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**THE
JOHANNESBURG
BOTANIC
GARDEN**

DEVELOPMENT PROGRAMME

**CITY COUNCIL OF JOHANNESBURG
PARKS AND RECREATION DEPARTMENT**



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This report on the proposed stages of development of The Johannesburg Botanic Garden is submitted for discussion purposes only.

It must be borne in mind that every stage of development is dependent upon funds being made available by the Council and because of a cut-back in the funds for this project in recent years, all reference to the time periods of development mentioned in this report must be ignored.

The report has been the subject of preparation over a period of time and changes have been made since development of the project commenced, and it is possible that further changes will be made in regard to future development and, in particular, to priorities.

Finally, it must be appreciated that the development of this project is likely to be a slow process because of the heavy demands on the Council's overall financial resources by certain Council Departments which have major projects under development that are of prior importance to the city.

C.H. TRIM

GENERAL MANAGER

THE JOHANNESBURG BOTANIC GARDEN

1. Introduction

1.1 A committee to investigate ways and means of establishing a Botanic Garden in Johannesburg was formed, after some preliminary talks in November 1951, basing the need for a Botanic Garden on the assumption that scientists and students need a garden containing various types of plants from all parts of the world in order to study their economic possibilities and for the purpose of research.

1.2 Preliminary City Council Action.

Health and Amenities Committee on 10 April 1968 resolved:

"That the General Manager, Parks and Recreation Department, submit a report on whether the establishment of a Botanic Garden is feasible."

Management Committee on 19 November 1968 resolved:

"That a Botanic Garden be established at Jan van Riebeeck Park and that the Parks and Recreation Department continue with the landscaping of the park on the lines indicated in the section of the report."

2.1 Landscape Planner's Brief

2.2 Preliminary Departmental Action 4 March 1969.

"That the landscape planner be given a free hand in regard to the planning of the Botanical Garden, but he should bear in mind the following:

- 2.3 The area to be planned will cover approximately 300 acres commencing at D.F. Malan Drive, more or less opposite West Park Cemetery.
- 2.4 The Rose Garden and Emmarentia Dam will be included in the layout.
- 2.5 The plan will show the siting of a conservatory, a nursery, a parking area and at least two boreholes.
- 2.6 The planting of trees, etc., will be on a family basis.
- 2.7 The entire area of the Botanic Garden be cultivated and planted with Kikuyu lawn.
- 2.8 The buildings in the garden be of the Cape Dutch design.

3.1 Summary of Proposals of the Landscape Planner

After due consideration we recommend that:

- 3.2 The plantings, where possible, be based on systematic groups defined by botanical relationships, geographical groups according to native habitats, ornamental plantings to create landscape effects and three species of dominant trees to unify the garden.
- 3.3 The relationship between tree planted areas and open space be planned with a view to vistas, pedestrian movement and the aesthetic aspects of the garden.
- 3.4 A photogrammic survey be undertaken of the area indicating contours of 1,5 m intervals, existing trees, stone outcrops, water courses, dams, etc., the scale of the plan to be 1:1000.
- 3.5 A comprehensive water reticulation system be installed.
- 3.6 The entire area be security fenced.
- 3.7 The area close to the intake of Emmarentia Dam, already camped off for the breeding of birds, be left undisturbed.
- 3.8 Where topographically feasible additional lakes be created.
- 3.9 The roadway system be of a continuous nature so as to obviate the necessity of back-tracking; it is further suggested that the system be designed to enable the visitor to take a route according to the amount of time at his disposal; a colour coded map on which the various timed walks and all the major attractions in the garden are shown, could be given to the visitor on entering the garden; further directional signs could be erected at strategic points.
- 3.10 A sub-system of pedestrian movement be included so that the detailed study of a family group may be undertaken. This system would be in the nature of grassy trails through each family, colour coded by means of directional signs to facilitate thorough coverage.

- 3.11 A herb garden be established exhibiting herbs of culinary, as well as African medicinal herbs and herbs of international medicinal importance.
- 3.12 A community education centre be constructed with facilities for an herbarium, library, lecture room, auditorium, working areas for flower shows and demonstrations, etc. This building is of paramount importance as it will draw people in a community spirit to the garden and thus humanize it. Without people a Botanic Garden is useless.
- 3.13 A Rose Trial area be constructed under the guidance of the Rose Society of South Africa.
- 3.14 A ground cover demonstration area be established.
- 3.15 The existing Rose Garden be rationalised.
- 3.16 A glasshouse complex be constructed including an arctic house, a temperate house, a tropical house and an arid house.
- 3.17 A garden herbarium be started from the inception of this project.
- 3.18 A geophysical survey be conducted to establish borehole water potential.
- 3.19 A garden nursery be laid out.
- 3.20 As the garden develops, consideration can be given to the establishment of demonstration gardens including displays of plant materials suitable for hedges, etc., and the testing of mulches, etc.
- 3.21 Special collections of plants such as magnolias, camellias, lilacs, irises, etc., will be planted in their family groups giving due consideration to their display in an aesthetically appealing manner.
- 3.22 Wherever possible, natural ground forms be retained.

- 3.23 As the garden will be security fenced outdoor sculptures may be exhibited with less fear of vandalism.
- 3.24 That private motor vehicles will not be permitted to drive around the garden, but that some form of organised transport will be provided by the Botanic Garden for viewing and instruction on the garden.
- 3.25 That shelters of an attractive design be built in case of sudden thunderstorms.
- 3.26 That the Botanic Garden will become a centre for horticulture and will provide facilities for the promotion of horticulture and floriculture, and foster more extensive and intelligent use of ornamental plants and trees, to enhance the beauty of Johannesburg gardens, parks and motorways.
- 3.27 That the purposes of the garden are very different from those of a recreational park, and it is not intended to be used for picnicking, sports, or similar activities. Picnicking will be permitted only North of Emmarentia Dam.

4.1 Accepted Principles on the Educational and Scientific Responsibilities of the Botanic Garden

- 4.2 That the Botanic Garden differs from a park in that it is a scientific and educational institution.
- 4.3 That an accession book will be kept listing all plants planted in the garden with a history of their origin and an allocation of an accession number.
- 4.4 That all plants will be scientifically labelled: i.e. botanical names, accession and location numbers. These numbers will refer to a card catalogue which will give location, origin and history of every plant represented.
- 4.5 That the garden by virtue of its international connections, will introduce noteworthy plants from around the world for trial, and the information regarding those which prove suitable, will be disseminated to nurserymen and thus to the general public.
- 4.6 That schools, universities, colleges of education, etc., be encouraged to make use of this facility by means of lectures, botanising excursions, etc.
- 4.7 That interested bodies such as garden clubs and societies will be encouraged to give practical help in the form of demonstrations and lectures.
- 4.8 That it is imperative to work in close association with universities in the creation of this garden.
- 4.9 Later when the Botanic Garden is fully organised, with an appropriate staff, important research programmes could be undertaken connected with clonal selection, hybridisation, etc.
- 4.10 That a weather station be established in the grounds of the Botanic Garden.

- 4.11 Pamphlets and booklets on various plants, their uses, etc., will be published from time to time.
- 4.12 The Department will exchange seed, from throughout the world.
- 4.13 The Botanic Garden should have a gardening school for training men to be horticulturists, superintendents, propagators and other skilled personnel required by the Parks and Recreation Department.

- 5.1 Work completed to date on The Johannesburg Botanic Garden.
- 5.2 A photogrammic survey was undertaken as per specifications in 3.4.
- 5.3 A geophysical survey was conducted, the results of which are that the borehole water potential is favourable to fair as per specification 3.18.
- 5.4 A master plan of the garden has been drawn. This plan shows the layout of the roadway system, the position of the future glasshouse complex, the locality of the proposed administration and community education centre, the siting of the nursery, the relationship between treeless and wooded areas, the main plantings of families, the siting of proposed car parks, the future main entrance, areas for trial grounds, the main through vistas, the position of lakes, etc.
- 5.5 The water reticulation system has been designed by the City Council's Water Branch in collaboration with various leading water engineering firms and will provide for complete watering coverage of the garden over a seven day period. Part of this system has been laid in the main body of the garden comprising a 152,4 mm pipe from which 101,6 mm laterals are taken at intervals of 91,44 m as per specification 3.5.
- 5.6 The area North of Emmarentia Dam, bounded on the West by John Mackenzie Drive and on the East by Louw Geldenhuys Drive, was considered a priority for development by this Department due to:
- (a) it being used as a rubbish tip for garden refuse, building rubble, etc.;
 - (b) undesirables using the thick reed for drinking and gambling purposes, resulting in a continuous stream of complaining letters to this Department;
 - (c) the area being of a limited size, this Department could make an immediate impression by development and thereby demonstrate the type of layout envisaged for the main body of the Botanic Garden.

5.6.a Due to the swampy nature of the terrain and the presence of the perennial overflow from Emmarentia Dam, it was decided to construct two ponds, to help drain the swamp and to provide aesthetic focal points in the area. This was completed over a period of 18 months. It must be emphasized that these two ponds were created by excavation, in order to blend them into the ground form, rather than by building retaining walls, which would have been an infringement on the landscape.

To prevent flood waters and silting, the main overflow stream from Emmarentia Dam has been diverted so that it does not pass directly through these ponds. A controlled amount of this stream is permitted into the ponds through a series of pipes and silt traps. The banks of the stream have been planted with water loving plants.

5.6.b The basic tree planting structure was governed by existing willow trees, which are a feature of this development; trees added to this are Quercus, Acer, Platanus and Betula.

5.6.c This area will eventually be used as a picnic area, as picnicking will not be permitted in the main body of The Johannesburg Botanic Garden.

5.6.d The portion of this area, which stretches up to Fifth Avenue, Linden, consisting of extensive reed beds, will not be developed in order that the existing bird life be preserved.

5.6e A Camellia Grove has been planted and will be expanded as and when varieties not at present represented become available. This grove has been interplanted with:

(a) Cover trees, to provide shade and to assist in the raising of humidity.

(b) Gardenias, to provide a pleasant perfume.

5.6.f Detailed plan of this area reference No. Section XI.

- 5.7 A Herb Garden was started in 1972 on the strength of a donation of R500 worth of bricks from The Johannesburg Botanic Garden Society. Up to the end of the 1974 financial year the culinary and African medicinal section had been planted, besides the hedges and tree plantings. See specification 3.11.
- 5.7.a Dr Breyer Brandwyk and Annabele Lucas drew up lists of African Medicinal Herbs for use by this Department in choosing plants for this section. As many plants are used by the Blacks only plants with ten or more accepted tribal uses will be grown.
- 5.7.b Brumeria in Pretoria have provided this Department with many plants from this list and, in time, this section will provide an interesting point of study for visiting botanists, medical persons and others.
- 5.8 The area along Thomas Bowler Street and D.F. Malan Drive has been graded to existing contours and planted with grass. Wherever possible, the natural ground form has been retained. Because of preserving the existing contours, the roadway system, which has been designed, will fit unobtrusively into the final development in that the system follows the smoothly flowing land form.
- 5.9 The planting of the families Leguminosae and Myrtaceae has commenced and will continue as and when more material becomes available. Many of the plants of the family Myrtaceae now growing in the garden are from seed exchanges between the Parks and Recreation Department and various Australian Botanic Gardens.
- 5.10 The Department is now in receipt of the yearly desiderata from botanic gardens throughout the world and as development takes place a greater demand will be placed on these institutions to provide our seed requirements as per specification 4.5.

- 5.11 The Western and Northern boundaries of the Rose Garden have been densely planted with a variety of trees, to form a screen from the Rose Garden of the unattractive shopping centre on the corner of Levubu Road and Olifants Road. It is planned to wood either side of the Rose Garden to create an air of intimacy by framing it with trees. A secondary consideration is to protect the roses from strong winds.
- 5.12 A collection of flowering cherries has been planted along the Eastern shoreline of Emmarentia Dam. When established, attractive reflections in the water will be seen from the Western side of the Dam. The trees were a gift from The Johannesburg Botanic Garden Society.
- 5.13 Some of the roadways have been marked out and graded. Unfortunately; with such limited funds the paving has not yet been started.

- 6.1 Development programme for 1974 - 1975. Work in progress.
- 6.2 Work will commence on the construction of two dams South of Emmarentia Dam. Due to a sewer line running through the valley in which the dams are to be constructed, final completion of the dams will have to await the diversion of the sewer. A new sewer is planned for the 1975/76 financial year and the Sewer Branch has agreed to a different route for the sewer.
- 6.3 These dams have been designed in collaboration with the City Engineer's Department of the City Council.
- 6.4 The tree planting programme will be continued on an extensive level throughout the year, according to the family groupings as indicated on the master plan.
- 6.5 A water reticulation system is to be installed in the developed area North of Emmarentia Dam. This system is being designed by the Water Branch of the City Council.
- 6.6 Further work will be done on the water reticulation system in the main body of the garden.
- 6.7 The International Medicinal Section of the Herb Garden will be constructed and planted.
- 6.8 The grading of the roadway system will be continued in the developed areas of the garden.
- 6.9 Due to rising maintenance costs a rationalisation scheme for the Rose Garden will be undertaken. This programme will be commenced this year on Terrace No. 7 with a reorientation of beds and the planting of carefully selected trees. This programme will be continued yearly on each successive terrace until the whole Rose Garden has been reorganised.
- 6.10 The programme of contour grading and grass planting will be continued to the Western shoreline of Emmarentia Dam and the Western side of the stream running through the garden.

- 6.11 The banks of the University of the Witwatersrand sportsfields have posed a considerable aesthetic problem to the Department: the height of the banks make them visible from virtually the whole garden and being so steep and alien to the natural contours of the garden, great difficulty is being experienced in integrating them, by landscaping into the overall design. It was decided after studying the soil, to plant a forest of Pine trees interspersed with various deciduous trees to give a sense of seasonal change.
- 6.12 Stormwater from roads into departmental ground when bounded by a park, have presented this Department with the expense, when we come to develop the area, of canalising this waste water. Due to this, part of this year's budget will be spent on piping the stormwater from D.F. Malan Drive, which at present disperses and erodes the lawns of the Botanic Garden, into the two dams at present under construction.
- 6.13 A forest of Podocarpus trees will be planted between the main entrance to the garden and the Rose Garden.
- 6.14 Construction will be started on the main car park and entrance to the Botanic Garden.
- 6.15 On going to press all 14 of the above items have been or are in the process of being executed.

7.1 Development programme for 1975 - 1976

- 7.2 Further work will be done on the main car park and entrance to the Botanic Garden which was started in the 1974/75 financial year.
- 7.3 The two dams on which construction was started in the 1974/75 fiscal year will be completed and landscaped. As the walls of the dams are alien to the natural land fall, skilful tree planting and contouring of the walls will have to be executed.
- 7.4 The area at present leased to Verwey's Golf Driving Range will revert back to control by the Parks and Recreation Department and will then be grassed and graded. Part of the collection of Leguminosae and Myrtaceae will then be planted over this area.
- 7.5 The Jan van Riebeeck Park sportsfields and clubhouse, at present in use within the boundaries of the Botanic Garden will be vacated, as facilities for this club have been provided elsewhere. The present sportsfield will be used as a nursery for the garden and the existing clubhouse will be converted into a temporary office and storeroom for the person in charge of the Botanic Garden.
- 7.6 The planting programme as laid down on the master plan will be continued.
- 7.7 The rationalisation of Terrace No. 6 of the Rose Garden will be undertaken.
- 7.8 A Rose Trial Demonstration Garden will be constructed and the first rose trials will be planted in July of 1975.
- 7.9 The Rose Garden Nursery will be moved to the Botanic Garden Nursery and the evacuated site will be landscaped.
- 7.10 A weather station will be established at the Botanic Garden during this year.
- 7.11 A fixed grid sprinkler system will be installed in the amphitheatre and central spine of the car park - see detailed plan.

- 7.12 The trees in the level areas of the main car park will have a "pipe-in-hole" watering system.
- 7.13 A 101,6 mm plastic pipe will be laid from the North-Western corner of Emmarentia Dam to the main Rose Garden pool, through which the submersible pump to be placed in Emmarentia Dam, will pump to the main Rose Garden pool. An electric meter box will be installed against the brick wall of Emmarentia Dam for the feed to the submersed pump. At the same time a feed point will be installed for the eventual lighting of the main car park.
- 7.14 A 101,6 mm overflow pipe will be laid from the Rose Garden main pool to the backwash sump and a new 152,4 mm pipe will be laid from the backwash sump into the new car park drainage system.
- 7.15 The fountains and jets in the Rose Garden pools will be replaced with more suitable types and the whole system will be disconnected from the municipal water supply and reconnected to the main pump reticulation.

8.1 Development Programme for 1976 - 1977

- 8.2 The car park adjacent to the site for the future administration and community education centre will be graded to final levels and planted with trees.
- 8.3 The rationalisation of terraces Nos. 4 and 5 in the Rose Garden will be undertaken.
- 8.4 The existing overflow stream from Emmarentia Dam will be widened to make it into a feature consisting of cascades and small waterfalls. Streamside plants will be planted consisting of Irises, Lobelia, Gunnera, Skirpus, Variegated reeds, etc.
- 8.5 The tree planting programme in the main body of the garden will be continued on an extensive level throughout the year, according to the master plan.
- 8.6 The area East of the two newly constructed dams will be graded and grassed, which will finalise this aspect in the development of the garden. Some of the natural areas of wild grasses will be left as they are and control will be exercised so that no alien grasses encroach.
- 8.7 The surfacing of the roadway system should be commenced.
- 8.8 During this financial year part of the security fencing for the garden should be erected. If completely free access at any point is permitted over a prolonged period of time, the Department will encounter strong public opposition to the final security fencing of the Botanic Garden, apart from protecting valuable plants, etc.
- 8.9 The labelling of plants will be continued.
- 8.10 Herbarium specimens will continue to be taken for the Garden Herbarium and for the Moss Herbarium.

- 8.11 The colonial type fence which has been erected along the Western boundary of the garden will be continued along the Eastern boundary.

- 8.12 A ground cover demonstration area will be constructed, displaying shade and sun loving ground covers.

9.1 Development Programme for 1977/1978

- 9.2 During this fiscal year, consideration will be given to the planning of a glasshouse complex for the Botanic Garden. It is felt that an initial display house should be of such a nature that plants rarely seen in South Africa, such as Alpines, Andean plants and Arctic plants should be grown. For this reason it has been decided that the first house to be built should be an Alpine glasshouse.
- 9.3 The surfacing of the roadway system will be continued.
- 9.4 Diagrammatic plans of the garden should be erected at strategic points on the continuous roadway system with arrow indications with the legend - "You are now Here".
- 9.5 A start should be made during this fiscal year on the administration and community education centre.
- 9.6 The rationalisation of Terraces Nos. 3 and 2 in the Rose Garden will be undertaken.
- 9.7 The tree planting programme will continue throughout the year according to the master plan.
- 9.8 It is suggested that a booklet be published with colour photographs on the Botanic Garden and the best plants introduced into South Africa through The Johannesburg Botanic Garden with explanations on their requirements and their possible use in private gardens.
- 9.9 The water reticulation system will be completed on the Eastern side of the gardens.
- 9.10 A bubbler-flood system will be installed on the newly designed Rose Garden terraces.
- 9.11 A supply of electricity will be laid for the Herb Garden and the completed Rose Garden terraces, to enable the use of electric hedge clippers and electric mowers.

10.1 Development Programme for 1978/1979

- 10.2 Consideration will be given to the construction of the Arctic House mentioned in the 1977/1978 development programme. The project will engender a large public interest in the garden.
- 10.3 Further construction work should be done on the administrative centre.
- 10.4 The security fence should be continued.
- 10.5 The tree planting programme will be continued throughout the year according to the master plan.
- 10.6 The rationalisation of Terrace No. 1 in the Rose Garden will be undertaken, which will bring this redevelopment to an end.
- 10.7 The surfacing of the roadway system will be continued.
- 10.8 The subsidiary car park on the South-Western side of the garden will be constructed.

GENERAL LAYOUT PLAN.

**GENERAL LAYOUT PLAN OF PART
OF THE WATER RETICULATION SYSTEM.**

EMMARENTIA No. 32

EMMARENTIA EXT. No. 1

MARKS PARK

University of the Witwatersrand Sportsfields

FRANKLIN ROOSEVELT PARK EXT. No. 1

THE JOHANNESBURG BOTANIC GARDEN PLAN SHOWING PART OF THE WATER RETICULATION SYSTEM

PARKS AND RECREATION DEPARTMENT

G.M. C.H. TRIM

APPROVED BY

[Signature]

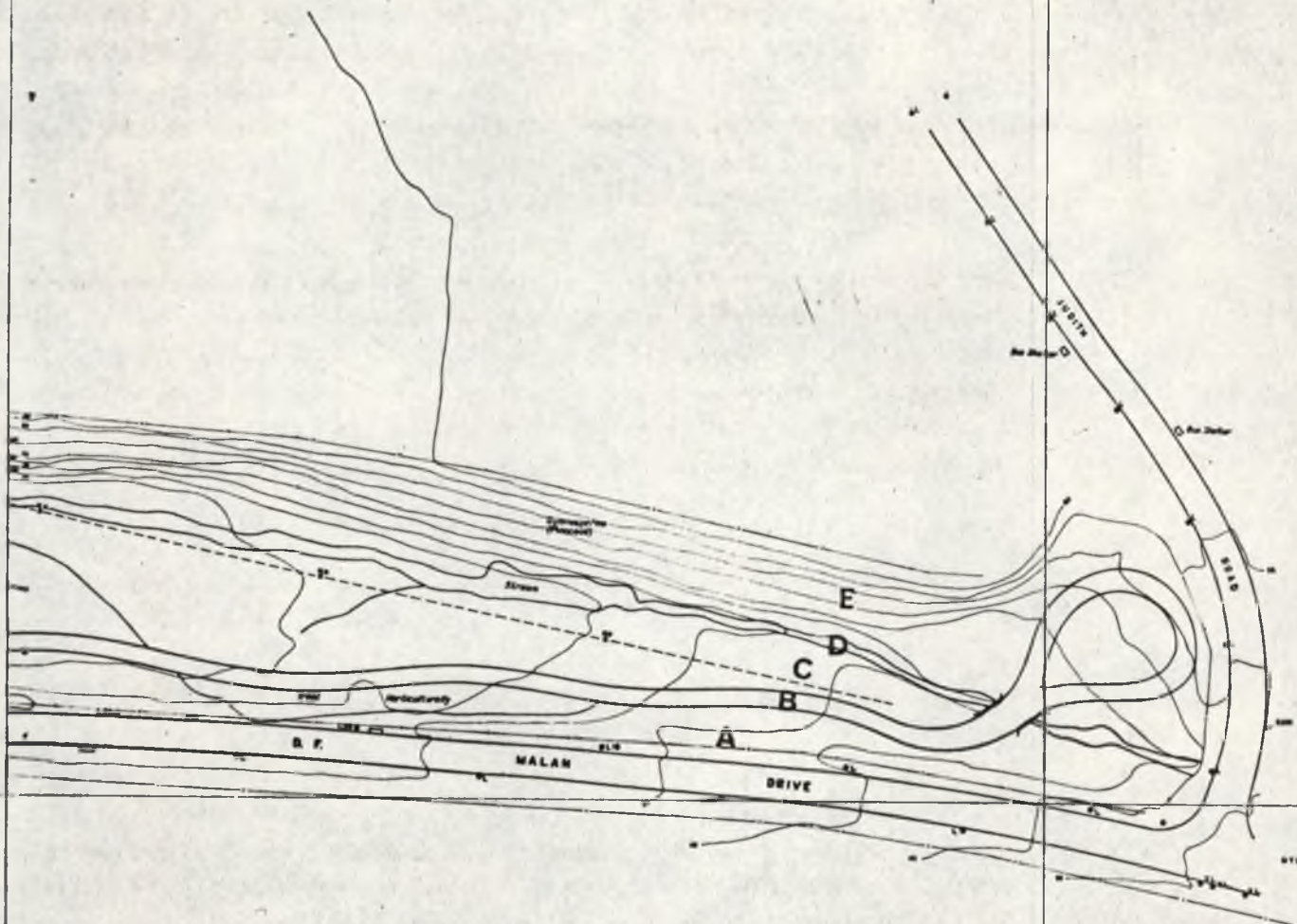
1925



***SECTIONAL PLANS OF THE LAYOUT OF
THE JOHANNESBURG BOTANIC GARDEN.***

THE JOHANNESBURG BOTANIC GARDEN SECTION I

- A. This area will be treated horticulturally.
- B. Part of the Pedestrian and Vehicular Roadway System.
- C. Banks of the stream to be treated horticulturally with bog plants.
- D. The Braamfontein Spruit.
- E. The Banks of the University of the Witwatersrand Sportsfields which will be planted with the order Gymnosperme concentrating mainly on Pinaceae.



SECTION T
THE JOHANNESBURG BOTANIC GARDEN.

PLANS AND RECREATION DEPT
 S.W. SECTION
 APPROVED BY
 DATE FEB. 1974
 SCALE 1:500
 REF No.



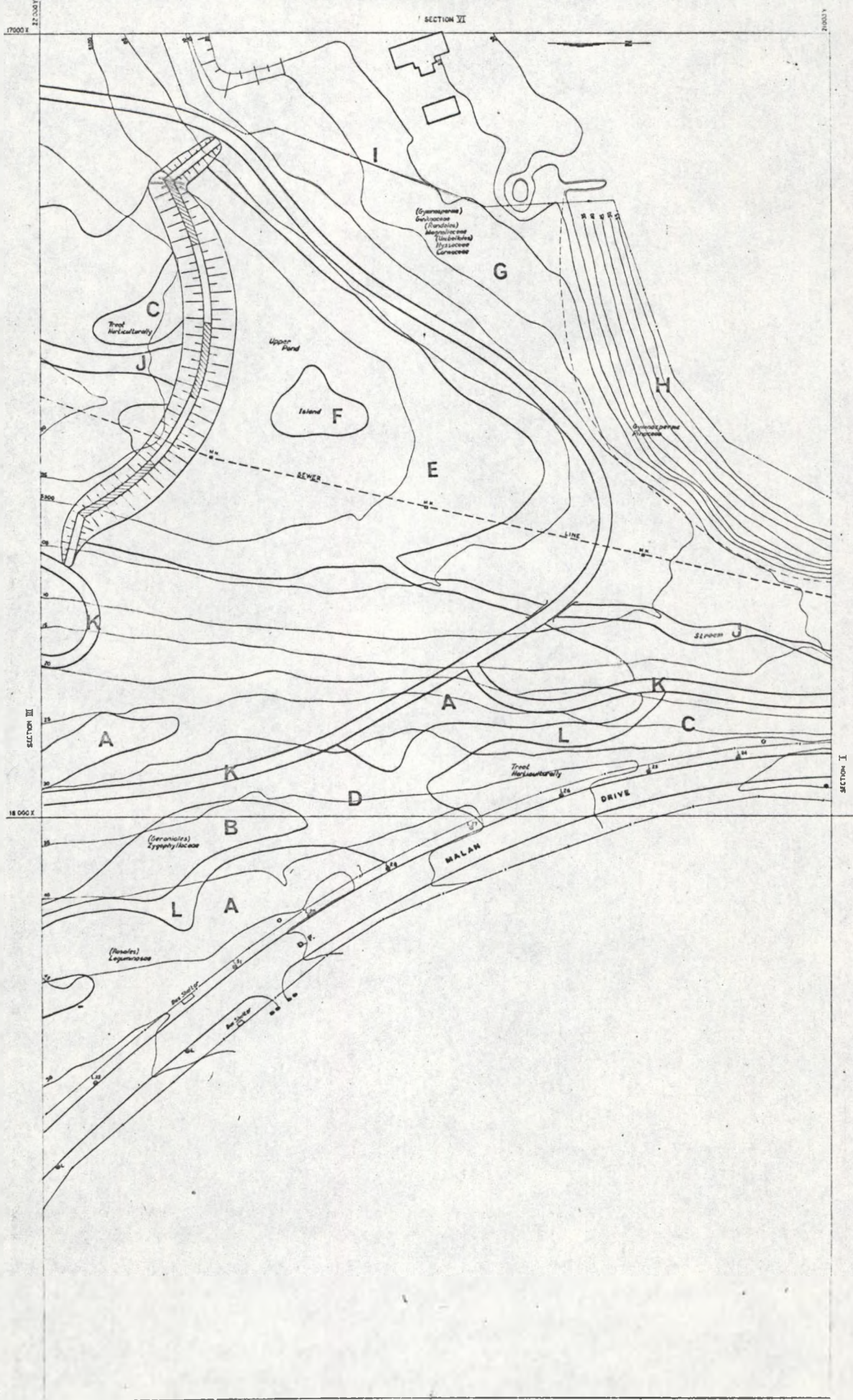
**THE JOHANNESBURG BOTANIC GARDEN
MASTER PLAN**

PARKS AND RECREATION DEPARTMENT
G.M. C.H. TRIM
APPROVED BY,
SCALE 1:1000

GRID IN BOLD F.I. SYSTEM (100 FEET)

THE JOHANNESBURG BOTANIC GARDEN SECTION II

- A. Planted with the order Rosales concentrating mainly on the family Leguminosae.
- B. Planted with the order Geraniales concentrating mainly on the family Zygophyllaceae.
- C. It is suggested that this area be treated horticulturally.
- D. One of the main Vistas of the garden orientated towards a distant hill and a possible future fountain.
- E. The Upper of the two proposed Dams.
- F. An Island to be established in the middle of the upper dam.
- G. Planted with the orders Gymnosperme, Randaes and Umbellales, concentrating on the families Ginkgoaceae, Magnoliaceae, Myssaceae and Cornaceae.
- H. The Banks of the University of the Witwatersrand which will be treated with Pinaceae.
- I. The Boundary Fence line between the Marks Park Sports Grounds and the Botanic Garden.
- J. The Braamfontein Spruit running through the garden and feeding Emmarentia Dam.
- K. Part of the Vehicular and Pedestrian Roadway System.
- L. One of the Grassy Trails running through the garden, from where a detailed study of a family may be made.



SECTION II
THE JOHANNESBURG BOTANIC GARDEN.

Public and Recreation Dept
 S.W. G. 1100
 Approved by
 2072 Jan 1974
 Scale 1:500
 B.C.F. No.

THE JOHANNESBURG BOTANIC GARDEN SECTION III

- A. Entrance to Subsidiary Car Park on the Western side of the Botanic Garden.
- B. An area planted with trees and perhaps including a fountain feature.
- C. Car Park for 102 cars. To be surfaced in a terracotta tar macadam.
- D. Entrance into the Botanic Garden. Orientated towards the upper of the two new dams.
- E. Planted with the order Rosales but concentrating on the family Leguminosae.
- F. One of the Vistas of the garden orientated towards Melville Koppies and the distant Brixton tower.
- G. One of the grassy Trails running through the garden, from where a detailed study of a family may be made.
- H. Planted with the order Myrtales but concentrating mainly on Myrtaceae and Proteaceae series II.
- I. One of the Main Vistas of the garden orientated towards a distant hill and a possible future fountain.
- J. Part of the Vehicular and Pedestrian Roadway System.
- K. The Lower of the two proposed Dams.
- L. Existing Stream feeding Emmarentia Dam.

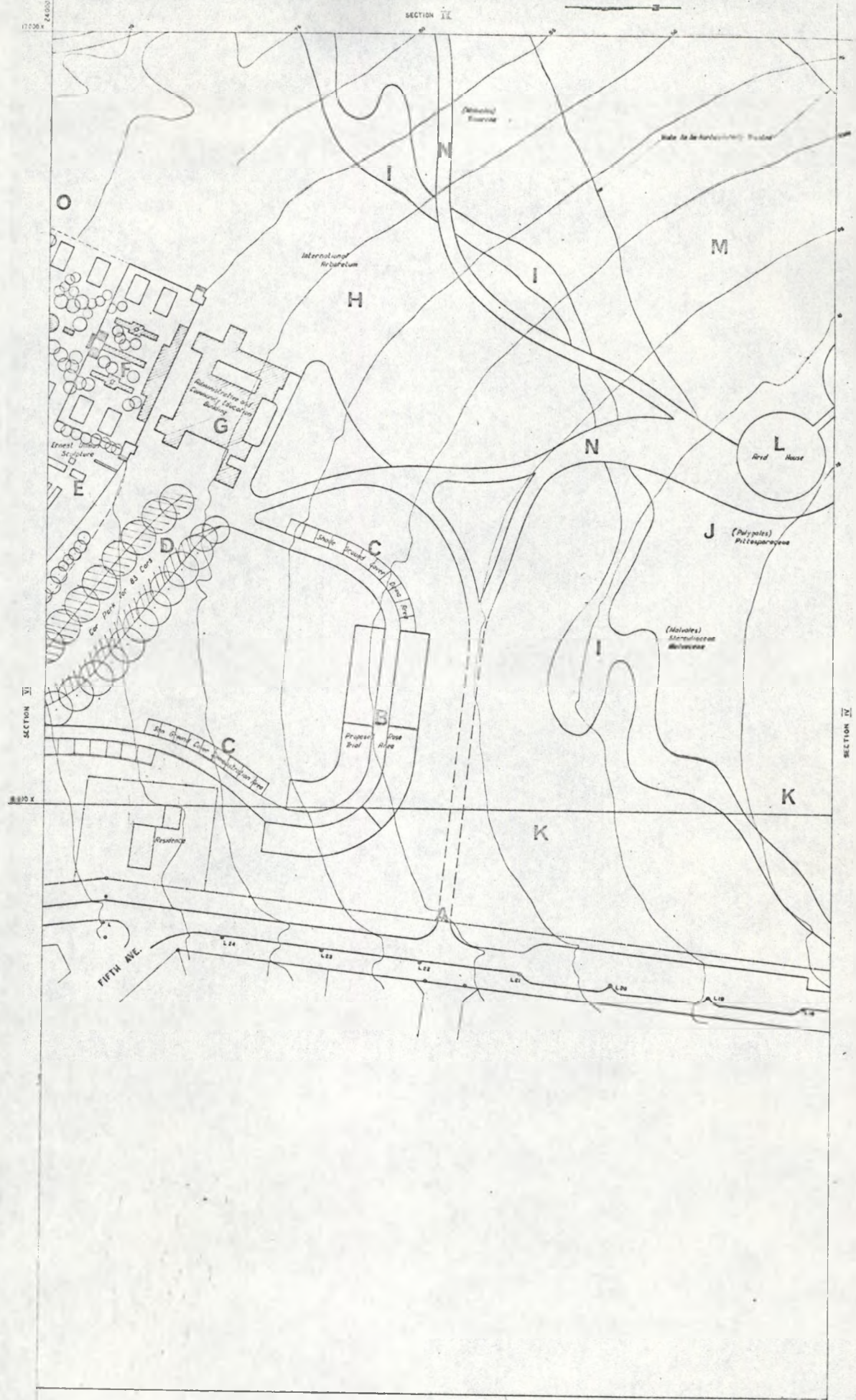
THE JOHANNESBURG BOTANIC GARDEN SECTION IV

- A. Planted with the order Calycineae concentrating mainly on Palmaceae.
- B. Part of the grassy trails running through the garden.
- C. The Botanic Garden Nursery.
- D. Part of the Pedestrian and Vehicular Roadway System.
- E. The proposed situation of a Tropical House in the Conservatory complex.
- F. The proposed situation of a Temperate House in the Conservatory complex.
- G. The proposed situation of an Arctic House in the Conservatory complex.
- H. Part of the Vista orientated towards Emmarentia Dam.
- I. Planted with the order Rosales concentrating mainly on the family Leguminosae.
- J. Part of the Vista orientated towards a distant hill.
- K. Planted with the order Unisexuales concentrating mainly on the families Betulaceae, Fagaceae and Aceraceae.
- M. Planted with the order Unisexuales concentrating mainly on the family Casuarinaceae.
- N. Planted with the order Ranales concentrating mainly on the family Magnoliaceae.
- O. Planted with the order Unisexuales concentrating mainly on the family Moraceae.
- P. It is proposed that this grassy walk will have sculptures placed at strategic points.

THE JOHANNESBURG BOTANIC GARDEN SECTION V

- A. Entrance to the Administrative and Community Education building. This roadway will be used by Botanic Garden staff and by members of the public attending lectures, etc., in the Administrative and Community Education Centre.
- B. The proposed Rose Trial Area which will be developed in collaboration with the Rose Society of South Africa.
- C. It is suggested that this be developed as a Ground Cover Demonstration area. This development continues on Section VI.
- D. Car Park for 83 cars to serve the staff and visitors to the Administrative and Community Education Centre. This car park should be paved in the same type of brick that is used in the Herb Garden.
- E. The Herb Garden Terrace. The Ernest Ullman Sculpture is exhibited here.
- F. The Rose Garden showing in part the simplification of the terraces and proposed reorientation of the Rose Beds.
- G. The proposed Administrative and Community Education building. See separate plan.
- H. An International Arboretum which was initiated during the Mayoral year of Councillor I. Schlapobersky. Consular representatives of various countries have promised the Council assistance with plant material indigenous to their native lands.
- I. One of the grassy trails running through the garden, from where a detailed study of a family may be made.
- J. Planted with the order Polygales.
- K. Planted with the order Malvales.

- L. The proposed situation of one of the houses in the Conservatory complex. To date no firm proposals as to the design of these houses have been made.
- M. One of the important vistas of the garden.
- N. Part of the Vehicular and Pedestrian Roadway system.

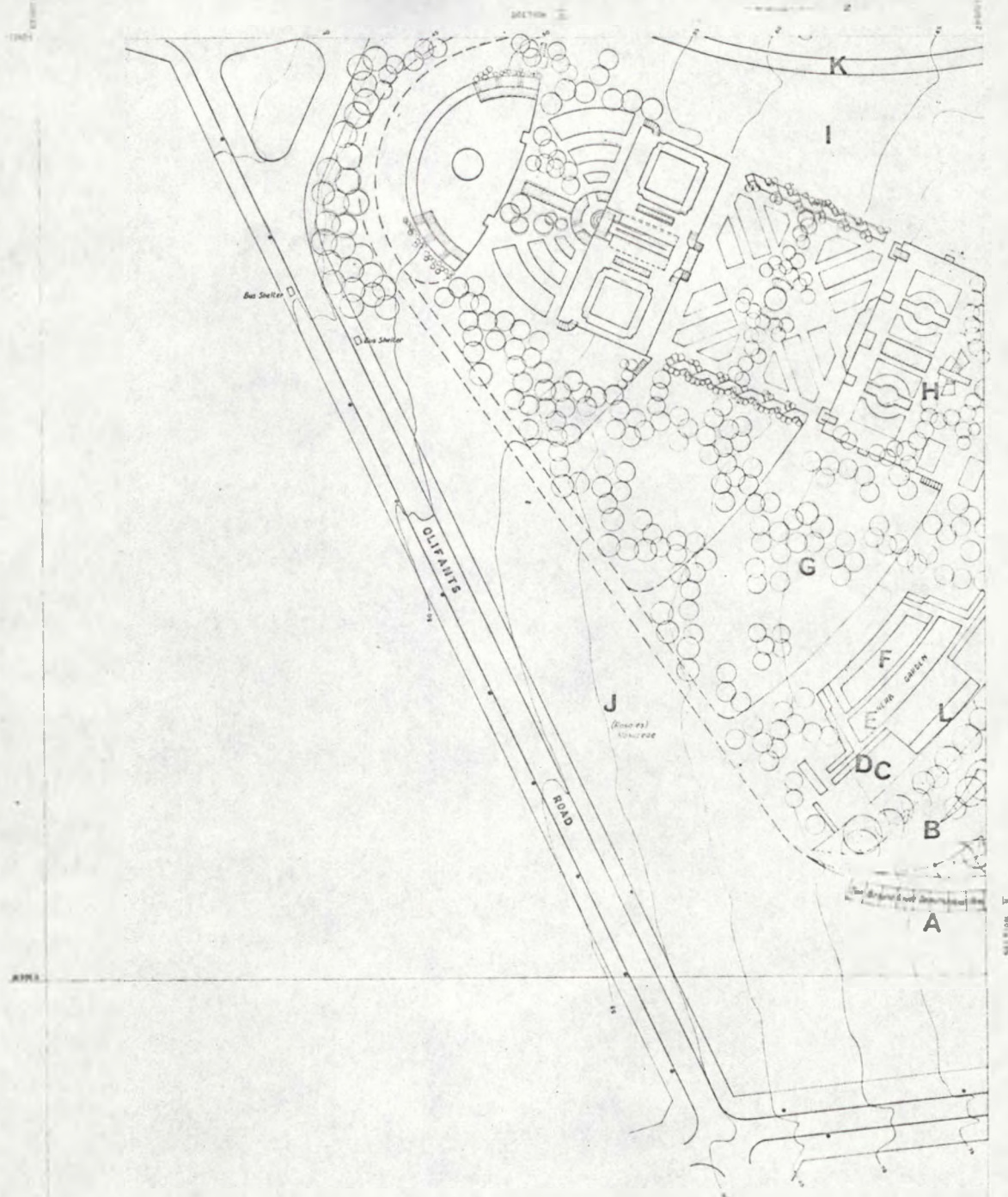


SECTION V
THE JOHANNESBURG BOTANIC GARDEN.

PARKS AND RECREATION DEPT
 G.W. GILTRUP
 APPROVED BY
 DATE APRIL 1974
 SCALE: 1:500
 REF No

THE JOHANNESBURG BOTANIC GARDEN SECTION VI

- A. It is suggested that this be developed as a Ground Cover Demonstration area. This development continues on Section V.
- B. Car Park for 83 cars serving the proposed Community Education Centre.
- C. The Herb Garden Terrace.
- D. Section of the Herb Garden devoted to Culinary Herbs.
- E. Section of the Herb Garden devoted to African Medicinal Herbs.
- F. Section of the Herb Garden devoted to International Medicinal Herbs.
- G. These terraces will be planted with a selection of trees as part of the rationalisation of the Rose Garden.
- H. The Rose Garden showing in part the simplification of the terraces and proposed reorientation of the Rose Beds.
- I. Part of the proposed forest stretching from the Main Car Park to the Rose Garden.
- K. Part of the Vehicular and Pedestrian Roadway System.

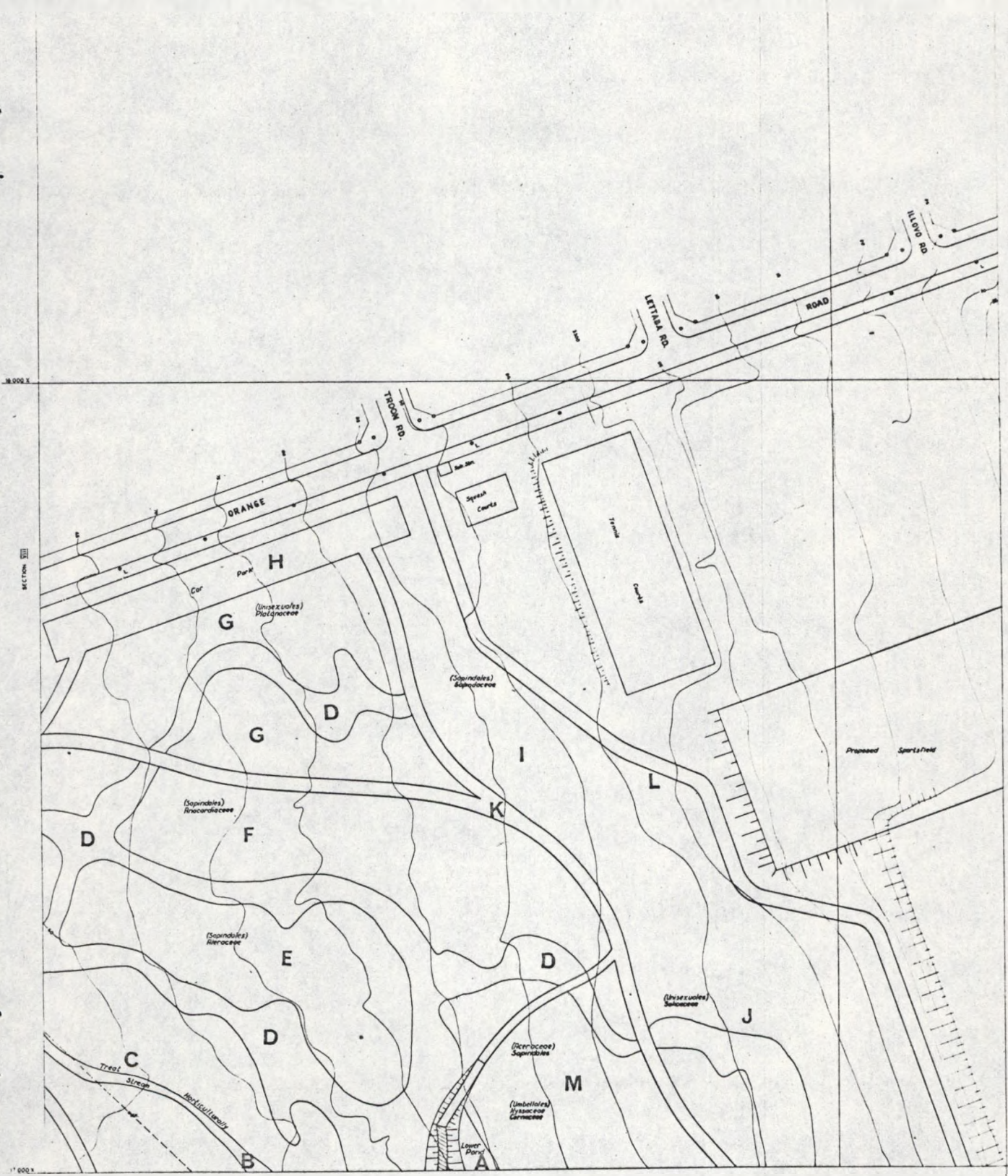


SECTION VI
THE JOHANNESBURG BOTANIC GARDEN.

Plans drawn by G. A. ...
 G.A. ...
 A.S. ...
 1924

THE JOHANNESBURG BOTANIC GARDEN SECTION VII

- A. A section of the lower of the two proposed dams.
- B. The Braamfontein Spruit.
- C. The stream side planting to be treated horticulturally.
- D. One of the grassy trails running through the garden.
- E. Planted with the order Sapindales concentrating mainly on the family Aceraceae.
- F. Planted with the order Sapindales concentrating mainly on the family Anacardiaceae.
- G. Planted with the order Unisexuales concentrating mainly on the family Platanaceae.
- H. Proposed subsidiary Car Park on the Eastern side of the Botanic Garden.
- I. Planted with the order Sapindales concentrating mainly on the family Sapindaceae.
- J. Planted with the order Unisexuales concentrating mainly on the family Salicaceae.
- K. Part of the vehicular and pedestrian roadway system.
- L. Boundary between the Botanic Garden and Marks Park.
- M. Planted with the orders Sapindales and Umbellales concentrating mainly on the families Aceraceae, Nyssaceae and Cornaceae.

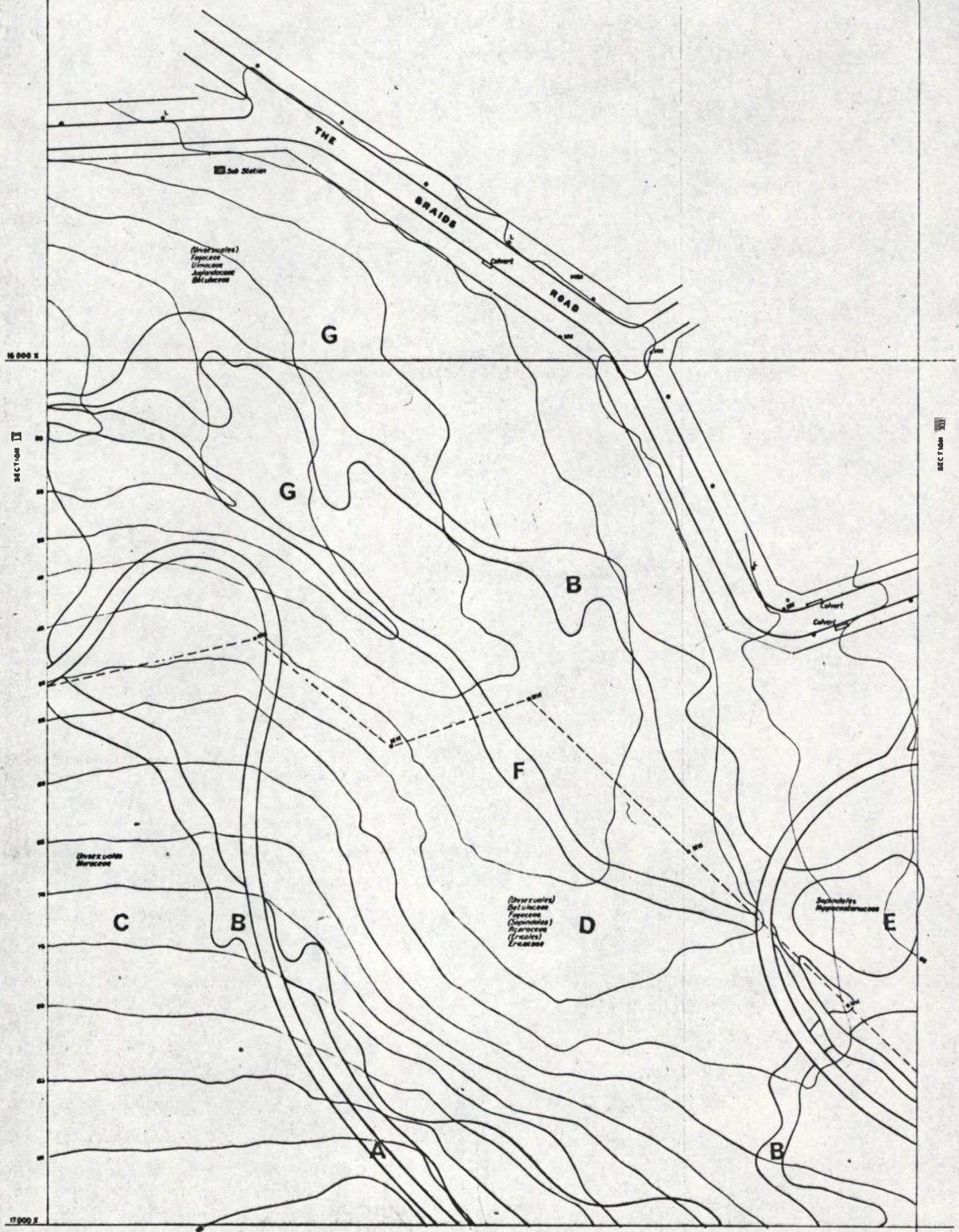


SECTION VII
THE JOHANNESBURG BOTANIC GARDEN.

GRANDS AND RECREATION DEPT
 S.W. G.H. FRIM
 DRAWING BY
 DATE MARCH 1974
 SCALE 1:500
 REF. NO.

THE JOHANNESBURG BOTANIC GARDEN SECTION VIII

- A. Part of the Pedestrian and Vehicular Roadway System.
- B. Part of the Grassy Trail System.
- C. Planted with the order Unisexuales concentrating mainly on the family Moraceae.
- D. Planted with the orders Unisexuales, Sapindales and Ericales concentrating mainly on the families Betulaceae, Fagaceae, Aceraceae and Ericaceae.
- E. Planted with the order Sapindales concentrating mainly on the family Hippocastanaceae.
- F. The Braamfontein Spruit.
- G. Planted with the order Unisexuales concentrating mainly on the families Fagaceae, Ulmaceae, Juglandaceae and Betulaceae.

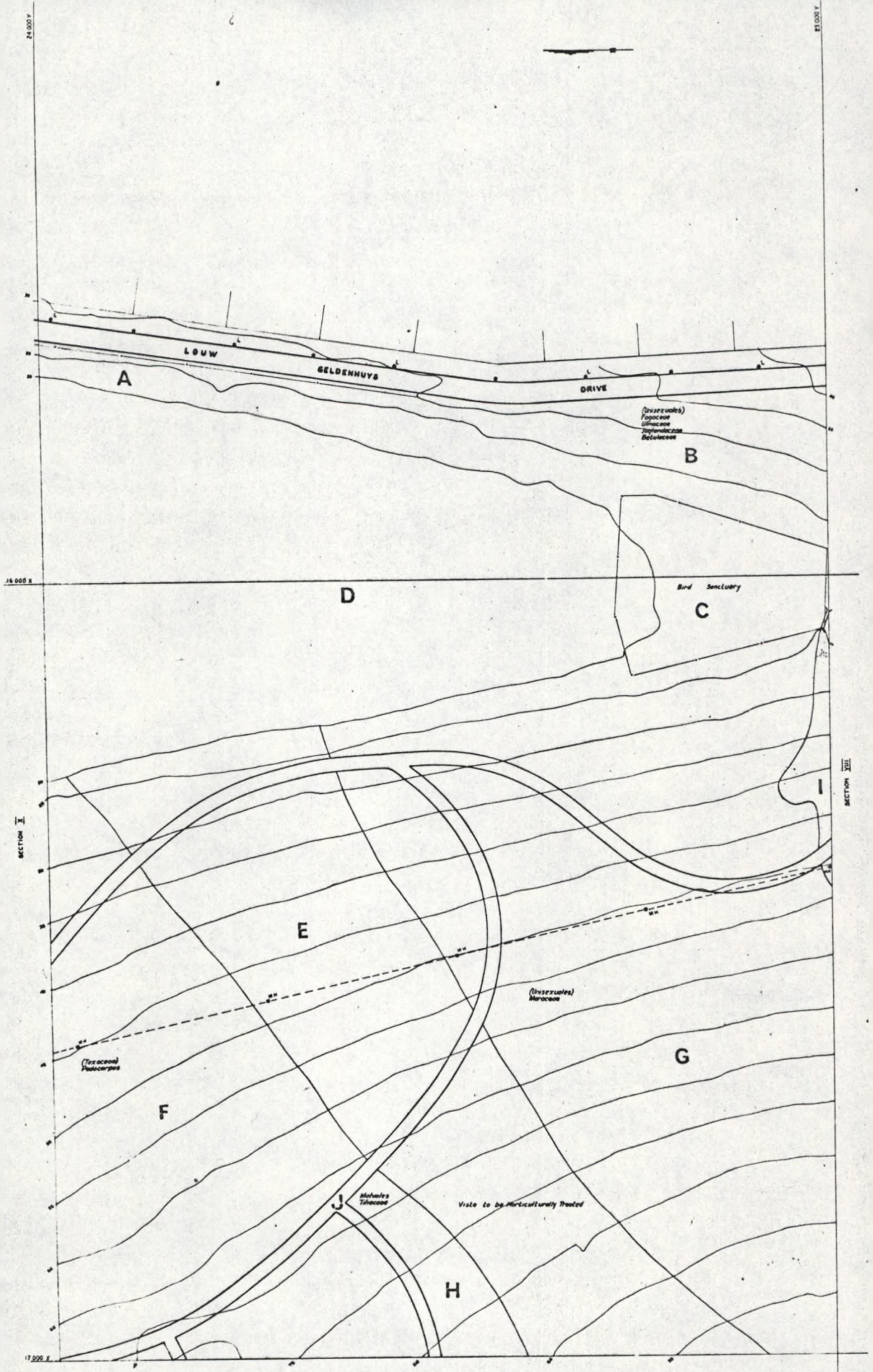


SECTION VIII
THE JOHANNESBURG BOTANIC GARDEN.

PARKS AND RECREATION DEPT.
 S. H. CHITMAN
 APPROVED BY
 DATE MAY 1974
 SCALE 1:500
 REF. No.

THE JOHANNESBURG BOTANIC GARDEN SECTION IX

- A. Eastern shoreline of Emmarentia Dam planted with a collection of flowering Cherries.
- B. Planted with the order Unisexuales concentrating mainly on the families Fagaceae, Ulmaceae, Juglandaceae and Betulaceae.
- C. An existing Bird Sanctuary which will remain after the development of the Botanic Garden.
- D. Emmarentia Dam.
- E. One of the Main Vistas of the Botanic Garden leading up to the Conservatory complex.
- F. Part of the forest between the Main Entrance to the garden and the Rose Garden.
- G. Planted with the order Unisexuales concentrating mainly on the family Moraceae.
- H. Planted with the order Malvales concentrating mainly on the family Tiliaceae.
- I. One of the grassy trails running through the garden.
- J. Part of the vehicular and pedestrian roadway system.

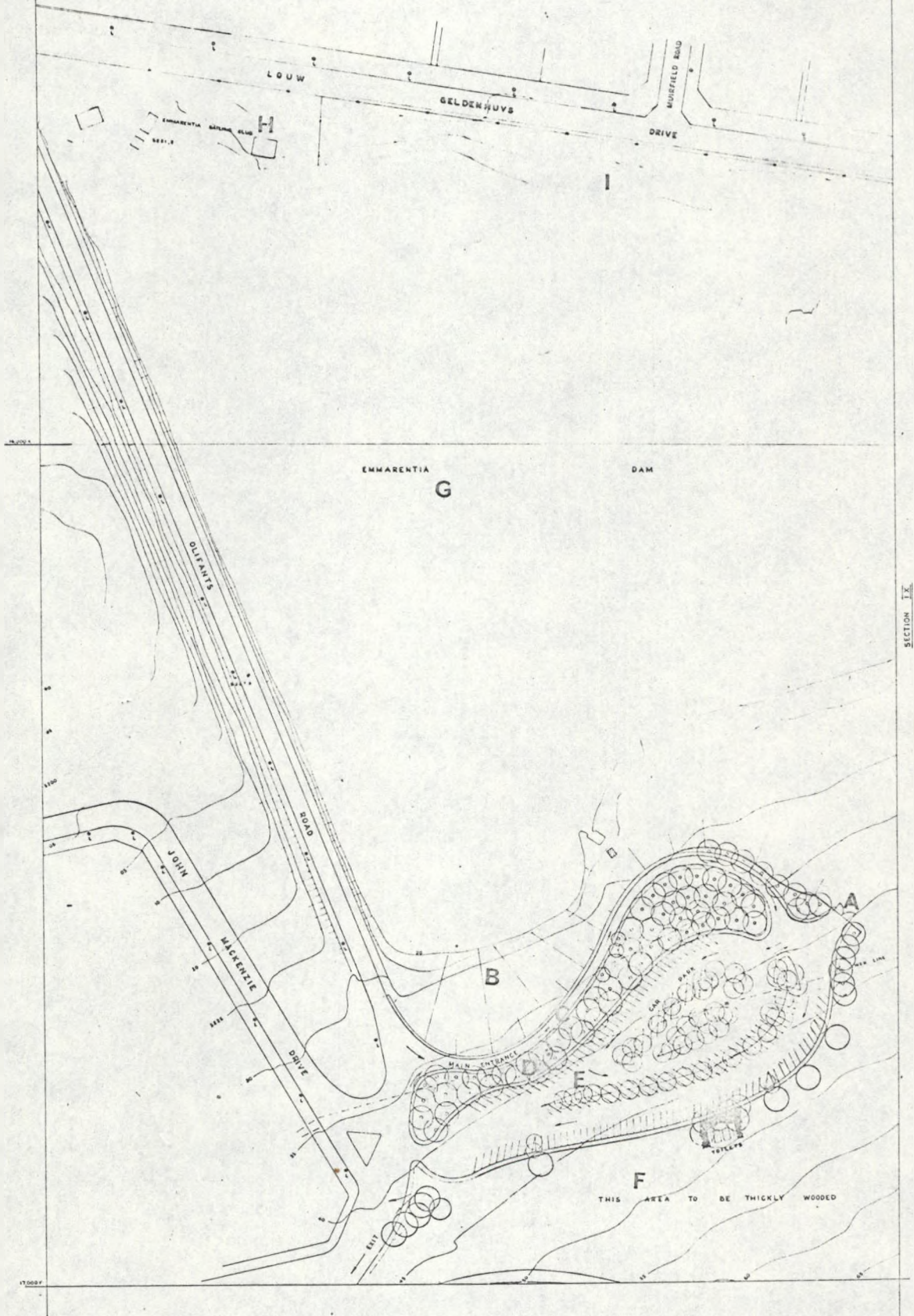


SECTION IX
THE JOHANNESBURG BOTANIC GARDEN.

PLANS AND REVISIONS BY
 G. W. C. 1914
 APPROVED BY
 DATE MAY 1916
 SCALE 1:500
 G. W. C.

THE JOHANNESBURG BOTANIC GARDEN SECTION X

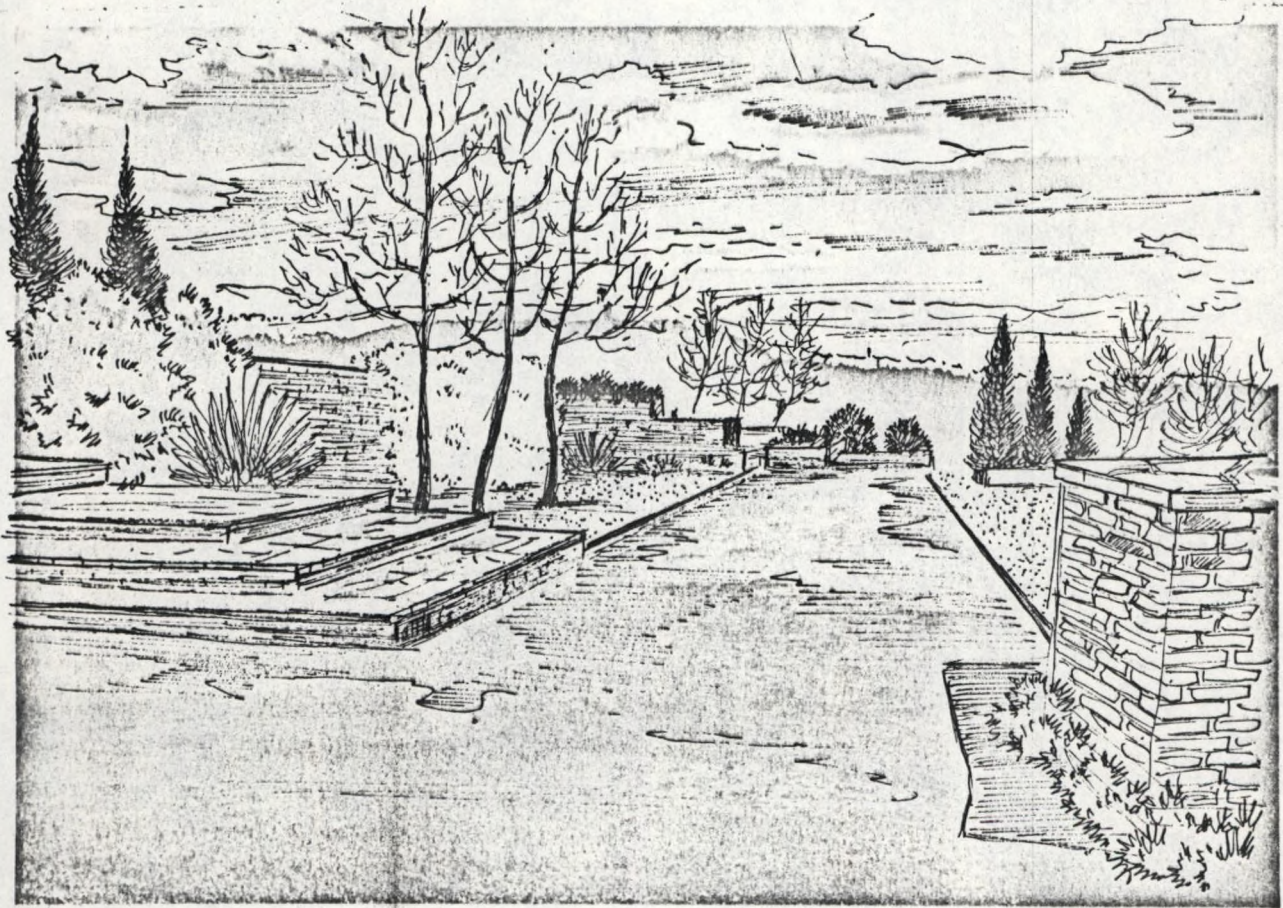
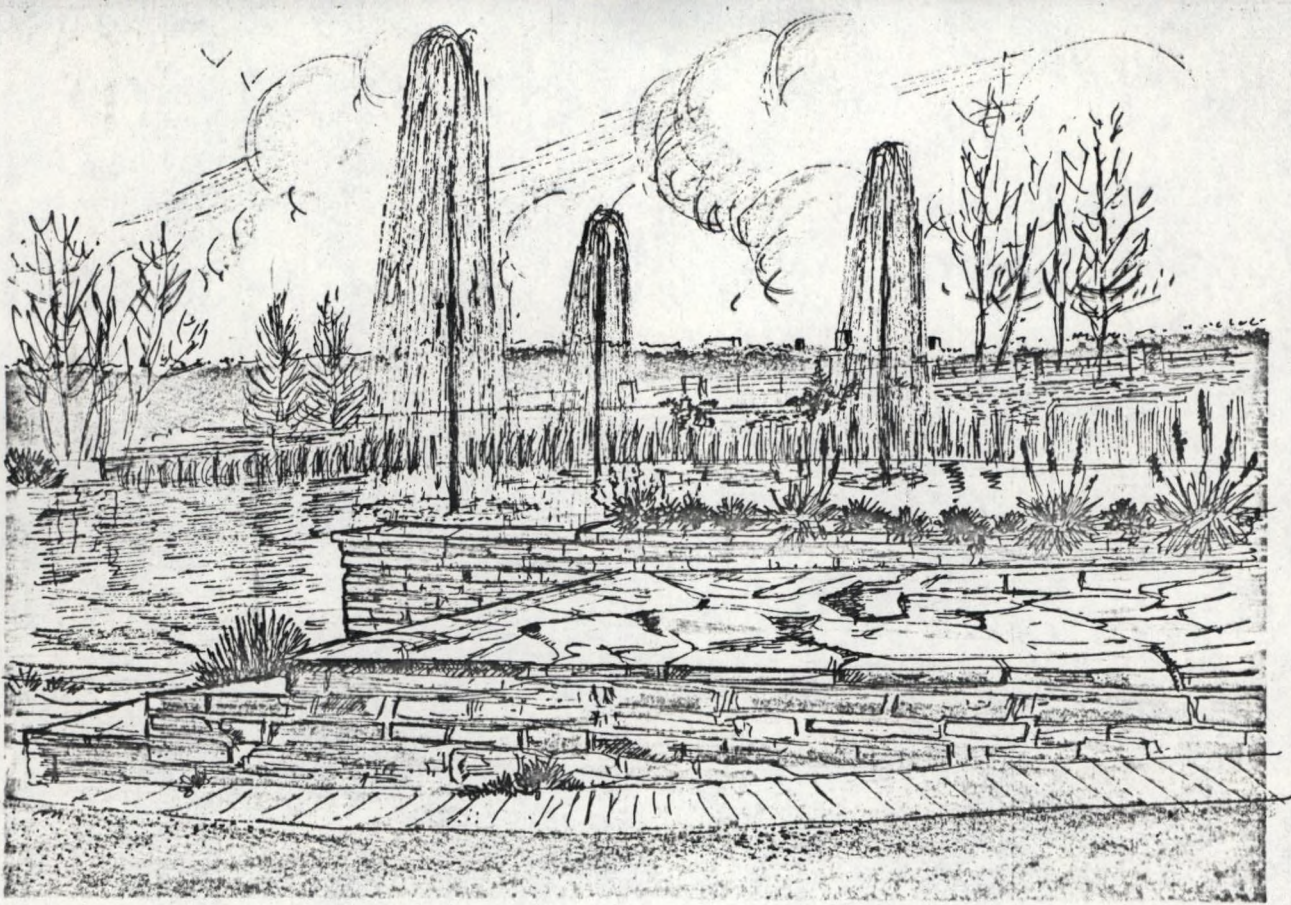
- A. Main Entrance into the Botanic Garden orientated across Emmarentia Dam.
- B. This area will be graded to facilitate a view of the Dam as one drives towards the car park. This area is to be planted with Taxodium and Betula so that the Dam will be viewed through tree trunks underplanted with naturalised Narcissus bulbs.
- C. Main driveway feeding the car park, which will be in one direction.
- D. This area will be mounded. This is to screen the car park from the Eastern shore of Emmarentia Dam, as well as screening it as one drives in towards the Botanic Garden entrance.
- E. The directional movement within the car park is indicated by the arrows. The interior has been so designed that looking back through A, the vehicles will not be visible due to heavy screening. The capacity of the car park is 200 vehicles.
- F. This area, as indicated on the plan, is to be thickly wooded to provide dense screening from the Rose Garden. This wooded area will extend right to the Eastern side of the Rose Garden. As the forest grows, so an underplanting will be established.
- G. Emmarentia Dam. This Dam will still be used by the Emmarentia Sailing Club. However, it is suggested that the Underwater Fishing Club, the Sea Scouts and the Model Power Boat Club should be offered facilities elsewhere in the city.
- H. The Emmarentia Sailing Club. It is suggested that pressure be brought upon this Club to ensure that this facility is made as attractive as possible. The site it occupies can be seen from virtually the whole of the Botanic Garden, hence its visual impact is very high.
- I. This area has been planted with cherries which, in time, will be reflected in the Dam and be an attractive feature viewed from the Western shoreline.



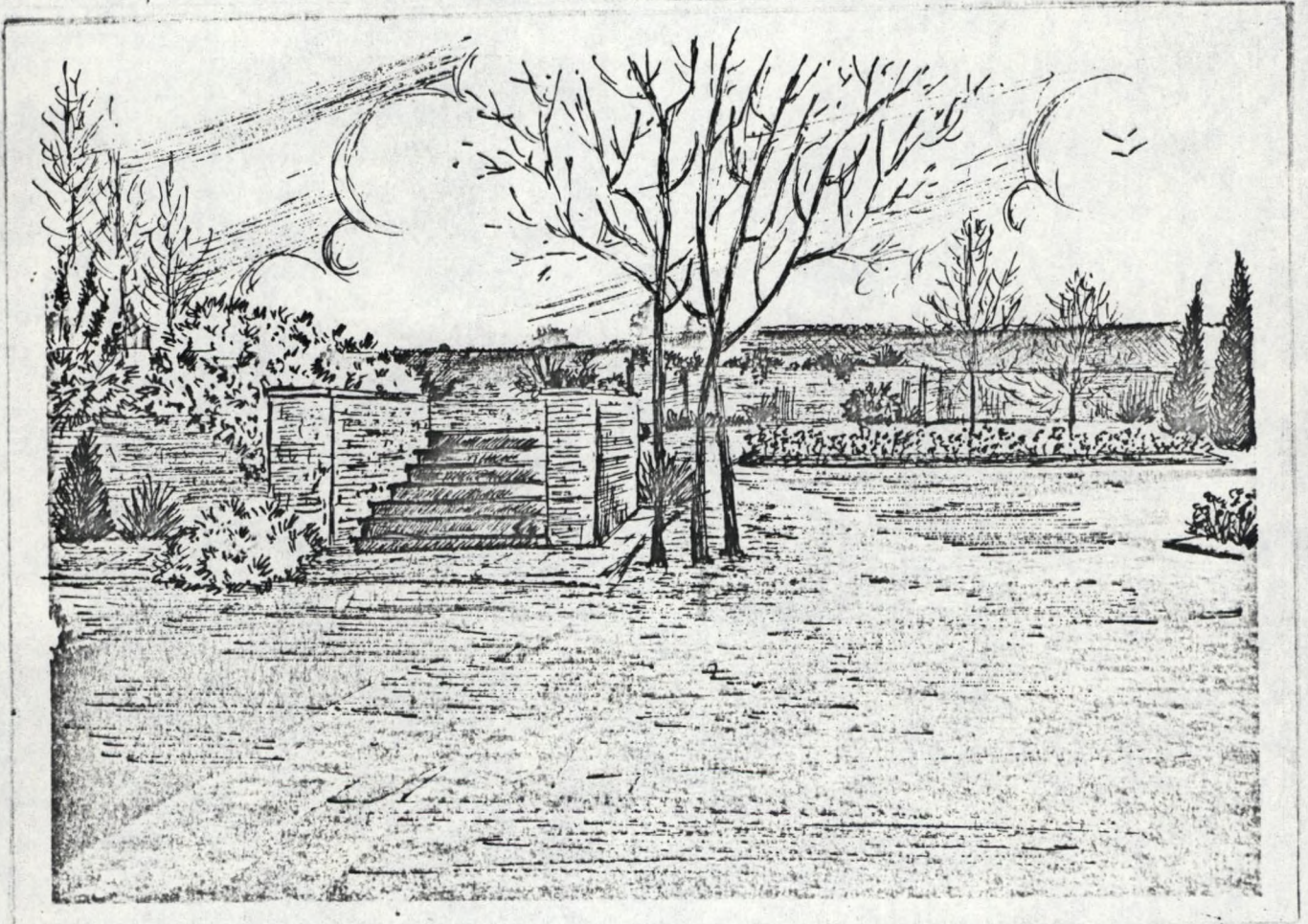
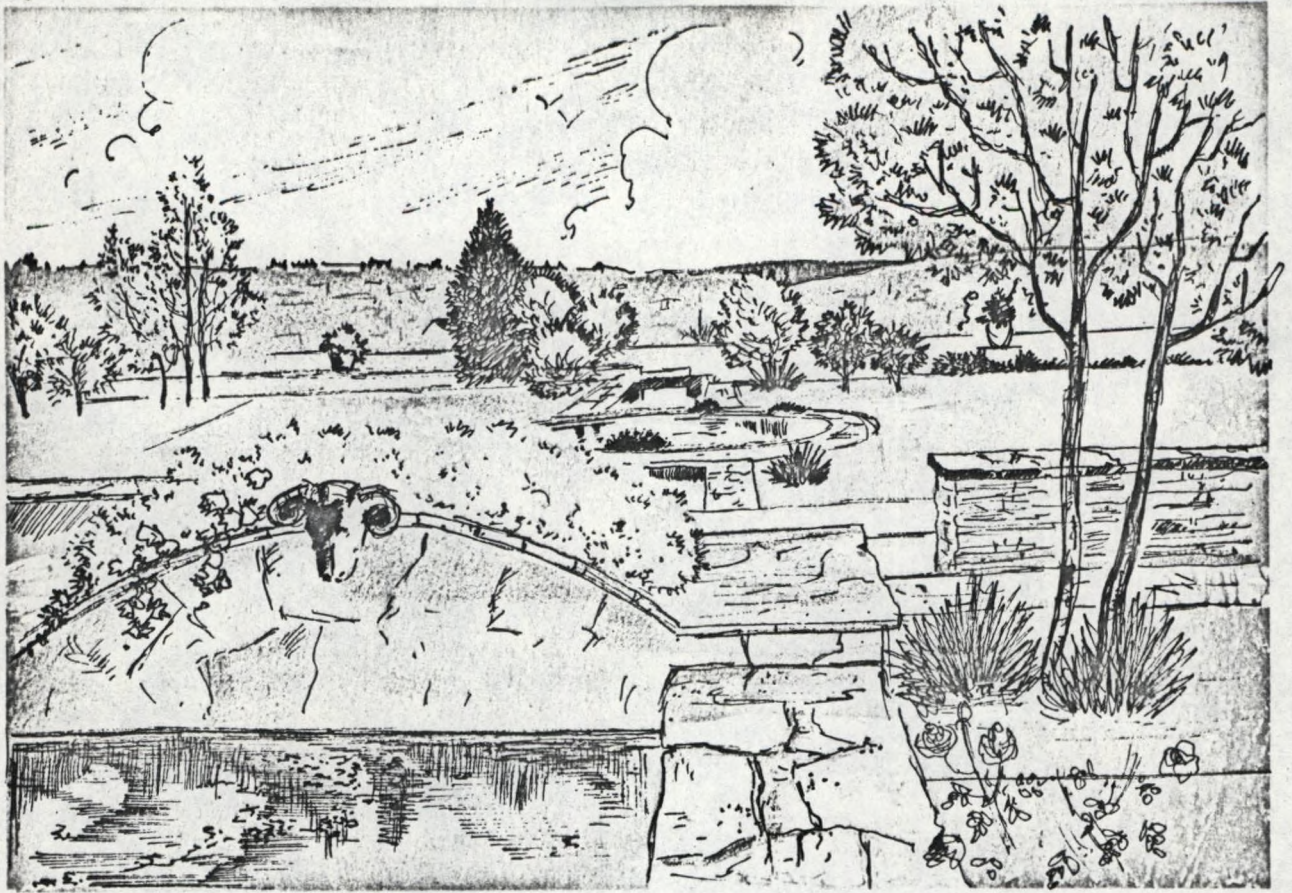
SECTION X
THE JOHANNESBURG BOTANIC GARDEN.

PARKS AND RECREATION DEPT
 G.M. CH. THOMAS
 APPROVED BY
 DATE AUGUST 1973
 SCALE 1:500
 REF. No.

**SKETCHED VIEWS OF IMPROVEMENTS TO
THE ROSE GARDEN.**



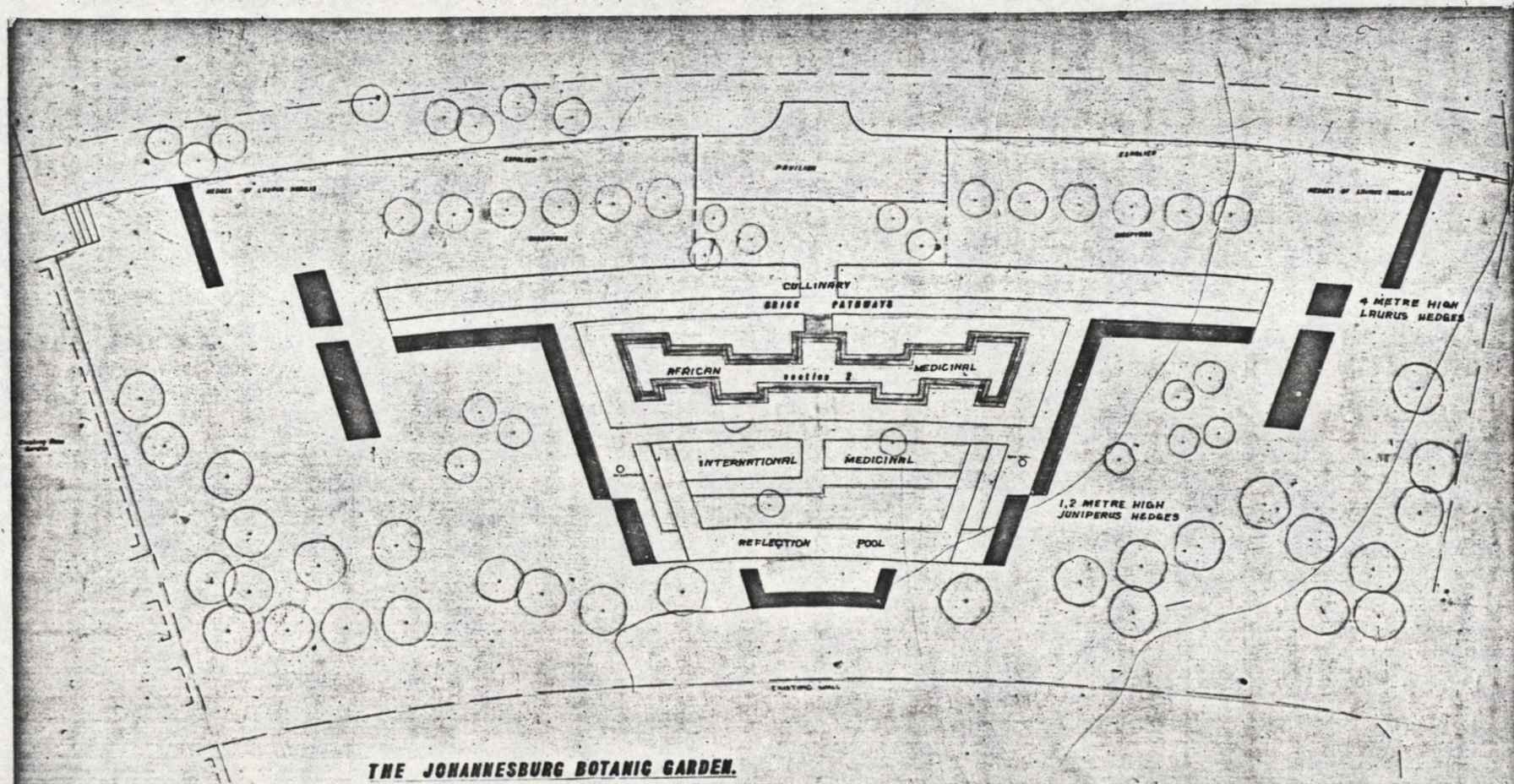
SKETCHED VIEWS OF IMPROVEMENTS TO THE ROSE GARDEN



SKETCHED VIEWS OF IMPROVEMENTS TO THE ROSE GARDEN

THE HERB GARDEN.

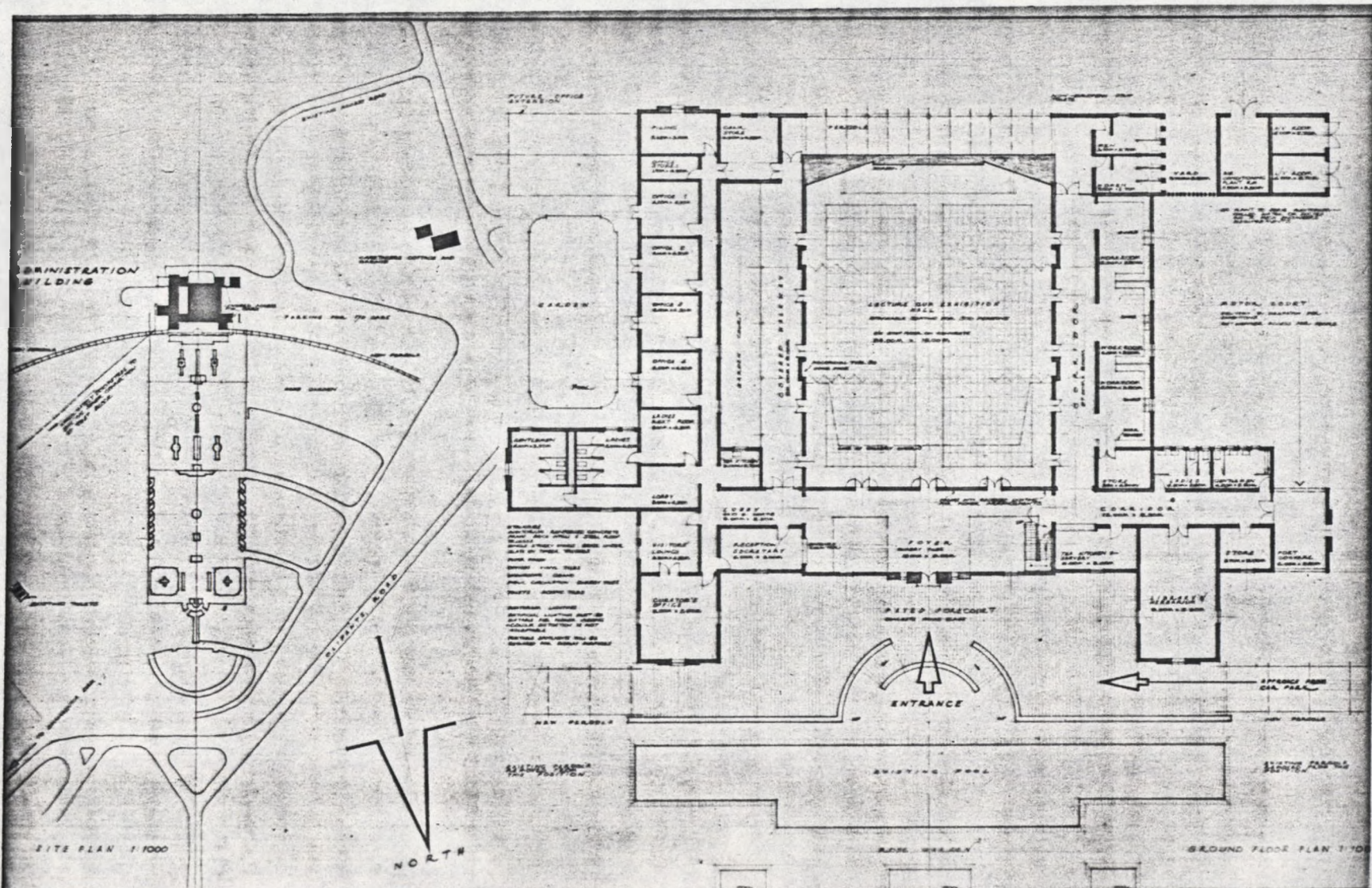
11/12



**THE JOHANNESBURG BOTANIC GARDEN.
THE HERB GARDEN.**

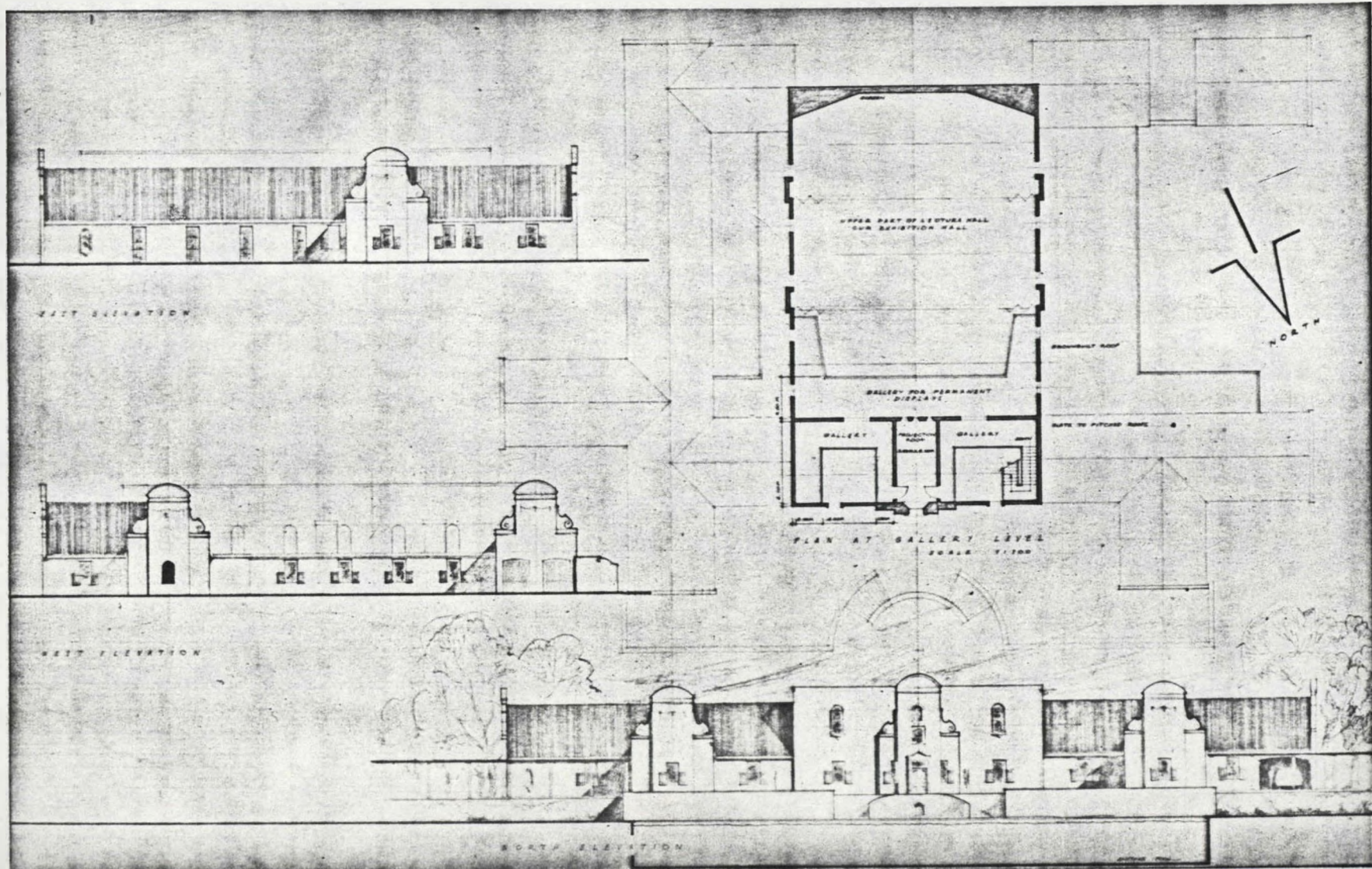
Parks and Recreation Dept.
 G.M. & S. Trim.
 Approved by: *[Signature]*
 Ref. No. 49/1/50. S.W.T. Scale 1:500

**THE PROPOSED ADMINISTRATION
AND COMMUNITY EDUCATION
BUILDING.**



SITE PLAN 1/1000

GROUND FLOOR PLAN 1/100



EXISTING AND PROPOSED TERRACE

LONG SECTION A - B
SCALE 1/1250

CROSS SECTION C - D
SCALE 1/1250

DESIGNED BY	JOSEPH W. BERRY	CITY OF JOHANNESBURG	C. E. D.	REVIEWED BY	R. D. F.	CITY ENGINEER
APPROVED BY		THE JOHANNESBURG BOTANIC GARDEN				
ADMINISTRATION BUILDING - SKETCH PLANS						
SECTIONS						
DESIGNED BY	JOSEPH W. BERRY	CITY OF JOHANNESBURG	C. E. D.	REVIEWED BY	R. D. F.	CITY ENGINEER

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