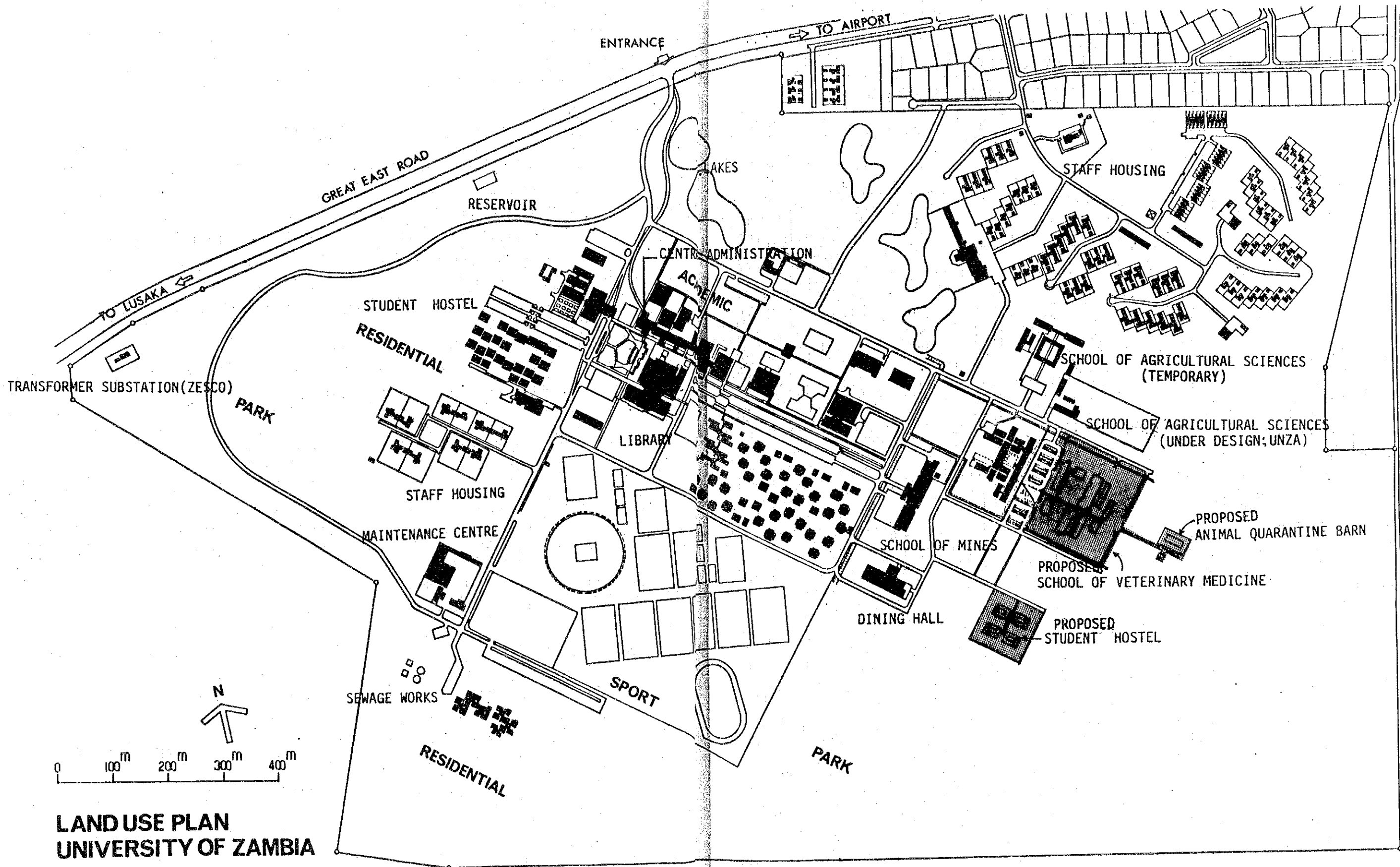
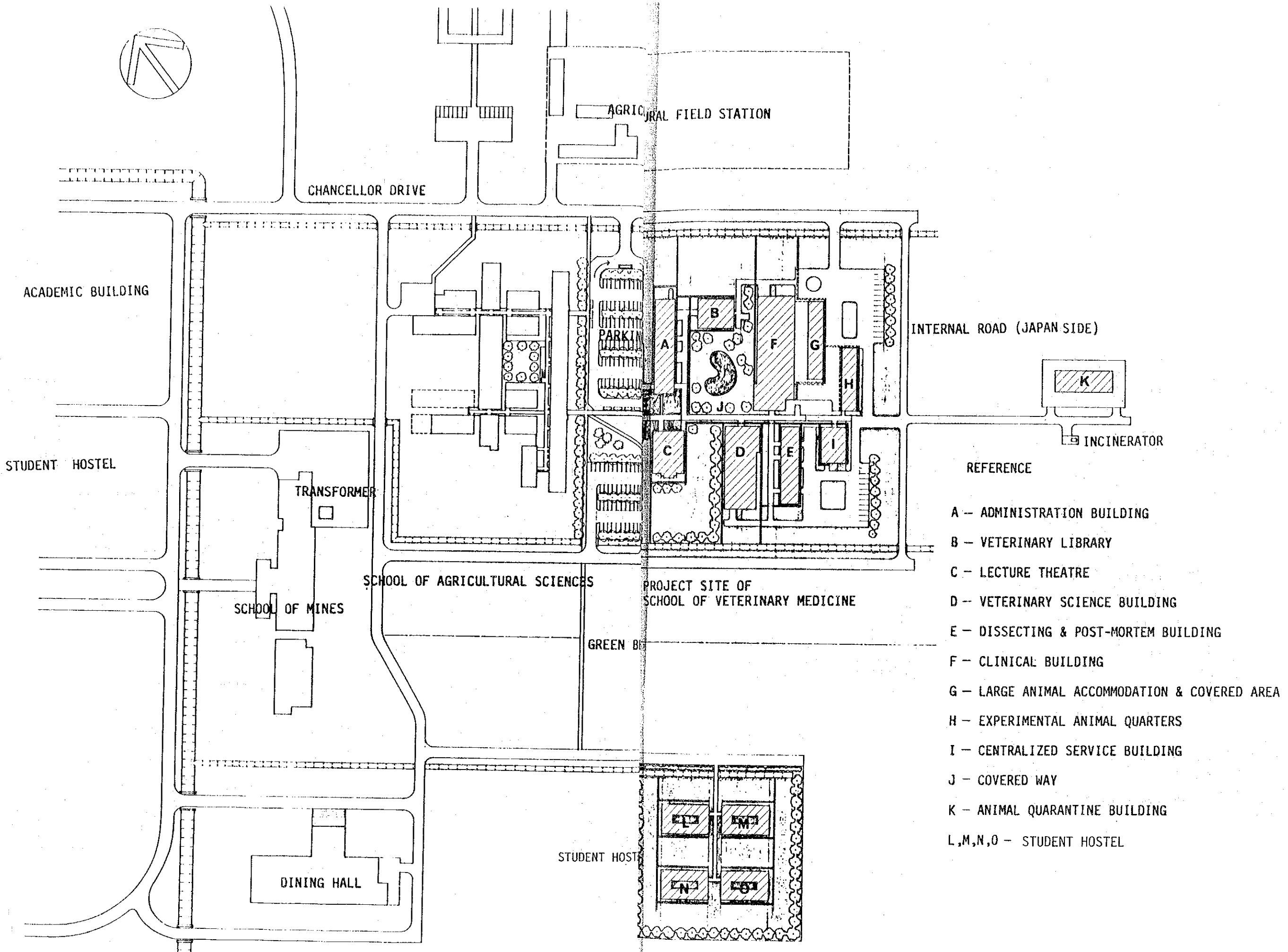


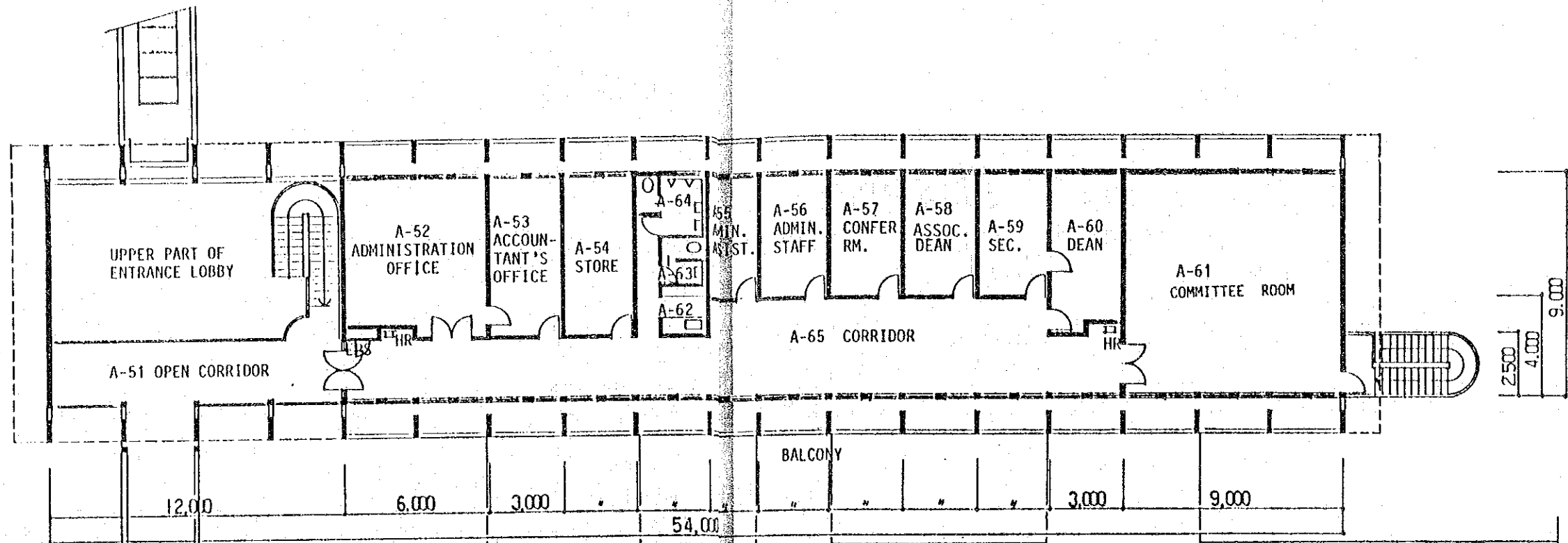
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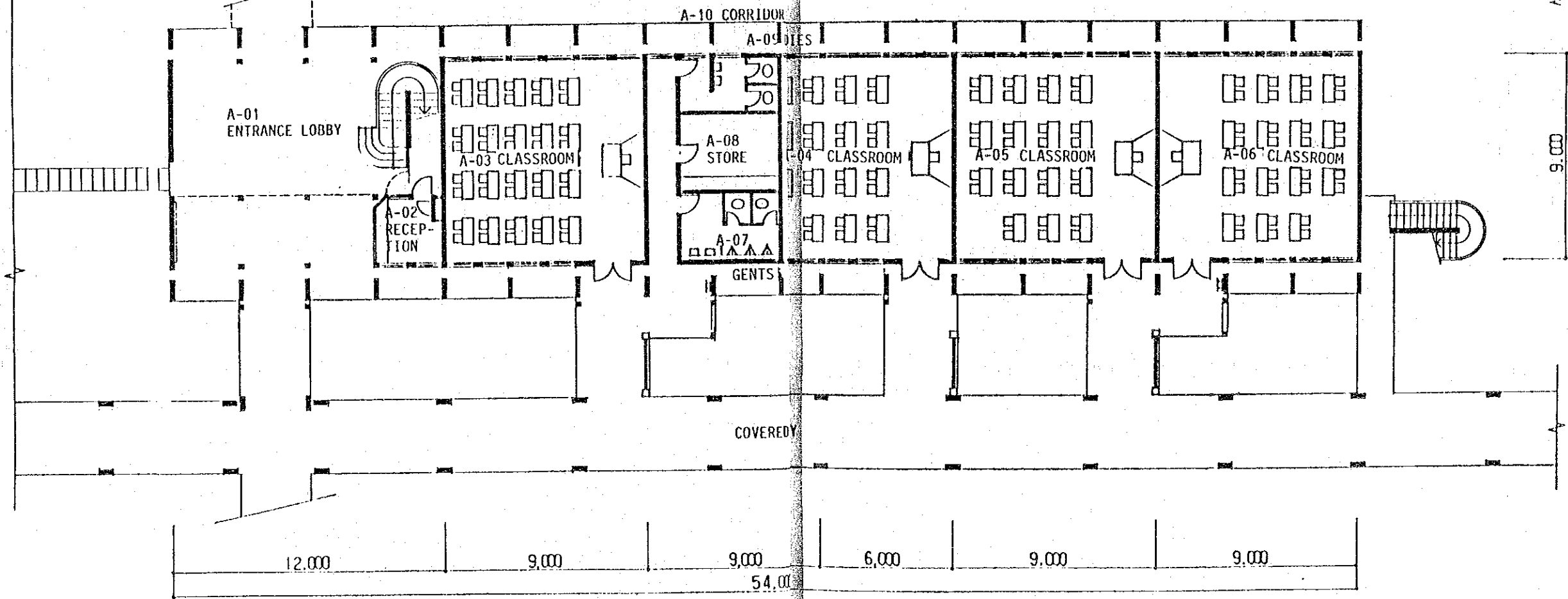


**LAND USE PLAN
UNIVERSITY OF ZAMBIA**



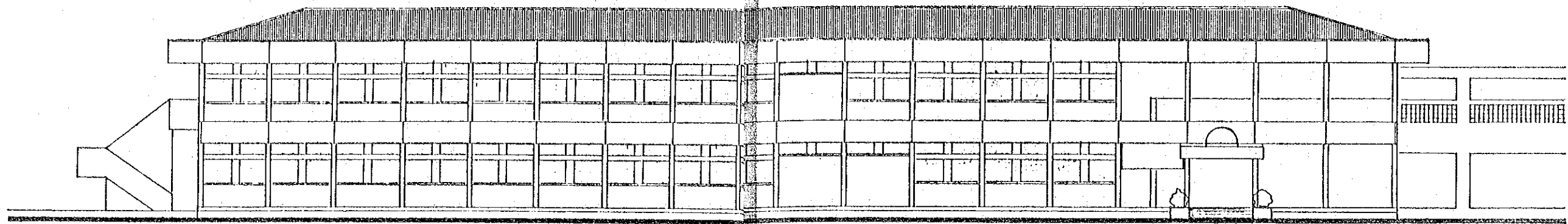


FIRST FLOOR PLAN

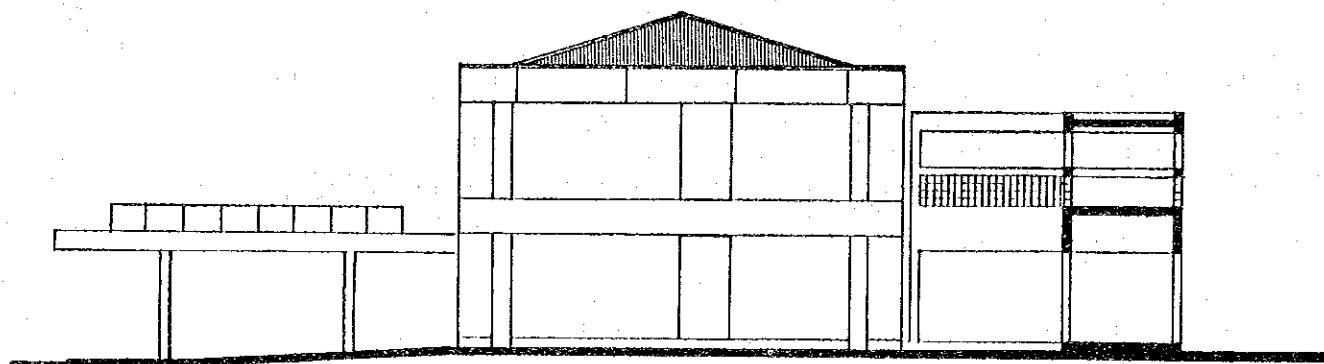


GROUND FLOOR PLAN

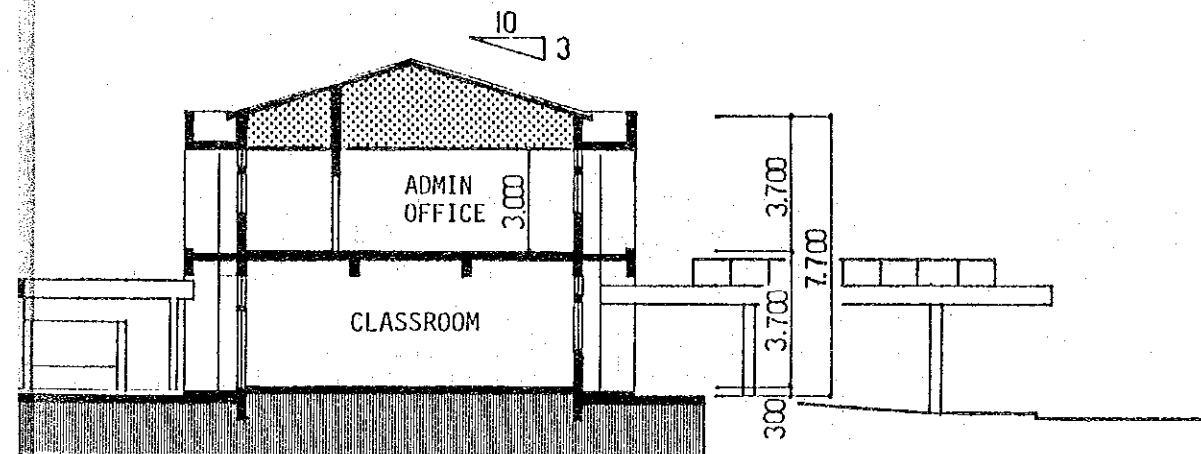
A : ADMINISTRATION BUILDING



WEST ELEVATION

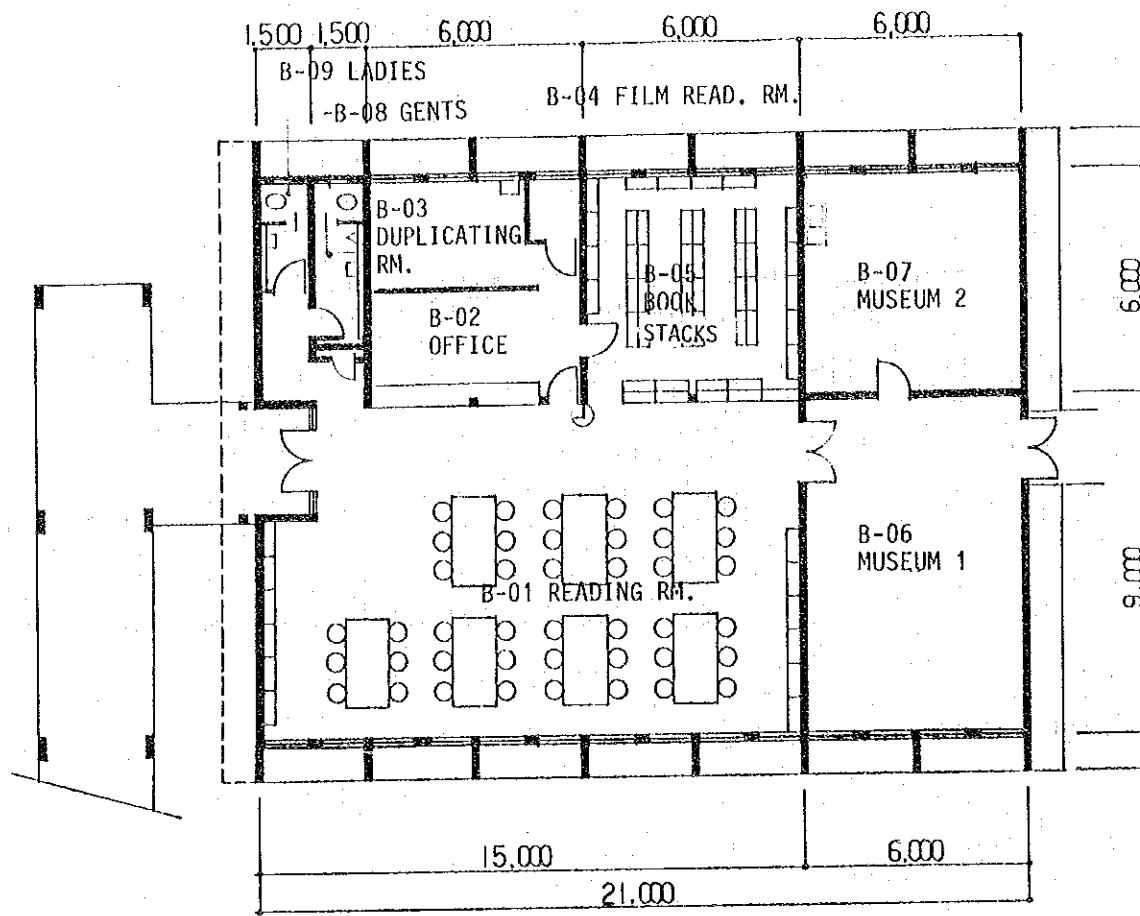


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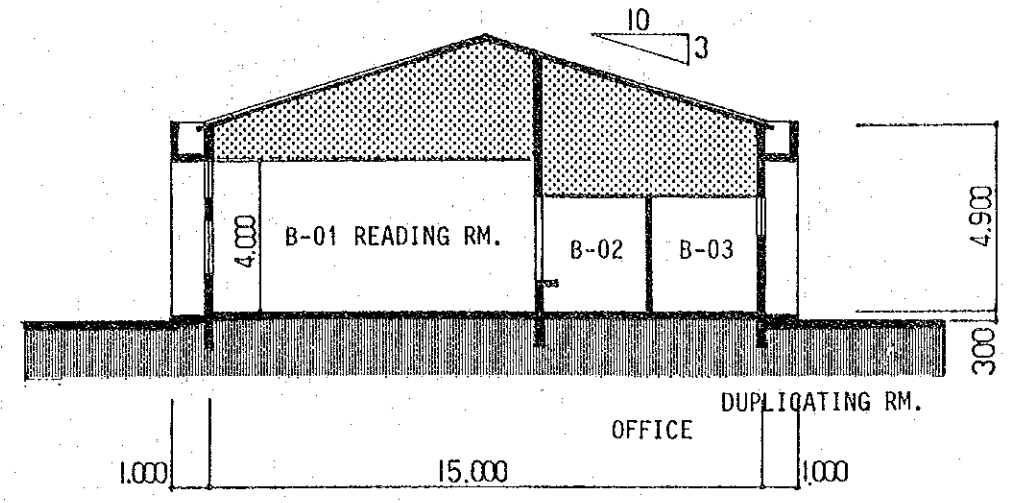


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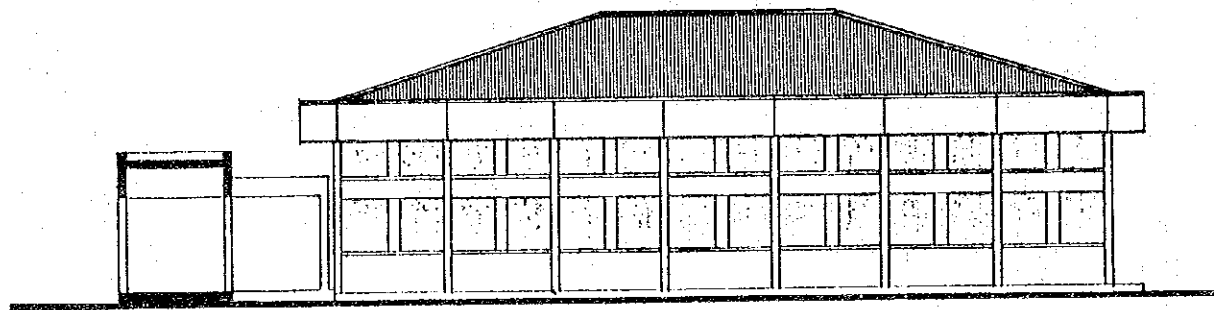
A : ADMINISTRATION BUILDING



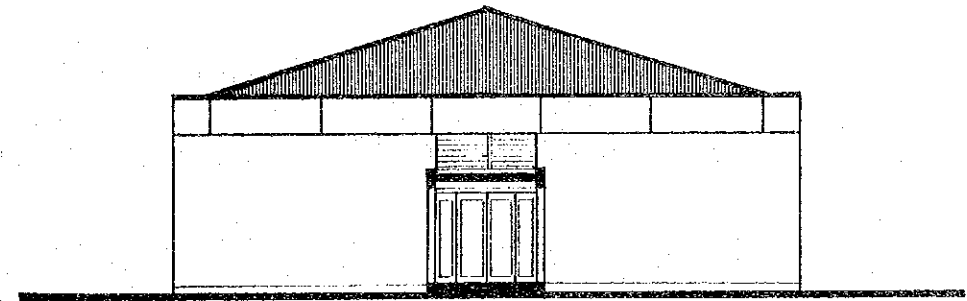
GROUND FLOOR PLAN



SECTION

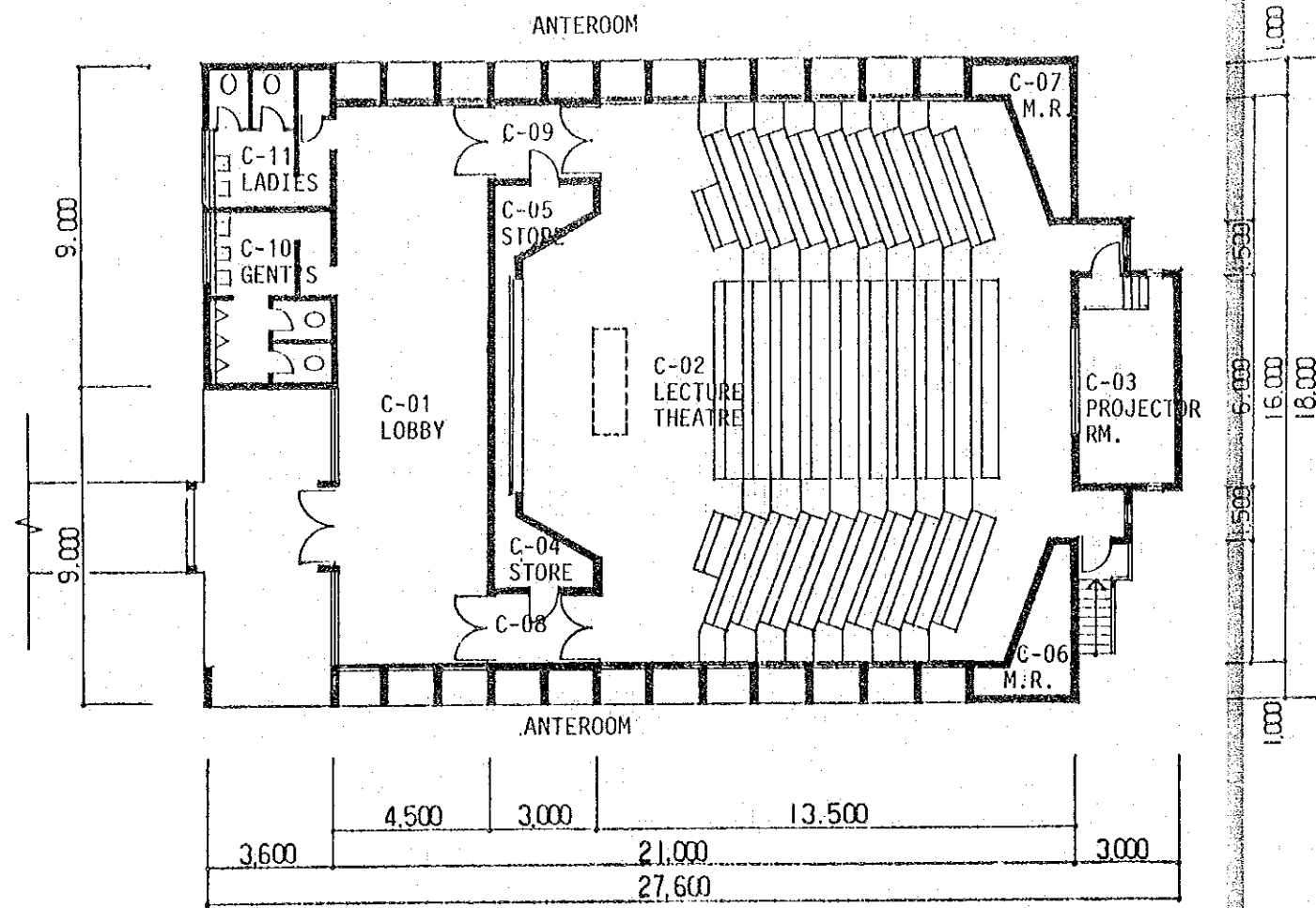


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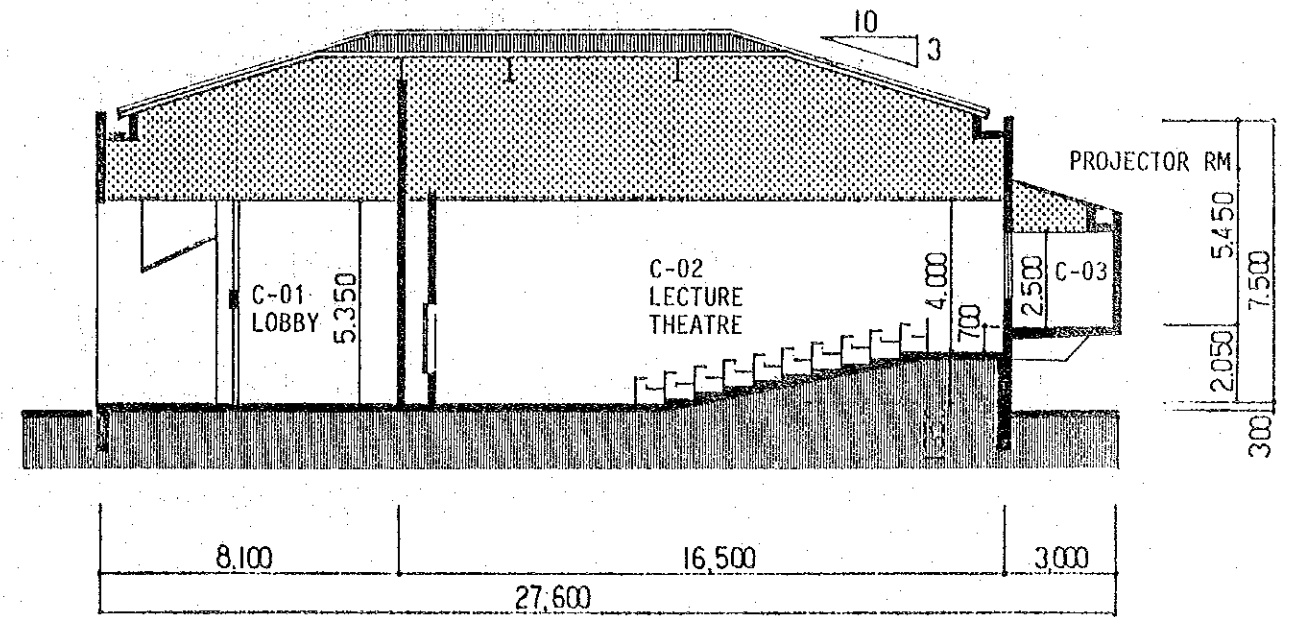


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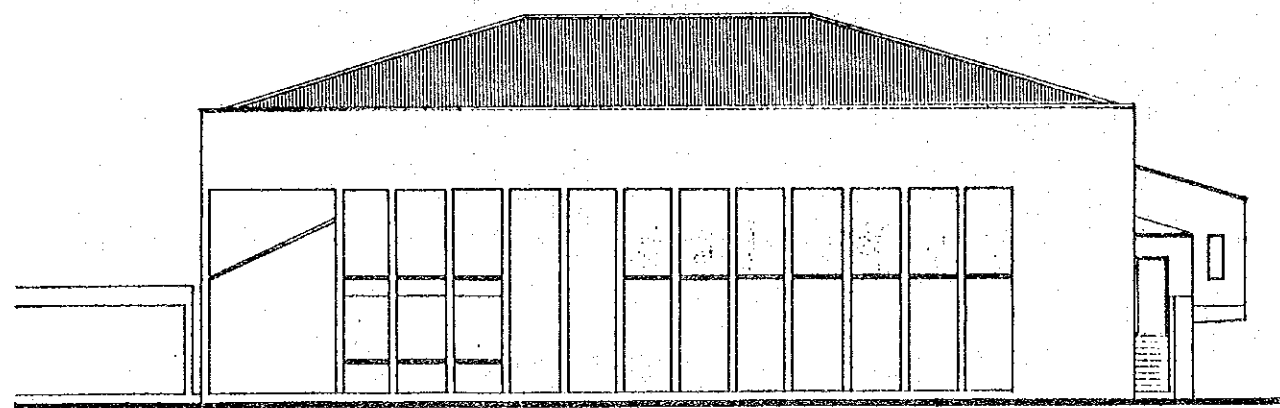
B : VETERINARY LIBRARY



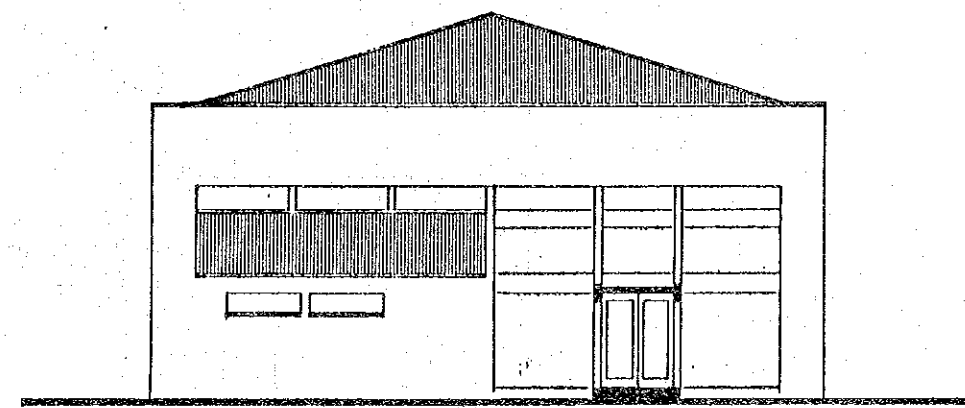
GROUND FLOOR PLAN



SECTION

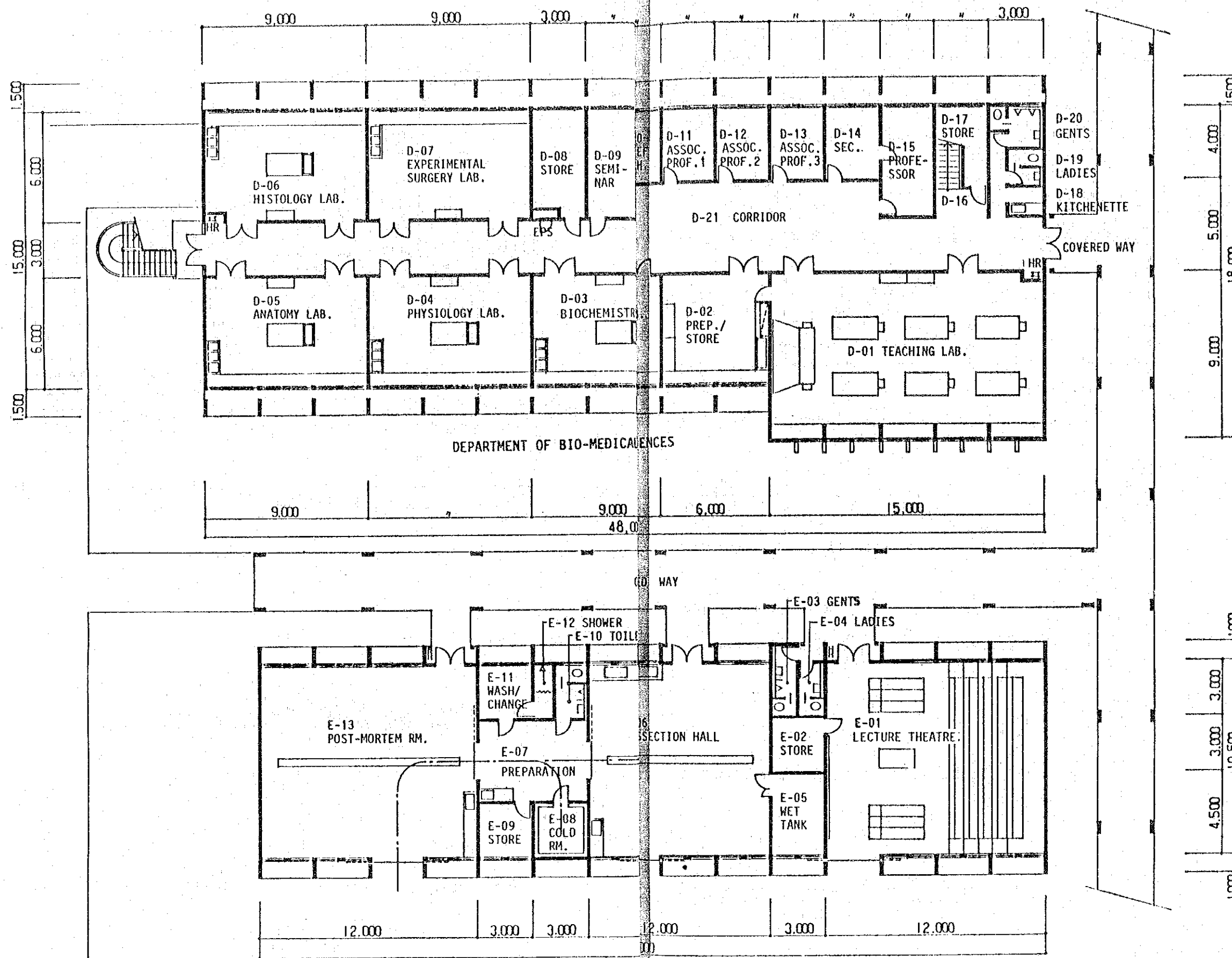


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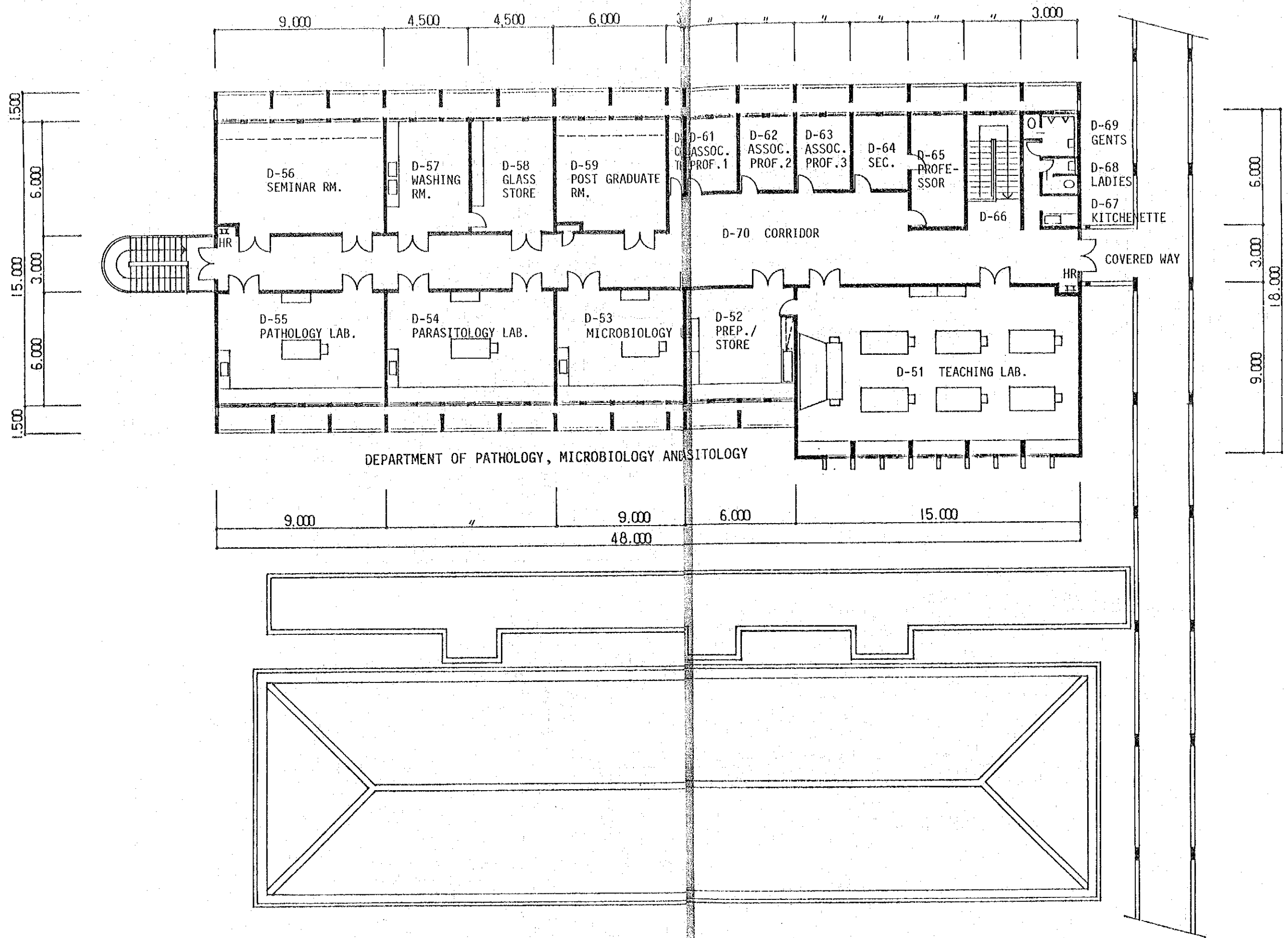
NORTH ELEVATION

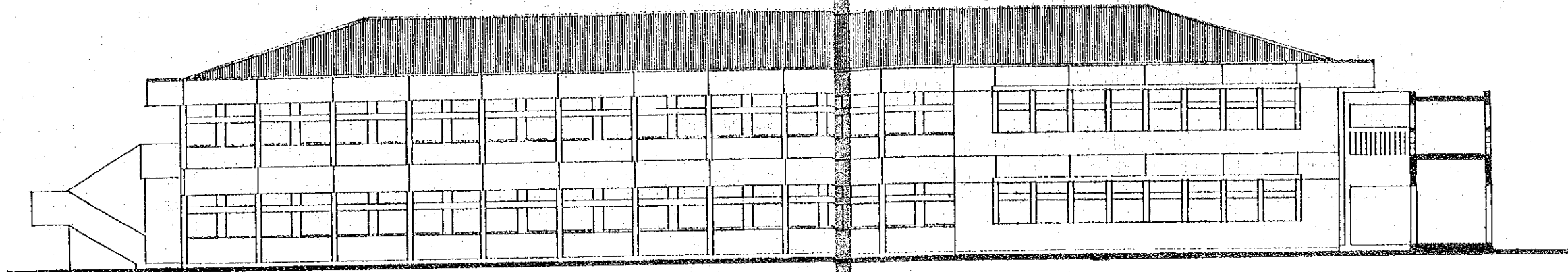
C : LECTURE THEATRE



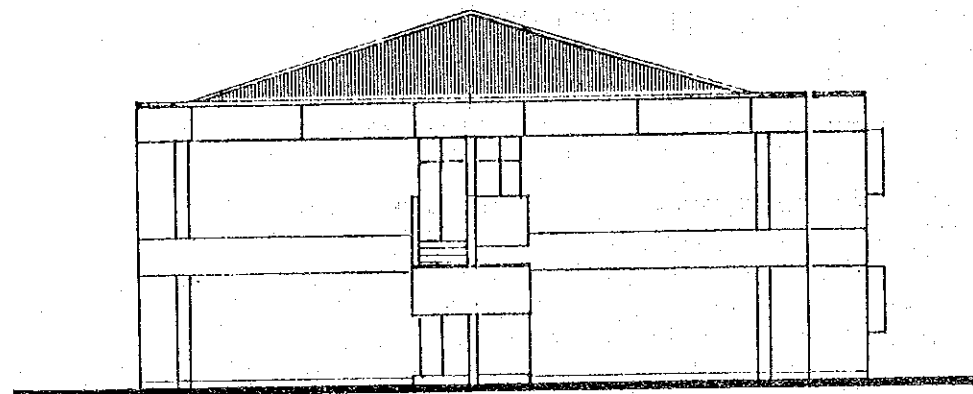
GROUND FLOOR PLAN

D: VETERINARY SCIENCE BUILDING
 E: DISSECTING & POST-MORTEM BUILDING

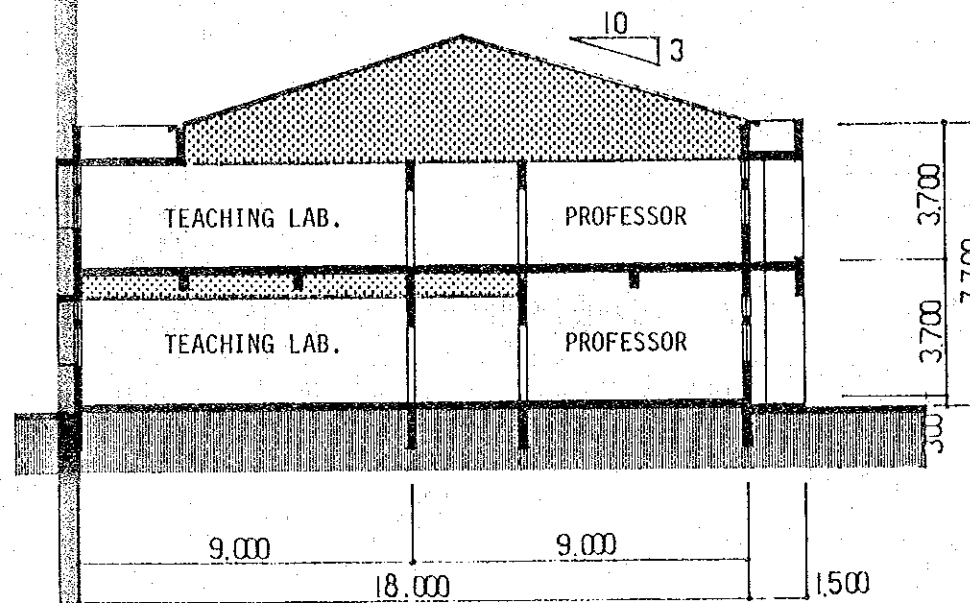




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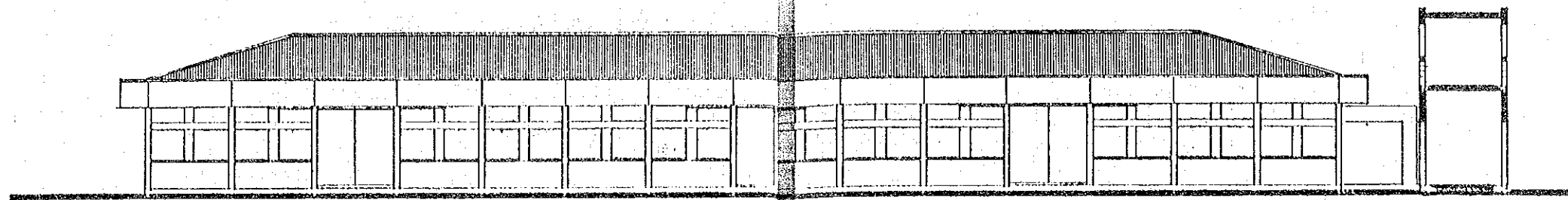


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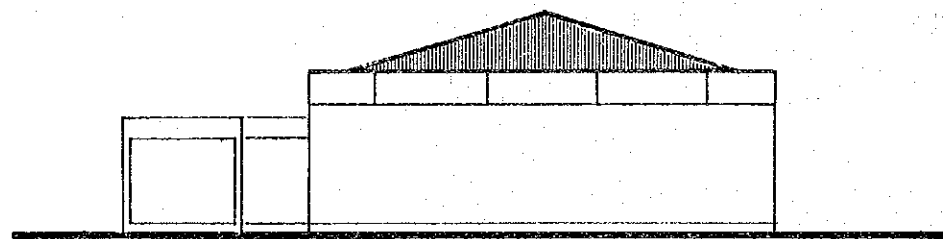


SECTION

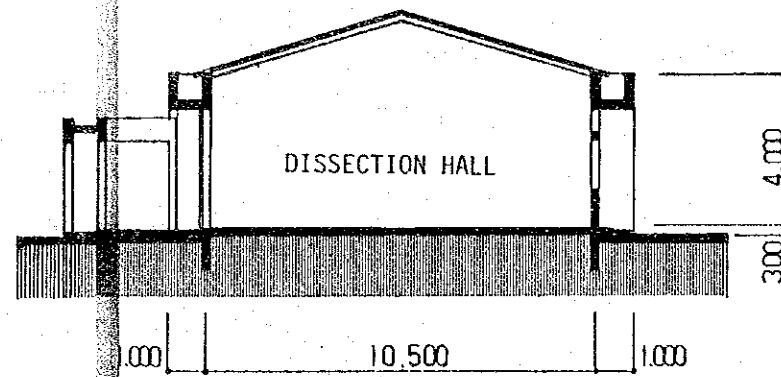
D : VETERINARY SCIENCE BUILDING



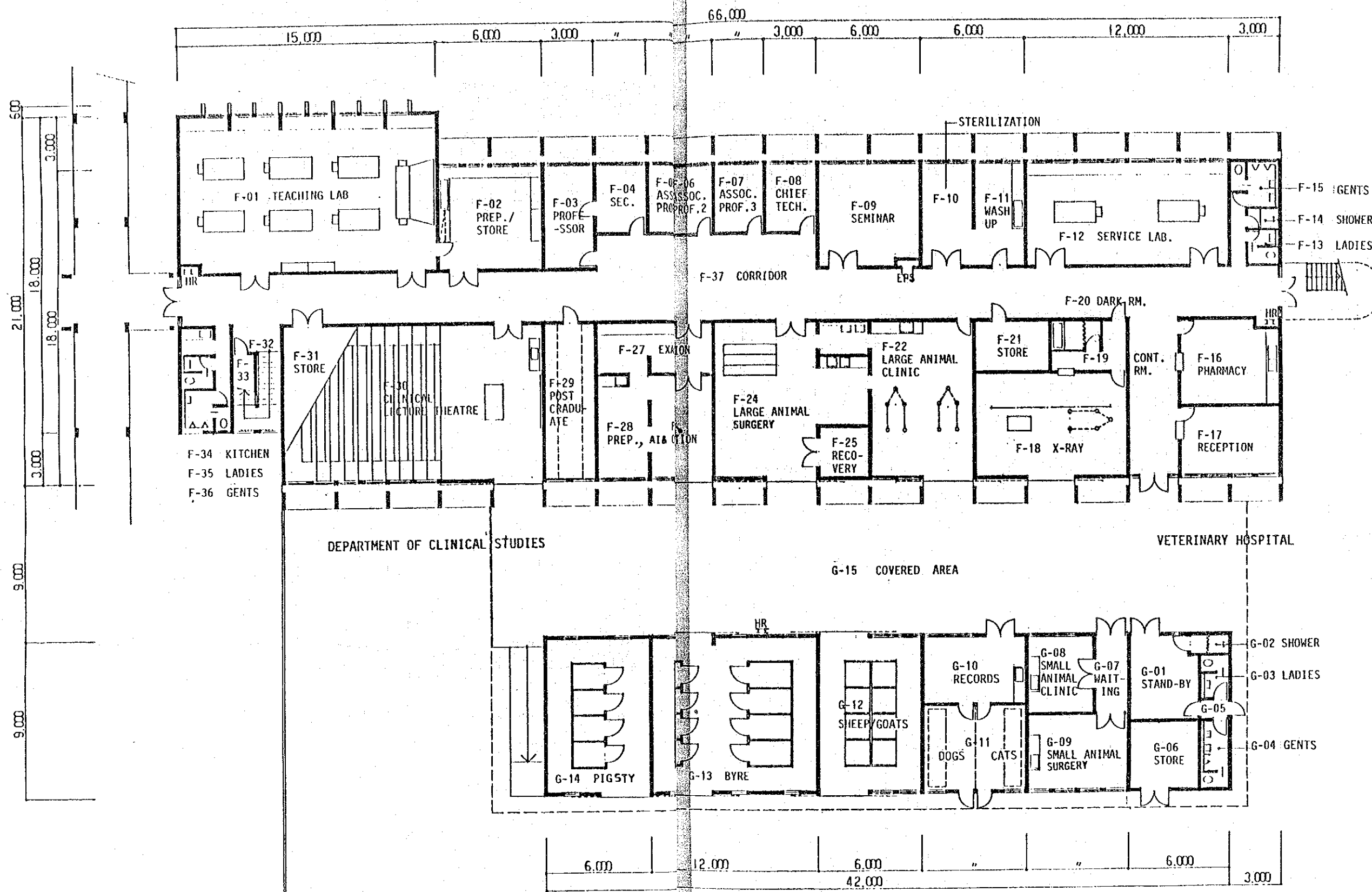
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SOUTH ELEVATION

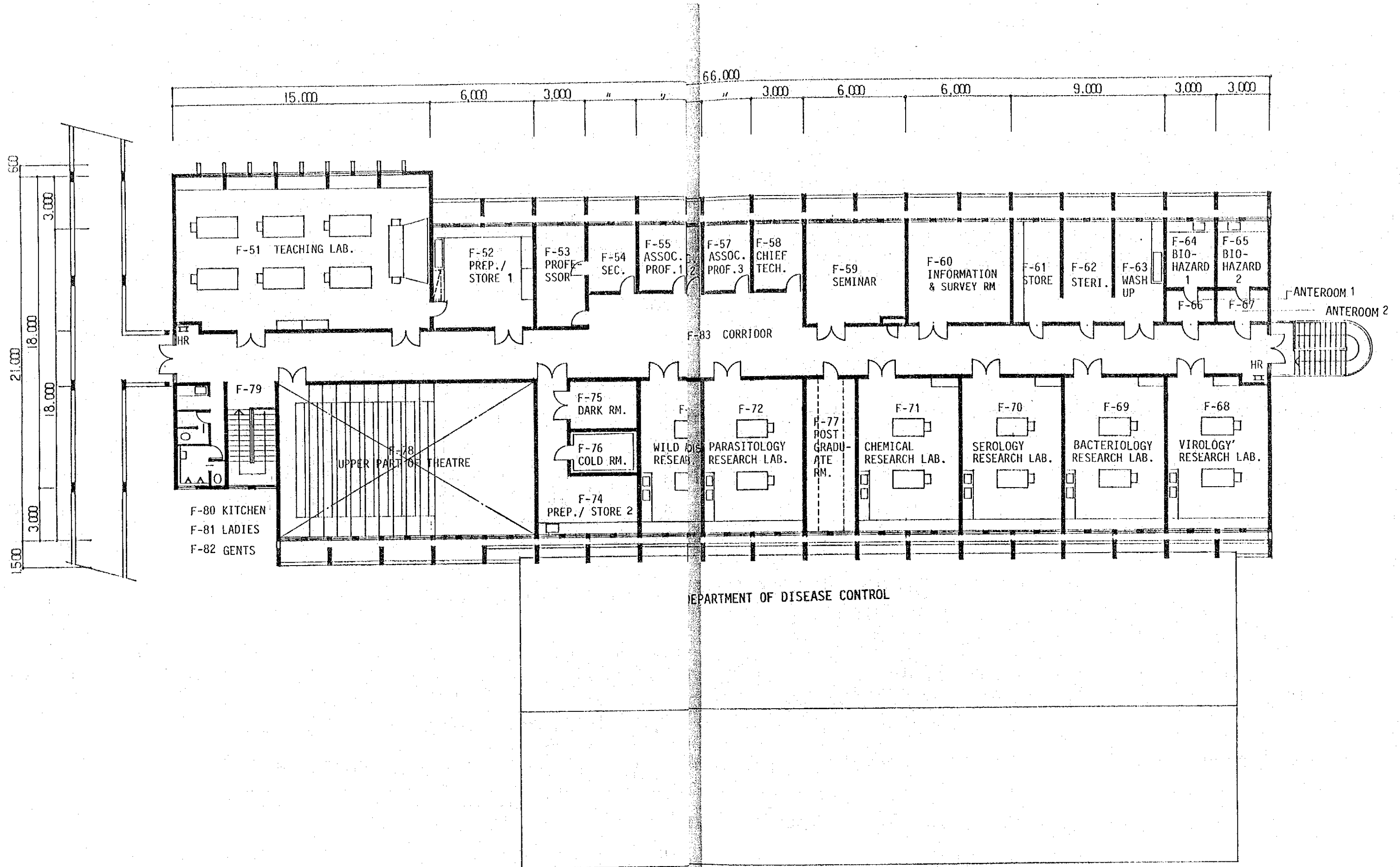


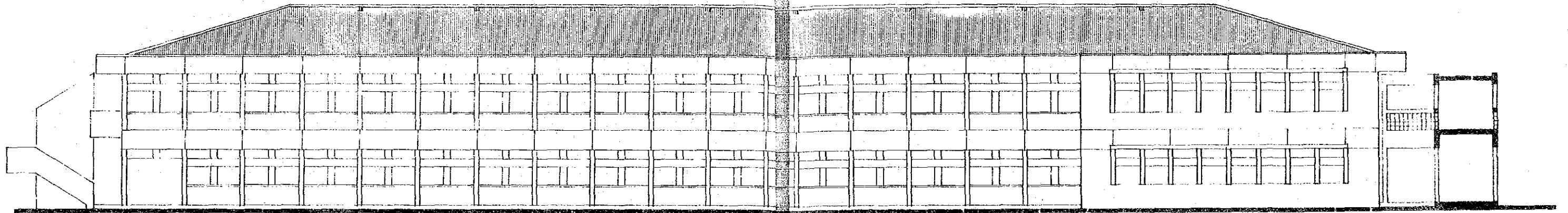
SECTION



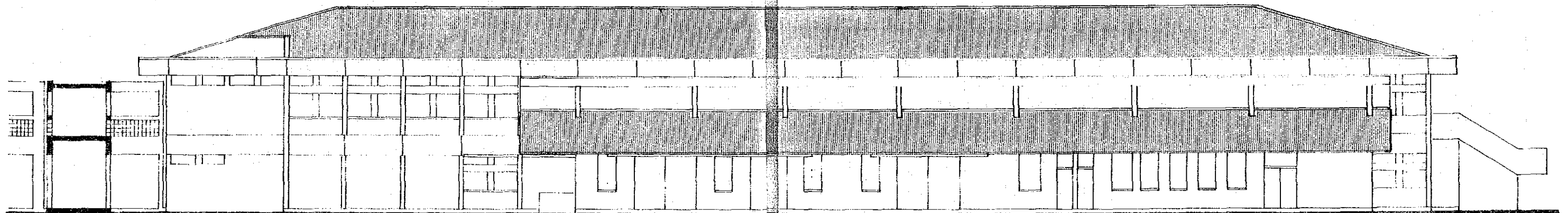
GROUND FLOOR PLAN

F : DISEASE CONTROL & CLINICAL STUDIES BUILDING
 G : LARGE ANIMAL ACCOMMODATION

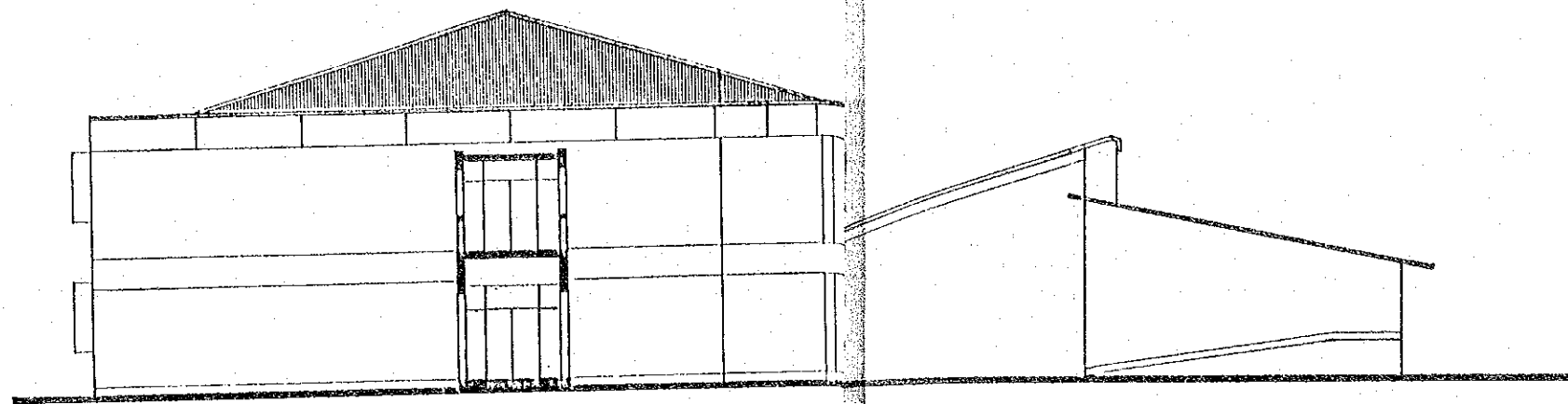




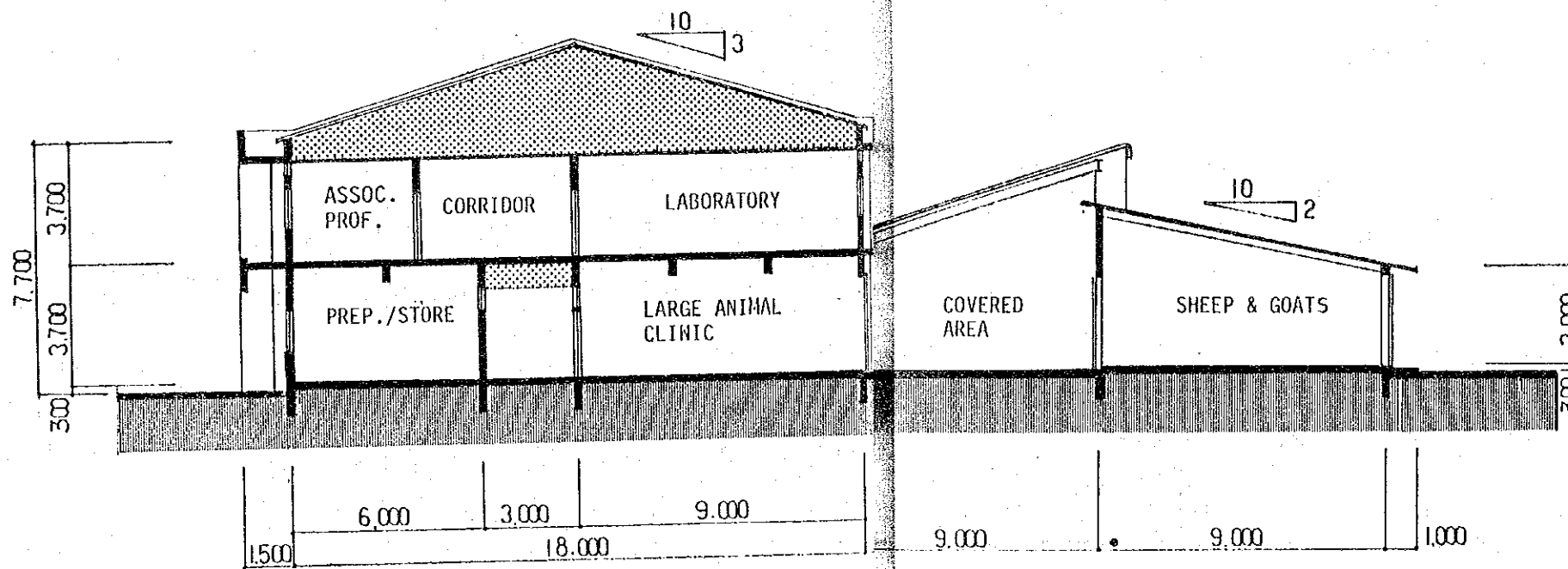
WEST ELEVION



EAST ELEVION



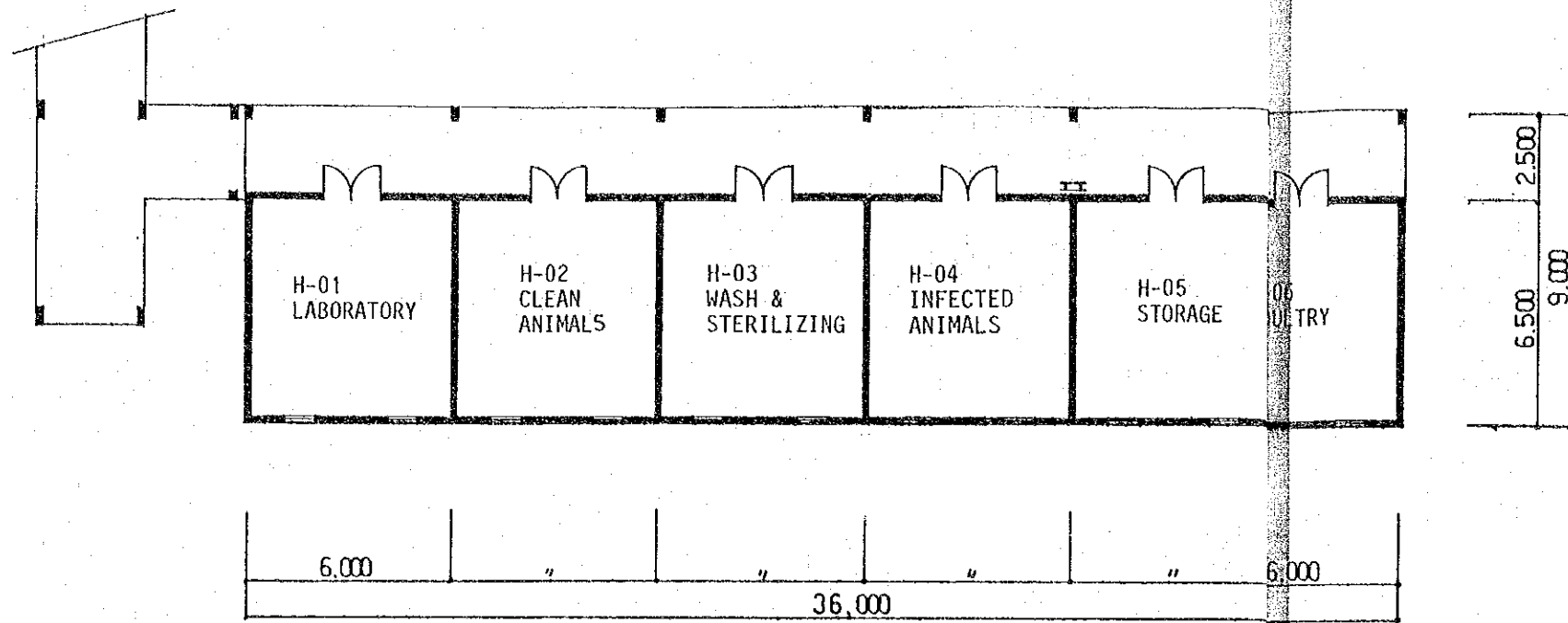
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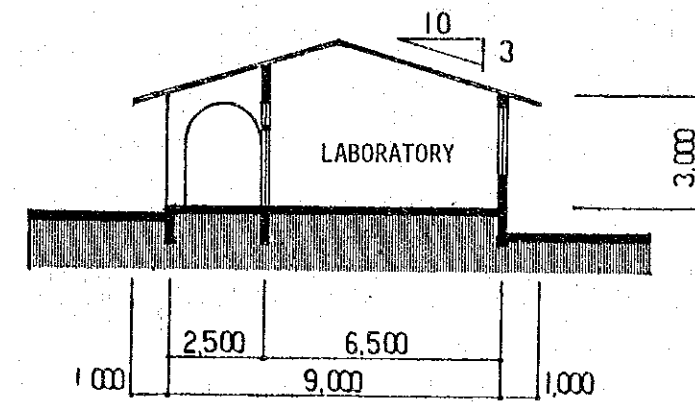
SECTION

F : DISEASE CONTROL & CLINICAL STUDIES BUILDING

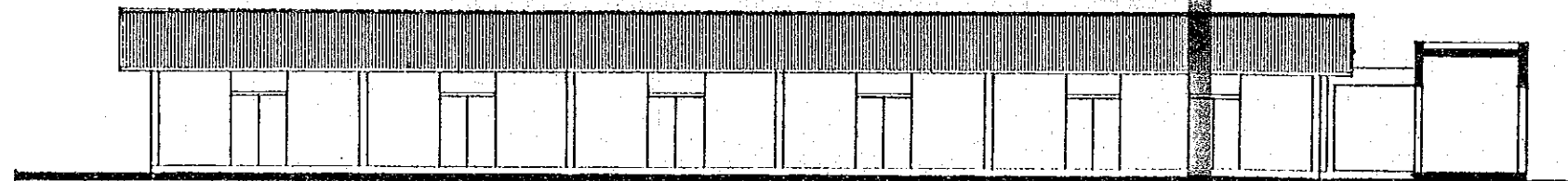
G : LARGE ANIMAL ACCOMMODATION



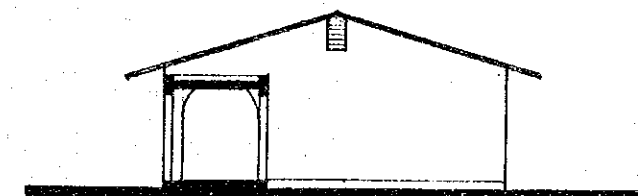
GROUND FLOOR PLAN



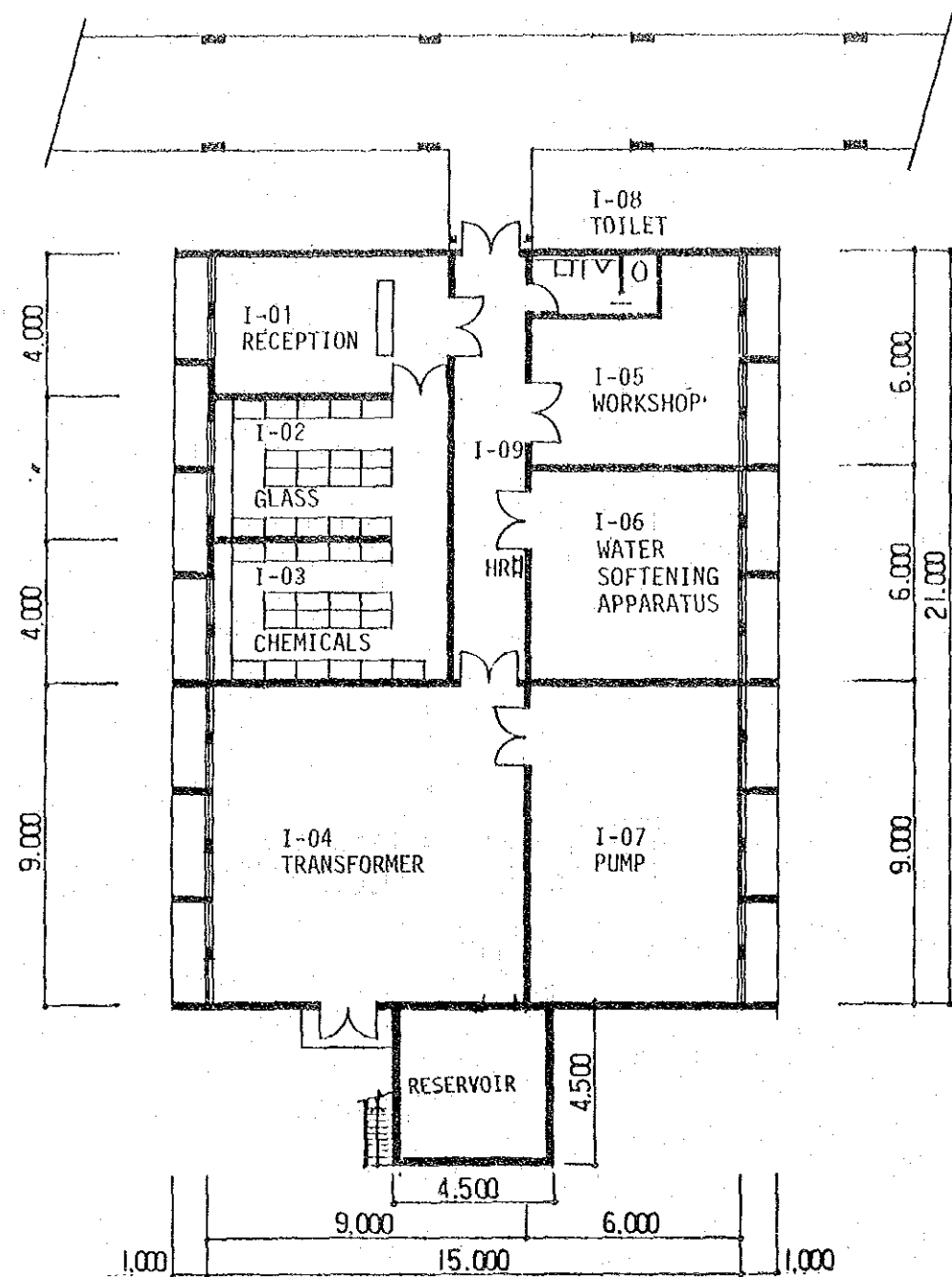
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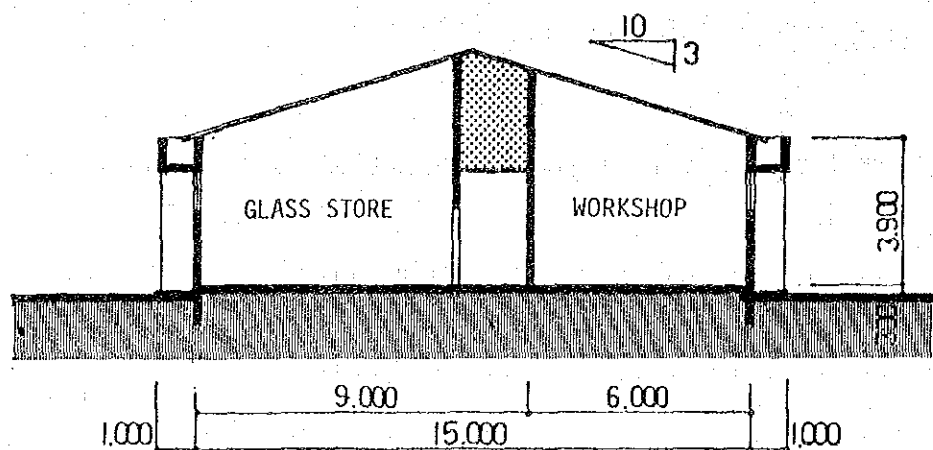
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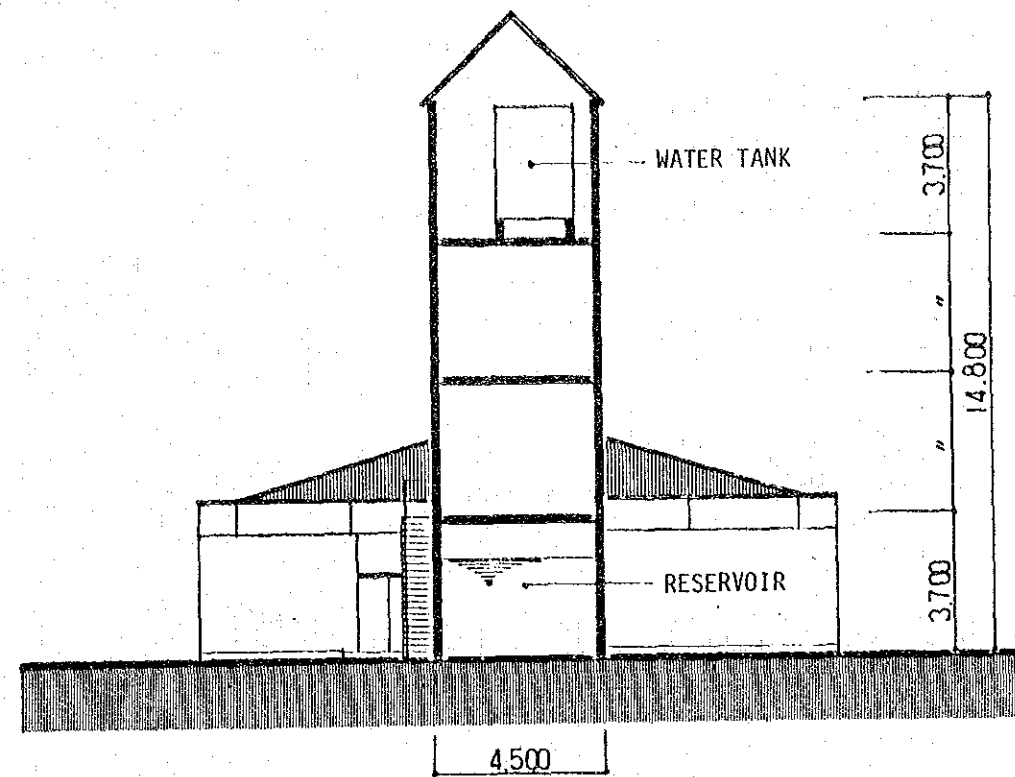
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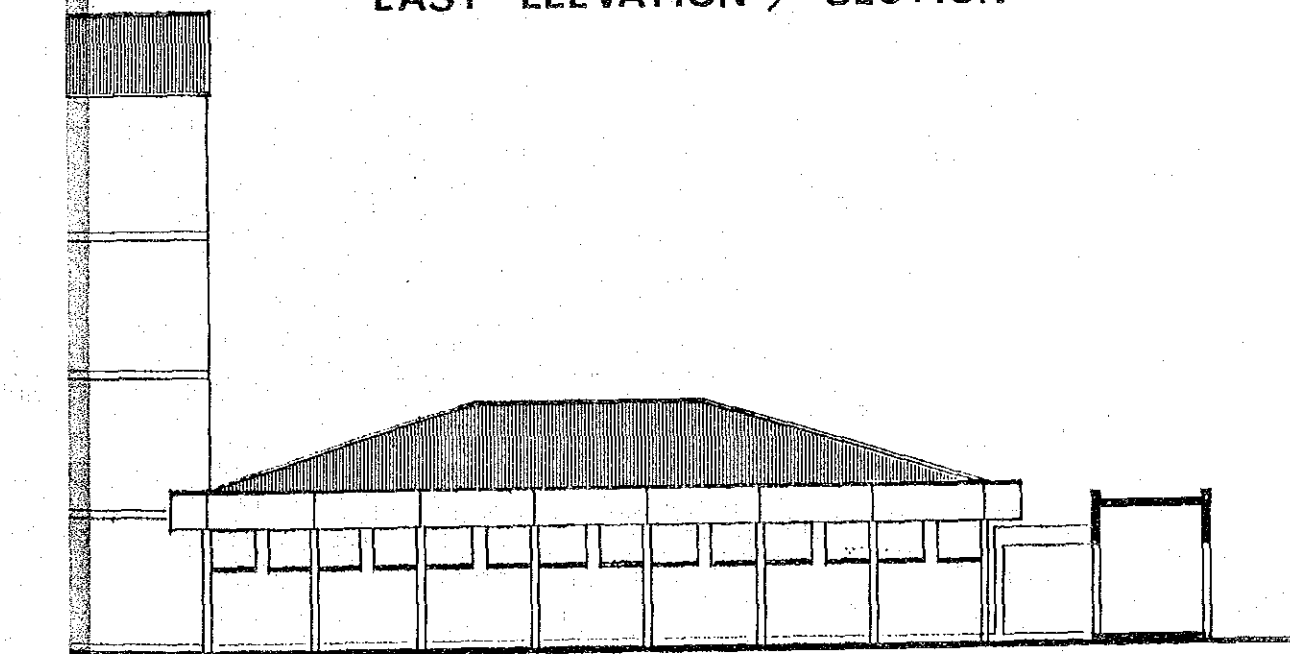
GROUND FLOOR PLAN



SECTION

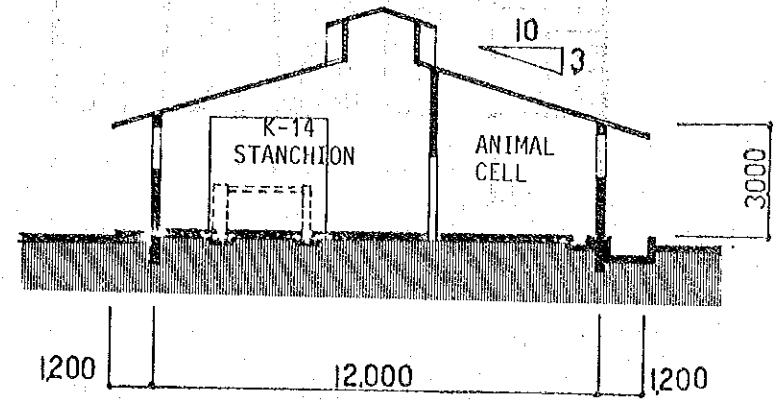
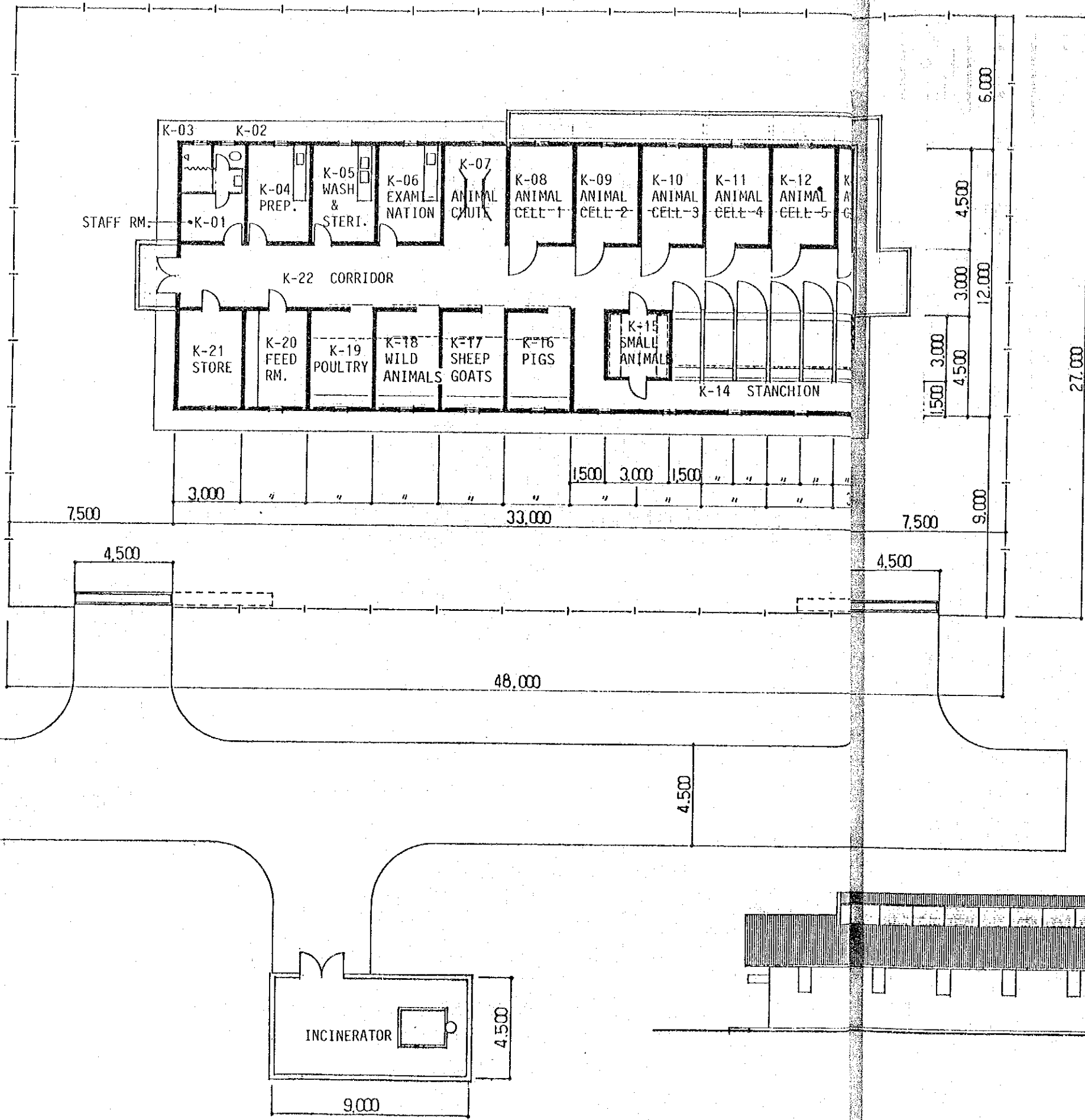


EAST ELEVATION / SECTION

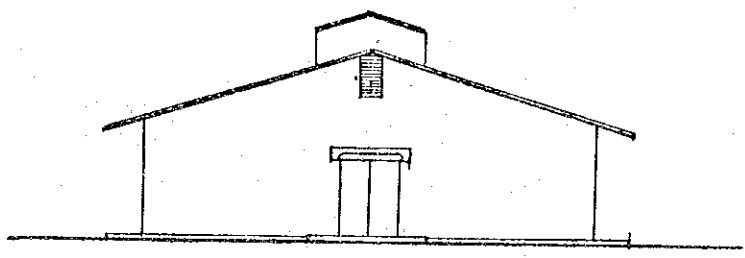


NORTH ELEVATION

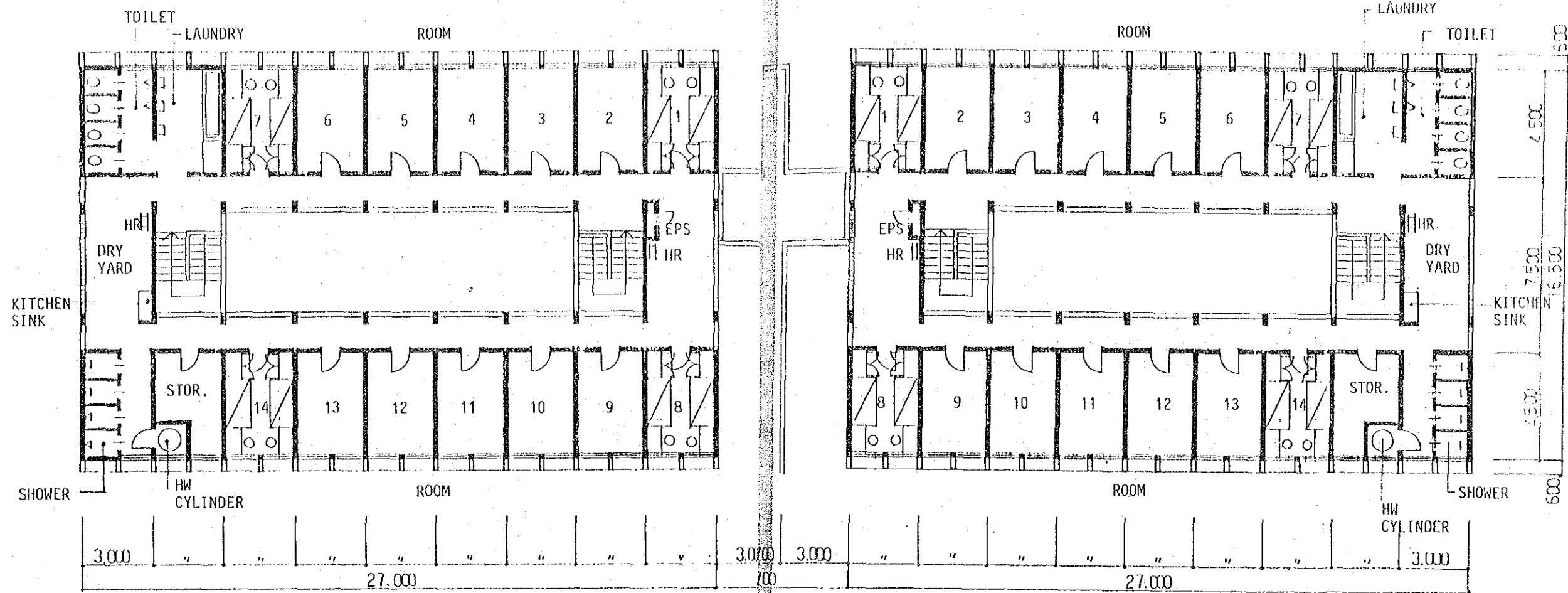
I: CENTRAL SUPPLY & SERVICE BUILDING



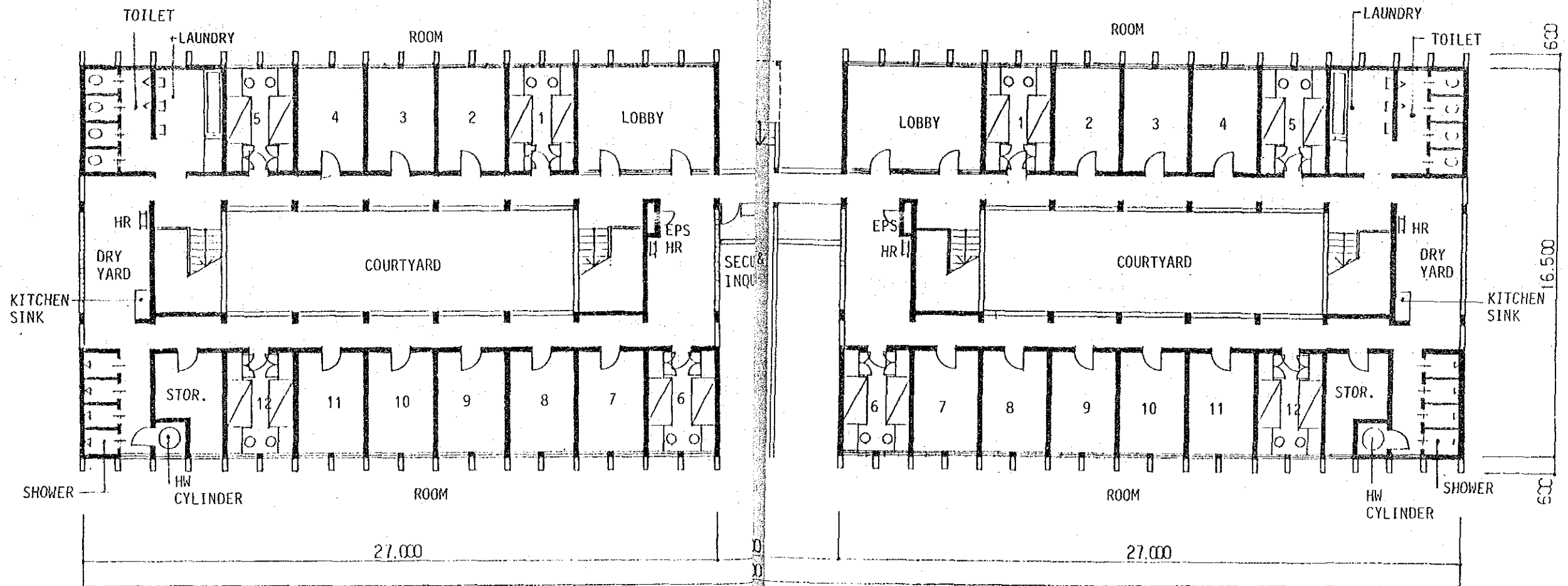
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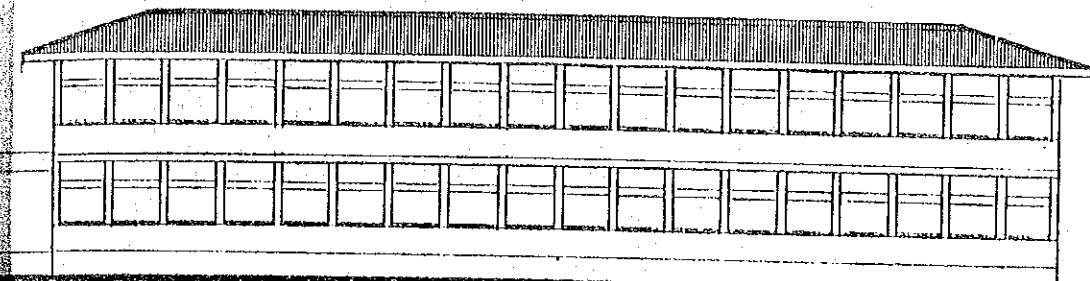
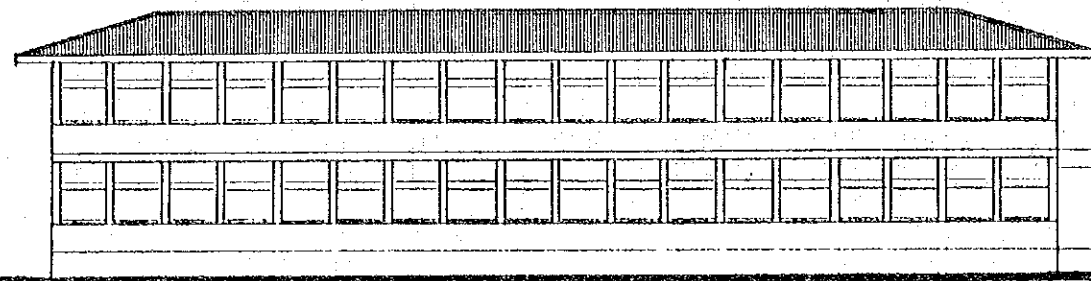
K: ANIMAL QUARANTINE BUILDING



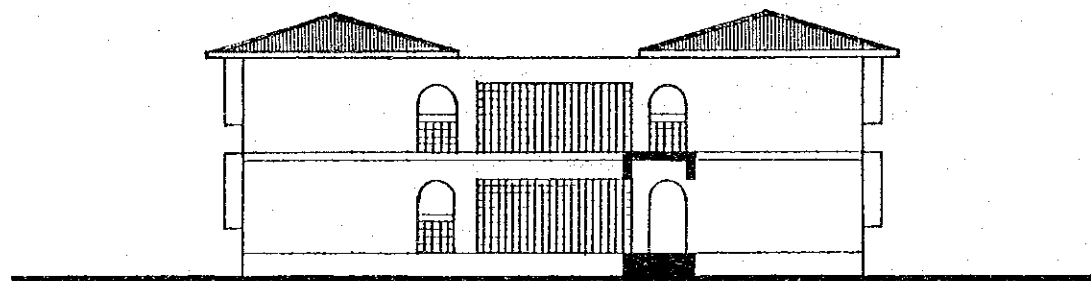
FIRST FLOOR PLAN



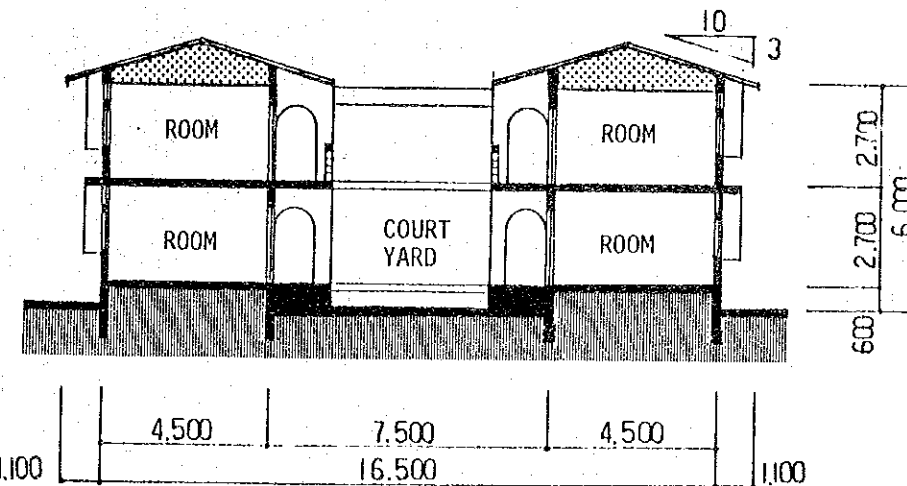
GROUND FLOOR PLAN



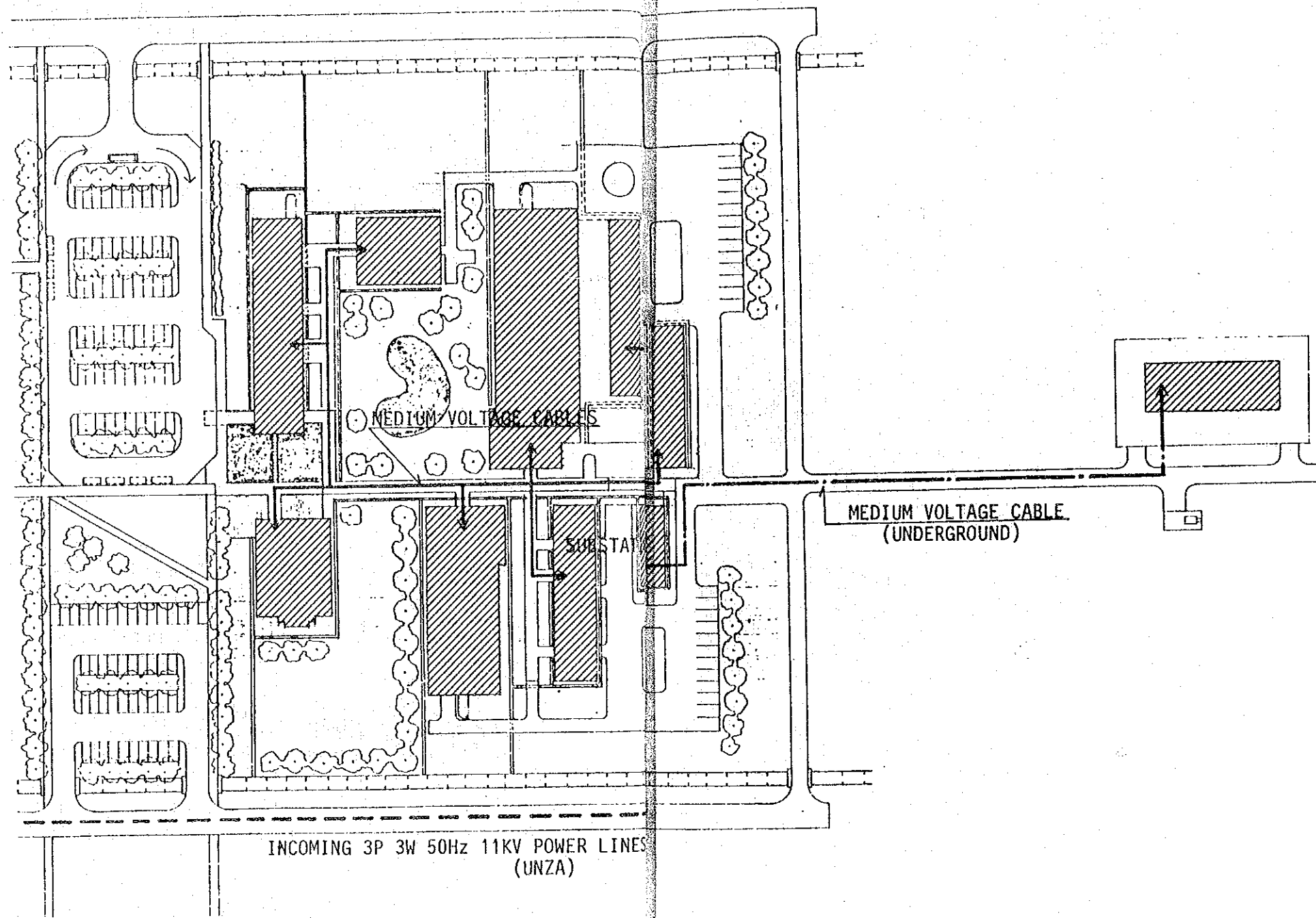
SOUTH ELEVATION

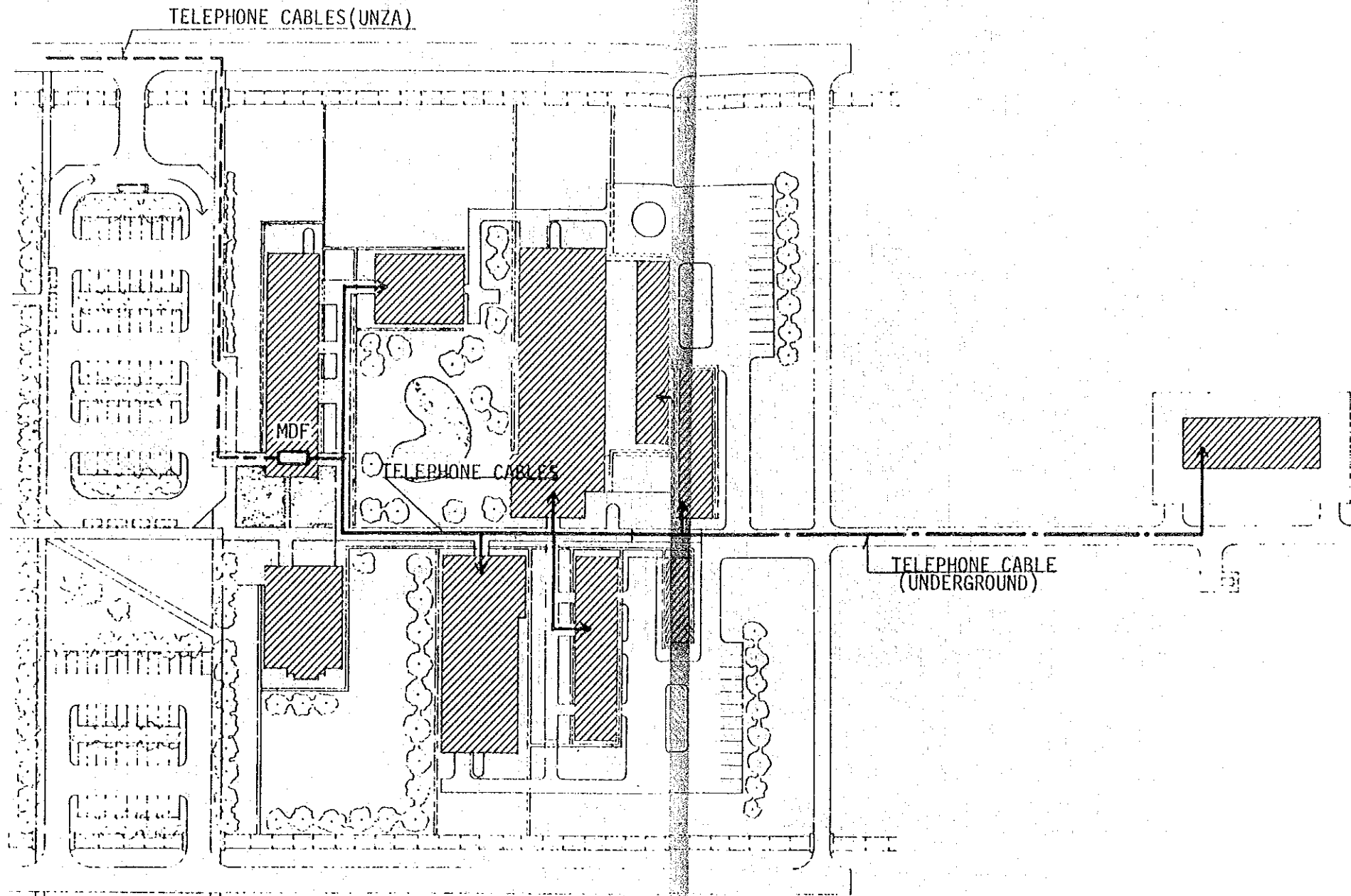


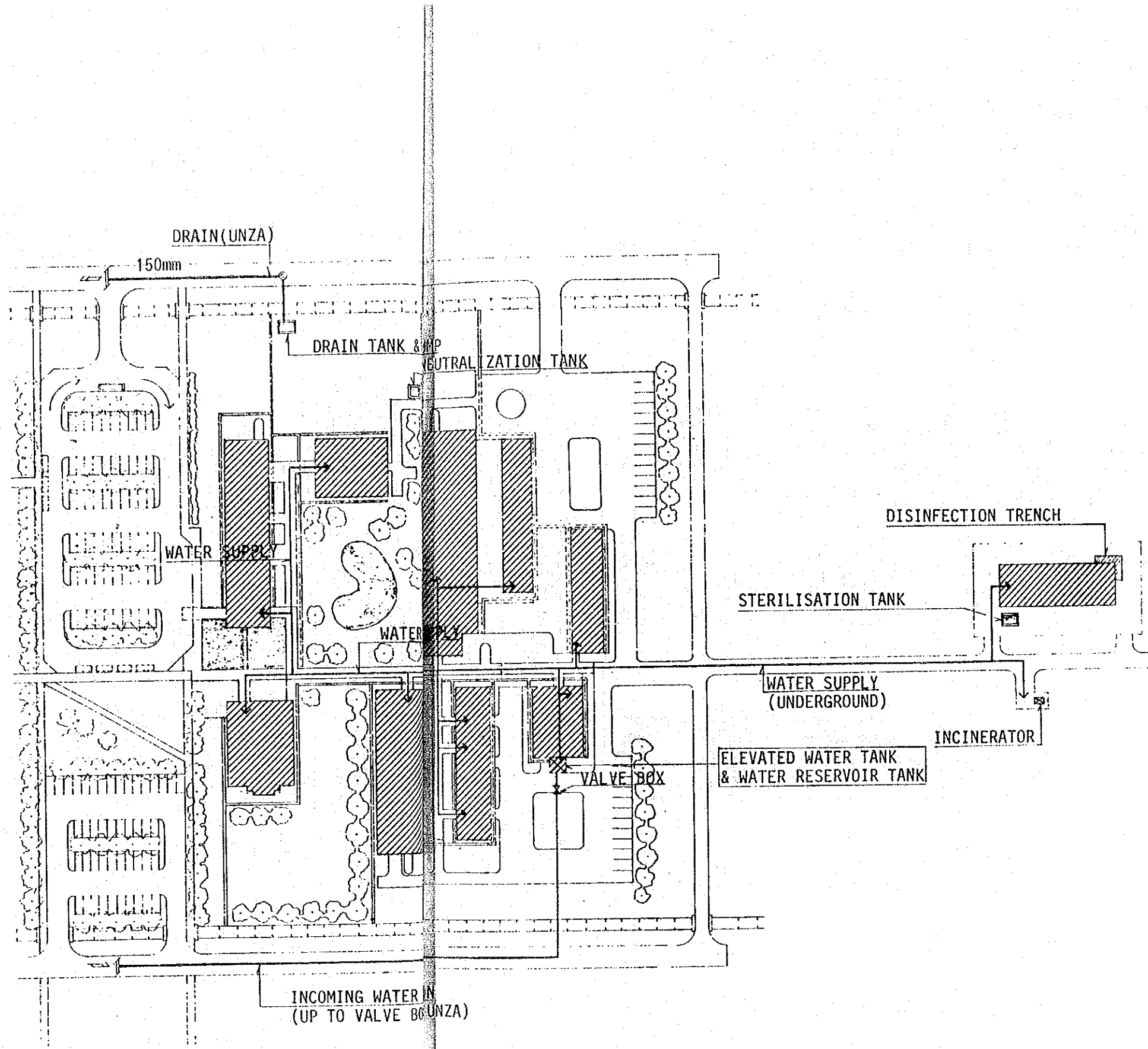
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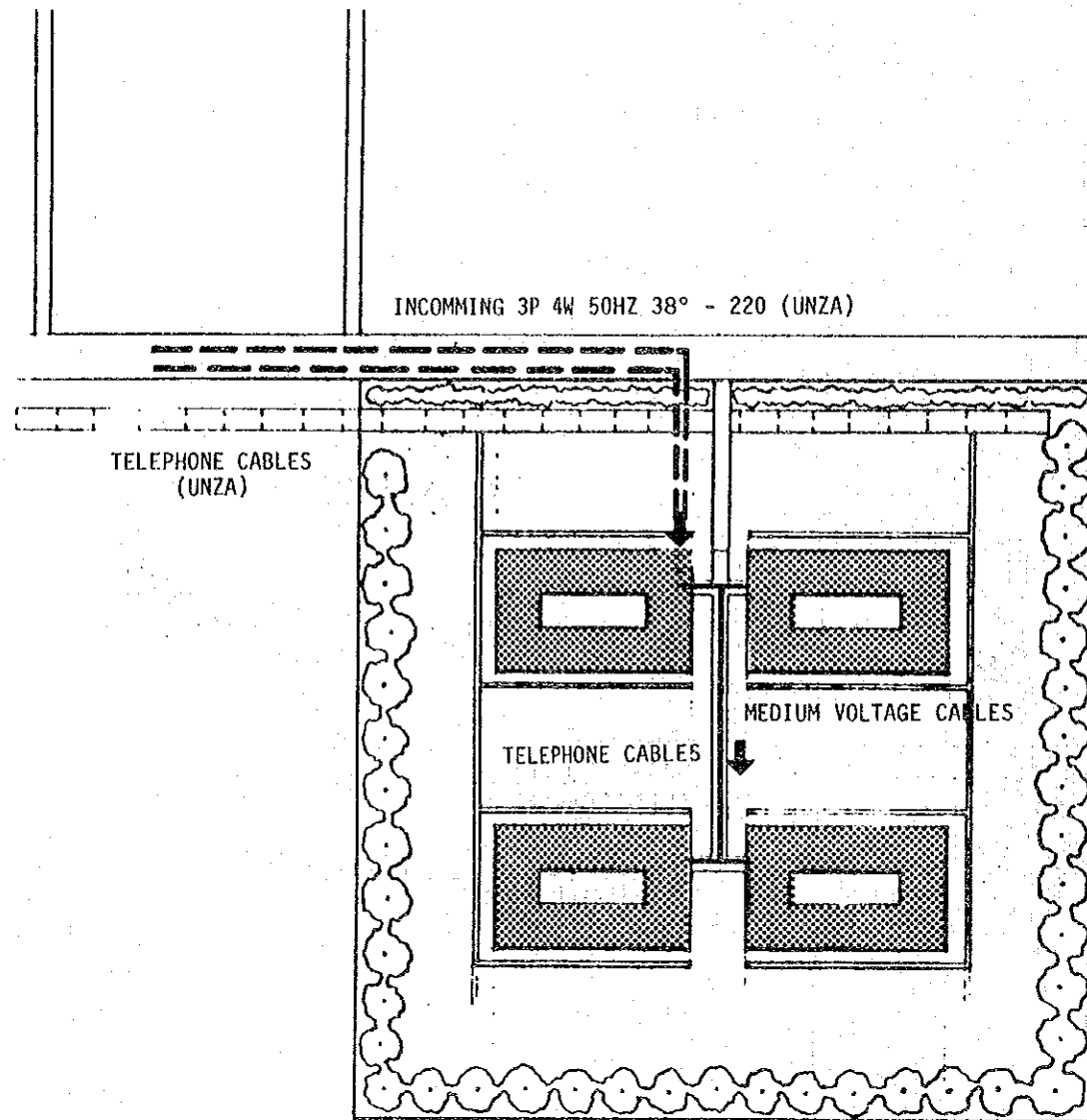


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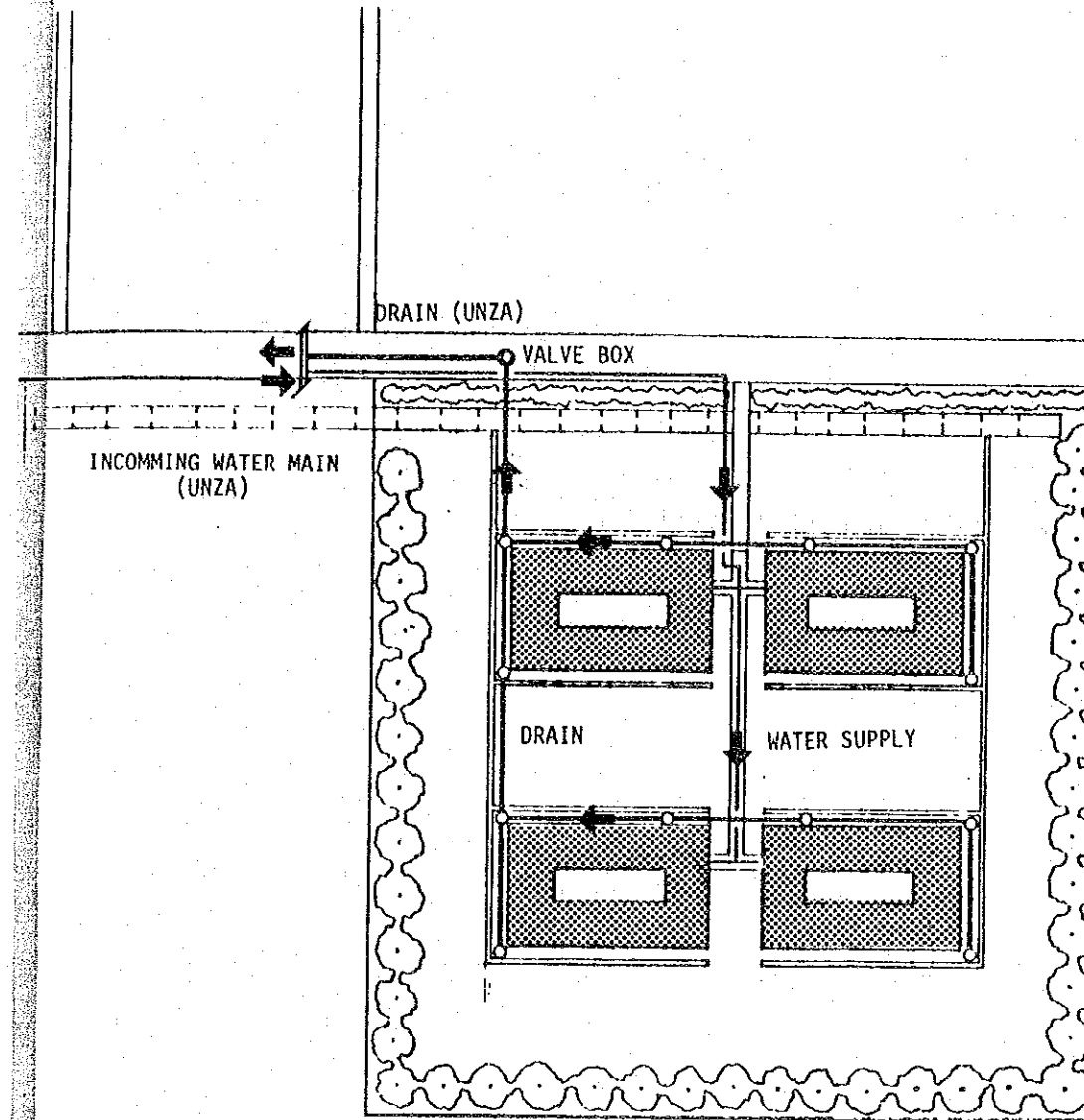








ELECTRICAL & TELEPHONE DISTRIBUTION SYSTEM



WATER SUPPLY & DRAINAGE SYSTEM

CHAPTER 5: PROJECT IMPLEMENTATION

CHAPTER 5: PROJECT IMPLEMENTATION

It is anticipated that this Construction Project will be implemented under Japanese Grant Aid in accordance with the framework laid down by the Japanese Government.

Certain items of the work must be carried out by the Zambian side in parallel with the work to be performed under the Grant Aid so that the former work can be smoothly combined with the latter. The work to be done by the Zambian side is outlined in this report, but its details must be determined through discussion as the implementation of the project progresses.

5-1 Executing Agency

The construction, maintenance and administration of the School will be undertaken by the University of Zambia. The systems of organization for the planning, construction and administration of the School have already been laid down (See Fig. 5-1), and the necessary budgetary arrangements made by the University (Please refer to the attached documents); and no particular organizational or financial problems in relation to the implementation of this project are seen at the present time.

The National Commission for Development Planning (NCDP) is the agency of the Government of Zambia that is responsible for the conclusion of the Agreement for the Japanese Grant Aid Programme.

FIG. 5.1

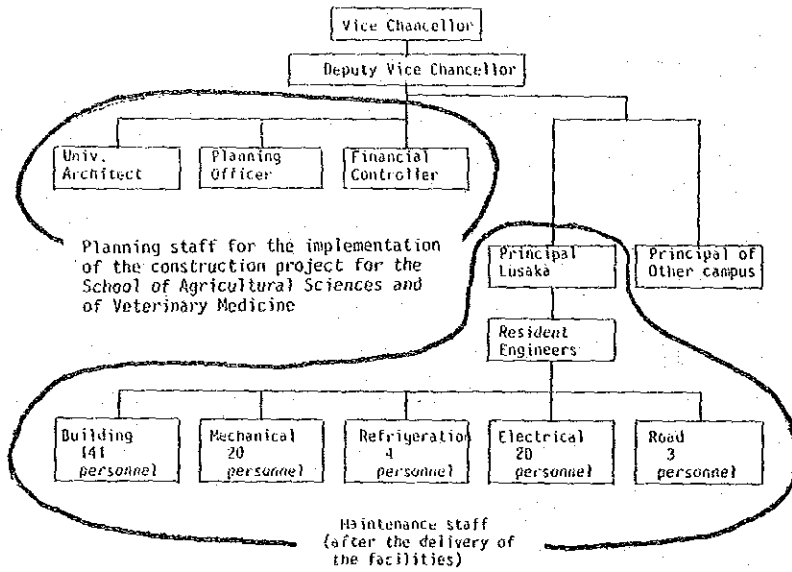


Figure-5.1

Partial Organization Chart of the University of Zambia as related to the Implementation of the Project

5-2 Construction Planning

(1) System

If the construction of this project is carried out under the Japanese Grant Aid system, the construction work will be awarded by tender to a Japanese contractor, who will take charge of the construction work, of which the building work will be performed by local subcontractors. The construction code employed in Zambia is the British Standard (BS) Code. The construction contract, etc/. between the contractor and the local subcontractors should be prepared according to the bill of quantity system of the Royal Institute of British Quantity Surveyors. The relevant standards are these:

| | |
|--------------------------|---|
| Plans and Specifications | Zambian Standard or British Standard |
| Construction Contract | RIBA, Conditions of Contract |
| Bill of Quantity | British Quantity Survey System (Royal Institute of British Quantity Surveyors) |
| Construction Code | BS Code |

In order to obtain a building permit, an application for building must be filed in the city of Lusaka. For this project, the application will be made by the Resident Architect of the University of Zambia.

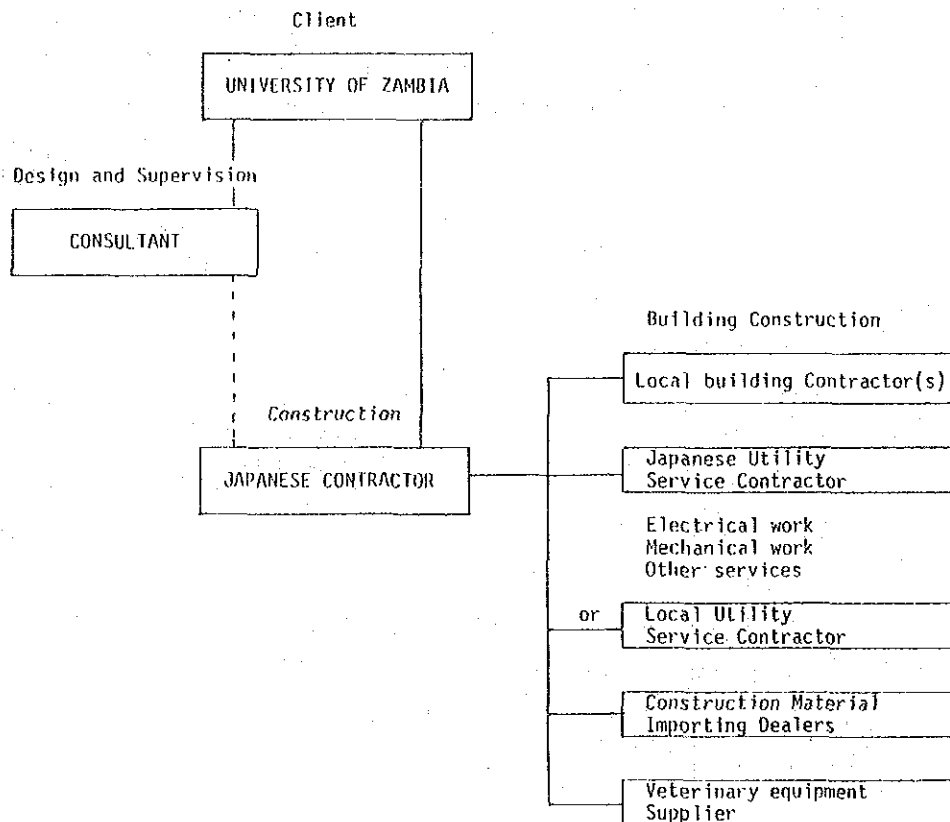
The construction work will be performed under contract by a Japanese construction contractor, who will subcontract: (a) the building work to local contractors, (b) the utility service work to a Japanese utility service contractor, or to a local service contractor.

Most of the major items of construction material will be imported from neighbouring countries or from Europe, and their purchase will be the responsibility of the Japanese construction contractor referred to above.

The veterinary equipment will be imported from Japan, and its installation will be carried out by a Japanese company under a subcontract from the Japanese construction contractor.

Fig. 5-2, below, indicates the system of contracting and subcontracting to be employed.

FIG. 5.2



(2) Planning

As stated in Chapter 4, above, the construction of the facilities of the School of Veterinary Medicine and the hostel accommodation, together having a total floor area of approximately 12,000 m², will be carried out on their respective sites. However, because of the structural complexity and size of the three two-storey buildings of the School facilities, critical path planning must be carried out centred on these three buildings, for it is on them that the overall construction plan will depend.

The construction plan is as follows: The construction subcontract will be awarded to a local contractor by a Japanese contractor after the contract between the client and the Japanese contractor has been concluded. The procedure after the commencement of construction work will be: (i) preparatory work and temporary work, (ii) grading and excavating, (iii) laying of foundations, (iv) concrete work, and (v) brick masonry work. For the concrete work and the brick masonry work of the two-storey buildings, it is considered that, four or five months will be required. Thereafter, the roofing work, consisting of iron-work and corrugated asbestos cement sheet installation, will be performed, and it is recommended that this be finished by November, when the rainy season begins. The Zambian rainy season lasts until the next March, and during this period, the interior finishing work such as that related to doors, windows, room partitions, etc., and utilities work on the electrical and sanitary systems, will be planned.

After the rainy season, the outdoor facilities work, external work and the exterior finishing of the building will be started. Simultaneously, it is planned to continue the work on the interior of the buildings and on the installation of both ordinary and medical equipment. It is necessary to plan the completion of all works by one month before the delivery of the

buildings, one month being regarded as necessary for the delivery procedures, completion of inspection, and so on. In all, for the completion of all construction work according to the above plan, it is considered that twenty-one months will be required (See Fig.4-1). Construction will be scheduled as stated below. Furthermore, the construction of the School of Agricultural Sciences will be undertaken separately by UNZA on an adjacent site, but the relationship of these two projects needs to be carefully considered in the planning of the construction of the School of Veterinary Medicine.

Zambia has to depend on importation for the procurement of almost all her construction materials other than gravel and sand, (aggregate), cement, bricks and asbestos-cement sheeting. What is more, there are times when bricks are not available or, even if available, are of too poor a quality to use. Special attention therefore needs to be given to the purchasing of construction material and to scheduling in this regard.

(3) Supervision

In the supervision of the construction work on this Project, site management and all other duties will be performed according to the procedures of Japanese Grant Aid by the Japanese consultants on behalf of the University of Zambia. In the course of these supervisory duties, all procedures related to construction and to Japanese Grant Aid will be performed in cooperation with UNZA, and the work will be coordinated, where appropriate, with the construction in progress on the School of Agricultural Sciences project. Such cooperation and coordination should contribute to the smooth progress of all construction work. Supervision by the consultant of the contracted services will cover:

- 1) Approval of shop drawings and samples of materials submitted by contractor
- 2) Instruction and explanation to contractor about design documents and specifications
- 3) Inspection and testing of construction materials specified in design documents
- 4) Supervision of workmanship, and verification of completion of all tasks
- 5) Control of scheduling

5-3 Scope of Work

The budget for the construction of the School of Veterinary Medicine and its related hostel accommodation will be provided under the Grant Aid Programme of the Government of Japan. The Government of Zambia will be responsible for site preparation, provision of the necessary infrastructure, and -- after the completion of construction -- the operation and management of all facilities. The allotment of the work is shown below:

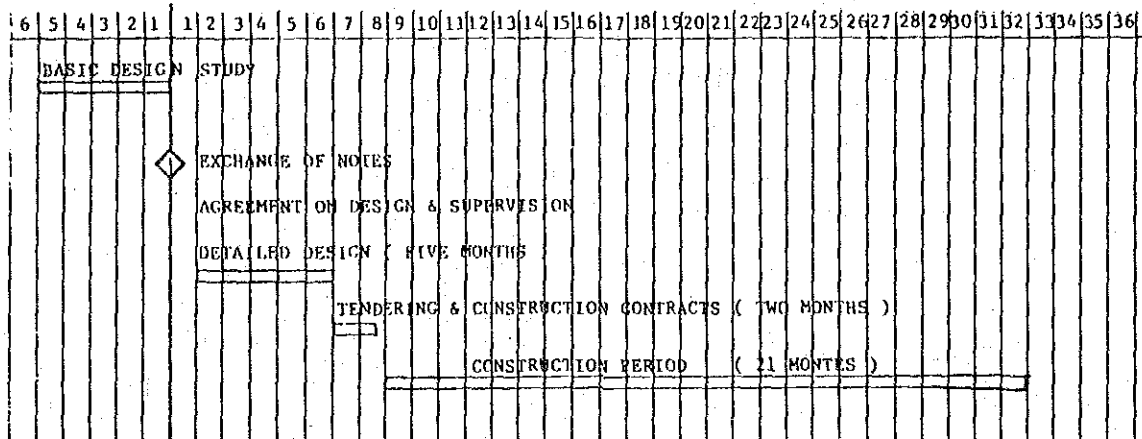
- (1) Construction and installation work to be performed by the Government of Japan
 - a. Facilities of the School of Veterinary Medicine
 1. Administration Building
 2. Veterinary Library
 3. Lecture Theatre
 4. Veterinary Science Building
 5. Dissecting and Post-mortem Building
 6. Disease Control and Clinical Studies Building
 7. Large Animal Accommodation
 8. Experimental Animal Quarters
 9. Central Supply and Service Building
 10. Covered Way
 11. Animal Quarantine Building
 12. Student Hostel
 - b. Veterinary Equipment
 1. Educational Equipment
 2. Research and Experimental Equipment

- (2) Construction and other duties to be performed by the Government of the Republic of Zambia
1. Securing of site and site preparation
 2. Provision of electricity, telephone, water supply, drainage facilities and other incidental external facilities
 3. Preparation of access roads to site
 4. Borings and soil tests on the site
 5. Securing of space for the construction of the necessary temporary offices, working areas, stock yards, etc.
 6. All necessary civil works such as fencing, both on and around the site, and planting.
 7. All procedures related to exemption of all Japanese nationals engaged on this project from all customs duties and taxes; all procedures related to the entry into Zambia and stay therein, of such Japanese nationals; and all procedures related to transportation for such Japanese nationals within Zambia.
 8. Operation and management of all facilities

5-4 Tentative Overall Schedule

The Project will be implemented according to the procedures defined by the Japanese Government's Grant Aid Program, and so the overall schedule of work should be as indicated in 5-3. Not only the work allotted to the Japanese side but that allotted to the Zambian side should be implemented according to this schedule as soon as this becomes effective.

FIG. 5.3 Tentative Overall Schedule



Notes:

- 1) The Basic Design Study above refers to the present study, conducted by JICA. (From February through June 1983.)
- 2) The Exchange of Notes has been taken as the zero point for this schedule.
- 3) It is assumed that the Exchange of Notes will have been concluded by the beginning of July 1983.
- 4) The Detailed Design above includes the preparation of specifications and tender documents.
- 5) As shown above, the construction period is estimated to be 24 months.
- 6) Further discussions will be needed with the Zambian side on the scheduling of the work to be done by the Zambian side as the Project progresses.

5-5 Operation and Maintenance

Upon their completion and handing-over to the Government of the Republic of Zambia, the operation and maintenance of the completed facilities will be the responsibility of the University of Zambia.

Four technical staff members -- one each for electrical equipment and buildings, and two for mechanical equipment -- will be necessary.

The costs of running, maintenance, and repairs are budgeted by the University as follows:

| <u>For the facilities of the School</u> | <u>Annual cost</u> |
|---|--------------------|
| Repair and Maintenance of Buildings | K 25,000 |
| Repair and Maintenance of Equipment | K 15,000 |
| Electricity and Water | K 44,300 |
| Cleaning | K 2,000 |
| <hr/> | |
| Total : | K 86,300 |

The organisation of operations and maintenance for the School will be as shown in Fig. 5-2.

The costs, to be borne by the University of Zambia, of works such as site preparation, connection of electricity and water supply and drainage systems, construction of access roads, and soil testing on the site, are included in the budget for the School of Agricultural Sciences, which is at present in the detailed design stage.

The budget required for the execution and administration of this Project, which is the responsibility of the University of Zambia, is composed of the following (in Zambian Kwacha):

1. Personnel costs

For the salaries, allowances, transportation costs and housing expenses of the staff of the School of Veterinary Medicine -- the Dean and all those under him, such as professors, lecturers, technicians, administrative personnel, etc. -- a total of 109 persons K 1,699,530

2. Running costs

For educational materials, books, research activities, equipment, glassware and other containers, expendable items (chemicals, etc.), books and journals, clothing, etc. For repair and maintenance of buildings and equipment; electricity and water supply, etc. K 313,300

3. Training costs

For 200 undergraduate students, 28 postgraduate students and 7 research students K 712,500

TOTAL: K 2,725,130

CHAPTER 6 : PROJECT APPRAISAL

CHAPTER 6: PROJECT APPRAISAL

The justification for and desired effects of the establishment of the School of Veterinary Medicine under Japanese Grant Aid are as follows:

- (1) This project will aid the Government of Zambia in implementing its policy of developing agriculture, including animal husbandry, as one of the main industries, and of abandoning the mono-economical structure of the country in favour of a more stable, balanced and modern economic basis.

For the development of animal husbandry in this country, it is an urgent necessity to train veterinarians to fill both the available posts, which are in extreme shortage, and posts to be set up in the near future, in order to bring their numbers up to a level sufficient to enable the establishment and maintenance of an efficient animal husbandry management system.

- (2) In Zambia, which has a high domestic animal population and is rich in wildlife, there is a great shortage of veterinarians. This becomes obvious by comparison of the ratio between the number of veterinarians and the animal population with international standards: there are only one-seventh of the ratio of veterinarians that other countries have. As the number of Zambian nationals among these veterinarians is only around 10% of the total in this country, for the most part, foreign nationals have to be relied on for veterinary services, in the animal medicine field as in the other areas. The realization of this project will contribute, in the field of veterinary medicine, to the "Zambianization" of the country, one of the basic policies of the Government.

- (3) In Zambia, for many years, plans have been studied for the establishment of the nation's own school of veterinary medicine, but these have been postponed because of various reasons. The differences in the education system between Zambia and those countries that employ the British system of education has raised much difficulty in relation to the dispatch of students from Zambia to these countries.

However, when the school is established by this project, such problems will be easily overcome, and furthermore, will make it possible to accept trainees from countries adjacent to Zambia. This will also serve to establish bonds between Zambia and these countries that may contribute to the prosperity and stability of the entire region.

- (4) The School will contribute greatly to the improvement of life in Zambia, for both humans and animals. It will lead to the systematisation of the administrative organisation of animal husbandry, and the development of animal husbandry throughout the nation.

Furthermore, it will be extremely beneficial for Zambia not only in the nurturing of her agricultural industry, but also in raising the level of education and public hygiene, since the training facilities will be designed and built with the cooperation of the Government of Japan to meet the specific educational needs of Zambia in these fields, and since the utmost efforts will be made by the Government of Zambia to appoint excellent teaching and research staff for the School.

These efforts will also help to promote further the cordial relations that exist between the two nations.

CHAPTER 7: CONCLUSION AND SUGGESTIONS

CHAPTER 7: CONCLUSION AND SUGGESTIONS

(1) A very high priority has been attached to this project by the Government of Zambia and also has a high effectiveness in project appraisal as stated before. Urgent measures by the Government of Japan is desirable for the realization of this project.

(2) Suggestions for the implementation of this project are as follows:

- a. In the future, it will be essential for the Government of Zambia to consider carefully the budgetary arrangements for the operation, maintenance, repair of the facilities for the renewal or acquisition of equipment, etc. for effective maintenance, management and operation.
- b. It is also expected that the school will secure the necessary teaching and research staff adequate in both quality and quantity for the effective operation and maintenance of the school. If it should be possible to establish a technical cooperation scheme to assist the school in directing the appropriate implementation of all aspects of veterinary education can be assured, this project will surely play an important role in the improvement of Zambia's animal husbandry and of her life standard in general, and in the promotion of her economy through the coordinated efforts of both Governments.

APPENDICES

1. Basic Design Survey

1-1 Zambian Government Officials Concerned

1-2 Japanese Basic Design Survey Mission

1-3 Diary

1-4 Minutes of Discussions

2. Confirmation Survey

2-1 Zambian Government Officials Concerned

2-2 Japanese Confirmation Survey Mission

2-3 Diary

2-4 Minutes of Discussions

1. Basic Design Study Mission

1-1 Zambian Government Officials with whom discussions were held during visit from 8th February to 1st March 1983.

1) National Commission for Development Planning (NGDP)

Dr. L. S. Chivuno - Director-General
Mr. M. S. Mwale - Assistant Director (ETC)
Mr. L. E. Banda - Senior Economist (ETC)
Mr. Leonard Soco - Economist (ETC)

2) Ministry of Higher Education

Mr. C. M. Sikazwe - Permanent Secretary
Mr. A. K. Mukela - Undersecretary
Mr. P. H. Milimo - Assistant Secretary
Mr. R. W. Mazonga - Senior Education Officer

3) University of Zambia

Dr. J. M. Mwanza - Vice Chancellor
Prof. M. J. Kelly - Deputy Vice Chancellor
Dr. V. G. Nyirenda - University Secretary
Prof. M. Siamwiza - Dean, Natural Sciences
Dr. R. Nadaraja - Dean, Agricultural Sciences
Dr. B. Owen - Dean, School of Agricultural Sciences
Prof. B. Mweene - Department of Mathematics, School of Natural Sciences
Mr. N. C. Mulenga - Planning Officer
Mr. J. Baxi - University Architect

- Dr. A. Siwlla - Head, Department of Biology, School of Natural Sciences
- Mr. G. Musonda - Public Relations Officer
- Mr. G. I. N. Chilongo - Head, Rural Economy and Extension, School of Agriculture
- Mr. D. O. Bampoe - Chief Librarian (acting)
- Mr. J. D. Zulu - Registrar, Lusaka Campus, UNZA
- 4) Ministry of Agriculture and Water Development
- Mr. Mbewe - Director of Planning
- Dr. G. Zyambo - Director of Veterinary & Tsetse Control Service
- Dr. M. N. Shandomo - Assistant Director, Veterinary Service
- Mr. C. Evison - Assistant Director (Tsetse Control)
- Dr. H.G.B. Chizyuka - Assistant Director (Research)
- Mr. D. Cruz - Senior Veterinary Officer
- 5) Central Veterinary Research Institute, Balmoral
- Dr. H.G.B. Chizyuka - Director
- Dr. H. F. Schels - Team Leader, FAO Project ZAM/77/002
- Mr. A. Q. Khan - Bacteriologist, FAO
- 6) Zambia Institute of Animal Health
- Dr. C. M. Sempebwa - Principal
B.V. SC & A.H.
- 7) FAO
- Mr. Owusu Agyemang - Representative

1-2 Basic Design Study Mission

| | | |
|------------------------------------|------------------|---|
| Team Leader | Nobuo Hashimoto | Professor, School of Veterinary Medicine, University of Hokkaido |
| Veterinary Education | Hiroshi Kanagawa | Professor, School of Veterinary Medicine, University of Hokkaido |
| Project Coordinator | Takeshi Komori | Grant Aid Dept., JICA |
| Acting Leader Planner | Kiyoshi Hata | Nikken Sekkei Ltd |
| Architect | Mutsuo Sato | Nikken Sekkei Ltd |
| Elect. & Mech. Engineer | Kazuhiko Yamada | Nikken Sekkei Ltd |
| Cost Estimator | Eiki Ezawa | Nikken Sekkei Ltd |
| Veterinary Medical Equipment | Nobuyuki Nagoshi | Nikken Sekkei Ltd |

1-3 Diary

| <u>Date</u> | <u>Day</u> | <u>Description</u> |
|-------------|------------|--|
| Feb. 6 | Sun. | Flight from Tokyo to Kenya (Nairobi) |
| 7 | Mon. | Call on JICA Office Visit to School of Medicine, Nairobi University |
| 8 | Tue. | Visit to International Laboratory for Research on Animal Diseases (ILRAD) Flight to Zambia (Lusaka) |
| 9 | Wed. | Courtesy calls on National Commission for Development Planning (NCDP), the Japanese Embassy, Ministry of Agriculture and Water Development, and University of Zambia (UNZA) |
| 10 | Thu. | Courtesy call to FAO Visit to Central Veterinary Research Institute (CVRI) and Inspection of the Project Site (FIRST SERIES OF MEETING) |
| 11 | Fri. | 1st meeting of first series with University of Zambia Visit to National Resources Development College Discussion with University Architect |
| 12 | Sat. | Inter-team meeting Preparation of the Block Plan |
| 13 | Sun. | ditto |
| 14 | Mon. | 2nd meeting with University of Zambia Discussion with University Architect |
| 15 | Tue. | Visit to the School of Mines, University of Zambia 3rd meeting with University of Zambia Presentation of the Minutes of Discussion Draft |
| 16 | Wed. | Visit to various farms and the facilities of University of Zambia 4th meeting with University of Zambia |
| 17 | Thu. | 5th meeting with University of Zambia Discussion with University Architect |
| 18 | Fri. | Discussion with University Architect Signing of the Minutes of the Discussions |

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|--------|------|--|
| 19 | Sat. | Discussion with University Architect Inter-team meeting |
| 20 | Sun. | Inter-team meeting Flight from Lusaka to Tokyo (Prof. Hashimoto, Prof. Kanagawa and Mr. Komori) (SECOND SERIES OF MEETINGS) |
| 21 | Mon. | 1st meeting of the 2nd part with University of Zambia Visit to Library of University of Zambia and University Teaching Hospital |
| 22 | Tue. | 2nd meeting with University of Zambia Discussion with University Architect Visit to Mass Media Complex |
| 23 | Wed. | 3rd meeting with University of Zambia |
| 24 | Thu. | Discussion with University Architect Meeting with a Structural Engineer in Lusaka Visit to National Resources Development College and Site for Student Hostel |
| 25 | Fri. | 4th meeting with University of Zambia Meeting with Zambia Electricity Supply Corporation Limited (ZESCO) |
| 26 | Sat. | Meeting with Mass Media Complex Projecta consultant Visit of the Project Site |
| 27 | Sun. | Preparation of Sketches for the Project |
| 28 | Mon. | Final Meeting with University of Zambia |
| Mar. 1 | Tue. | Flight from Lusaka to Tokyo |

1-4 Minutes of Discussions

MINUTES OF DISCUSSIONS
ON
THE CONSTRUCTION PROJECT FOR
THE SCHOOL OF VETERINARY MEDICINE, UNIVERSITY OF ZAMBIA,
THE REPUBLIC OF ZAMBIA

In response to the request by the Government of the Republic of Zambia for assistance in establishing the school of veterinary medicine at the University of Zambia in Lusaka (hereinafter referred to as "the Project"), the Government of Japan has sent through the Japan International Cooperation Agency (JICA) a survey team headed by Nobuo HASHIMOTO, Professor of the School Veterinary Medicine, Hokkaido University, to conduct the Basic Design Survey on the Project from 8th to 27th of February, 1983. The team held a series of discussions and exchanged views with the relevant Authorities of the Government of Zambia.

As the result of the study and discussions, both parties have agreed to recommend to their respective Government to examine the result of the survey attached herewith toward the realization of the Project.

February 18, 1983

橋本信夫

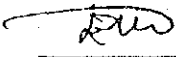
Nobuo HASHIMOTO

Leader
Japanese Survey Team

M J Kelly

M J Kelly

Deputy Vice-Chancellor
University of Zambia


I S Chivuno

Director General
National Commission for
Development Planning

Attachments

1. The objective of the Project is to provide necessary buildings, facilities and equipment for the establishment of the School of Veterinary Medicine at the University of Zambia (hereinafter referred to as "the School").
2. The proposed site of the Project is at the Great East Road Campus of the University of Zambia in Lusaka, Zambia.
3. The basic concept for the School is as follows:
 - (1) The main role of the School is to produce qualified professional veterinarians, in order to meet the requirements of Zambia, who will be engaged in the activities of increasing quantity and improving quality of livestock production, and identifying, controlling and where possible eradicating the major domestic animal diseases.
 - (2) The Departments required for the School are as in Annex I
 - (3) An outline of the programmes is as in Annex II
 - (4) The Teaching Curriculum is as in Annex III
4. The Japanese Survey Team will convey the desire of the Government of Zambia to the Government of Japan that the latter will provide the buildings and other items as listed in Annex IV within the scope of Japanese economic cooperation in grant form.
5. The Government of Zambia stressed the need for housing for Japanese experts who might be assigned to Zambia under a technical cooperation scheme in relation to the Project.
6. The Government of Zambia will take the necessary measures listed in Annex V on condition that the grant assistance by the Government of Japan is extended to the Project.
7. Both sides confirmed that the Japanese Survey Team explained Japan's Grant Aid Programme and that the Zambian side understood it.

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Annex I

Departments

1. Department of Bio-Medical Sciences
 - Anatomy
 - Physiology
 - Biochemistry
 - Pharmacology

2. Department of Pathology, Microbiology and Parasitology
 - Pathology
 - Microbiology
 - Parasitology

3. Department of Disease Control
 - Epizootiology
 - Preventive Medicine or Public Health
 - Food Hygiene
 - Environmental Science or Wild Life Disease

4. Department of Clinical Studies
 - Animal Reproduction and Veterinary Obstetrics
 - Artificial Insemination and Animal Breeding
 - Medicine
 - Surgery and X-Ray Radiation

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Year at UniversityPre-Veterinary I

1

Biology
Chemistry
Physics
Mathematics

2

Pre-Veterinary II

Biochemistry and Organic Chemistry
Genetics and Biometrics
Introduction to Anatomy and Physiology
Sociology

3

1st Professional Year

Comparative Anatomy/Histology/Embryology
Animal Physiology
Pharmacology and Toxicology
Animal Nutrition and Dietetics
Animal Breeding

4

2nd Professional Year

Comparative Pathology, Histopathology and
Clinical Pathology
Microbiology (Bacteriology and Virology)
Immunology
Parasitology and Entomology

5

3rd Professional Year

Epizootiology and Animal Hygiene
Public Health and Food Hygiene
Environmental Science or Wild Life Disease
Introduction to Clinical Studies
Livestock Production

6

4th Professional Year

Animal Reproduction and Obstetrics
Artificial Insemination
Medicine
Surgery and X-Ray Radiation
The Veterinarian in Society

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Annex IV Items required by the Government of Zambia whose costs will be borne by the Government of Japan

1. Academic Buildings, Facilities

- (1) Administration Offices
- (2) Veterinary Library
- (3) Lecture Theatre
- (4) Department of Bio-Medical Sciences
- (5) Department of Pathology, Microbiology and Parasitology
- (6) Department of Disease Control
- (7) Department of Clinical Studies with Veterinary Hospital
- (8) Experimental Animal Quarters
- (9) Isolation Animal Building and Incinerator
- (10) Central Services Building
- (11) Exterior Facilities on the Academic Buildings Project Site

The above Buildings and Facilities are indicated in the sketches attached hereto.

2. Veterinary Equipment

- (1) Educational Equipment
- (2) Laboratory Equipment

3. Hostel Accommodation

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Annex V Required Arrangements to be undertaken by the
Government of the Republic of Zambia

1. To secure land necessary for the construction of the facilities and to clear, fill and level the site as needed before the start of the construction.
2. To provide facilities for distribution of electricity, telephone, water supply and drainage and other incidental facilities outside the building.
3. To construct and prepare the access road to the Project Site.
4. To ensure prompt unloading, tax exemption and customs clearance at ports of disembarkation in Zambia and prompt internal transportation therein of the products purchased under the grant.
5. To exempt Japanese nationals engaged on the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Zambia with respect to the supply of the products and the services under the verified contracts.
6. To accord without delay to Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contract such facilities as may be necessary for their entry into Zambia and their stay therein for the performance of their work.
7. To maintain and use properly and effectively the facilities constructed and equipment purchased under the grant.
8. To bear all the expenses, other than those to be borne by the grant, necessary for the construction of the facilities as well as for the internal transportation of the products and services under the grant.
9. To undertake incidental civil works such as planting and fencing, if needed.
10. To provide the space necessary for such construction as temporary offices, working areas, stock yards and others.

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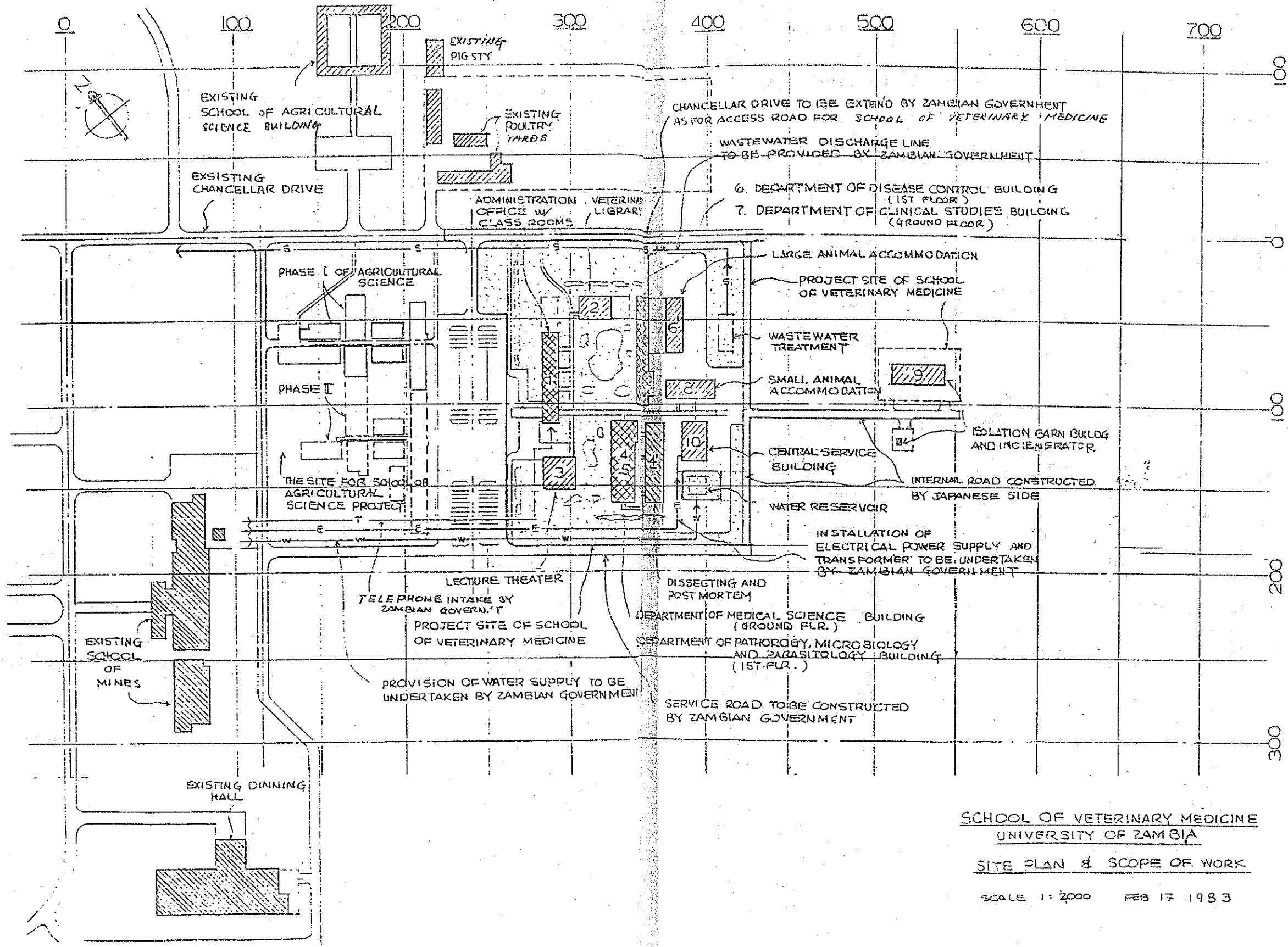
Annex II

Outline of the Programmes

| <u>School of Veterinary Medicine</u> | <u>Years</u> | <u>Annual Enrolment</u> | <u>Remarks</u> |
|--------------------------------------|--------------|-------------------------|--|
| Pre-Veterinary Course | 2 | 40 | |
| Undergraduate Course (B.V.M.) | 4 | 30 | Veterinarians |
| Graduate Course Master (M.V.Sc.) | 2 | 8 | To train local staff to teach in the School and to foster research and development in the area of Zambia's animal health needs |
| Doctor (Ph.D.) | 3 | 4 | ditto |

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SCHOOL OF VETERINARY MEDICINE
 UNIVERSITY OF ZAMBIA
 SITE PLAN & SCOPE OF WORK
 SCALE 1:2000 FEB 17 1983

2. Confirmation Survey

2-1 Zambian Government Officials with whom discussions were held during visit from 24th May to 30th May 1983.

- 1) National Commission for Development Planning (NCDP)
 - Mr. T. T. Musango - Undersecretary NCDP
 - Mr. Mwate - Assistant Director (ETC)

- 2) Ministry of Higher Education
 - Mrs. P. M. Akupelwa - Undersecretary
 - Mr. P. H. Milimo - Assistant Secretary

- 3) University of Zambia
 - Dr. J. M. Mwanza - Vice Chancellor
 - Prof. M. Mweene - Deputy Vice Chancellor
 - Dr. V. G. Nyirenda - University Secretary
 - Prof. K. Mwafuluka - Principal, Lusaka
 - Dr. B. Owen - Dean, School of Agricultural Sciences
 - Prof. M. N. Siamwiza - Dean, School of Natural Sciences
 - Prof. M. J. Kelly - Professor, Former Deputy Vice Chancellor
 - Mr. N. C. Murenga - Planning Officer
 - Mr. J. Boxi - University Architect

2-2 Members

| | | |
|--------------------------|-----------------|---|
| Team Leader | Nobuo Hashimoto | Professor, School of Veterinary Medicine, University of Hokkaido |
| Project Coordinator | Takeshi Komori | Grant Aid Dept., JICA |
| Acting Leader Planner | Kiyoshi Hata | Nikken Sekkei Ltd. |
| Architect | Mutsuo Sato | Nikken Sekkei Ltd. |
| Structual Engineer | Mitsugu Asano | Nikken Sekkei Ltd. |

2-3 Diary

| <u>Date</u> | <u>Day</u> | <u>Description</u> |
|-------------|------------|--|
| May 22 | Sun. | Flight from Tokyo to Lusaka |
| May 23 | Mon. | Arrive at Lusaka |
| May 24 | Tue. | Courtesy calls on National Commission for Development Planning (NCDP), Ministry of Higher Education. Visit to the Japanese Embassy First meeting with University of Zambia, Presentation and Explanation of the Draft Report |
| May 25 | Wed. | (Africa Freedom Day) Visit to the Construction Site of Kabulonga Flats, University of Zambia |
| May 26 | Thu. | Second meeting with University of Zambia, Discussion of the Draft Report |
| May 27 | Fri. | Visit to Steel Fabrications, Zambia Steel and Building Supplies Limited (Timber Division) Discussion with University Architect and Structual Consultant on Structual System and Soil Test |
| May 28 | Sat. | Visit to Construction Sites Survey of Construction Materials |
| May 29 | Sun. | Collection of Construction Information Data |

| | | |
|--------|------|---|
| May 30 | Mon. | Inter-team meeting Signing of the Minutes of the Discussion |
| May 31 | Tue. | Visit to the Brick and Tile Manufacturer Flight from Lusaka to Tokyo |

2-4 Minutes of Discussions

MINUTES OF DISCUSSIONS
ON
THE CONSTRUCTION PROJECT FOR
THE SCHOOL OF VETERINARY MEDICINE, UNIVERSITY OF ZAMBIA,
THE REPUBLIC OF ZAMBIA

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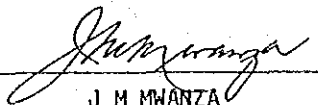
As a result of surveys and discussions, JICA prepared a Draft Report on the Project and dispatched a mission to Zambia from 23rd to 31st May, 1983. The purpose of the mission was to explain the Report to Zambian authorities and discuss its content with them. Both parties held a series of discussions on the Report and agreed to recommend that their respective governments consider the Report and take the necessary steps towards the realization of the Project.

May 30, 1983

橋本信夫


Nobuo HASHIMOTO

Leader Japanese Team



J. M. MWANZA

Vice-Chancellor
University of Zambia



L. C. CHIVUNO

Director-General
National Commission for
Development Planning

JICA