to be installed.

a. Choice of machinery

i) Machinery for metalworking trade

Since most of the curriculum of bench work course are of manual bench work technique, the handicraft machinery are at basic level. But the practical training site was located near to that of machine work course in order to enable the trainees, if need arises, to get overall training of handicraft machinery.

Machinery for machine work course consist of general basic machinery. The main part of this course is occupied by lathe working and therefor lathe machine is to be desirably distributed to each trainee. The specification for machinery

corresponds to the size of the materials to be processed. A. C. arc. welder used for the sheetmetal-work, welding and gas cutting course are not used frequently in view of the power supply and demand from industrial sector. Therefore the number of engine welder is set relatively large to enable the trainees to have one (1) set for each if the number of A. C. arc. welder is added to that of engine welders. Acetylene gas generator system was selected for gas cutting apparatus, discarding soluble acetylene gas since it was not used and sold actually in Indonesia.

Basic processing machinery are mainly selected for sheet-metal working course, excluding the large-size machines. Shaping machinery, such as oil pressure press or crank press are discarded in view of the scarce supply of metal molds. In addition to the above, pipe treating machine was chosen since it is at least, necessary for pipe treatment to provide sanitary pipes.

In the forging course, the forging work such as tool bits, fire tongs and iron parts for building is the main subject. Therefore air hammer was only chosen as forging apparatus and the forging furnace is to be provided for every two trainees.

ii) Machinery for electric trade

Since the house installation wiring course is mainly composed of training by using the wiring practice board, the equipments such as switch board were chosen. And for the electric machinery repair course, which is mainly to be composed of training of dismantling and assembly of electric motor and transformer, wirings, insulations, those machinery needed for these were chosen.

Machinery necessary for radio-TV repair course were chosen in view of the necessity of training of mono-colour TV repair as described in (2), targets of trainings, above. Teaching materials for the practical training in this course being lacking, one (1) assembly kit of radio is to be provided to each of trainees.

iii) Machinery for woodworking trade

Machinery for furniture course, the contents of which are mainly of manual processing techniques, were decided to be of those general machinery necessary for material processing. Since the woodworking tools, such as planes and saws, used throughout Indonesia are of western specifications, which are quite different from Japanese one, the request for the donation of those tools of western specification were made. This request was approved by Japanese mission.

iv) Machinery for building trade

Since the machinery for wood building course is jointly used with those for woodworking course, the location of practical training site was chiefly considered. As was in the case of furniture course, the woodworking tools were of western specifications.

Machinery necessary for concrete or mortor mixing were selected for brick-laying and plastering courses. No special machine for implementation work was considered as the work is supposedly of manual type. However the rammer and belt-conveyor were selected in view of the future trend, although at present it is done by manpower. No selection was made for the machinery of reinforcement course because manual works are prevailing.

v) Machinery for auto-mechanic trade

At present, auto-repair shops in Indonesia are not generally using testers for automobiles. However, general machinery for checking and repairing are to be installed in view of the future centre's role as a pilot plant of auto-repair since joint plant with Japanese firm is now under way as described earlier. Moreover, one (1) automobile as teaching materials is to be provided to each six (6) trainees.

Machinery for material processing and for repairing are chosen for the course of internal combustion engine repair in consideration of centre's future role as a pilot plant as well.

One (1) engine as teaching material is to be provided for each three (3) trainees. The request for the donation of practical training material showing the energy transmission mechanism through small internal combustion marine engine to screw was approved by the Japanese Mission.

vi) Power generators

At the time of preliminary survey, Indonesian Government requested to have donation of power generator with 150 kVA capacity with the assumption of possible preservation of 200 kVA power from the outside, the record of which is shown on the report. However in this current survey, the situation of unstable power supply from the thermal plant was revealed. Therefore the request was made that the power generator to be donated be of capacity to cover all demand from the main building, workshops, dormitory and houses for counterpart instructors.

The total figure of the request by Indonesian Government was 300 kVA, 50 kVA of which is for lighting demand and 250 kVA for vocational training centre. The Japanese mission decided to make estimate of the power demand after the selection of all necessary machinery for the centre.

The kind, number and specification of the machinery selected, basing on the above principle, are listed in Table 1, List of machinery to be provided by the Japanese Government.

b. Machinery donation progamme

Since Indonesian Government disclosed the plan to start the training of metalworking trade first among others, those machinery and tools for this trade will first be donated. And at the same time, power generator above mentioned will be donated. The donation of machinery and tools for the other training courses will correspond to Table 2, Construction and operation schedule of Sulawesi Industrial Vocational Training Centre.

TABLE 1 List of Machinery to be provided by the Japanese Government

Shop	Machine	Specification	Quantity	Note
Black-Smithing	Forge fire	dia. 510mm (with duct, fan)	5	
	Water tank	Cap. 2.2 m^3	1	
	Air hammer	Cap. 1/8 t	1	
	Pedestal drilling M/C	Swing 540mm	1	
	Hack-sawing M/C	Stroke 150mm	1	
	Double head grinder	Wheel dia. 205mm (with dust collector)	1	
	Hardness tester	rockwell type	1	
	Air compressor	Cap. 10 kg/cm^2	1	
		Tools		
		Measuring instruments		
		Teaching materials		
Bench-work	Shaper	Stroke 400mm	2	
	Shaper	Stroke 650mm	1	
	Pedestal drilling M/C	Swing 540mm	1	
	Bench type drilling M/C	Drilling dia. 13mm	4	
	Double head grinder	Wheel dia. 205mm (with dust collector)	1	
		Tools		
		Measuring instruments		
		Teaching materials		
Machine bench work	Lathe	Between the centre 550mm	7	
	Lathe	Between the centre 810mm	2	
	Lathe	Between the centre 1,250mm	1	
	Pedestal drilling M/C	Swing 540mm	1	
	Bench type drilling M/C	Drilling dia. 13mm	2	
	Shaper	Stroke 400mm	1	
	Shaper	Stroke 650mm	1	
	Universal milling M/C	Table size 270 x 1,100mm	1	
	Vertical milling M/C	Table size 270 x 1,100mm	1	
	Hack-sawing M/C	Stroke 150mm	1	
	Double head grinder	Wheel dia. 205mm (with dust collector)	1	
	Cylindrical grinding M/C	Between the centre 500mm	1	
	Surface grinding M/C	Grinding area 650 x 300mm	1	
	Universal tool and cutter grinding M/C	Between the centre 480mm	1	
	Universal testing M/C	Cap. 30t, 15t, 6t, 3t	1	
		Tools		
		Measuring instruments		
		Teaching materials		

Shop	Machine	Specification	Quantity	Note
Plate and welding	Acetylene gas generator	Cap. 3,200 l/n	1	
	Screw press	Cap. 5t	1	
	Brake press	Cap. 2.3 x 2,000mm	1	
	Bending M/C	Cap. 3.2 x 1,250mm	1	
	Shearing M/C	Cap. 6.5 x 1,280mm	1	
	Lever shear	Cap. 220mm	2	
	Nibbling M/C	Cap. 6mm	1	
	Foot shear	Cap. 1.6 x 1,000mm	1	
	A.C. arc welder	250A	5	
	Engine welder	230A	3	
	Spot welder	2.5KVA	1	
	Pedestal drilling M/C	Swing 540mm	1	
	Bench type drilling M/C	Drilling dia. 13mm	2	
	Pipe bending M/C	dia. 60mm	1	
	Pipe screw cutting M/C	dia. 25 - 76mm	1	
	Hock-sawing M/C	Stroke 150mm	1	
	Shaper	Stroke 400mm	1	
	Double head grinder	Wheel dia. 205mm (with dust collector)	1	
	Gas cutting apparatus	Cap.5 - 60mm	1	
	Air Compresser	Cap. 10kg/cm^2		
		Tools		
		Measuring instruments		
		Teaching materials		
House installation wiring	High voltage switchboard	A.C. 3000/6000V 3ϕ 50H$_2$	1	
	Low voltage switchboard	380ϕ 3ϕ, 220V 1ϕ	1	
	Wiring board	Wood	10	
	Bench-type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 205mm (with dust collector)		
		Tools		
		Measuring instruments		
		Teaching materials		
Electric machinery repair	Running switchboard	M.G.board, A.C.board, D.C.board, Motor operating board	4	
	Insulation resistance tester	5kVA	1	
	Testing generator	D.C. 2.2KW, A.C. 2KW	2	
	Testing transformer	5kVA	2	
	Rectifier	Silicon	1	

Shop	Machine	Specification	Quantity	Note
	Coil winding M/C	Motor 450mmφ, transformer 450mmφ	10	
	Electric dynamometer	3KW	1	
	Motor	Every kinds	10	
	Generator	Every kinds	4	
	Transformer	Every kinds	10	
	Bench type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 205mm (with dust-collector) Tools Measuring instruments Teaching materials		
Radio repair	Vacuum tube circuit experimental equipment	Panel system	1	
	3 Vacuum tube radio experimental equipment	Panel system	2	
	Automatic voltage regulator	Vacuum tube type, transistor type	2	
	Rectifier	Silicon	1	
	Oscilloscope	Cathode-ray tube dia. 5"	10	
	Synchroscope	Cathode-ray tube 6"	3	
	Vacuumtube voltmeter	P type	2	
	Radio	Every kinds	10	
	Television	Every kinds	6	
	Speaker	Portable type	1	
	Record player	4 speed	4	
	Tape recorder	Portable type	4	
	Bench type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 205mm (with dust-collector) Tools Measuring instruments Teaching materials	1	
Farnitures and Fixtures	Dust collector	Wood work M/C (with duct, Cyclone)	1	
	Dust collector	Wood painting (water screen type)	1	
	Drying oven	9KW	1	
	Hand planer	Width 300mm	1	
	Hand planer	Width 400mm	1	
	Surfacer	Width 600mm	1	
	Band sawing M/C	Saw wheel dia. 700mm	1	
	Circular sawing M/C	Saw dia. 400mm	1	
	Cross cut sawing M/C	Saw dia. 400mm	1	

Shop	Machine	Specification	Quantity	Note
	Universal sawing M/C	Saw dia. 400mm	1	
	Square drilling M/C	Chisel size 25mm	1	
	Electric hand planer	0.4KW	5	
	Electric hand Saw	0.4KW	5	
	Rooter	20,000 r.p.m.	1	
	Wood lathe	Between the centre 1.070mm	1	
	Fret Sawing M/C	Table size 304mmϕ	1	
	Sander	Portable type	5	
	Wood press	Cap. 20t	1	
	Saw shapener	Band saw, circular saw	1	
	Bench type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 300mm (with dust-collector)	1	
	Universal tool and cutter grinding M/C	Grinding length 600mm	1	
	Air compressor	Cap. 83 l Tools Measuring instruments Teaching materials	1	
Brick laying and plastering	Concrete mixer	Cap. 0.075m^3	1	
	Mortar mixer	Cap. 0.06m^3	1	
	Belt conveyer	Motor, engine	2	
	Rammer	Cap. 50kg	1	
	Sand shifter	0.2KW	1	
	Double head grinder	Wheel dia. 205mm (with dust-collector)	1	
	Transit	x25	2	
	Level	x30	2	
	Plone table	Size 500 x 410mm Tools Measuring instruments Teaching materials	5	
Automobile repair	Brake shoe grinder	Grinding dia. 150-410mm	1	
	Brake lining bonding oven	Oven size 410mmϕ	1	
	Brake drum lathe	dia. 150 - 600mm	1	
	Steam cleaner	4 - 7kg/cm^2	1	
	Car washer	15kg/cm^2	1	
	Parts washing stand	Tank cap. 100 l	1	
	Auto lift	Cap. 5t	1	
	Air lift	Cap. 2.5t	4	
	Brake tester	Cap. 3,000kg	1	
	Chassis dynamometer	Cap. 3,000kg	1	

Shop	Machine	Specification	Quantity	Note
	Speedometer tester	Portable type	1	
	Wheel balancer	Tire size 490 - 736 mmϕ	1	
	Headlight tester	Screen type	1	
	Side slip tester	Cap. 1,500kg.	1	
	Motor vehicle	Every kinds	4	
	Bench type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 205mm (with dust-collector)	1	
	Hydraulic press	Cap. 60t	1	
	Battery charger	Silicon	1	
	Air compressor	3.7KW	2	
	Dust collector	Metal painting (water screen type)	1	
	Infrared rays stand	250W x 12 Tools Measuring instruments Teaching meterials	2	
Internal combustion engine repair	Cylinder boring M/C	Boring dia. 67 - 165mm	2	
	Stationary honing M/C	Honing dia 30 - 160mm	2	
	Pin hole honing M/C	Honing dia. 13 - 52mm	1	
	Valve seat grinder	Valve seat dia. 28-65mm	1	
	Valve seat grinder	Valve seat dia. 38-160mm	1	
	Valve refacer	Chuck cap. 6 - 14.5mm	1	
	Crankshafe grinder	Swing 420mm	1	
	Surface grinder	Wheel dia. 280mm	1	
	Diesel injection pump tester	8 cylinder	1	
	Parts washing stand	Tank cap. 100 l	1	
	Engine analyzer	8. sets	1	
	Engine dynamometer	220PS/4,000 r.p.m.	1	
	Engine	Every kinds	8	
	Bench type drilling M/C	Drilling dia. 13mm	1	
	Double head grinder	Wheel dia. 205mm (with dust-collector)	1	
	Hydraulic press	Cap. 60t Tools Measuring instruments Teaching materials	1	
Audio-Visual aide		16mm projector, slide projector, O.H.P., V.T.R., Film and slides, etc.		
Non-utility generator		Dieselengine generator, etc.		

c. Voltage and frequency used

Voltage and frequency used at the vocational training centre are as follows.

The case of single phase;	Maximum power used is under 5 kw and the voltage is 220 v, frequency 50 Hz.
The case of three phase;	power used is 5 kw or more and the voltage is 380 v, frequency 50 Hz.

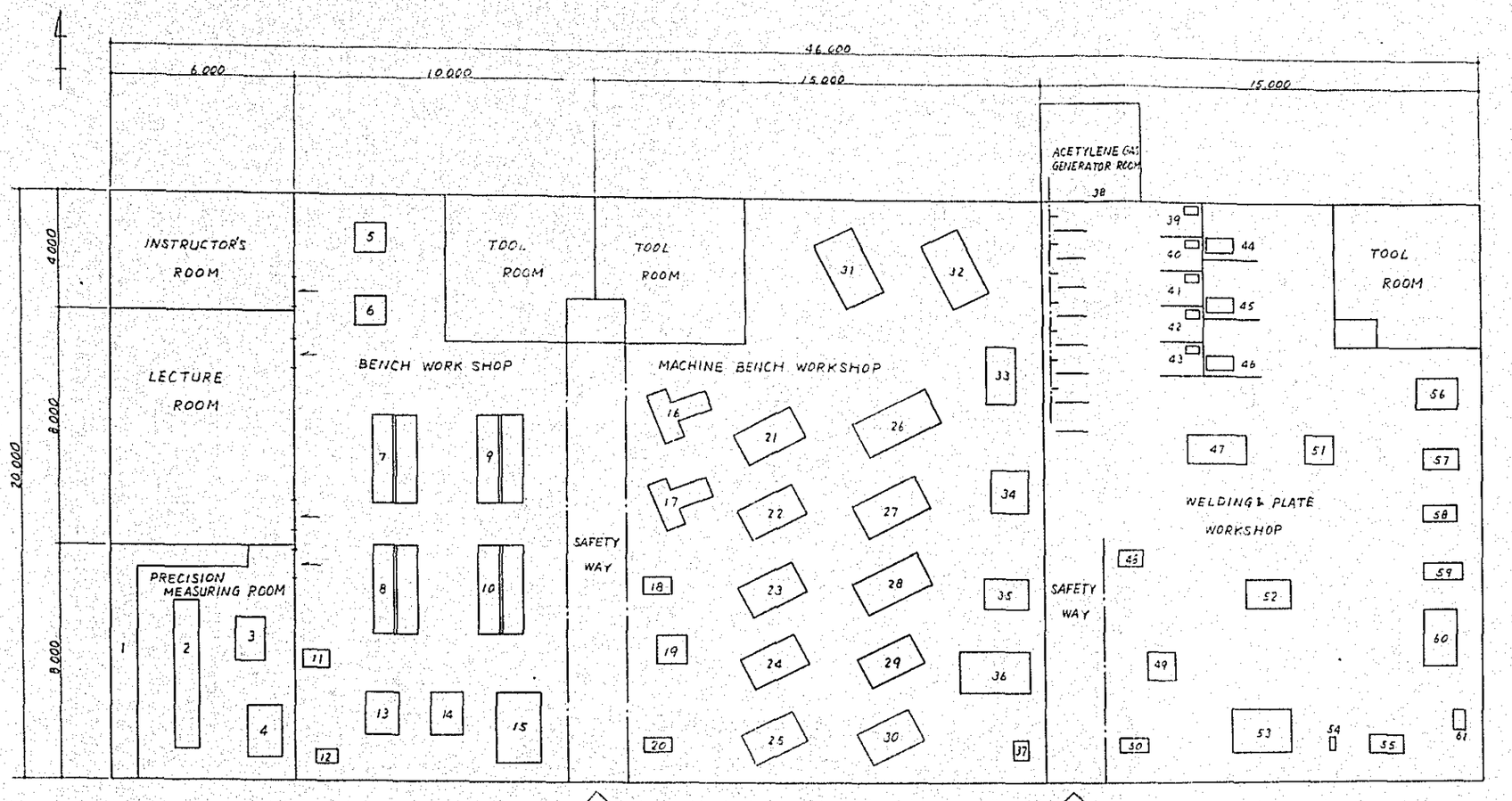
(6) Building

a. The acrage of workshops

At the time of preliminary survey, the rough estimate of total acrage of workshops were shown in order to facilitate the explanation for building budget to BAPPENAS. After making the selection of numbers and specifications for machinery in line with the choice of machinery, (1) above, the layout of machines and equipment for each of the trades, as shown in Fig. I, are stipulated and the actual acrage needed for the workshops are listed. Indonesian Government agreed the proposed acrage and promised to preserve this. The acrage for main building and the workshops are shown below.

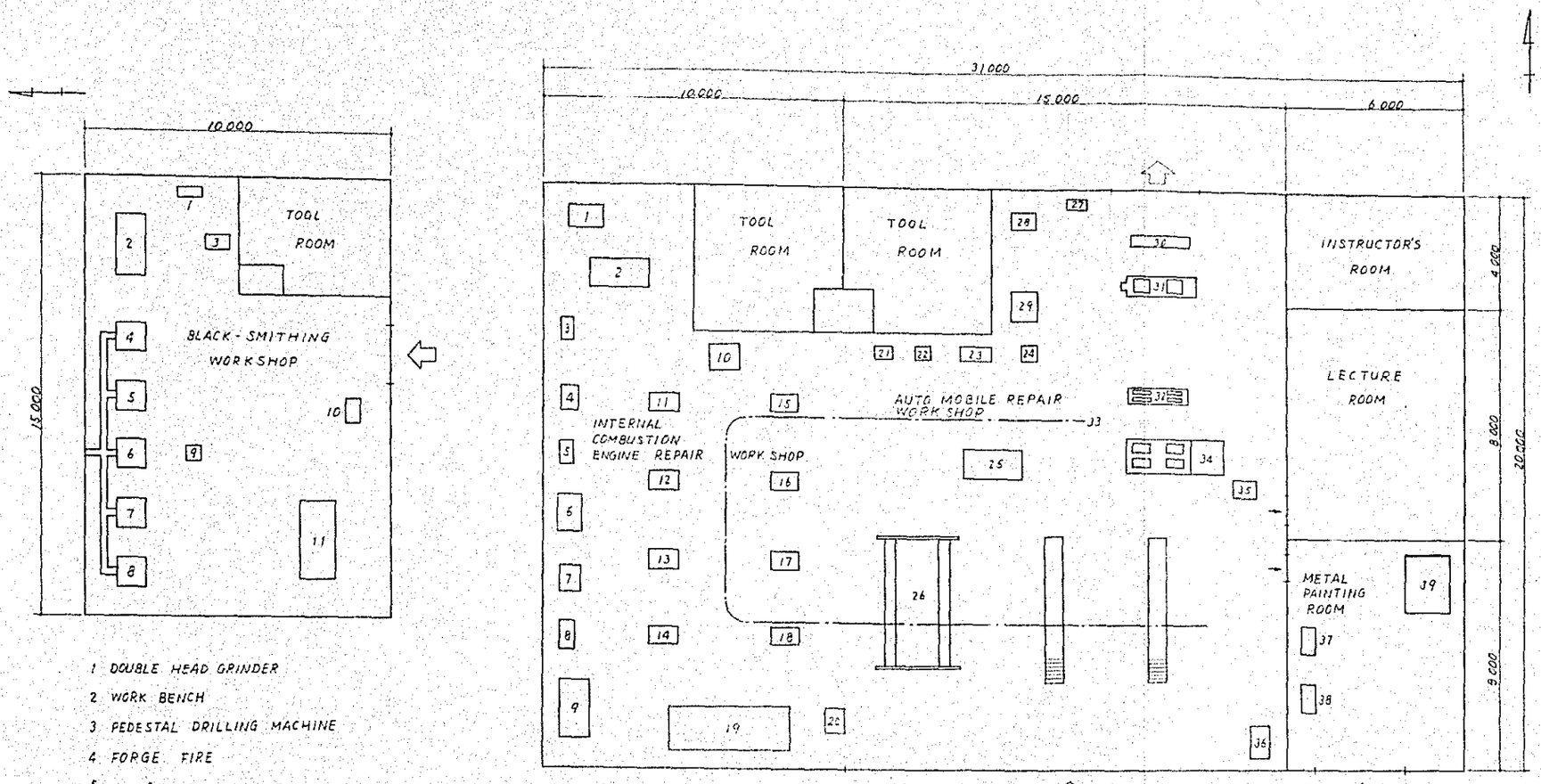
b. Layout of buildings

Before starting from Japan the Japanese Mission prepared the plan figures for main building and for workshops as the first proposal for constructing the centre. Whereas Indonesian Government, basing on the report of preliminary survey, preserved Rp. 30,000,000 only which is equivalent to the construction of 1,000 m^2 workshop of metalworking trade. Therefore, the discussion was held how to construct the workshop of 1,000 m^2. The Indonesian Government proposed that the training of two (2) trades both of metalworking and auto-mechanic be started simultaneously, and that, even partly, the construction of workshops for both trades be made, entailing the request of donation of basic machinery necessary for two (2) trades at the early stage. The Japanese Mission counterproposed that the simultaneous commencement of two (2) trades be impossible in view of the locations of buildings, functions of the workshops, installation and maintenance of machinery and effects of trainings. As a result,



1 PRECISION MEASURING INSTRUMENT SHELF	9 WORK BENCH	17 VERTICAL MILLING MACHINE	25 LATHE (4')	33 WORK BENCH	41 A.C. ARC WELDER	49 SCREW PRESS	57 SPOT WELDER
2 "	10 "	18 PEDESTAL DRILLING MACHINE	26 " (8')	34 UNIVERSAL TOOL & CUTTER GRINDING MACHINE	42 "	50 HACK-SAWING MACHINE	58 PIPE SCREW CUTTING MACHINE
3 MEASURING BENCH	11 PEDESTAL DRILLING MACHINE	19 MARKING-OFF TABLE	27 " (6')	35 SHAPER (400 mm)	43 "	51 SURFACE PLATE	59 NIBBLING MACHINE
4 UNIVERSAL TESTING MACHINE	12 DOUBLE HEAD GRINDER	20 HACK-SAWING MACHINE	28 " (")	36 " (650 mm)	44 ENGINE WELDER	52 BENDING MACHINE	60 BRAKE PRESS
5 MARKING-OFF TABLE	13 SHAPER (400 mm)	21 LATHE (4')	29 " (4')	37 DOUBLE HEAD GRINDER	45 "	53 SHEARING MACHINE	61 DOUBLE HEAD GRINDER
6 "	14 " (")	22 " (")	30 " (")	38 ACETYLENE GAS GENERATOR	46 "	54 LEVER SHEAR	
7 WORK BENCH	15 " (650 mm)	23 " (")	31 CYLINDRICAL GRINDING MACHINE	39 A.C. ARC WELDER	47 WORK BENCH	55 FOOT SHAR	
8 "	16 UNIVERSAL MILLING MACHINE	24 " (")	32 SURFACE GRINDING MACHINE	40 "	48 PEDESTAL DRILLING MACHINE	56 SHAPER (400 mm)	

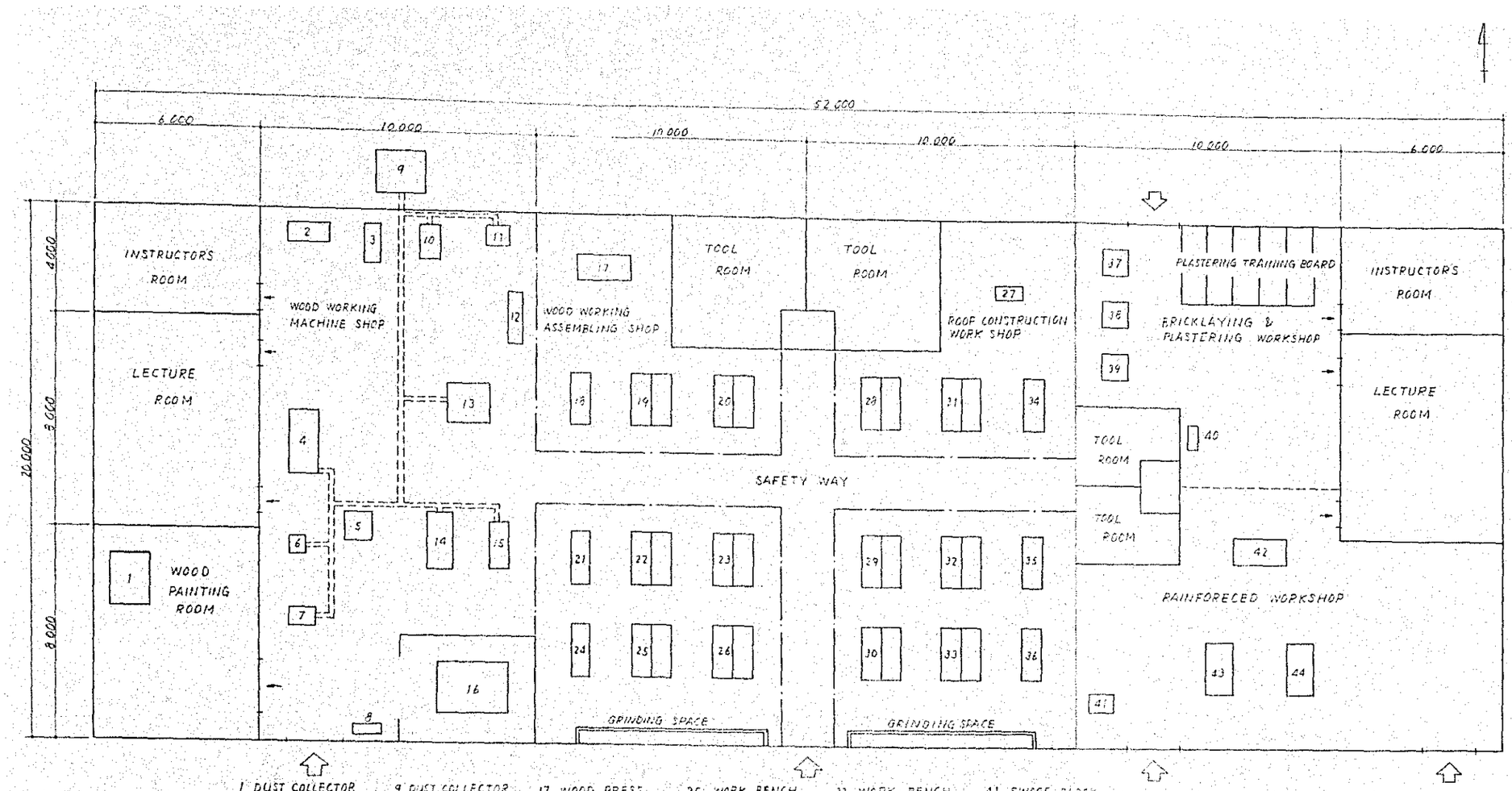
Fig. I Layout of the Machines and Equipment



1 DOUBLE HEAD GRINDER
2 WORK BENCH
3 PEDESTAL DRILLING MACHINE
4 FORGE FIRE
5 "
6 "
7 "
8 "
9 WATER TANK
10 HACK-SAWING MACHINE
11 AIR HAMMER

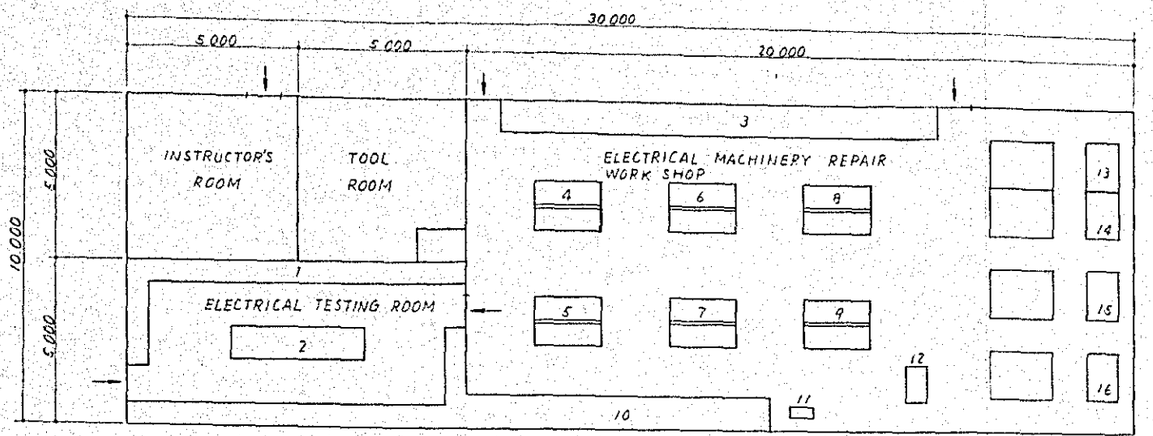
1 DIESEL INJECTION-PUMP TESTER	9 STATIONARY HONING MACHINE	17 ENGINE STAND	25 WORK BENCH	33 MONORAIL HOIST		
2 WORK BENCH	10 PARTS WASHING STAND	18 "	26 4 POSTS LIFT	34 CHASSIS DYNAMOMETER		
3 DOUBLE HEAD GRINDER	11 ENGINE STAND	19 CRANKSHAFT GRINDER	27 DOUBLE HEAD GRINDER	35 " CABINET		
4 HYDRAULIC PRESS	12 "	20 ENGINE DYNAMOMETER	28 HYDRAULIC PRESS	36 STEAM CLEANER		
5 VALVE REFACER	13 "	21 WHEEL BALANCER	29 PARTS WASHING STAND	37 INFRARED RAYS STAND		
6 SURFACE GRINDER	14 "	22 BRAKE DRUM LATHE	30 HEADLIGHT TESTER	38 "		
7 PIN HOLE HONING MACHINE	15 "	23 BRAKE SHOE GRINDER	31 SIDE SLIP TESTER	39 DUST COLLECTOR (WATER BOOTH)		
8 STATIONARY HONING MACHINE	16 "	24 BRAKE LINING BONDING OVEN	32 BRAKE TESTER			

Fig. I-2 Layout of the Machines and Equipment



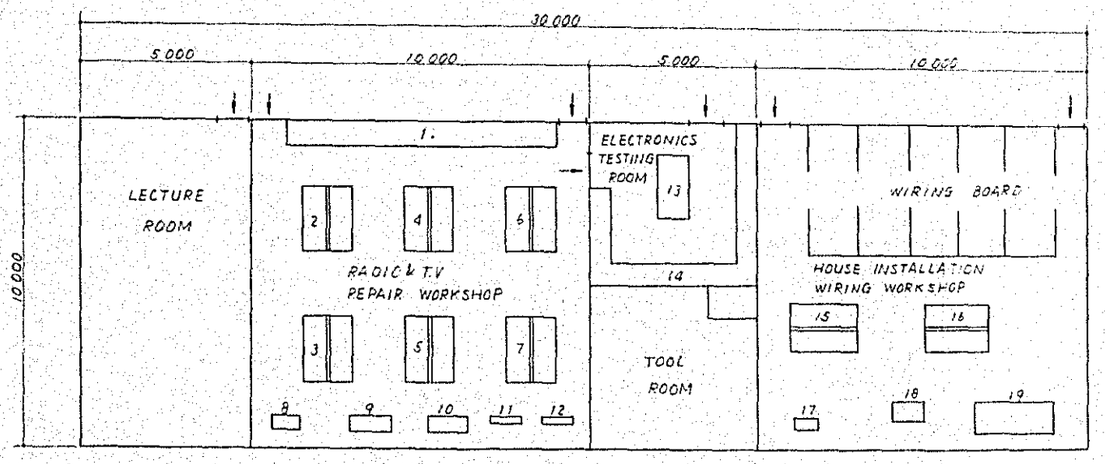
1 DUST COLLECTOR (WATER BOOTH)	9 DUST COLLECTOR (CYCLONE)	17 WOOD PRESS	25 WORK BENCH	33 WORK BENCH	41 SWAGE BLOCK
2 UNIVERSAL TOOL & CUTTER GRINDING MACHINE	10 PLOTER	18 WORK BENCH	26 〃	34 〃	42 WORK BENCH
3 FRET SAWING MACHINE	11 SQUARE DRILLING MACHINE	19 〃	27 SAW SHAPENER	35 〃	43 〃
4 CROSSCUT SAWING MACHINE	12 WOOD LATHE	20 〃	28 WORK BENCH	36 〃	44 〃
5 UNIVERSAL SAWING MACHINE	13 SURFACER	21 〃	29 〃	37 SAND SHIFTER	
6 CIRCULAR SAWING MACHINE	14 HAND PLANER(300mm)	22 〃	30 〃	38 MORTAR MIXER	
7 BAND SAWING MACHINE	15 〃 (400mm)	23 〃	31 〃	39 CONCRETE MIXER	
8 DOUBLE HEAD GRINDER	16 DRYING OVEN	24 〃	32 〃	40 DOUBLE HEAD GRINDER	

Fig. I-3 Layout of the machines and Equipment



1st FLOOR

1	SHELF	5	WORK BENCH	9	WORK BENCH	13	RUNNING SWITCH BOARD
2	TESTING BENCH	6	〃	10	COIL WINDING BENCH	14	〃
3	SHELF	7	〃	11	DOUBLE HEAD GRINDER	15	〃
4	WORK BENCH	8	〃	12	ELECTRIC DYNMO-METOR	16	〃



2nd FLOOR

1	SHELF	5	WORK BENCH	9	VACUUM TUBE CIRCUIT EXPERIMENTAL EQUIPMENT	13	TESTING BENCH
2	WORK BENCH	6	〃	10	〃	14	SHELF
3	〃	7	〃	11	VACUUM TUBE RADIO EXPERIMENTAL EQUIPMENT	15	WORK BENCH
4	〃	8	DOUBLE HEAD GRINDER	12	〃	16	〃

17	DOUBLE HEAD GRINDER		
18	LOW VOLTAGE SWITCH BOARD		
19	HIGH VOLTAGE SWITCH BOARD		

Fig. I-4 Layout of the machines and Equipment

the original plan that trainings of metalworking are started earlier than the other was approved by both sides.

Since the design shown in the layout of the first proposal could not be adopted for the construction of workshop of 1,000 m^2, discussion was held how to locate the workshop of metalworking as well as how to schedule the construction in the coming years.

Thus the layout shown in Fig. II was stipulated. The Japanese Mission requested to construct one (1) block of building including rooms for experts and classrooms in the first year of the schedule. This request was accepted by the Indonesian Government, although the new layout exceeded the Indonesian plan of 1,000 m^2 by 70 m^2. The construction of other workshops are to be undertaken, basing on the layout shown in Fig. II, in line with the schdule of commencement of each training course as the annual construction budget is to be disbursed from BAPPENAS.

As for the structure of buildings, the reinforced concrete structure with steel-framed roof is now prepared by Indonesian Government.

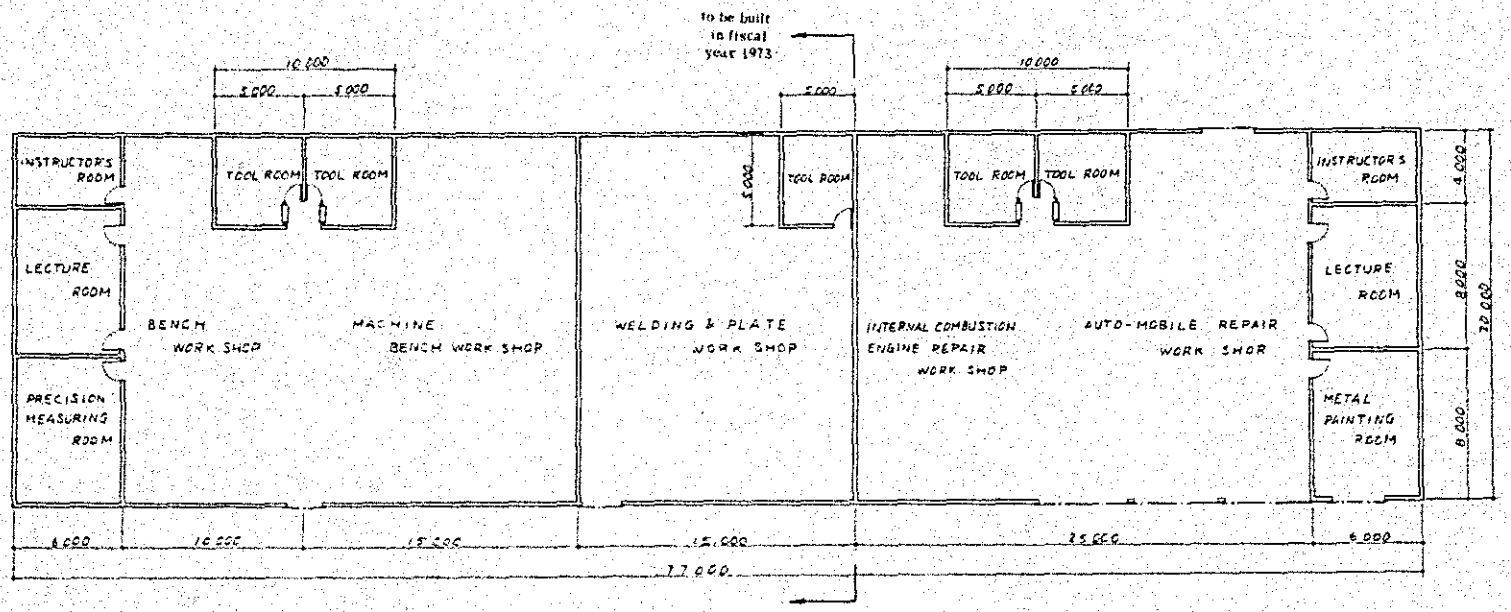
Following constructions were made for the layout of the main building and workshops.

i) Main building

Since the lectures held in classrooms are desirably linked with the practical training, thus enhancing the training effects, the classrooms are generally attached to the workshops and only the minimum number of classrooms are attached to the main building.

The audio-visual classroom is designed in view of the centre's future role as a pioneer of audio-visual trainings for all vocational training centre, although the training by way of audio-visual textbooks are not popular yet.

The exhibition room for the work and materials is also designed in consideration of the centre's important role in and around Ujung Pandang city.



METAL WORKING SHOP & AUTOMECHANIC SHOP PLAN

Fig. II Layout of Main Building and Workshops

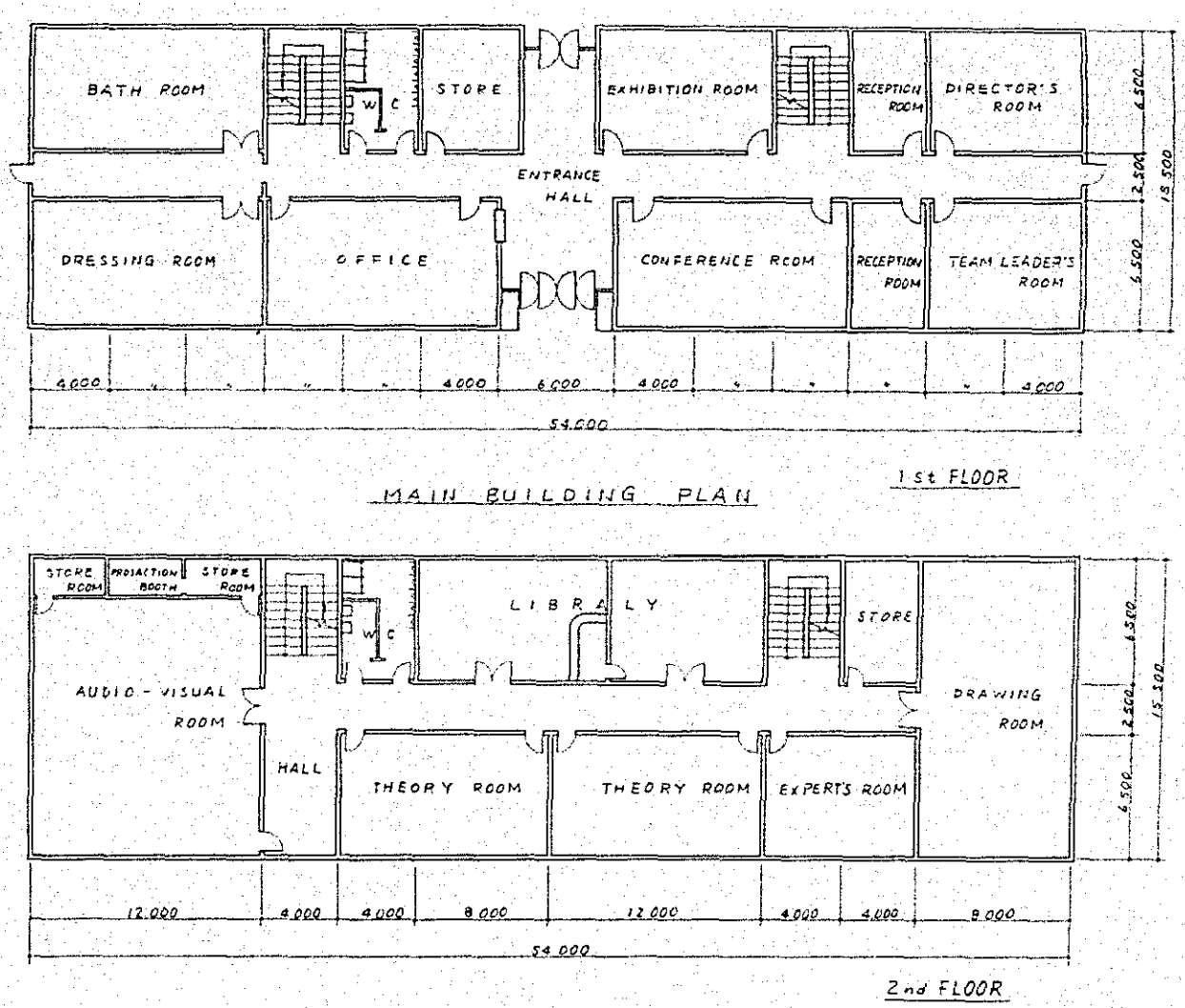


Fig. II-2 Layout of Main Building and Workshops

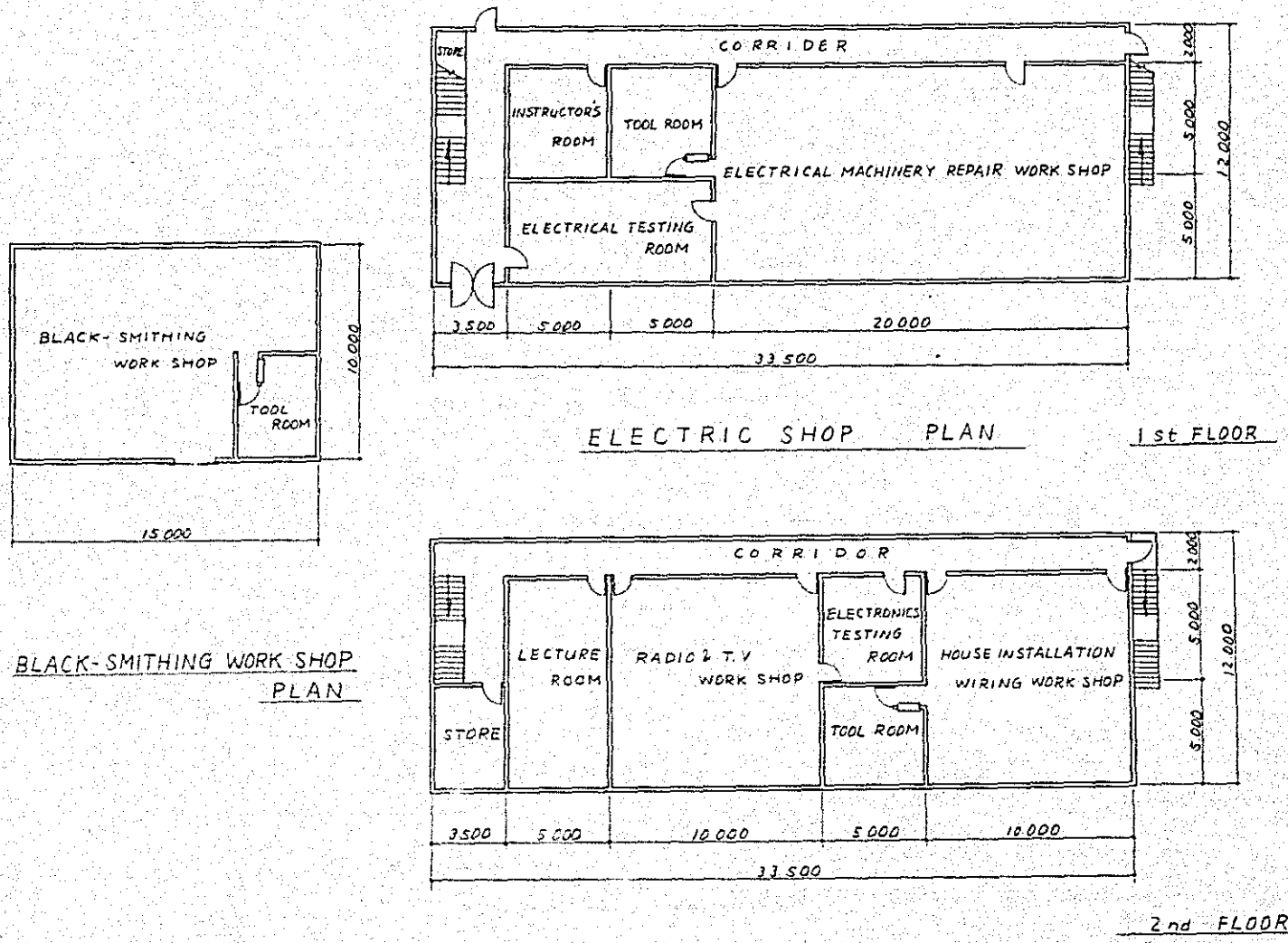
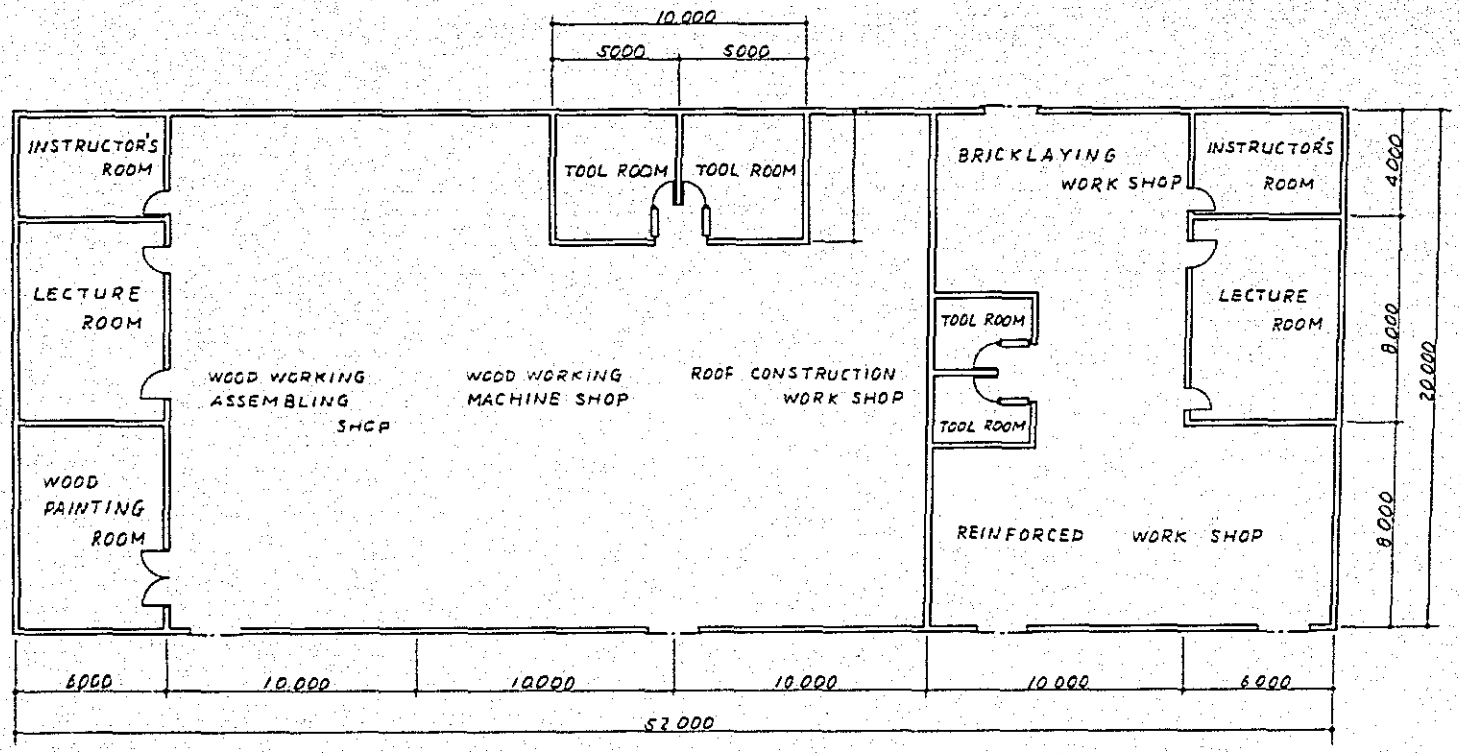
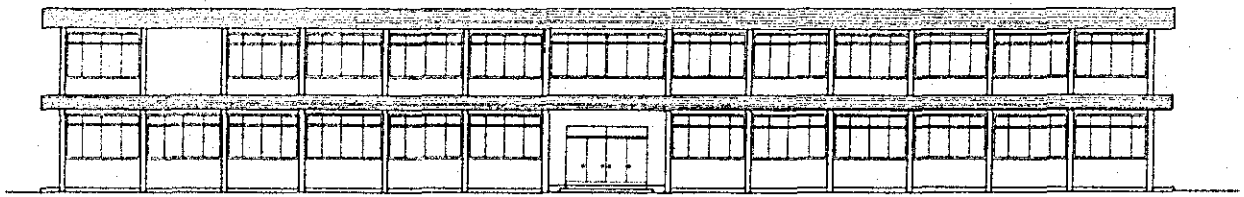


Fig. II-3 Layout of Main Building and Workshops



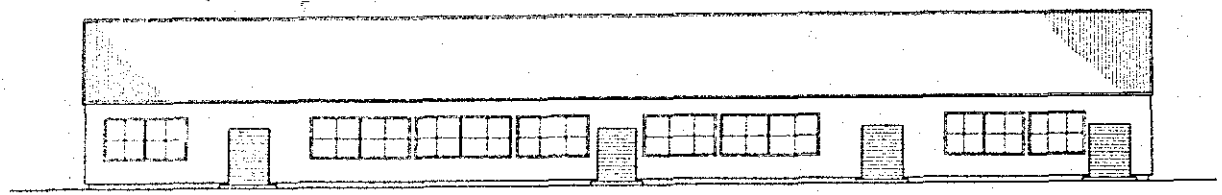
WOOD WORKING SHOP & BUILDING SHOP PLAN

Fig. II-4 Layout of Main Building and Workshops



MAIN BUILDING ELEVATION

Fig. II-5 Layout of Main Building and Workshops



WOOD WORKING SHOP & BUILDING SHOP ELEVATION

Fig. II-6 Layout of Main Building and Workshops

ii) Workshops

In compliance with the three (3) year budget disbursement schedule, as described before, workships similar each other are installed in a same building in order to promote the common and effective use of the machinery.

The location of tool rooms are basically to be chosen at the convienient place for the trainees at their practical training. However the proposal by the Indonesian Government that the room be jointly used by similar courses from the standpoint of maintenance was accepted.

The workshop for forging course and for electric courses (electric machinery repair workshop) are located in separate buildings in view of the characteristics of the trainings. Warehouses for materials and oil, generator room and gymnasium are also in separate buildings.

The capacity of the dormitory is now considered to be about 200 trainees (6 m^2/trainee). The houses for Japanese experts are to be constructed in a same site. Moreover, the Indonesian Government expressed that the houses for experts and their family were also to be built in the same site.

iii) Location of the buildings in the site

The Japanese Mission prepared the location plan in which the main building and workshops were facing southern direction to avoid the exposure to afternoon sunshine and were extending through east to west (See Fig. III). The Indonesian Government counter proposed the plan in which warehouses for materials and tools were located in the centre of workshops and the main building was facing east, with the rectangular exposure to the workshops, because of overall visual command of all workshops, easy maintenance of materials and tools and of easy supervision of the locker rooms for trainees. The counterproposal was accepted (See Fig. IV). The Indonesian Government sees to it that the workshop of metalworking trade constructed in the first year of the schedule, will be guarded with wire netting and by guard-men with the light by a small generator at night time.

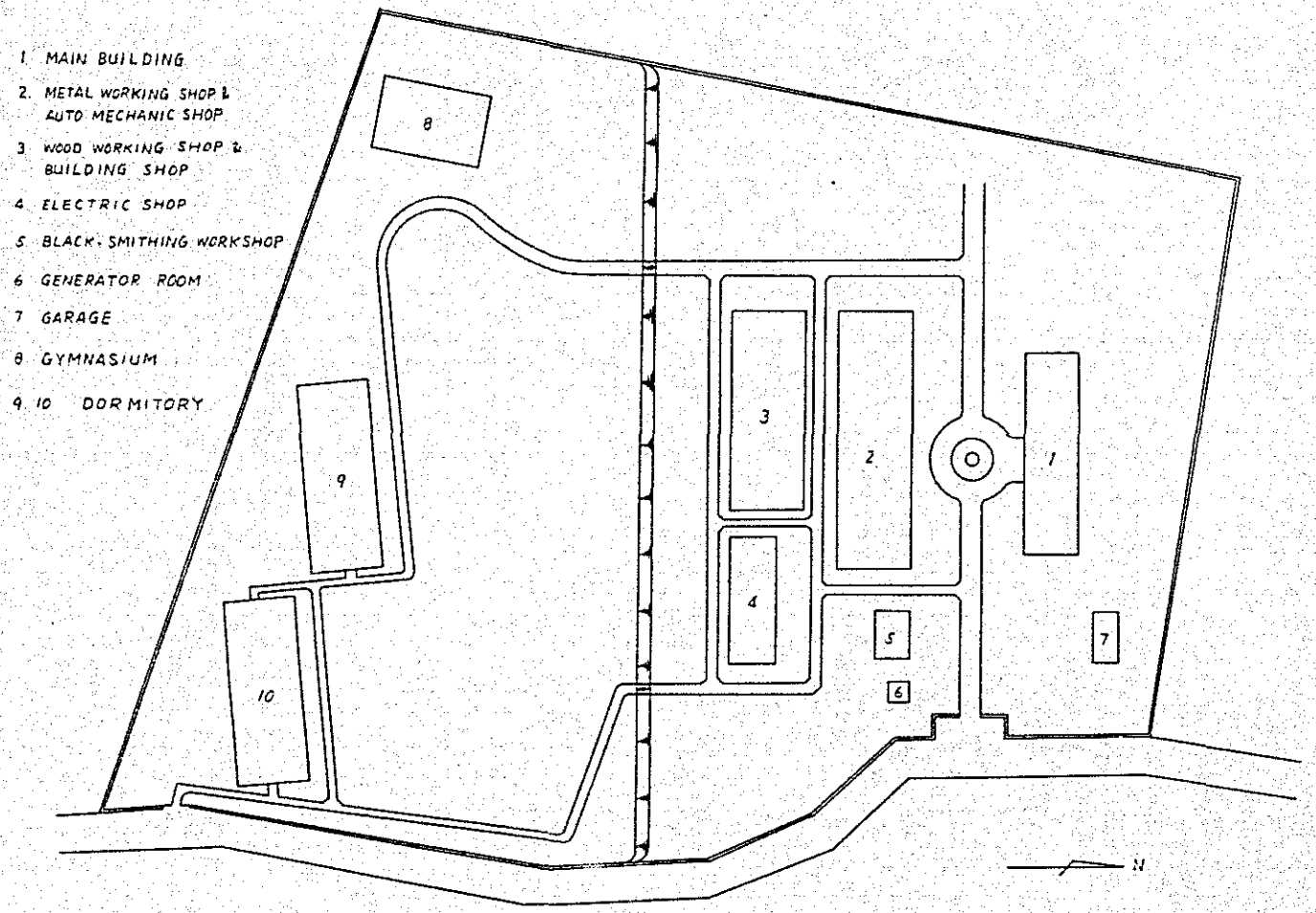


Fig. III Location Plan of Building and Workshops

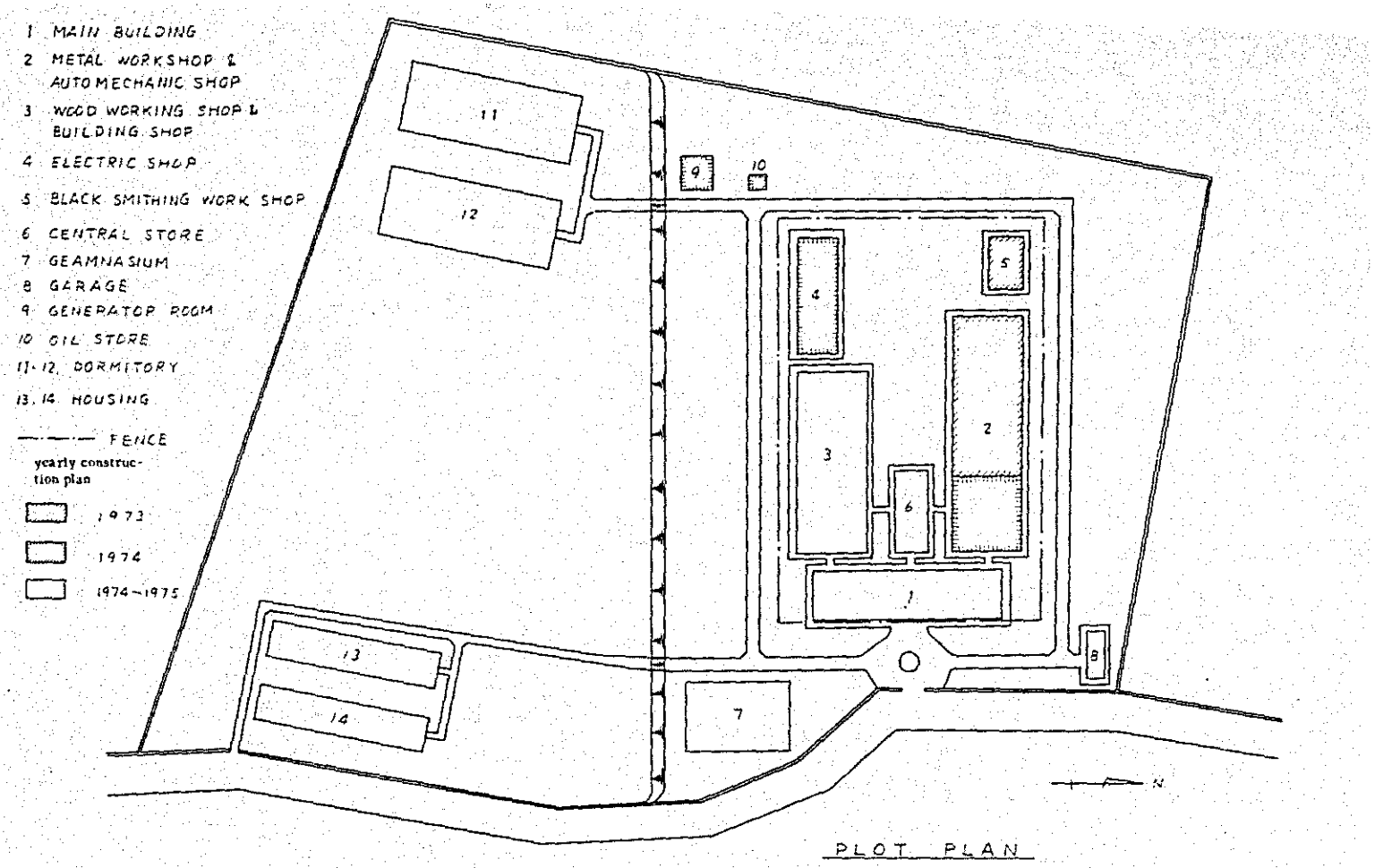


Fig. IV Final Location Plan of Building and Workshops

It also considers that when all workshops are completed, they will be surrounded by the fence, leaving the trainee's entrance only at the central part of the main building.

iv) Construction contracters

At the stage of construction programming, Department of public works, the local community office and Department of manpower, transmigration and cooperatives are to constitute a committee and this committee is to make overall supervision. And the construction of buildings will be undertaken by a construction of buildings will be undertaken by a contracter designated by Department of public works. The field supervision, in this stage, will be made by the liaison offices of Department of public works, Department of manpower, transmigration and cooperatives and local community office.

(7) Site

a. Location

At the time of preliminary survey, the site of 5 ha. site at the back of the cemetry for unknown soldiers, a hundred (100) meter away from the trunk road leading to the Hasanuddin airport was shown as the proposed project site. But the site of 5 ha. facing the trunk road was preserved (See Fig. V).

b. Form of the site

The form of the site is approximately of trapezium shape. To the north, only the concrete fence for the cometry of unknown soldiers is found and no obstacles are around (See Fig. VI). A slight gradient was found from the north to south, the height of which is unknown. By way of making one step, this gradient will be overcome.

c. Geology

The geology of the site is of clay and fairly good. However the site may be subject to the sandy wind at dry season. The exact soil resistivity is unknown due to lack of survey but judging from the fact that a thermal power plant is established around there, the soil is

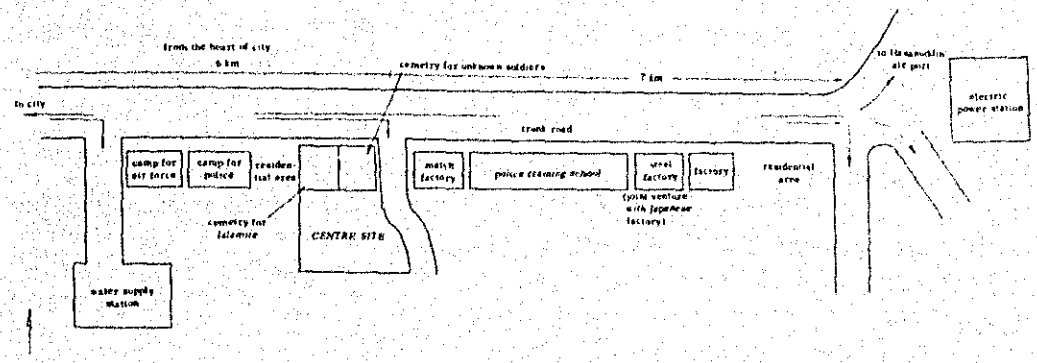


Fig. V Location of the Centre

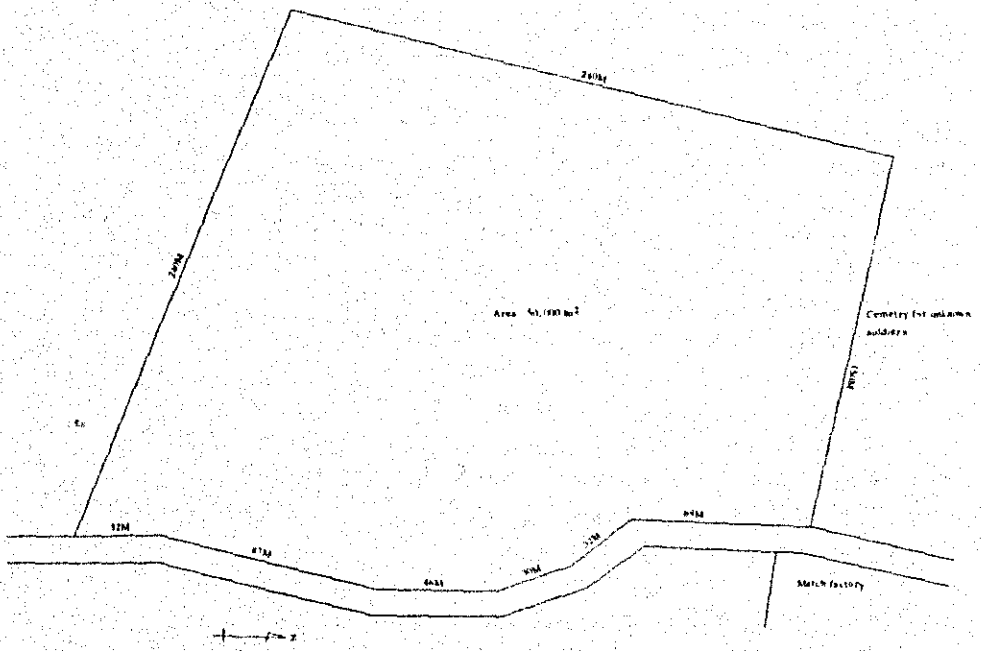


Fig. VI The site of the Centre

not considered so soft. Anyway the data will be submitted later.

d. Land owner

The owner is the South Sulawesi State but the land is now leased to the private and used as farm. However, since the compensation budget of Rp. 12,000,000 was reserved for this fiscal year, there will be no problem in using the land as the project site. The procedure to get the permission of the Governor, South Sulawesi State, for the use of the land was already cleared.

e. Land readjustment

As described above, relatively large amount of budget for land compensation was reserved for this year and the budget for land readjustment of the entire project site was not reserved. Therefore the site for workshops to be constructed in the first year of the schedule was to be readjusted and the rest of the project site was to be readjusted according to the building construction schedule.

However, during the discussions, the arrival timing of equipment and machinery in Indonesia were set at July 1974, later than the original schedule for Indonesian convieniences. Accordingly, the transportation budget now dispensed with are to be allocated for the land readjustment. In view of the sandy wind in dry season, as described c. above, care should be taken to leave the growing bamboo and trees as much as possible. Moreover, the Japanese Mission requested that the "step" mentioned b. above be made between workshops block and the playground, not workshops.

f. Road

The budget of Rp. 4,000,000 was reserved for the pavement of the road with 100 meter length and 10 meter width connecting the entrance of the centre with the trunk road mentioned in a. above. Therefore the road to the entrance of the vocational training centre will be paved.

g. Water supply and drainage

Water resevoir is to be made near the centre and the water

supply will be sufficiently provided. However, as for drainage system, there has been no concrete plan.

The Japanese Mission insisted to have the sewarage improvement plan to dispose the waste oil and carbide. The Indonesian Government, though in the future, will dispose the waste materials in the river by way of constructing the 700 meter drainage.

h. Power supply

As described in a. vi) power generator of (5) Equipment to be provided by the Japanese Government above, power supply must be resorted to the independent power generation plant under the condition of frequent black-out or brown-out.

The project site of 5 ha., which was reserved, was finally approved basing on those mentioned above and particularly on the building location of main building, workshops, gymnasium, dormitory, houses location of main building, workshops, gymnasium, dormitory, houses for counterpart instructors as shown in b. of (6) Buildings above as well as on future possibility of expansion of training courses.

(8) Japanese experts

The scope of trainings provided by Japanese experts are generally as mentioned in the report of the preliminary survey. The following points are those revised during the current survey.

a. The training of TV (mono-color) repair is to be added to the electric trade.

b. In b. of II. (2) Outline of discussions and III (1) Training courses in the preceding chapters, the necessary to have the training on energy transmission mechanism through small marine engine to screw was emphasised. The Japanese Mission proposed that the Indonesian counterpart instructors should assume this training, since the Japanese experts in auto-mechanic trade are unable to cover the field. The proposal was accepted by Indonesian Government. Therefore the scope of training of auto-mechanic trade remains same as those of the report of the preliminary survey.

The number of Japanese experts was decided eight (8). This is because Indonesian Government requested, as was done at the time of preliminary survey, to have two (2) experts in metalworking trade by assigning one (1) expert to welding.

The functions and scope of works by Japanese experts are shown in Annex II of Record of Discussions.

The following point are requested by Indonesian Government as for the dispatch of experts.

i) English is mainly used as teaching media both in class and in the practical training. But among the trainees, some can not understand English. Accordingly if possible, the Japanese experts should study Indonesian language before starting from Japan.

ii) The Japanese experts should know, to some extent, the Indonesian customs.

(9) Indonesian counterpart instructors

The Indonesian Government considers that four (4) counterpart instructors are to be assigned to each trade. The counterpart instructors are of bachelor degree, and are trained to be teachers for six (6) months at the Bandung Industrial Vocational Training and Managerial Centre. They are expecting to get six (6) months to one (1) year training in Japan.

The Indonesian Government requestes to send at least two (2) counterpart instructors in each training trade to Japan. The Japanese Mission agreed to accept two (2) counterpart instructors in metalworking trade in this fiscal year, leaving the rest of proposal in the consideration for next year.

The composition and number of Indonesian counterpart instructors are listed in Annex V of Record of Discussions.

CHAPTER IV TIME SCHEDULE FOR CONSTRUCTION AND OPERATION OF VOCATIONAL TRAINING CENTRE

The mission had several discussions, if necessary with detailed scrutinies, on the above items with the Department of Manpower, Transmigration and Cooperatives and the conclusion was reached as for the construction schedule, the outline of which is as follows.

(1) The commencement of the training

The following timings of the commencement of each training course are decided in view of the construction budget for 1,000 m^2 workshop for the fiscal year 1973, the budget for the main building being to be reserved in the next year or years after next and the machinery as donation from Japan being to be supplied for three (3) years starting from the fiscal year 1973.

(i)	metalworking	January, 1975
(ii)	auto mechanic	July, 1975
(iii)	electric	October, 1975
(iv)	wood working	July, 1976
(v)	building	July, 1976

(2) Construction of buildings

The Indonesian Government wished that the 1,000 m^2 workshop to be constructed in 1973 fiscal year would be used for metalworking and partly for auto mechanic trades and that the training of both trades should be commenced simultaneously. But mainly due to the ploblem of orderings installations and locations of machinery, the workshop is to be completed and used only by metalworking trade. The workshops, main building and its annexes are to be constructed from fiscal year 1974 but the construction of gymnasium, dormitory and houses for counterpart instructors may be undertaken in the years after next due to the budget constraints.

(3) Installation of machinery

The consideration was paid to that the machinery donated would be delivered to Indonesia six (6) months prior to the commencement of the training, allowing two (2) or three (3) months for the installation and trial operation. Machinery donated will be directly landed at Ujung Pandang port and transported to the centre. The custom clearance is to be carried out at the responsibility of the Department of Manpower, Transmigration and Cooperatives.

The departure of machinery from Japan will be adjusted in accordance with the Indonesian budget disbursement system, although the machinery were originarily to be delivered to Indonesia by the end of fiscal year 1973.

(4) Dispatch of Japanese experts

In order to operate the vocational training centre smoothly as well as to enable Japanese experts to get acquainted with the Indonesian customs, the Japanese experts are to arrive at Indonesia one (1) year prior to the actual commencement of each training course. The first party comprising of team leader, two (2) experts of metalworking and the liaison officer will be sent to Indonesia January 1974.

(5) Assigning the Indonesian administrative staff and the trainings for counterpart instructors in Japan

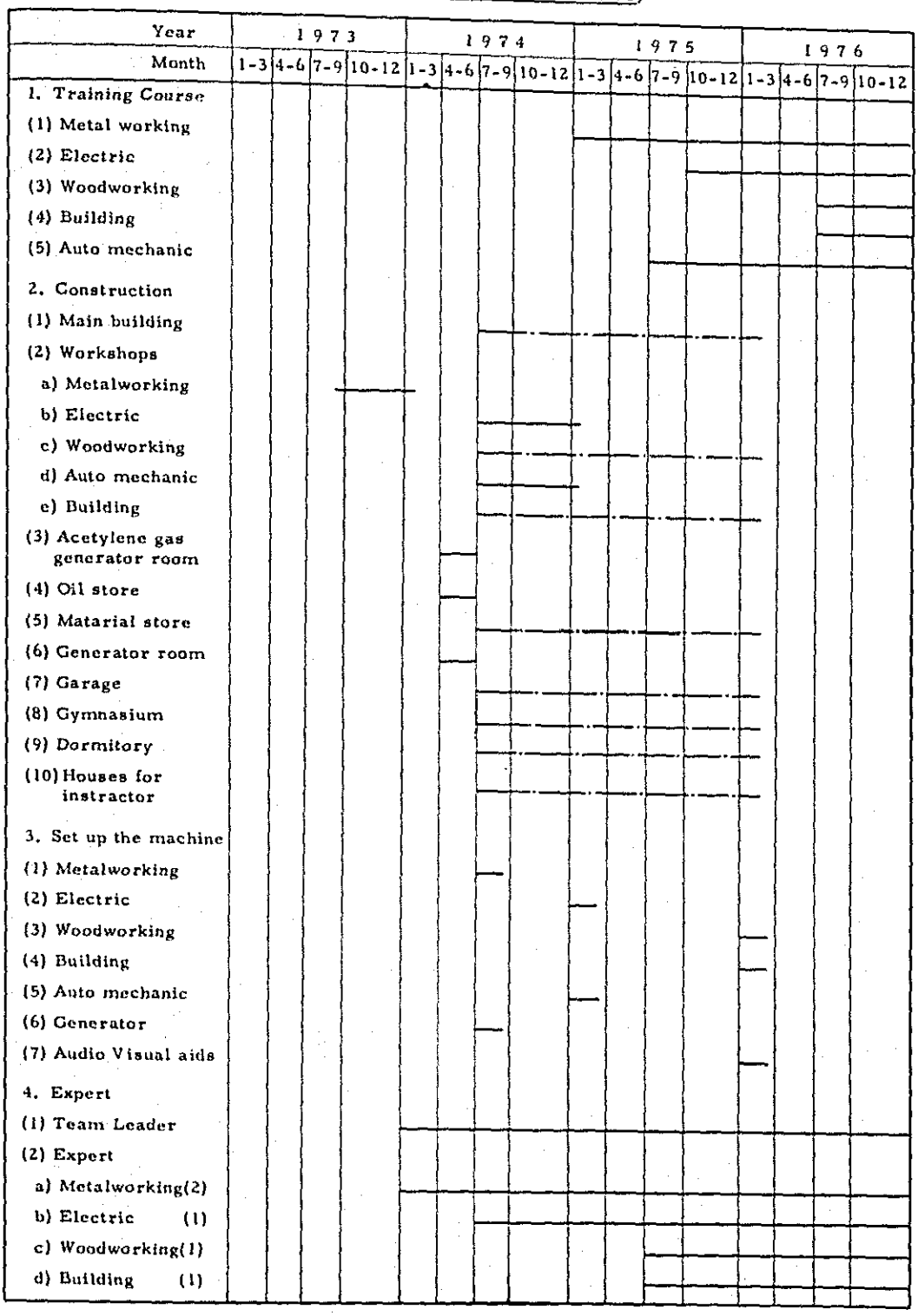
Since the Indonesian administrative staff are to be assigned at the same time of the commencement of the training course, the commencement of metalworking taining in January 1975 was considered in the allocation plan.

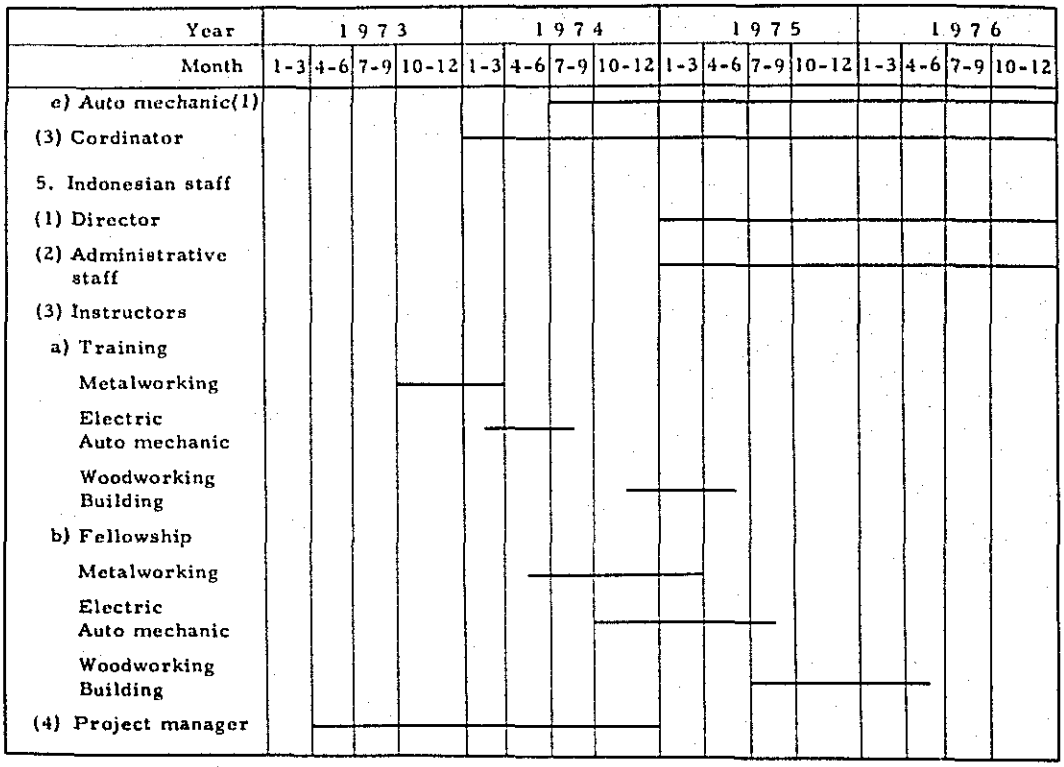
The counterpart instructors are to be recruited in accordance with the commencement timing of each trade and to be trained for six (6) months in Indonesia. Therefore, one (1) or two (2) counterpart instructors of each trade is to be sent to Japan for six (6) months to one (1) year. Accordingly, the counterpart instructors for metalworking trade are to be recruited and selected September 1973, trained for six (6) months from October 1973 and sent to Japan from May, 1974 to March, 1975 for training.

Those counterpart instructors other than sent to Japan are to be directly sent to the centre after the training in Indonesia and assigned to prepare for the commencement of the training courses.

TABLE 2 Construction and operation schedule of Sulawesi Industrial Vocational Training Centre

(Time Schedule for the operation of the SIVTC)




Year
1973
1974
1975
1976
Month
1-3
4-6
7-9
10-12
e) Auto mechanic(1)
(3) Cordinator
5. Indonesian staff
(1) Director
(2) Administrative staff
(3) Instructors
a) Training
Metalworking
Electric Auto mechanic
Woodworking Building
b) Fellowship
Metalworking
Electric Auto mechanic
Woodworking Building
(4) Project manager

ANNEXES

ANNEX I

Informations to be confirmed by the Japanese Implementation Survey Mission for the Establishment of the Sulawesi Industrial Vocational Training Centre

30 May 1973

Necessary informations be given on the items mentioned below:

1. Land

(1) Size or area of land to be utilized for the establishment of the Centre and data of its subsoil condition for the study of the building foundation.

(2) Necessary procedures for the acquisition of the land.

(3) Necessary amount to be need for the acquisition of the land in the First Year's Development Budget.

(4) Nominal ownership after acquisition of the land.

2. Building

(1) Amount to be used for the construction of the buildings and annexes of the Centre in the First Year's Development Budget.

(2) Possibility of measures for acquiring supplemintary budget to be used for the construction of buildings and annexes of the Centre from Second Year's Development Budget.

(3) Yearly construction schedule of the buildings and annexes of the Centre as well as necessary period for construction works in each year.

(4) Condition of existing conduit pipes and drain pipes.

(5) Condition of water supply and drainage of water, chemicals, etc.

(6) Are there any regulations concerning the following which are incidental to the operation of machinery and equipment? Can we be furnished with copies of these regulations, if any?

a) Weight
b) noise
c) powder dust
d) gas
e) and others

(7) Are there any regulations concerning the fowlling and if there are, can we be furnished with copies of there regulations?

a) structure of machinery and equipment

b) electric apparatus like motor, switch, electric heater, etc., and its sturcture, voleume, wiring system, wiring color, etc.

c) arrangement and treatment of high voltage equipment like air-tank, boiler, etc.

d) the treatment of firearms and combustibles

e) usage and handling of poisonous chemicals

f) treatment and disposal of sewage, useless liquid, useless gas, etc.

g) machinery for hoisting or lifting heavy loads

(8) On the following construction and installation work, will the Department of Manpower, the Government of the Republic of Indonesia nominate the technical experts in charge?

a) machinery and equipment

b) water supply and drainage

c) plumbing work for gas, oil, etc. attached to machinery and equipment

d) electric works

(9) What kind of constructor will take construction works of the buildings and annexes of the Centre?

3. Operation of the Centre

(1) Time schedule of openning the courses.

(2) Operating system of the Centre by the Indonesian side.

(3) Process of the election to the Indonesian Project Manager and his responsibility.

(4) Budgetary system of all running expenses necessary for the operation of the Centre.

(5) Constituent and number of the Indonesian staff in the Centre.

(6) Necessary measures to cover the deficit, if any, all running expenses necessary for the operation of the Centre.

4. Trainees

(1) Method of recruitment.

(2) Scale and facilities of dormitories.

(3) Financial support and treatment for the trainees to be admitted to the Centre.

5. Equipment to be granted

(1) Name of the consignee and final destination.

(2) Customs duties and any other changes with respect of the goods provided by Japan.

(3) Necessary procedure of customs clearance.

(Hajime Hosomi)
Head, Japanese Survey Mission

ANNEX II

Answer to questionnaire submitted by the Japanese Implementation Survey Mission from the Department of Manpower, Transmigration and Cooperatives, Republic of Indonesia

June 1973

1. Land:

(1) Site of land utilized for the establishment of the Centre is 5 Ha. in total. Data of subsoil condition will be obtained after the land survey has been done.

(2) The land is owned by the Regional Government.
The government provides the budget to lease the peasants using that site of land.

(3) Budget is allocated for the acquisition of the land reaching the total of 12,500,000 rupiah in the first year period 1973/1974.

(4) The land will be owned by the Ministry of Manpower, Transmigration and Cooperatives after acquisition.

2. Building construction and annexes:

(1) Budget allocated for the establishment of the Centre in the fiscal year 1973/1974 is as follow:-

I.	Remuneration of land (5 Ha)	Rp. 12,500,000. -
II.	Mapping, measuring and sounding of land	" 2,000,000. -
III.	Building construction (workshop) 1,000m. sq.	" 30,000,000. -
IV.	Road construction 1,000 m. sq.	" 4,000,000. -
V.	Fenching, guardhouse and temporary electrical	" 1,650,000. -

	installation		
VI.	Purchasing of 1 vehicle (jeep)	Rp.	2,000,000. -
VII.	Local/handling cost	"	7,500,000. -
VIII.	Electrical installation (partial) to be connected to the state electricity	"	10,500,000. -
IX.	Training of Indonesian Instructors	"	3,000,000. -
X.	Inspecting and Supervising budget	"	1,700,000. -
XI.	Administration cost	"	150,000. -
		Total Rp.	75,000,000. -

(2) Proposed supplementary budget to be used for the building construction and annexes in the first year (1974/1975) reaching the amount of Rp. 150,000,000. -

(3) Yearly construction schedule of building and annexes executed depends on the budget allocation provided by the Government according with the time scheduling agreed by both sides (the Indonesian Government and the Government of Japan).

(4) Drainage doesn's exists and must be constructed afterwards.

(5) Water supply should be obtained from the near by water purification plant.

(6) Such a requlation exists and the Department for Safety of the Ministry of Manpower, Transmigration and Cooperatives is concern with the supervision.

(7) Regulation in force (see appendix attached).

(8) The Government of Indonesia will take care and will be responsible for the construction and installation of machineries and equipment, water supply and drainage, plumbing for gas, oil etc. and electric works.
Technical experts in charge will not be nominated by the Indonesian Government.

(9) Contractor for the construction works will be nominated

through a tender and usually done by private contractors. A supervisory body will be set up and among the members a representative of the ministry of Public Works & Electric Utilization who is resposible for the daily supervision of the project.

3. Operation of the Centre:

(1) The courses will be started based on time schedule agreed by both sides (The Indonesian Government and the Government of Japan).

(2) The recruitment of trainees is based on block entry system and the course duration is 6 till 12 months.

(3) The Head of the Regional Office of the Ministry of Manpower, Transmigration and Cooperatives at Ujung Pandang is appointed as the Project Manager. He is responsible for the executing of the entire construction of the Centre.

(4) The expenses needed for the operational activities of the Centre will be provided by the routine budget yearly.

(5) The total number of the Indonesian Staff for the Centre will be 51.

(6) If any deficit of the budget utilized for operational activities of the Centre occurs, a supplementary budget will be provided by the Central Government.

4. Trainees:

(1) Trainees will be recruited as follows:-

a. Trainees sent by enterprises for initial, accelerated or upgrading training.
b. Unemployed (job seekers) sent by the local or ressort office of the Ministry of Manpower, Transmigration and Cooperatives.

(2) The total dormitories will be able to accomodate 250 trainees.

(3) a. Enterprises concern will bear the training fee for their trainees admitted at the Centre.

b. Trainees recruited as unemployed (job seeker) will have to bear a small amount of the training fee (± Rp. 1,000. -/ trainee/month). The rest will be subsidized by the Government).

5. Equipment to be granted:

(1) The Head of the Regional Office of the Ministry of Manpower, Transmigration and Cooperatives at Ujung Pandang.

(2) Goods provided by the Government of Japan for this project will be free of custom duties.

(3) The bill of loading for goods sent to Indonesia should be delivered to the Ministry of Manpower, Transmigration and Cooperatives in advance before the arrival of the goods.

ANNEX III

On the summary report by the Japanese preliminary sutdy team on establishment of a vacational training centre in Indonesia

November 6, 1972

The preliminary study team on the establishment of a vacational training centre in Indonesia (hereinafter called "The Team") since its arrival has been making a study on the industrial and manpower situation in Indonesia, in close contact with the Department of Manpower, through its visit to the Coordinating Committee for International Technical Co-operation, the ILO office, the Employers' Association and so on. It has also inspected four vocational training centres (Jakarta, Bandung, Malang, and Palembang) as well as the Senior Technical Development School (Jakarta) to look into the reality of vocational training and vocational education.

On the other hand, the Team's visit to Ujung Pandang, South Sulawesi, where a vocational training centre is proposed to be set up, consisted of visits to the South Sulawesi regional office of the Department of Manpower, the Governor's office as well as the Mayor's office and three other governmental agencies, 14 enterprises (some of them are state-own, and some are small-scale), one Industrial High School and the Engineering faculty of Hasanuddin University.

Meanwhile all the members of the Team wish to express their sincere gratitude to the Department of Manpower and to those who did not hesitate to cooperate them and also feel satisfied to have come to the stage which enables the team to make a report to their government in line with the summary attached herewith.

1. The team considers it appropriate to start the technical cooperation project on the establishment of an industrial vocational training centre in Ujung Pandang, South Sulawesi (formerly known as Makassar), given the fundamental line of the regional development policy of the Republic of Indonesia, given the industrial as well as manpower situation of the east

part of Indonesia whose centre is the Province of South Sulawesi and given the importance of Ujung Pandang in the east part of Indonesia.

2. The team considers the following appropriate to the magnitude and outline of the operation of the industrial vocational training centre to be set up in Ujung Pandang.

(1) The training course will be in the following five basic trades:

Metal working	Bench-work, Machine bench-work, Plate, Black-smithing, Acet-Welding and Cutting, Electric Welding, etc.
Electric	House installation wiring, Electric machinery repair, Radio repair, etc.
Woodworking	Furnitures, Fixtures, etc.
Building	Roofconstruction, Bricklaying, Plastering, etc.
Auto mechanic	Automobile repair, Internal Combustion Engine repair, etc.

(TV repair course will be added to the Electric trade in future)

(2) Potential candidates for training will be

(A) those who have no skill (including the un-employed)
(B) workers from Government and private enterprises
(C) the self-employed
(D) others

(3) The Training period will be in principle as follows

(A) Basic training for those who have no skill --- 6 months
(B) Specialized training for those who have finished the basic training course as well as for those who already have certain standard of skill ---------- 6 months

Division of (B) into two periods (each up to three months) will be conceivable in the future whenever the necessity arises.

(4) The number of trainees will be up to fifty persons in each trade and up to 250 in total.

(5) Approximately one Japanese expert will be provided to each trade and the duration of their stay in Indonesia will be three years.

(6) Four counterpart instructors will be provided to each trade and they are designated from graduates of technical academies or industrial high schools. These instructors are to be trained in Japan for a certain period after at least 6 months' training in Indonesia.

(7) The machines, tools and instruments to be used for the training will include the following

Metalworking

Benchwork	(Bench type drilling machine, shaper, Pedestal drilling machine, tools and instruments, etc.)
Machine benchwork	(Lathe, Universal milling machine, Vertical milling machine, Pedestal drilling machine, Bench type drilling machine, Shaper, Universal cylinderical grinding machine, Surface grinding machine, tools and instruments, etc.)
Plate and Welding	(Shearing machine, Bending machine, A. C. arc welder, Engine welder, Acetylene gas generator, Gas cutting apparatus, tools and instruments, etc.)
Black-smithing	(Air hammer, Heat treatment equipment, Hardness tester, tools and instruments, etc.)

Electric	
House installation wiring	(Wiring board, tools and instruments, etc.)
Electric machinery repair	(Motor, Generator, Transformer, Coil winding machine, Tester, tools and instruments, etc.)
Radio repair	(Oscilloscope, Vacuumtube voltmeter, Radio, Record-player, Tester, tools and instruments, etc.)
Woodworking	
Furnitures and Fixtures	(Hand planer, Surfacer, Band sawing machine, Band saw sharpener, Circular sawing machine, Circular saw sharpener, Electric hand planer, tools and instruments, etc.)
Building	
Bricklaying and Plastering	(Pot mixer, Belt conveyer, Rammer, tools and instruments, etc.)
Automechanic	
Auto mobile repair	(Speed meter tester, Brake Tester, Lift, Electrotester, Infrated rays stand, Steam cleaner, tools and instruments, etc.)
Internal combustion engine repair	(Engine dynamo meter, Crankshaft, grinder, Cylinder boring machine, Stationaty horing machine, Diesel injection pump tester, Tester, tools and

	instruments, etc.)
Audio-visual aids	(16 mm projector, slide projector, Overhead projector, films and slides, etc.)
Non-utility generator	(Dieselengine generator, etc.)

(8) Buildings necessary for the activities of the centre will include the following

	Area (m^2)
(A) Main building	1.640
(1) Project manager's room	40
(2) Co-Project manager's room	40
(3) Office	60
(4) Expert's room	40
(5) Reception room (20 m^2 x 2)	40
(6) Conference room	80
(7) Bath room	50
(8) Dressing room	100
(9) Theory room (50 m^2 x 2)	100
(10) Library	100
(11) Exhibition room	100
(12) Audio-Visual room	150
(13) Drawing room	100
(14) Other (Hall, Store, etc.)	600
(B) Work shops	2.850
Metal working	1.000
(1) Bench-work shop	200
(2) Machine bench workshop	300
(3) Plate and welding workshop	300
(4) Black-smithing workshop	150
(5) Precision measuring room	50
Electric	450
(1) House installation wiring workshop	100
(2) Electric machinery repair workshop	200
(3) Radio repair workshop	100
(4) Electrical testing room	50

	Woodworking	450
	(1) Wood working machine shop	200
	(2) Wood working assembling shop	200
	(3) Wood painting shop	50
	Building	
	(1) Roof construction workshop	200
	(2) Bricklaying and Plastering workshop	100
	(3) Reinforced workshop	100
	Automechanic	550
	(1) Auto-mobile repair workshop	300
	(2) Internal combustion engine repair workshop	200
	(3) Metal painting shop	50
(C)	Acetylene gas generator room	10
(D)	Oil store	10
(E)	Material store	250
(F)	Non utility generator room	100
(G)	Garage	100
(H)	Gymnasium	600
(I)	Dormitory	2. 000
(J)	House for instructors	1. 000
	Total	8. 560

(9) On the management of the Centre, a project manager (Indonesian) and a co-project manager (Japanese) well work in close co-operation

(10) On the contribution of the two governments,

(A) The Government of Japan will undertake to supply machines, tools and instruments necessary for the centre, as well as to dispatch experts and to grant fellowships

(B) The Indonesian Government will undertake

a. to install counterpart instructors, administrative staffs and other staffs needed for the management of the centre

b. to purchase land and to provide buildings for the centre

c. to supply materials for training

d. to provide accomodation for the Japanese experts

e. to bear other local cost necessary for the management of the centre

3. The team has expressed its requests to the directorate in charge, in the Department of Manpower, concerning the technical cooperation projects to the effect that:

(1) as the location for the centre, a site better or equal to the land behind the Hero Cemetery, Ujung Pandang be selected and the scale of the land be more than 5 ha.

(2) the directorate in charge strive to obtain sufficient number of trainees to fill the capacity of the centre

(3) applicants to the various courses be preferebly those who have a minimum of 9 years of primary education

(4) suitable jobs be provided for those who have finished the courses

(5) Indonesian instructors be given opportunities to participate in activities of enterprises

(6) the centre be open to University students or pupils of technical high schools for practice as well as to self-employment people in order to receive technical guidance provided the original activities of the centre are not hampered

(7) that the centre be opened formaly around April 1975 and that workshops as well as stores be compleded by March 1974 to receive the equipment which is to be sent by the Government of Japan

4. The team has been informed of the requests from the Directorate in charge to the effect that:

(1) considering the importance of welding work in Indonesia, one expert in welding be included in the experts to be sent for the metal working trade

(2) considering the recent jump of rents for houses, the Government of Japan bears the expence for the accomodation of the Japanese experts

(3) counterpart-instructors be trained in Japan over a resonably long period

(4) more than one vehicle be included in the equipments to be granted by the Government of Japan for the purpose of transportation as well as communication

(5) considering the public electricity situation, a standby generato of about 150 kVA be given to the centre.

HAJIME HOSOMI

Head of the Team
Ministry of Labour

ANNEX IV

Questionnaire to the Department of Manpower from the Japanese Preliminary Study Team on Establishment of a Vocational Training Centre in Indonesia

October 18, 1972

(Necessary informations be given on the items mentioned below)

1. On vocational training centres in Indonesia

   (1) Name and place of centres

   (2) Fields of training in each centre

   (3) Magnitude of each centre in terms of number of trainee
   Present number of trainee

   (4) Qualifications and conditions to be recruited, Method of recruitment.

   (5) Scale and facilities of dormitories

2. On a vocational training centre proposed to establish in Makassar

   (1) Position of the centre
   (location, scale of the land reserved, geological features of the land, underground water, convenience of transportation, neighbouring area, owner of the land, situation of demand and supply of electricity as well as full, etc.)

   (2) Building
   (structure, magnitude, dormitory, situation of water supply and drainage, existance of construction plan, etc.)

   (3) Fields of training
   (situation of local industries in the proposed fields of training, local employment situation in the fields, etc.)

   (4) Aims of training
   (requirement of the local industries, requirement from a

viewpoint of government development plan, etc.)

(5) Intelectual level of trainees
(language to be used, etc.)

(6) Period of training
(in the light of the aims of training as well as the standard of the skill to be trained, etc.)

(7) Number of trainees
(in the light of local employment conditions as well as government employment plan)

3. Equipment to be granted

(1) the standard of measure (inch or meter)

(2) voltage of electricity

(3) place for storage as well as the destination of the equipments

(4) whether or not the machines can be repaired locally

(5) whether or not parts of the machines can be supplied locally

(6) whether or not materials for the training can be supplied locally

4. Others

(1) Regulations
(on electricity, structure of machines poisons, pollution, etc.)

(2) Installation
(whether or not there are technicians available for the installation of the equipments)

(3) Treatments which Japanese experts can expect including residence

ANNEX V

Answer to questionnaire submitted by the Japanese Preliminary Survey Team from the Department of Manpower

November 1972

1. Vocational Training Centers in Indonesia (owned by the Ministry of Manpower R. I.)

(1)

PLKI	Pasar Rebo	Jakarta
PLKIM		Bandung (West Java)
PLKI	Singosari	Malang (East Java)
PLKI		Palembang (South Sumatera)
PLKI		Semarang (Central Java)
PLKI		Surakarta (Central Java)
PLKI		Jogjakarta
PLKI		Padang (West Sumatera)

PLKI = Pusat Latihan Kejuruan Industri
(Industrial Voc. Tr. C.)

PLKIM = Pusat Latihan Kejuruan Industri & Management
(Industrial Voc. Training & Management Center)

PLKP	Lembank (near Bandung - West Java)
PLKP	Klampok (near Purwokerto - Central Java)
PLKP	Wonojati (near Malang - East Java)

PLKP = Pusat Latihan Kejuruan Pertanian
(Agricultural Voc. Tr. C.)

(2) The Industrial Voc. Training Centers generally cover the industrial basic trades, as:

Metalworking	(bench-work, machine, bench-work, plate, blacksmithing, acet. welding, electric welding)
Electric	(house installation, wiring, electric motor repair, radio TV)

Woodworking	(roofconstruction, doors & windows, etc.)
Building	(bricklaying, masonry, etc.)
Auto mechanic	(automobile repair, gasoline & dieselengines)

Some training centers provide commercial trades training (typing, shorthand, bookkeeping, English correspondents), and some also in tailoring.

(3) The big centers has a seating capacity of about 200 to 250, while the medium/small ones about 60 to 150 seats. The yearly capacity is difficult to say, because it depends on the particular training times and the number of each group.

(4) In general at least primary school (6 years after Kindergarten) graduates.
Individual enlistments or send by their company.

(5) In principle, a dormitory is provided to enable trainees from out of town in stay in the center's complex.
The big centers has dormitories of 200 men capacity.

2. (1) Location of the Ujung-Pandang VTC is proposed at Panaikang, 100 meters from the main-road Makassar-Mandai Airport.
The site is exactly behind the Ujung-Pandang's Hero Cemetry.
-The geological, soil mechanical and geodetical features of the land is not yet known. These characteristics will be measured as the first activity of the project.
-Watersupply will be easy, because the Water Purification Plant Project (finished end 1973) is only about 2 km from the site.
-Transporation from the center of the city will not form a discouragement.
-The neighbouring area, according to the cityplanning, will be at the same side of the mainroad with the center, meant for residential areas, while the other side (the west side) will be used of industrial establishments.
-Ownership of land: will be processed to be owned by the Ministry of Manpower R. I.
-Electricity can be supplied at an capacity of 200 kVA.
The electric power plant is only about 1 km away from the center.
-But it is always suggested to have an own Diesel-generator set

for standby operation (in this case a 150 kVA) for the possibility of:

exessive peak loads or falling off of the public electric system.

-Diesel fuel and various kinds of oil are available.

(2) The building.

-We prefer a reinforced concrete building with a steelconstruction roof. It should be strong enough against machine/engine vibrations and for some divisions provided with pillars for workshop cranes.

-For watersupply, see point 2(1).
Drainage for waste water and rain, will be designed after the geodetic mapping.

-A construction plan for VTC Ujung Pandang does not exist yet, because it depends on the site, specifications of the trades, and other particular situations.
The land needed is 4 to 5 hectares.

-The sizes of the rooms (workshop, theory and offices), depends on number of trades, number and sizes of machines & equipments.

(3) Fields of training.

Starting with the so-called "basic trades" of general character. In the future extentions can be made for more advanced courses of the trades and the needed courses of a more specialized nature.
Local industries and mining of importance are:

paper-mill cement-mill Nickel Mining
flour-mill Zn-galvanized sheet iron production
machine & equipment maintenance
autorepair workshops
outboard & inboard motor repair and maintenance (fishery)
building construction works
etc. etc. in the small and selfemployment businesses.

The need for trained workers is high already at this moment and will certainly increase in the near future.
The local employment situation: see special data from the local office of the Ministry of Manpower.

(4) The aims of training are:

a. to fulfill the need of industry & mining
b. to increase/improve the economic growth of this region, through skill formings and upgradings
c. making people more employable

The VTC is in the first place directed to adults (adult training). The VTC is not only meant for Ujung Pandang, but for the whole Sulawesi, Nusatenggara Barat/Timur, Maluku and Kalimantan Selatan, which form the biggest part of East Indonesia (except West-Irian).

(5) Level of trainee is the direct workers level (semi & skilled workers). Generally primary school graduates already reaching adult-hood, but higher educational backgrounds are not excluded.
The VTC can also be utilized for practical training of Technical students (highschool or University).
Language to be used is: the Indonesian language.

(6) For the sake of flexibility, the modul system should be considered as main system, such that trainee can immediately continue his training for about 1 year, or can quie after any modul he is following, and come back afterwards for the next modul if so is needed.
The standards of skill is of a general skilled worker without specialized abilities. More advanced or specialized moduls should be added in the future as extention programmes.

(7) For every class 12 to 16 trainees. We consider this as the most effective and economic "batch".
According to effective needs (actual enrolments), parallel classes can be organized, according to the ability and capacity of the machines & equipments (possibly with distinguishing morning and afternoon classes).
The working hours of the Gov't offices are 07.00 - 14.00 officially. Overhours are possible for arrangements.

3. Equipment.

(1) The general used measuring standard is the metric system, but in some cases, also the "inch system" is used, for instance in treads, tube diameters, plate thicknesses, etc.

(2) The voltage of electricity:

for power 220/380 volts 50 cps 3 phase
We propose the light also using the same wiring/system, which will be 220 volts 50 cps 1 phase.
(in general for light 115 volts single phase is used, so that an additional transformer will be necessary).

(3) Destination harbour for equipments: Ujung Pandang
Also its temporary storage.
After completion of building in which the machines will be installed, immediate transportation to VTC site shall be arranged.

(4) Machines can be repaired locally:

a. doing the repair by the VTC itself (by VTC staff)
b. by authorized sole-agent of manufacturer

(5) Locally availability of spareparts depends on
existance of dealer (branch or agent of authorized sole agent)
popularity of machine brand (f. i. for verhicles, so that even small shops have a stock).

(6) Materials of general use are available locally, and it is the VTC concern to purchase according to stock policies.

4. Others.

(1) All workshop and machine buildings should follow the general and particular Safety Regulations.
It is suggested strongly also to take measures in the field of Industrial hygiene and occupational health.

(2) By subcontracting the installments of machines & equipments and setting up the installations of the wiring, etc., their are technically no problems.

(3) We generally assist the experts in finding convenient residencies.
For the transportation of experts, it should be suggested to include a motor verhicle in the assistance programme.