

A Community Sanctuary

REDEFINING THE CEMETERY



By
Sandra J. Neal

A Practicum
Submitted to the Faculty of Graduate Studies
in partial fulfillment of the Requirements
for the Degree of

MASTER OF LANDSCAPE ARCHITECTURE

Department of Landscape Architecture
University of Manitoba
Winnipeg, Manitoba

© August 1995



National Library
of Canada

Acquisitions and
Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale
du Canada

Direction des acquisitions et
des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-612-13396-6

Canada

Name SANDRA J. NEAL

Dissertation Abstracts International is arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation. Enter the corresponding four-digit code in the spaces provided.

ARCHITECTURE
SUBJECT TERM

0129
SUBJECT CODE

U·M·I

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS

Architecture 0729
Art History 0377
Cinema 0900
Dance 0378
Fine Arts 0357
Information Science 0723
Journalism 0391
Library Science 0399
Mass Communications 0708
Music 0413
Speech Communication 0459
Theater 0465

EDUCATION

General 0515
Administration 0514
Adult and Continuing 0516
Agricultural 0517
Art 0273
Bilingual and Multicultural 0282
Business 0688
Community College 0275
Curriculum and Instruction 0727
Early Childhood 0518
Elementary 0524
Finance 0277
Guidance and Counseling 0519
Health 0680
Higher 0745
History of 0520
Home Economics 0278
Industrial 0521
Language and Literature 0279
Mathematics 0280
Music 0522
Philosophy of 0998
Physical 0523

Psychology 0525
Reading 0535
Religious 0527
Sciences 0714
Secondary 0533
Social Sciences 0534
Sociology of 0340
Special 0529
Teacher Training 0530
Technology 0710
Tests and Measurements 0288
Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS

Language
General 0679
Ancient 0289
Linguistics 0290
Modern 0291
Literature
General 0401
Classical 0294
Comparative 0295
Medieval 0297
Modern 0298
African 0316
American 0591
Asian 0305
Canadian (English) 0352
Canadian (French) 0355
English 0593
Germanic 0311
Latin American 0312
Middle Eastern 0315
Romance 0313
Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY

Philosophy 0422
Religion
General 0318
Biblical Studies 0321
Clergy 0319
History of 0320
Philosophy of 0322
Theology 0469

SOCIAL SCIENCES

American Studies 0323
Anthropology
Archaeology 0324
Cultural 0326
Physical 0327
Business Administration
General 0310
Accounting 0272
Banking 0770
Management 0454
Marketing 0338
Canadian Studies 0385
Economics
General 0501
Agricultural 0503
Commerce-Business 0505
Finance 0508
History 0509
Labor 0510
Theory 0511
Folklore 0358
Geography 0366
Gerontology 0351
History
General 0578

Ancient 0579
Medieval 0581
Modern 0582
Black 0328
African 0331
Asia, Australia and Oceania 0332
Canadian 0334
European 0335
Latin American 0336
Middle Eastern 0333
United States 0337
History of Science 0585
Law 0398
Political Science
General 0615
International Law and Relations 0616
Public Administration 0617
Recreation 0814
Social Work 0452
Sociology
General 0626
Criminology and Penology 0627
Demography 0938
Ethnic and Racial Studies 0631
Individual and Family Studies 0628
Industrial and Labor Relations 0629
Public and Social Welfare 0630
Social Structure and Development 0700
Theory and Methods 0344
Transportation 0709
Urban and Regional Planning 0999
Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES

Agriculture
General 0473
Agronomy 0285
Animal Culture and Nutrition 0475
Animal Pathology 0476
Food Science and Technology 0359
Forestry and Wildlife 0478
Plant Culture 0479
Plant Pathology 0480
Plant Physiology 0817
Range Management 0777
Wood Technology 0746
Biology
General 0306
Anatomy 0287
Biostatistics 0308
Botany 0309
Cell 0379
Ecology 0329
Entomology 0353
Genetics 0369
Limnology 0793
Microbiology 0410
Molecular 0307
Neuroscience 0317
Oceanography 0416
Physiology 0433
Radiation 0821
Veterinary Science 0778
Zoology 0472
Biophysics
General 0786
Medical 0760

EARTH SCIENCES

Biogeochemistry 0425
Geochemistry 0996

Geodesy 0370
Geology 0372
Geophysics 0373
Hydrology 0388
Mineralogy 0411
Paleobotany 0345
Paleoecology 0426
Paleontology 0418
Paleozoology 0985
Palynology 0427
Physical Geography 0368
Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES

Environmental Sciences 0768
Health Sciences
General 0566
Audiology 0300
Chemotherapy 0992
Dentistry 0567
Education 0350
Hospital Management 0769
Human Development 0758
Immunology 0982
Medicine and Surgery 0564
Mental Health 0347
Nursing 0569
Nutrition 0570
Obstetrics and Gynecology 0380
Occupational Health and Therapy 0354
Ophthalmology 0381
Pathology 0571
Pharmacology 0419
Pharmacy 0572
Physical Therapy 0382
Public Health 0573
Radiology 0574
Recreation 0575

Speech Pathology 0460
Toxicology 0383
Home Economics 0386

PHYSICAL SCIENCES

Pure Sciences
Chemistry
General 0485
Agricultural 0749
Analytical 0486
Biochemistry 0487
Inorganic 0488
Nuclear 0738
Organic 0490
Pharmaceutical 0491
Physical 0494
Polymer 0495
Radiation 0754
Mathematics 0405
Physics
General 0605
Acoustics 0986
Astronomy and Astrophysics 0606
Atmospheric Science 0608
Atomic 0748
Electronics and Electricity 0607
Elementary Particles and High Energy 0798
Fluid and Plasma 0759
Molecular 0609
Nuclear 0610
Optics 0752
Radiation 0756
Solid State 0611
Statistics 0463
Applied Sciences
Applied Mechanics 0346
Computer Science 0984

Engineering
General 0537
Aerospace 0538
Agricultural 0539
Automotive 0540
Biomedical 0541
Chemical 0542
Civil 0543
Electronics and Electrical 0544
Heat and Thermodynamics 0348
Hydraulic 0545
Industrial 0546
Marine 0547
Materials Science 0794
Mechanical 0548
Metallurgy 0743
Mining 0551
Nuclear 0552
Packaging 0549
Petroleum 0765
Sanitary and Municipal 0554
System Science 0790
Geotechnology 0428
Operations Research 0796
Plastics Technology 0795
Textile Technology 0994

PSYCHOLOGY

General 0621
Behavioral 0384
Clinical 0622
Developmental 0620
Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
Psychobiology 0349
Psychometrics 0632
Social 0451



**A COMMUNITY SANCTUARY
REDEFINING THE CEMETERY**

BY

SANDRA J. NEAL

**A Practicum submitted to the Faculty of Graduate Studies of the University of Manitoba
in partial fulfillment of the requirements of the degree of**

MASTER OF LANDSCAPE ARCHITECTURE

© 1995

**Permission has been granted to the LIBRARY OF THE UNIVERSITY OF MANITOBA
to lend or sell copies of this Practicum, to the NATIONAL LIBRARY OF CANADA to
microfilm this Practicum and to lend or sell copies of the film, and LIBRARY
MICROFILMS to publish an abstract of this Practicum.**

**The author reserves other publication rights, and neither the Practicum nor extensive
extracts from it may be printed or other-wise reproduced without the author's written
permission.**

DEDICATION

*This is dedicated to
my parents John and Joyce Neal
who have encouraged me to have faith
and to believe in myself.*

Acknowledgements

I wish to thank the following groups and organizations for their assistance in providing me with valuable information and resources for the study area: Metropolitan Toronto and Region Conservation Authority (MTRCA), Ontario Provincial Government, Ministry of Natural Resources, Ministry of Housing, Seaton Interim Group, and the Town of Pickering, Planning Department. A special thank you is extended to Glen Timney and John Howard of Toronto Trust Cemeteries for their support and generosity in providing a suitable site for the purpose of this study.

I would also like to thank Doreen Young for providing me with a quiet place to complete this work and my good friend Michel Perrin who has always been encouraging and supportive. I would also like to acknowledge my committee members Professor Alf Simon (Advisor), Professor Charlie Thomsen, and Mr. David Firman, Department of Culture, Heritage and Citizenship for their support and guidance in the preparation of this study.

A Community Sanctuary

REDEFINING THE CEMETERY

Table of Contents

<i>Acknowledgments</i>	5
<i>Abstract</i>	13

CHAPTER ONE

INTRODUCTION	17
Background	17
The Study	19

CHAPTER TWO

TYPOLOGY OF THE NORTH AMERICAN CEMETERY

Introduction	25
Early Beginnings of Evolution: 17th - 20th c.	25
COLONIAL BURIAL PRACTICES (17TH-20TH C.)	26
TOWN/CEMETERY	27
EUROPEAN CEMETERIES	29
2nd Stage: The Rural Cemetery	
1831 - 1970's	31
MOUNT AUBURN	33

3rd Stage: The Lawn-Park Cemetery	
1855 - 1920's	35
SPRING GROVE	36
INTRODUCTION OF THE URBAN PARK	37
4th Stage: The Memorial Park Cemetery	
1917 - Present	38
FOREST LAWN	39
THE MODERN CEMETERY	41
Synopsis.	41
CHARACTERISTICS OF THE NORTH AMERICAN CEMETERY	43

CHAPTER THREE

ANALYZING THE COMMUNITY

Regional Context	47
LOCATION	47
TOPOGRAPHY	47
GEOLOGY	49
SOILS	49
SEATON COMMUNITY	49
OPEN SPACE SYSTEM	50
TRANSPORTATION	53
PROFILE OF THE USER POPULATION	55
RELIGIOUS COMPOSITION	56
LOCAL CEMETERIES	56
WOODLANDS	58
STREAMS	59
RECREATION AREAS	59
CLIMATE	62
PAST LANDUSE OF PICKERING	62
Local Context	63
DESCRIPTION	63
LAND OWNERSHIP	63
SITE DESCRIPTION	63
SITE ZONING	66
Site Context	69
LANDFORM	69
SOIL	69
SURFACE WATER	70
ENVIRONMENTAL	70
NATURAL SITE FEATURES	72
CIRCULATION	74
EXISTING BUILT FEATURES	78
VIEWS AND VISTAS	80
NOISE	81

CHAPTER FOUR

DESIGN INTENTIONS

Background	85
Approach	86
Program	87
USE AREAS	87
MAJOR STRUCTURES	89
MINOR STRUCTURES	90
AREA SUMMARY	91
DESIGN MATRICES	92
SUITABILITY MAPS	92

CHAPTER FIVE

DESIGN & DEVELOPMENT

Overview	101
Concept	101
Broad Overview	103
Detailed Overview	104
CIRCULATION	104
MAJOR STRUCTURES	104
MINOR STRUCTURES	105
OUTDOOR SPACES	106
Design Sketches and Drawings	107
SITE PLAN	109
MAUSOLEUM	111
BURIAL AREAS	113
SKETCHES	115
MODEL	119

CHAPTER SIX

SUMMARY

Conclusion	125
Appendices	127
APPENDIX A: CLIMATIC DATA	129
APPENDIX B: REGIONAL ANALYSIS OF PICKERING	131
APPENDIX C: PICKERING/AJAX CHURCH LISTING	135
APPENDIX D: PLANNING CONSIDERATIONS	137
APPENDIX E: AERIAL PHOTOGRAPH	139
APPENDIX F: SITE PHOTOGRAPHS	141

<i>Figure Credits</i>	149
<i>Bibliography</i>	157

Abstract

*Whatever the cause, one consequence is clear:
the places where we bury the dead are
no longer important parts of the landscape
we inhabit.*

—Catherine Howett,
"Living Landscapes of the Dead," Landscape, 1977.

Traditionally, the North American cemetery was perceived to be a sacred place. This attitude was one of respect towards the cemetery, and the recognition of its spiritual qualities which served as reminders of our mortality. Today, cemeteries are generally perceived as dark, morbid, and uninteresting places. The shift in the cemetery's priorities from spiritual quality to commercial interests reflects the 'low value' that our society has placed on this institution. In addition, our cemeteries today are often forgotten spaces, isolated from the people they were intended to serve.

The study proposes a new direction for the contemporary cemetery one which will give it a more significant role in the community. The notion of the cemetery as open space is explored as the means of integrating the cemetery into the urban fabric. A review of North American cemeteries provides insight in developing the new cemetery as a resource for the community.

Southwestern Ontario provides the setting for the study. The site is well situated within the proposed community of Seaton, north of the Town of Pickering. Expected users of the cemetery include members of the Seaton community, the Town of Pickering, surrounding areas, as well as users of the Regional

Open Space Network. The analysis of the site is organized in order of increasing detail: regional, neighbourhood and site. External factors affecting the site and the potential opportunities are identified. Results of the analysis are synthesized and used to develop a design program outlining design guidelines.

The result of this study is an alternative approach in the way we perceive the cemetery. The new cemetery will exhibit a liberalized approach integrating cemetery and park in the form of a community sanctuary which responds to society's changing needs. It will be integrated into a network of parks that will connect one community to another. The community sanctuary is intended to challenge our current perceptions of the cemetery landscape.

Chapter One



*"To everything there is a season,
and a time to every purpose under the heaven:
A time to be born and a time to die."*

— *Ecclesiastes*

The Introduction places the study within a North American context. It focuses on the evolution of the cemetery as a place of commemoration, inspiration and reflection. It brings forward the notion that the cemetery not only reflects our religious and cultural attitudes towards death but also mirrors society's social structure. The tone and spirit of the study are established and put into the context of the site. The scope and nature of the study are also identified.

Introduction

Background

Throughout its development in North America, the shape of the cemetery has been guided by how society views death. The earliest burial grounds were the Pioneer, Homestead and Churchyard graves. The members of the small communities which characterized these early burial grounds, regarded the funeral to be a demonstration of their friendship and unity and considered it their duty to take part in the ceremony. Mourning the death of an individual was not done privately but rather in public by the whole community. As towns and villages grew to be cities this rural sense of friendship and unity was lost. The funeral changed from an all-inclusive communal happening to a private event centered around the grieving family. Attendance was limited to invited guests and members of family's church. The funeral became the family's responsibility rather than that of the community. The overcrowding and unsightly conditions of the churchyard prompted demands by families for new burial grounds that provided a sense of security and permanence where they could bury, honor and remember their ancestors. This became one of the significant forces that led to the emergence of the cemetery as an institution.



Figure 1.1
The cemetery is often perceived as serving a transitory and unimportant purpose. They are displaced landscapes, often situated in undesirable locations.

The cemetery reached the height of its popularity in North America during the Industrial Revolution with the emergence of the Rural Cemetery. These cemeteries were located on the outskirts of the city and known for their beauty, seclusion, spaciousness and winding paths set in a natural setting. This new kind of cemetery was a reaction to the churchyard cemetery which in larger urban centers had become overcrowded and unsightly and was perceived to be a threat to public health. The natural setting of the cemetery was an attempt to promote rural values lost in the industrialized cities. These were the city's first public open spaces to be developed, serving as retreats from the chaos and unhealthy living conditions of the city. The rural cemeteries were an immediate success, providing opportunities for passive recreation and places of educational and historical value. They were visited not only by the families of the deceased but by the growing urban population seeking refuge from the city. Over time the

Figure 1.2
Cemeteries were once thought of as places of inspiration and reflection. Now, even the best ones maintained are rarely visited.



development of the urban park contributed to the decline in the popularity of the cemetery. The urban park gave city inhabitants an alternative form of open space free of the limitations imposed by the cemetery.

In current times cemeteries are only visited in conjunction with a burial or a memorial act. While they are generally maintained, many cemeteries no longer active have become overgrown and abandoned. In general the cemetery as an institution has become disconnected from the community it was intended to serve. The change in attitude towards the cemetery occurred in the period following the Second World War. During this period North American culture became preoccupied with all which is youthful. The older and more established cemeteries with large ornate entrances and religious imagery no longer appealed to North Americans since they were visual reminders of their mortality. During this period the cemetery became a commercial enterprise offering a wide range of service packages intended to relieve the grieving family of the burden of caring for the deceased. The superintendents who had previously managed the cemetery were replaced by professional managers with the goal to operate profitable enterprises. This was a departure from the former system in which the superintendent's main goal was the beautification of the landscape rather than the realization of a profit. A standardization of both monuments and landscape, the result of the devaluation of memorialization and of economic constraint, now characterizes the contemporary cemetery.

The Study

The study addresses the plight of the contemporary cemetery, a victim of a changing society. At one time the cemetery performed a central role in society but today it is a landscape isolated from the community. Economics have replaced aesthetics and social responsibility as the forces shaping the cemetery. This study proposes integrating the contemporary cemetery into the urban fabric by exploring the notion of the cemetery as open space. The evolution of the contemporary North American cemetery is reviewed to reveal the factors which have helped to shape this institution. The study, with the insight gained from the review of this evolution, explores



Figure 1.3
A blooming fruit tree acts as a focal point in Mount Pleasant Cemetery, New Jersey, 1982.

how the character of the cemetery might be altered to provide communities with a valuable resource which might accommodate passive recreation.

Southwestern Ontario, an area whose recent history has been one of dramatic urban growth, provides the setting for the study. This sudden urban growth gave rise to several urban planning initiatives to maintain existing services and to meet future needs. The proposed community of Seaton, located north of the Town of Pickering, is one of the urban planning initiatives created to alleviate some of these pressures. When the plan is fully realized, the Seaton community will accommodate 90,000 inhabitants. Within the Seaton plan lies the Regional Open Space Network, a planned buffer between the Seaton and Pickering communities, comprised of parks, trails, streams, open spaces and uses deemed suitable under the plan.

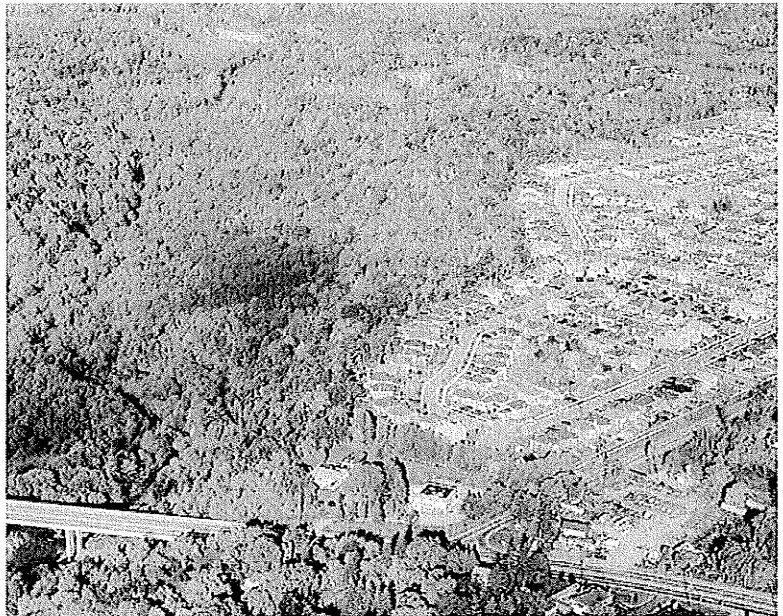


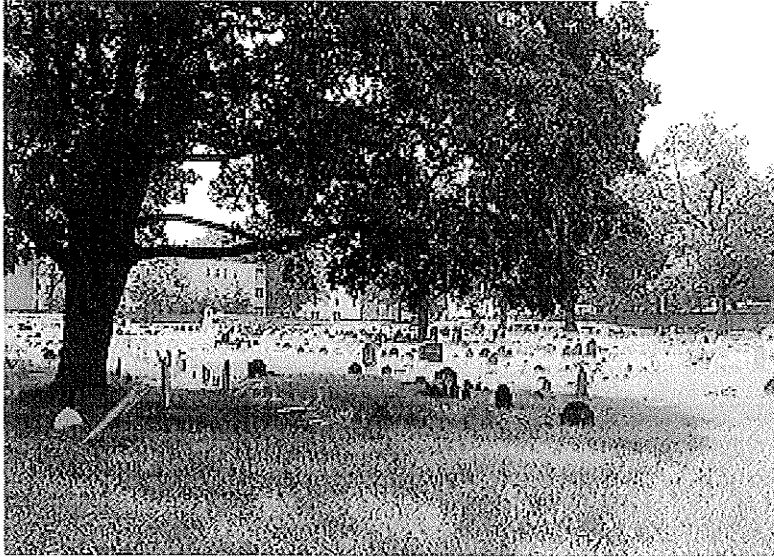
Figure 1.4
Growth and development are a result of the economic prosperity of the Greater Toronto Area, Aurora, Ontario.

Within the context of this environment of new urban planning initiatives lies the opportunity to propose a new model for the cemetery. This new kind of cemetery for the Seaton community is the subject of this study. The expected users of the new cemetery include members of the Seaton community, the Town of Pickering, surrounding areas, as well as users of the Regional Open Space Network.

The site of the cemetery is analyzed in ever increasing detail

moving from the regional, neighborhood and ending with the site specific analysis. External factors affecting the site and potential opportunities are identified. The results from the analysis are synthesized and used to develop a design program outlining the guidelines to be followed in the design. The result is a contemporary cemetery that provides a different approach to design, such that it becomes a more viable resource to the community. The study develops objectives and principles which may be used to create a new model for the contemporary cemetery. This model could then be implemented in other North American locations sharing similar problems arising from urban sprawl. Thus, it is an instrument promoting a change in the way we now perceive the cemetery landscape.

Chapter Two



"(We) have never been able to study humans seriously without considering the essential fact of their mortality. This is because death and its rituals not only reflect social values, but are an important force in shaping them."

The Interpretation of Cultures
Clifford Geertz

This chapter focuses on the evolution of the North American cemetery. A chronological study of the cemetery examines the processes and changes that the burial place has undergone.

Four cemeteries serve as models for cemetery design: New Haven Burying Ground, Mount Auburn, Spring Grove and Forest Lawn. Each reflected new attitudes towards structure and organization of the landscape and the cultural attitudes associated with people's perceptions of life and death.

Every period in history provides us with evidence that cemeteries are collective representations of deeply shared attitudes and assumptions of individuals, groups and cultures.

Typology of the North American Cemetery

Introduction

The study of the North American cemetery from the late 18th century to the late 20th century, reveals how it has changed within the social and cultural framework. Throughout its history, the North American cemetery has been a reflection of the needs of the society it serves at a particular place and time. The cemetery, a community organization, is defined by the institutions, families, or individuals that help shape it.

The North American cemetery evolved from the isolated pioneer grave scattered throughout the wilderness. As communities emerged they made the cemetery one of their central institutions and shaped it according to their needs, attitudes, and beliefs. The evolution of the North American cemetery is characterized by its rise and fall as a place of commemoration, inspiration and reflection.

Early Beginnings of Evolution: 17th - 20th century

The North American cemetery evolved from the lonely pio-

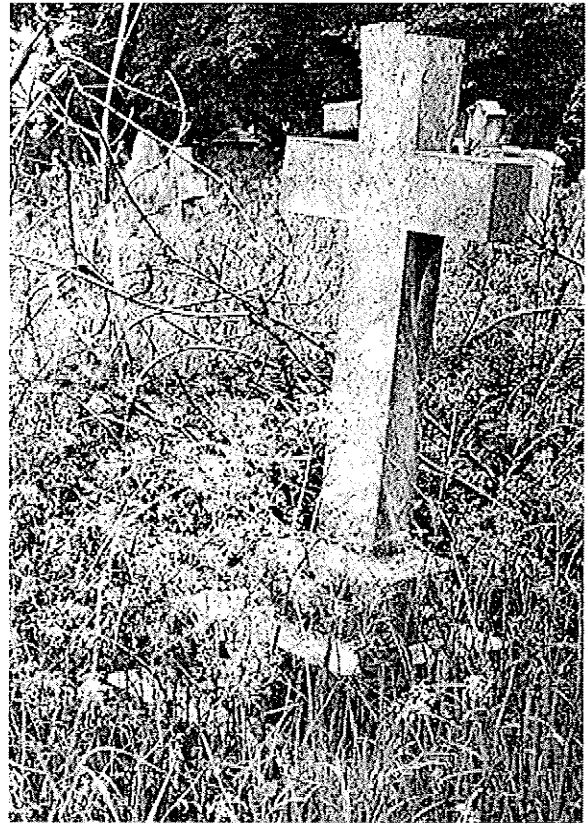


Fig. 2.1
A lone tombstone in a forgotten burial place.

neer grave set in the wilderness. As civilization grew the cemetery as an institution grew from sporadic and random graves to a central community burial place. During the 16th and 17th centuries there were three types of burial practices which evolved out of pioneer settlements. These were Pioneer graves, Domestic/Homestead graveyards, and Churchyards.

COLONIAL BURIAL PRACTICES

Pioneer Graves

The Pioneer grave was one of the earlier burial practices influenced by both European heritage and the routine of daily life. They were unorganized, isolated places located sporadically throughout the countryside wherever death had occurred. There was no maintenance of the site and little thought was given to the markings of the gravesite. Fieldstone or wooden slabs were generally used for markers, either etched with the deceased's initials, or simply left unmarked.

Domestic/Homestead Graveyards

As the population increased, homesteads evolved into small rural communities. The individual grave was replaced by a cluster of graves located on the outskirts of a farmer's field, usually nestled amongst a group of trees. The graveyard would occupy a high point on the field with the graves placed irregularly within the small enclosure.

Many individual burial sites were isolated from local communities due to distance and bad roads. In smaller towns, the lack of clergy and churches, compelled settlers to make the burial process a community affair. The establishment of community burial grounds became commonplace as rural communities became less isolated and grew into larger villages and towns.

Churchyards

In larger communities, many settlers followed European tradition and buried their dead in the churchyard. The church itself was coveted by the rich and influential who sought crypts beneath the slabs of the floor, preferably as near to the altar as possible. This practice placed prominent individuals closest to the church's altar which symbolized heaven and

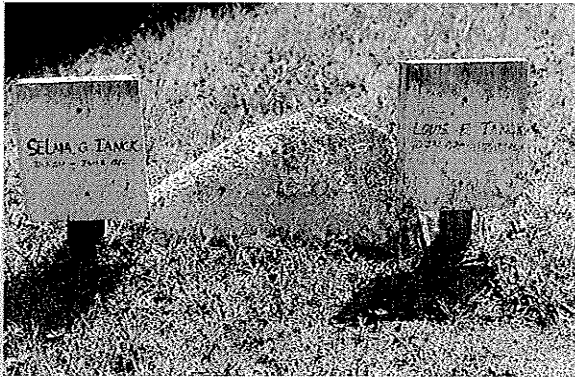


Fig. 2.2
Simple gravemarkers indicating the final resting place of two souls, Fish Creek, Wisconsin.



Fig. 2.3
A small cluster of gravestones hidden amongst the trees, Waldheim Cemetery, Indiana.

those with the least status the furthest away. Burying the dead within the church was inconvenient, and the space available was not adequate to meet the demand. Thus, evolved the practice of using the grounds surrounding the church. The typical churchyard had a few pathways, a few trees and scattered shrubs. Eventually the large number of burials in the churchyard exhausted the available space. This led to the unpleasant practice of placing more than one body in the same location and when this was no longer feasible the removal of cadavers occurred to make room for new burials.

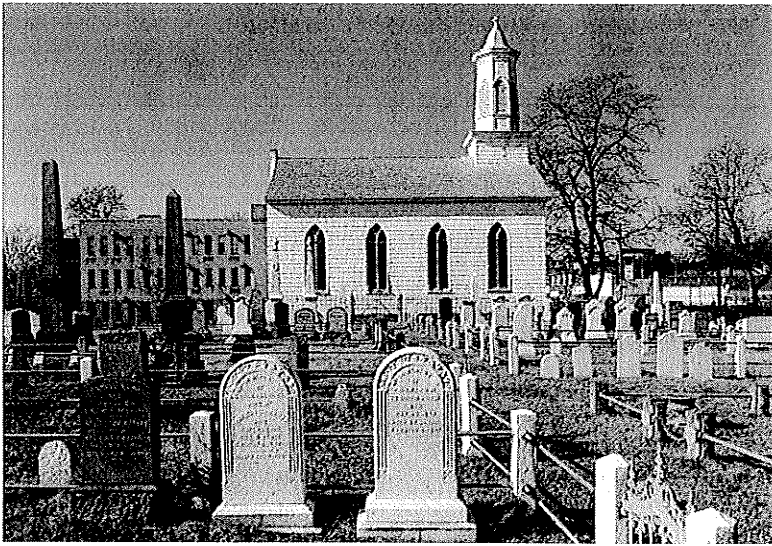


Fig. 2.4
Small country church and cemetery, Brooklyn, New York.

In large cities many inner-city burial grounds were viewed as foul smelling unattractive eyesores and sources of disease. By the middle of the 19th century, this view had intensified to the point where public health reformers regarded the burial place as a health hazard. Ultimately, the public's discontent led to the search of a new burial ground. The solution would ultimately be to locate the cemetery outside the city. However, the transition from the churchyard to the external cemetery was resisted by people who saw the move as lowering of their status.

TOWN/CITY CEMETERY

By the 1780's and 1790's, people were generally concerned about the overcrowded conditions of churchyards. The recurrence of epidemics forced people to consider alternatives to



Fig. 2.5
New York City's Street cleaners 1868.

the inner-city burial grounds. One of the first attempts to resolve the churchyards deplorable conditions appears in New Haven, Connecticut. Here an attempt was made to improve the aesthetic and moral character of the town by introducing nature back into the community; improving the quality of life by merging city and country. The natural beautification of the town was viewed as a moral virtue to make city life less harsh, less immoral and less barren. This attitude extended to the churchyard.

Grove Street Cemetery

The recurrence of yellow fever in 1794 and 1795, made conditions in New Haven's original burial ground intolerable, leaving no choice but to find an alternative solution. In 1796 having evolved from this need to replace "the unsightly clutter" of the churchyard, Grove Street Cemetery was established. Originally named the New Haven Burying Ground, Grove Street Cemetery was formed by thirty-two prominent citizens of New Haven, who came together to incorporate a private association. Their prime objective was to establish permanence and a sense of security within the burial grounds. The most influential of the thirty-two members, was Senator James Hillhouse. Hillhouse had first considered the possibility of a family graveyard on his own property however, perpetual care of the graves was not assured and he decided against it.

The separation between the town and Grove Street Cemetery was emphasized by its location on the outskirts of town, and the monumental entrance detailed in the style of the period (Egyptian Revival). Unlike earlier churchyards, Grove Street Cemetery was a private, non-denominational cemetery and the first cemetery to introduce the concept of purchasing land for burial. Interment in churchyards had always been a privilege of membership in a congregation. The cemetery placed significance on the family sections. Obelisks, large expensive markers which emphasized private wealth, were placed in the centre of the family's lot with the family's name prominently displayed. New Haven became a place where families could comfortably bury, honor, and remember their ancestry.

Incorporation of a cemetery was a new concept in North America. Families, through their investments, established

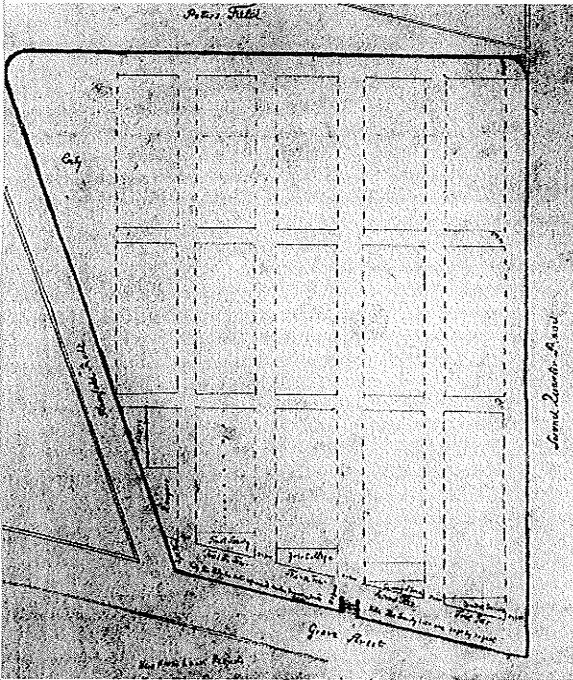


Fig. 2.6
Plan of New Haven Burying Ground, New Haven Connecticut, 1797.



Fig. 2.7
Entrance to the Grove Street Cemetery, a good example of Egyptian Revival—designed by Henry Austin in 1845.

ownership and control, ensuring a safe and secure burial place. Unlike other burial places, Grove Street Cemetery was completely planned. Initially a six acre site, it was eventually expanded to twelve acres later in the 19th century. It was laid out in a grid-iron plan and divided into parallelograms. Each plot was of exactly the same dimensions, and every grave faced the same direction. Lombardy poplars lined the roadways providing shade and ornamentation, accenting the geometric design of the grounds.

Grove Street Cemetery was a reflection of the “pressures” that were causing other towns and cities to reconsider the custom of inner-city burials and was an important step in the evolution of the cemetery. Grove Street Cemetery still maintained its urban heritage in its geometric design and formal in style. Society wanted a burial place that did not reflect the fast pace of the city. Only when cemeteries abandoned traditional urban forms and accepted the aspects of the country, did they become rural.

EUROPEAN CEMETERIES

There are basic similarities between the North American and European cemetery. Traditionally, European burial practices influenced western values, yet major distinctions exist between the two. There are basically five differences: private ownership, family control, commercialism, natural landscapes and cremation.

In the 19th century, the North American cemetery was an institution in itself and assumed the responsibility for its own management, whereas in Europe, it was the responsibility of the church and government to manage and maintain the cemetery. Historically, cemeteries in Europe remained dependent on other institutions to establish schedules, set regulations for visitors, and maintain the landscape.

The burial of Jean-Jacques Rousseau in 1778, was an important step towards the rejection of inner-city burial grounds. The placement of the grave in a garden, represented a shift in society’s attitude towards death and nature. The loss of the family member and the trauma of death became the focus as opposed to the formalized public ceremonies of the past.

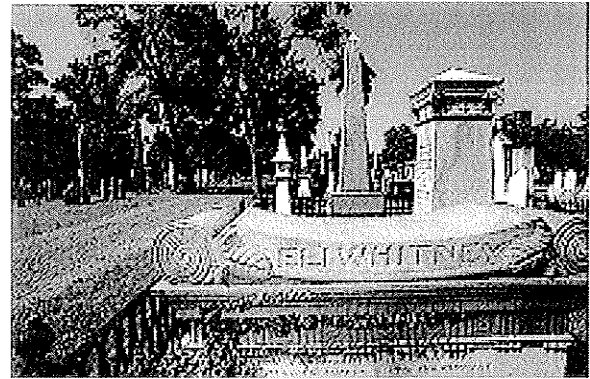


Fig. 2.8
18th century tombstones of New Haven Burying Ground.

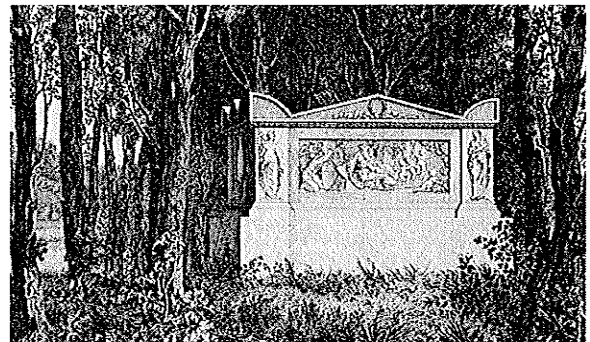


Fig. 2.9
Rousseau's Tomb nestled amongst the trees in the gardens of the estate of the Marquis de Girardin in 1778.

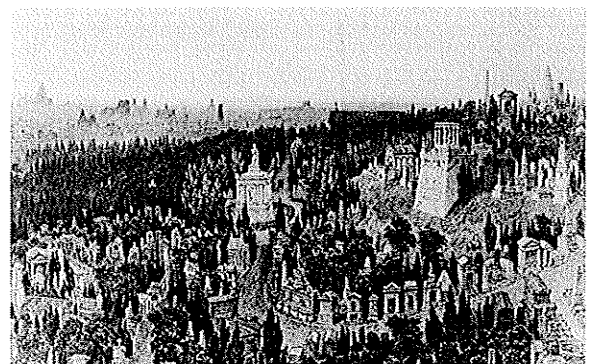


Fig. 2.10
View of P re Lachaise Cemetery, 1854. The number of monuments and mausoleums quickly diminished the gardenlike character of the cemetery.



Fig. 2.11

A life-size statue of Anatole de la Forge, leading the Parisian people, 1895.

Père Lachaise

Père Lachaise was the most influential cemetery of the 19th century. Established outside of Paris in 1804, as a result of the declining conditions of inner-city churchyards, it represented a new era, which changed the perception of burial and inspired a change in the attitude toward nature. It was the first European cemetery to allow middle class families to purchase perpetual burial rights. Prior to this, the grave was rented, typically between 6 - 20 years, after which the remains were removed to the charnel house. Unlike the attitude in North America, European governments did not perceive the cemetery as a business.

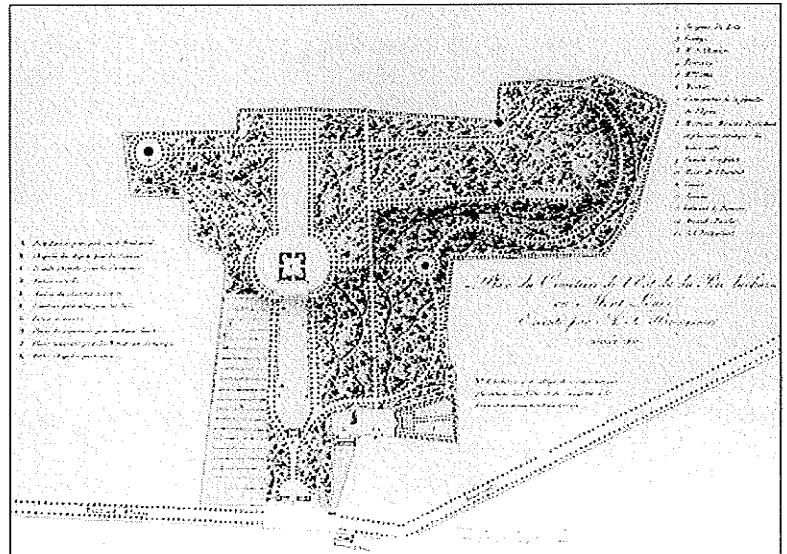


Fig. 2.12

A Plan of Père Lachaise in 1813. Père Lachaise was the first garden cemetery established, combining gardenesque and formal styles.

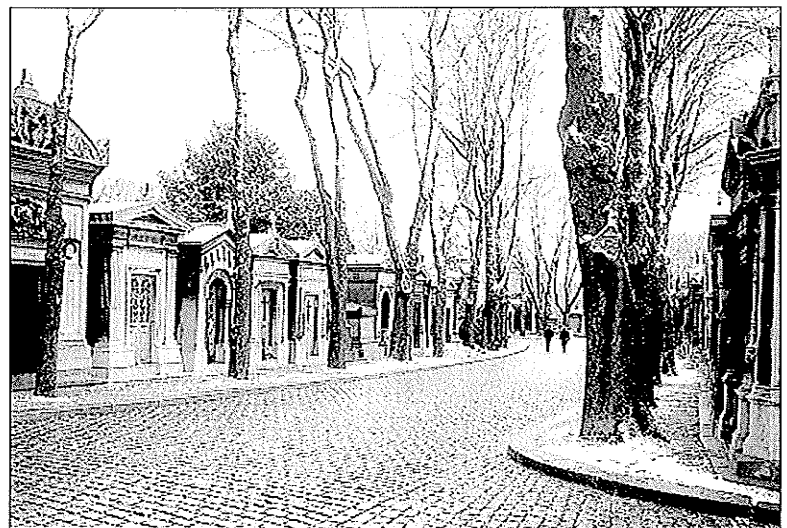


Fig. 2.13

Cobblestone avenues lined with trees and mausoleums, late 19th century.

Père Lachaise began as a garden cemetery designed on a hilltop overlooking Paris, with serpentine roadways winding through the site. Two parallel avenues extended out from a grand boulevard leading from the western entrance to a central shrine. Maximizing the opportunities of the existing topography, the cemetery was designed in such a manner that one would anticipate and discover new views around each bend and corner, enjoying panoramic views of the city. The site sustained the illusion of a vast and unbounded park, where one always anticipated something new.

By 1831, Père Lachaise was a successful cemetery and major tourist attraction. It was famous not only for the beauty of the landscape but also for the celebrities interred there. Ironically, the very popularity of Père Lachaise undermined its status as a garden cemetery. While the elaborate vegetation and expensive markers accumulated, by 1825, more than 25,000 monuments were established. Growth continued until Père Lachaise had completely lost the character of a garden cemetery. The cemetery remains still today one of the major attractions of Paris.

2nd Stage: The Rural Cemetery 1831 - 1970's

During the 19th century, Colonial graveyards were no longer central community institutions but rather were unsanitary places considered to be a health hazard. There was a need for reform, but no obvious alternative was available. Grove Street Cemetery was an improvement in that it was situated in a more protected location and encouraged families to become involved by owning and embellishing their family's section. However, society decided the graveyard was still unacceptable and created an alternative, the "*rural cemetery*". Influenced by European events and ideas, the rural cemetery was situated on the outskirts of the city, on large tracts of farmland. It was developed into a garden cemetery, embodying the rural values that society felt was important to maintain.

The rural cemetery was an acceptable solution to the confusion and complexity of urban life. It reflected the common concerns of society, offering people fresh air and a place for rest and contemplation in a quiet setting. The cemetery be-

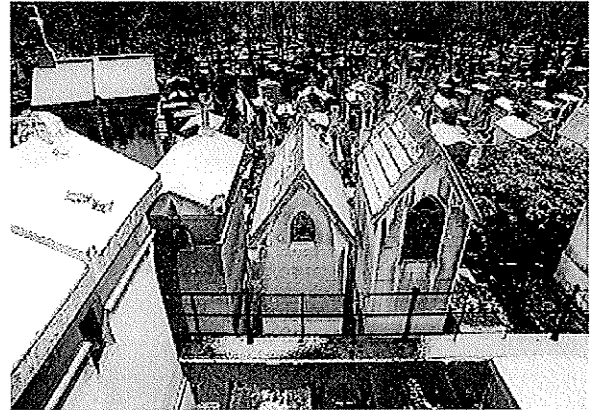


Fig. 2.14
A few of the narrow mausoleums located in Père Lachaise.

came a place of refuge away from the hustle and bustle of the city; a source of moral inspiration, historical information and education.

Features of the Cemetery

The sextons of the rural cemetery were responsible for the overall appearance of the site that included the grading of the landscape, building of the roads/pathways, and the planting of the trees and shrubs. The family was then responsible for their family's monument and/or marker, including the maintenance of individual plantings. This soon became a problem since not everyone would maintain their lot. It wasn't until 1843, that an 'maintenance fund' was established at Mount Auburn to help rectify this situation.

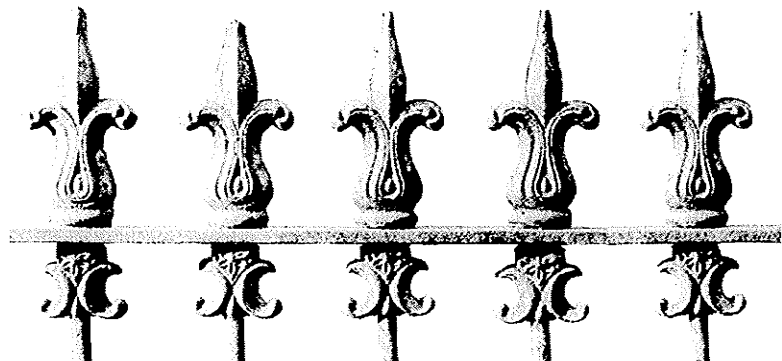
Contrary to the initial intent to be democratic the rural cemetery was in fact elitist, since it's artistic atmosphere depended on spacious plots and elaborate monuments which only the wealthy could afford. Those of the working class were buried away from the lakes and hills occupied by the wealthy and placed in the cemetery's least desirable locations. Individual lots were placed along the cemetery's edges and other areas that filled space in the landscape such as near fences, storage sheds, and stables. These areas were both visually and physically segregated from the family lots of the middle and upper classes. Typically, the purchase of these lots left families separated, crowded into sections with fewer trees, paths, and natural plantings. The rural cemetery was purported to be democratic in the philosophy of equality, yet in reality, it represented the interests, ideals and philosophies of the middle and upper classes.

The most prominent feature in the rural cemetery was the



Fig. 2.15
Stone monument illustrating the theme of salvation.

Fig. 2.16
Rural cemetery fences – A.J. Downing believed that lot fences and gates ruined the appearance of the cemetery.



monuments which demonstrated the heritage and success of individuals. Large monuments centered amongst the family lots were a means by which the middle and upper classes could commemorate families, ancestry, community and themselves. The markings on the monuments often portrayed images of hope, salvation, and life. In the rural cemetery, salvation was the prevailing theme, with the belief that anyone could gain salvation through good works. In contrast to the older colonial attitudes of damnation, the new ideals lessened the fear of death, and focused on the individual's deeds and good works.

A.J. Downing, a landscape architect, believed ornamentation and the over embellishment of cemeteries reduced the quality of the rural atmosphere. It was his impression that monuments concealed the beauty of the rural landscape. The overcrowding of monuments created a feeling of hopeless mourning and a very little sense of the continuity of life. Downing perceived the cemetery as a small piece of rural scenery where people could walk, ride, and contemplate nature. Instead, monuments cluttered rural cemeteries which contradicted the initial concept, that of a place of refuge. In 1861, Frederick Law Olmsted noted, "the rural cemetery, which should be a place of rest, silence, seclusion, and peace, is too often now made a place not only of the grossest ostentation of the living but a constant resort of mere pleasure seekers, travelers, promenaders, and loungers." (Sloane, 1991, p. 90).

MOUNT AUBURN

The "garden" or "rural" cemetery movement began in 1831 with the establishment of Mount Auburn Cemetery in Cambridge, Massachusetts. Initially proposed in 1825 by professor and horticulturist Dr. Jacob Bigelow, and laid out by Henry A.S. Dearborn, it featured an Egyptian gate and fence, a Norman tower and a granite chapel. Mount Auburn defined a new kind of "romantic" cemetery situated on the outskirts of the city complete with winding paths, deep forest trees and a natural setting. The primary objectives were to improve the quality of the environment and to provide an example of landscape gardening principles incorporating the ideals of the Romantic Movement.

The rural cemetery emerged from society's discontentment of the church graveyard. It was intended to cure the problems of

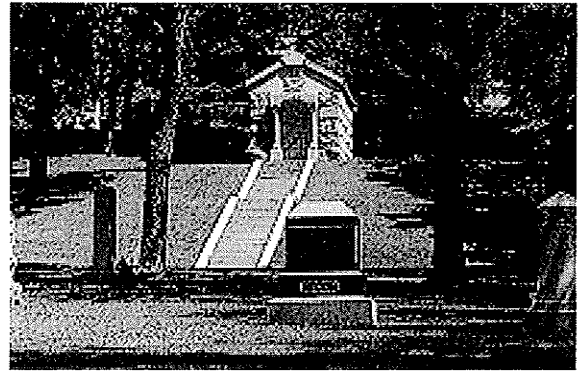


Fig. 2.17
Steps leading up to the mausoleum, late 19th century, Forest Hills Cemetery, 1903.



Fig. 2.18
Monuments and markers decorate the family plot, Cedar Lawn Cemetery, New Jersey, 1908.

urban life, and provide the community with a “moral landscape” (Sloane, 1991, p. 90). At a time of growing social problems and the isolation of people within urban environments, Mount Auburn became an integral part of the movement to reorder and renew the sense of community that was lost.

The site was comprised of a network of road systems designed to crisscross one another to divert the visitor from the formal promenade. This allowed the traffic to move slowly, generating sharp turns that would compel the visitor to focus on significant views. The main road would pass along a lake or water feature, creating a natural break in the scenery. The serpentine pathways revealed many unexpected views, yet it would always lead back to the main road. Beautiful, secluded and spacious, these cemeteries occupy some spectacular urban settings.

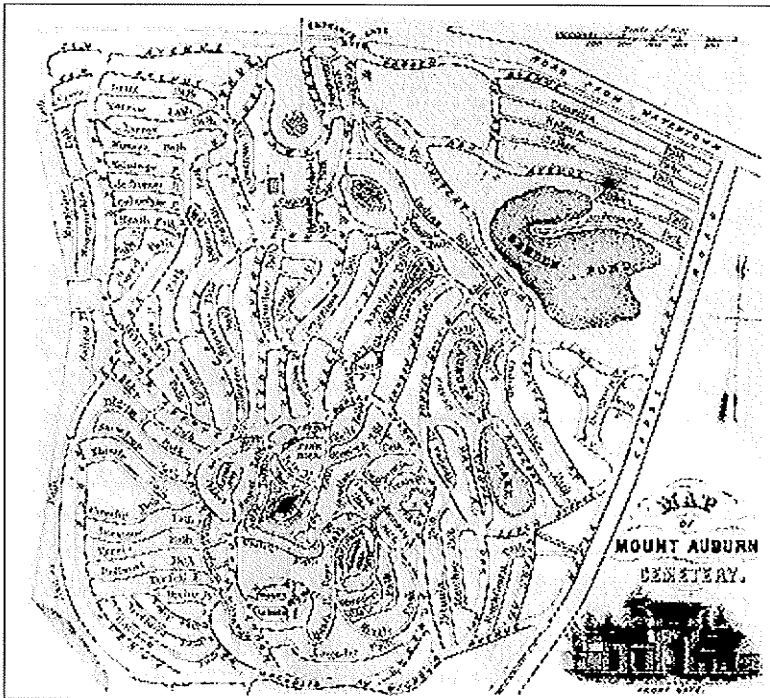
The immediate success of Mount Auburn gave rise to the establishment of other garden cemeteries in the mid 19th century. The cemetery became so popular that not only was it visited by families of the departed, but also by a growing urban population in need of recreation. Mount Auburn became inadvertently the first large scale public open space. It featured a pleasant botanical tour, a local historical museum, an arboretum, and a space for burials. The landscape was impressive, contrasting the hustle and bustle of the city with the tranquillity of the countryside. It abandoned traditional urban forms and focused on the aspects of the natural landscape. “By the 1840’s one could travel to Mount Auburn by direct horse



Fig. 2.19
The profusion of monuments was a result of elitism,
in late 19th century, Laurel Hill, Philadelphia.

car. Visitors would stroll the grounds with a guidebook in hand, viewing sculptural tombs, enjoying fresh air, and picnicking along the undulating paths". (Jackson, 1989, p.19)

Mount Auburn was so successful that other communities emulated it, imitating it's style and organization, and adapting it's principles to local conditions. It became the model for North America, providing the community with a resource to maintain their history, strengthening the family, and preserving the character of rural life.



3rd Stage: The Lawn Park Cemetery 1855 - 1920's

It wasn't until the 1850's that a new generation of landscape designers experimented with a simpler and cleaner landscape, retreating from the ideals of the rural cemetery. The result was a change from the picturesque, to a design that imitated the urban park and the middle class suburb.

The lawn-park cemetery simplified the design creating a more spacious and pastoral landscape. The plan limited marker size

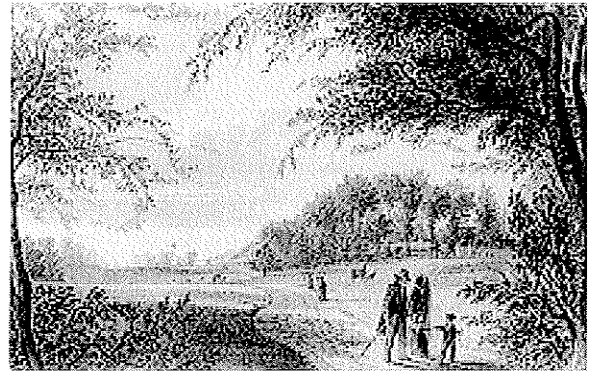


Fig. 2.20
Visitors stroll in the rustic landscape of the rural cemetery, 1847.



Fig. 2.21
Forest Pond, Mount Auburn Cemetery, 1847.

Fig. 2.22
Plan of Mount Auburn Cemetery in 1831. Mount Auburn's naturalistic design revolutionized the rural cemetery movement in the mid 19th century.

and thinned out trees and shrubs, shaping the landscape to a cleaner appearance than that of the picturesque. Instead of the diverse and eclectic appearance of the rural cemetery, the landscape emphasized gently flowing lines, regularity, balance and symmetry.

SPRING GROVE

Spring Grove, located in Cincinnati Ohio, is one of the largest cemeteries in North America, comprising 733 acres. Established in 1844, and designed by Howard Daniels, it was based on the model of Mount Auburn. It wasn't until later that the "lawn-park plan" was introduced.

In 1855, Aldophe Strauch, a gardener with extensive experience in Europe, became the superintendent of Spring Grove. It was his impression that the "clutter" from the monuments detracted from the natural appearance of the landscape. The significance of the "lawn-park plan" was that the landscape, including the views, should take precedence over the monuments, to create an expression of a unified landscape. He encouraged a combination of large lots and smaller low-maintenance markers that would not restrict any extensive landscaping or sweeping vistas. In the difficulty of transforming a graveyard into a park, he began to remove the fences and hedgerows around the graves and to revolutionize the graveyard in accordance with the 'lawn-park plan'. The result was a cleaner more park-like appearance, accomplished by re-routed roads that followed the natural contours of the land, less plants, larger lots, smaller markers, and the use of water to divide sections and allow the visitor to view deep into the grounds. Strauch's plan was intended to maintain a feeling of openness and to dot the grounds with lakes, islands and footbridges. The connection of lakes were often the focal point of the design, complimenting both the lawn and the monuments. Strauch recognized that the cemetery was not a park, a playground nor a garden, but a burial place. He designed Spring Grove to improve the cemetery as an arboretum, historical museum, as well as an artistic expression.

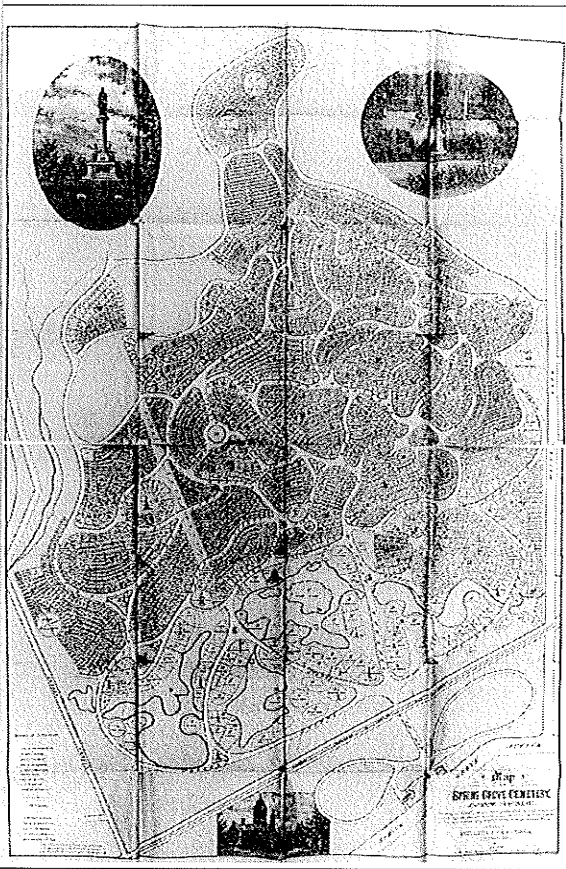


Fig. 2.23
Map of Spring Grove Cemetery, 1883.

The 19th century attitude towards death, instilled a fear in people and created a sense of isolation. People began to distance themselves from the realities of death, and began to depend on others to maintain the grave and to control the care

and maintenance of the cemetery. The church and government assumed less control over the burial process, leaving it to be handled by the private sector. The cemetery was becoming

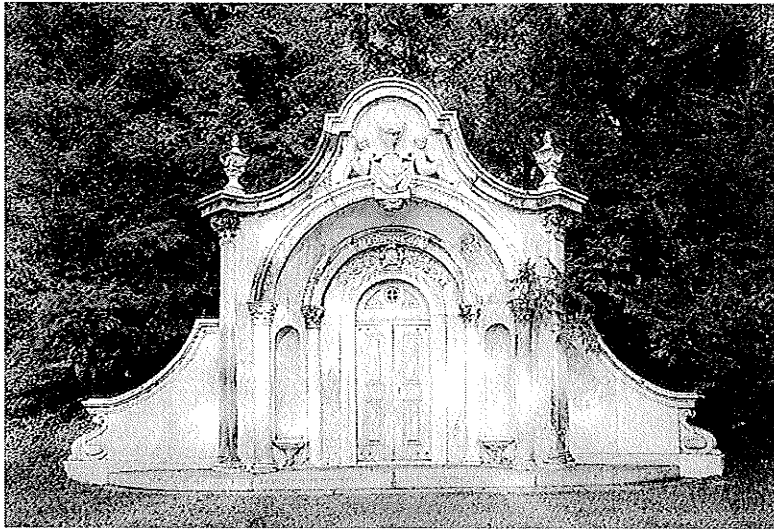


Fig. 2.24 (Left)
Mausoleum built in 1865 of Italian Marble, recalls the grand portals of Roman churches.



Fig. 2.25
Sculpted figures positioned by a serene lake encouraging contemplation and reflection.

entrepreneurial, providing a public service at a profit. Spring Grove reflected this change in attitude and became more of a business than a community service. It was the first cemetery to provide a maintenance service package, as well as an annual-care program to prospective buyers and families. The funds generated from the maintenance package were an important source of income for the cemetery, enabling the grounds to be maintained in a consistent manner. The professionalization of the superintendent's position to manager, set a precedent for all cemeteries. The position represented the transition from amateur horticulturist to landscape designer, an important step towards the development of the profession of Landscape Architecture. It was the commercialization of the cemetery that evoked a movement of reform, which led to the redesign of the cemetery into the Memorial Park.

By the 1900's the lawn-park plan, was modeled throughout North America making Strauch a leader of the Modern Cemetery Movement.

INTRODUCTION OF THE URBAN PARK

The rural cemetery movement was so popular that it inspired the urban park movement. In the latter part of the 19th century,



Fig. 2.26
Family monuments set into the landscape.

several new public parks were created, offering people many opportunities for recreation. Early European concepts of park planning were applied to the landscape, joining the beauty of the cemetery with the peace of the countryside. This attitude coincided with the interest in parks beginning in the 1850's and still continues today. These "rural parks," were society's attempt to control the chaos in cities that were in physical, social, and economic upheaval.

The concept of the rural cemetery was to put the city into the country, whereas the "rural park" in comparison was a means to bring the country into the city. After the development of the park system, the popularity and use of the cemetery as a recreational site diminished. People preferred to use parks for recreation; they were closer, had fewer rules, and were more pleasurable to visit. The success of the park had influenced certain design changes in the cemetery by limiting the size and placement of monuments thus diminishing the visibility of death in the landscape. Although the monuments restricted management's ability to shape and maintain the environment, it also marked the cemetery as a sacred place different from the recreational park.

4th Stage: The Memorial Park Cemetery 1917 - Present

Early in 1917, Dr. Hubert Eaton conceived the *memorial park*, which eventually served as a model for North America. Eaton combined the traditional elements of landscape, history, art, and Christianity in the memorial park model however, no other cemetery has been quite so eclectic in the use of symbols. The most prominent features of the memorial park were the restrictions placed on the memorial tablets. The memorial tablets were to be flush with the ground, making lawn care more economical and creating an park-like appearance. Such total control over the look of the grounds was a new approach to the cemetery as were the large-scale consistent promotions for Forest Lawn.

Memorial parks were typically located in the city suburbs, making it a visually accessible cemetery. They offered a uniform landscape garden typically located at the centre of the burial section. These garden sections divided the burial place



Fig. 2.27
The "Christus" represents the attempt to reaffirm the importance of religious symbolism. Allegheny Cemetery, Pittsburgh, Pennsylvania, 1983.

into smaller parts, such that those wishing to be buried with similar cultural or religious beliefs could do so. While individual monuments were restricted in the memorial park, large mass produced statues were used as decoration at entrances, crossroads, and in newer sections of the parks. The architectural and sculptural features gave the memorial park a unique identity. Most were non-denominational landscapes, with the sculptures reflecting Christian ideals.

It wasn't until after World War II, when most North Americans lost interest in cemeteries and monuments, that memorial parks became the dominant type of funerary landscape. The changing patterns of living made the practicality of memorial parks more appealing.

FORESTLAWN

Forest Lawn began as a small traditional cemetery in 1906 in Glendale, California. In 1917, under the direction of Hubert Eaton, it became the first memorial park. Shortly after becoming general manager of Forest Lawn, Eaton set down his future objectives. Forest Lawn was designed to be a combination of religion, commercialism, and conservative values. The memorial park had become a modern, multifaceted business, offering a wide variety of services. Eaton united in one place all the burial services that would be required from cremation,

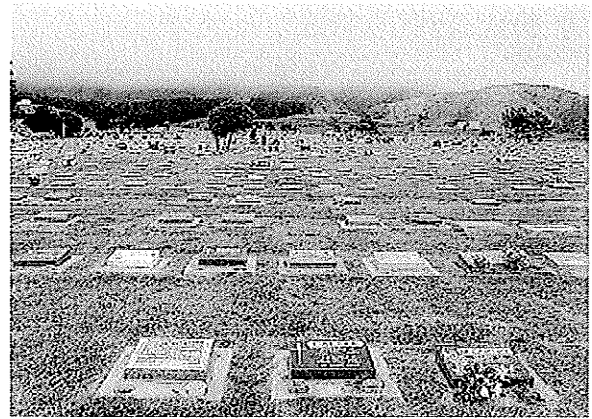


Fig. 2.28
Flat markers laid in the ground, Holy Cross Cemetery, Colma, California, 1985.

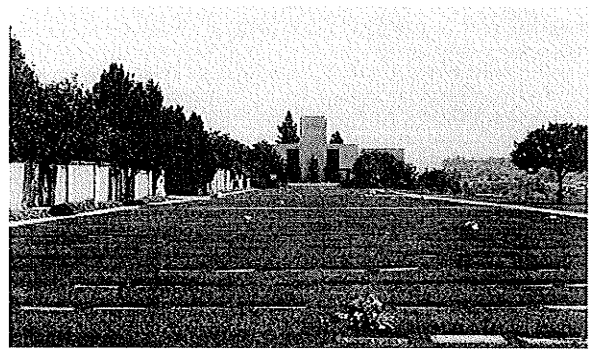


Fig. 2.29
Court of Freedom, Forest Lawn Memorial Park, Glendale, California, 1982.

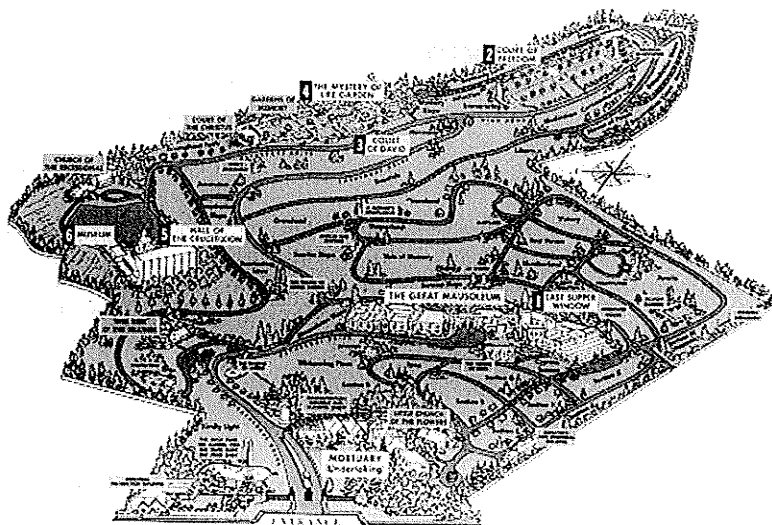
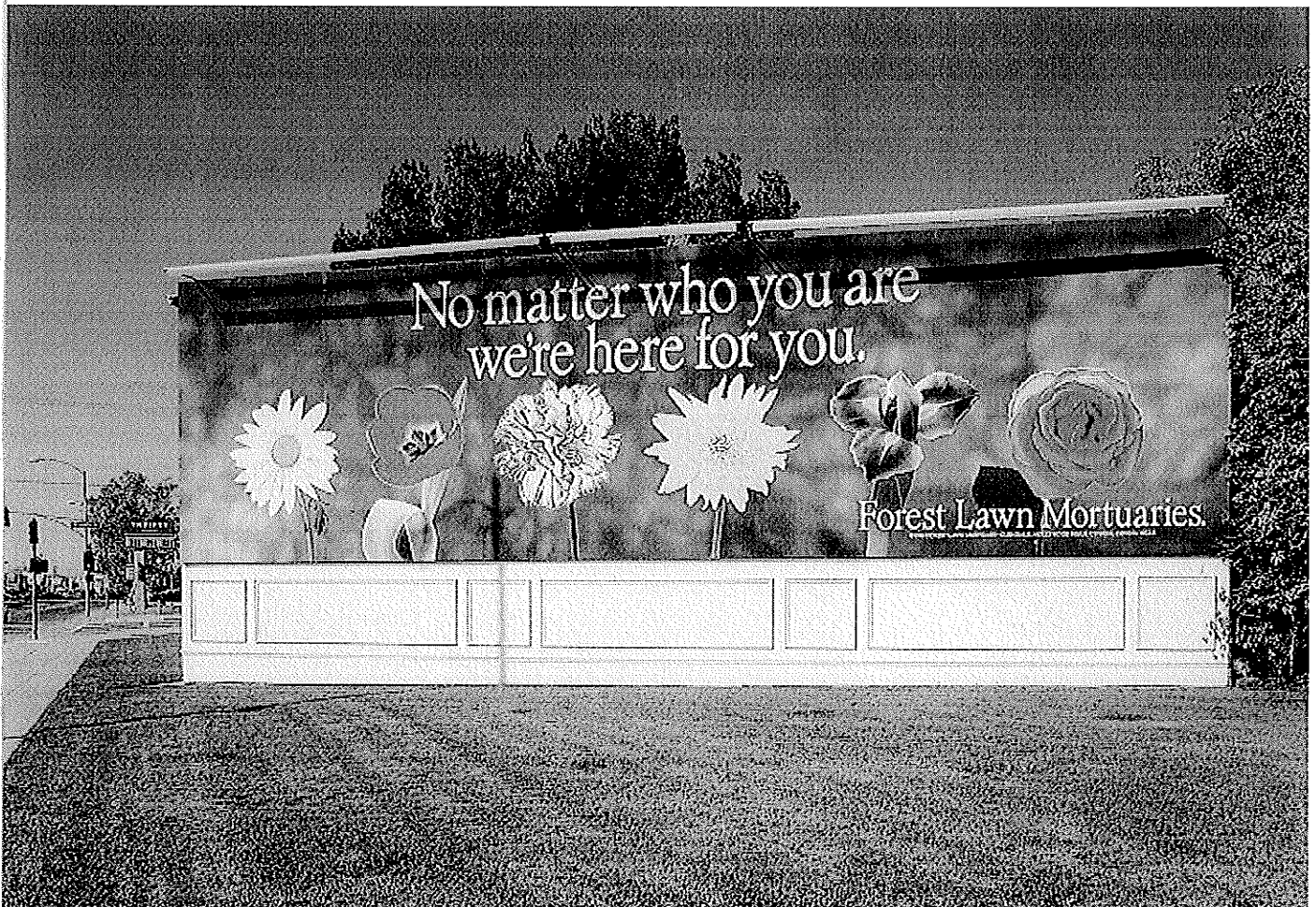


Fig. 2.30
Pictorial Map of Forest Lawn, 1961. Forest Lawn was designed to accommodate the casual visitor by making the experience enjoyable, in the hopes that it would result in the purchase of services.

funerals, interment, and even controlled the style of marker that could be installed by requiring that they be purchased from the cemetery. These extended services fully redefined the burial place from being a communal space to a private commercial enterprise.

Forest Lawn was the first cemetery to mandate the use of flat memorial tablets. These rules stipulated that both individual and family memorials were to be flush with the ground. The memorial park was composed of towering trees, sweeping lawns, and classical architecture, educating and uplifting the community. The main road started at the entrance gates and wound around the older monument sections, proceeding upward through the rolling hills. The serpentine road continued to wind around and end at the summit, where people could look out over the cemetery. Like the elite rural cemeteries, Forest Lawn tried to soften the idea of mortality through the

Fig. 2.31
The 1987 billboard for Forest lawn Mortuaries typifies the cheerful mood that they try and convey.



use of sculptures that depicted religious figures, uplifting Christian symbolism and images. The collection of classical sculptures became a symbol of Forest Lawn. Comforting imagery was its trademark.

By the beginning of the 20th century, cemeteries were suffering from a decline in popularity in the number of people visiting, predominantly because of the popularity of the urban park. It was the intent of Forest Lawn to lure the public back by reducing the images of death in the landscape, and offering images of life. It wasn't until 100 years after Mount Auburn, that Forest Lawn re-established the optimism associated with death, but in a different context. It was not a manifestation of the Romantic ideals but a 20th century attitude of reducing the fear of death and introducing Christian ideals.

THE MODERN CEMETERY

Throughout history, the cemetery has remained an important place for millions of people. The garden type cemeteries of the 19th century were so popular that people did not necessarily go to mourn but to seek refuge from the city. As cemeteries became overcrowded with monuments, and their function more apparent, people began to turn towards the urban park for passive recreation. The public's lack of interest opened the door for cemetery administrators to impose regulations that would make the maintenance of the site easier and less expensive.

Many modern cemeteries are commercial ventures, managed by salespeople who are more interested in the increase of sales than they are in the spiritual and aesthetic nature of the landscape. Their focus is no longer the creating and maintaining of beautiful landscapes, but to make a profit. The urban cemetery has changed from a community based institution to a service based institution and has become isolated from the community that it was intended to serve. Society has become increasingly indifferent to the cemetery as a sacred place.

Synopsis

The cemetery, once central to the community, is a necessary but not necessarily desirable resource. Changes occurred



Fig. 2.32
The cemetery on the outskirts of the city, Calvary Cemetery, Queens, New York.



Fig. 2.33
Standardized markers laid into the landscape, Kensico Cemetery, Valhalla, New York.



when centrally located graveyards were removed to the outskirts of growing towns and cities. The rural cemetery was located further away from the city to counteract the atmosphere of urban life.

During the mid 19th century the rural cemetery developed a new 'Romantic' landscape that was aesthetically pleasing. Unlike the previous colonial graveyards, the rural cemetery was owned and managed by private, secular associations established for the development of the cemetery. The crowding and spatial confusion of the rural cemetery led designers to streamline the landscape and alter the management of the cemetery. The resulting *lawn-park* cemetery was a more efficient and rational design dependent on professionals to develop and maintain the landscape.

The 20th century cemetery was renamed as *memorial park*, to obscure the negative connotations believed to have been perceived in the word *cemetery*. It was simpler and more accessible than the lawn-park cemetery and its intent was to make the cemetery more comfortable and familiar (Sloane, 1991, p.25.). Thus, in developing the atmosphere of the memorial park, the cemetery emphasized elements used in suburban landscapes .

Each evolutionary stage of the cemetery has influenced a new generation of designers, reflecting a new attitude towards the landscape, its structure, and the cultural attitudes associated with people's perception of the cemetery.

Figure 2.34
A cherub marks the top of a column, Brompton.

Characteristics of the North American Cemetery

Name	Period	Design	Location	Monumental Style	Monument Material	Type of Manager	Primary Distinction	Paradigm
Pioneer Graves	17-20th c.	None	Site of Death	Plain, simple or no markers	Wooden, stone	None	Isolated, no design	None
Domestic Graveyards	17-20th c.	Geometric	Farm Field	Some iconographic markers if any	Wooden, stone	None	Small, family owned; functional design	None
Churchyard	17-20th c.	Geometric or formal garden	Next to church	Artistic iconographic markers if any	Wooden, stone, slate	Part-time sexton	Religious ownership functional design	English churchyards
Potter's Field	17-20th c.	Geometric	City's Borders	Plain markers, if any	Wooden, stone	Sexton	Public ownership functional design	Gospel St. Matthew
Town/City cemetery	17-20th c.	Formal garden	City's Borders	3D markers; monuments; sculpture	Stone, marble	Sexton	Family or government owned; formal design	New Haven Burying Ground
Rural	1831-1870's	Picturesque, natural garden	Suburb	3D markers; monuments; sculpture	Marble granite	Trustee Superintendent	Private ownership; garden aesthetic; mausoleums	Mt. Auburn Cambridge
Lawn-park cemetery	1855-1920's	Pastoral, parklike	Suburb	3D monuments; sculpture, markers, close to the ground	Granite, stone, bronze	Trustee Entrepreneur Superintendent	Entrepreneurial; park-aesthetic; mausoleums	Spring Grove Cincinnati
Memorial park	1917-present	Pastoral, suburban	Suburb	2 or 3D flush to the ground; central-section sculptures	Bronze, marble, granite	Entrepreneur Sales Manager Superintendent	Entrepreneurial; suburban aesthetic; mausoleums	Forest Lawn Glendale

Figure 2.35

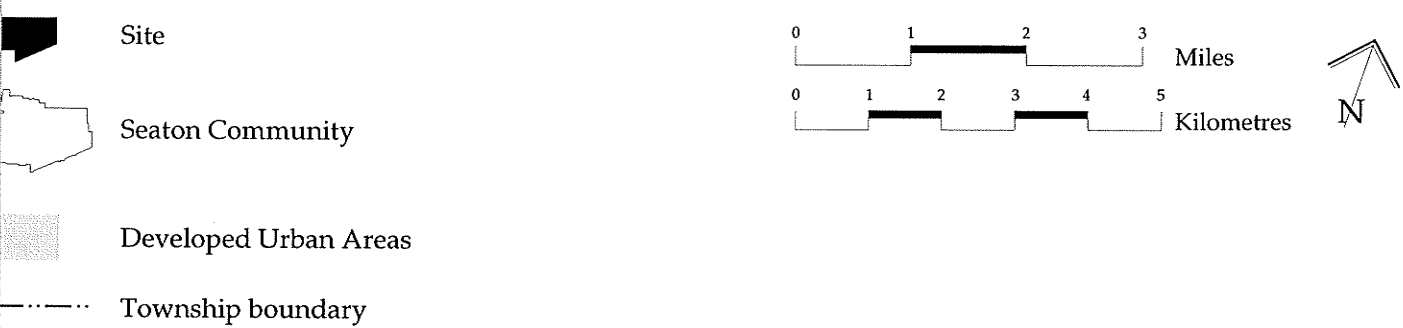
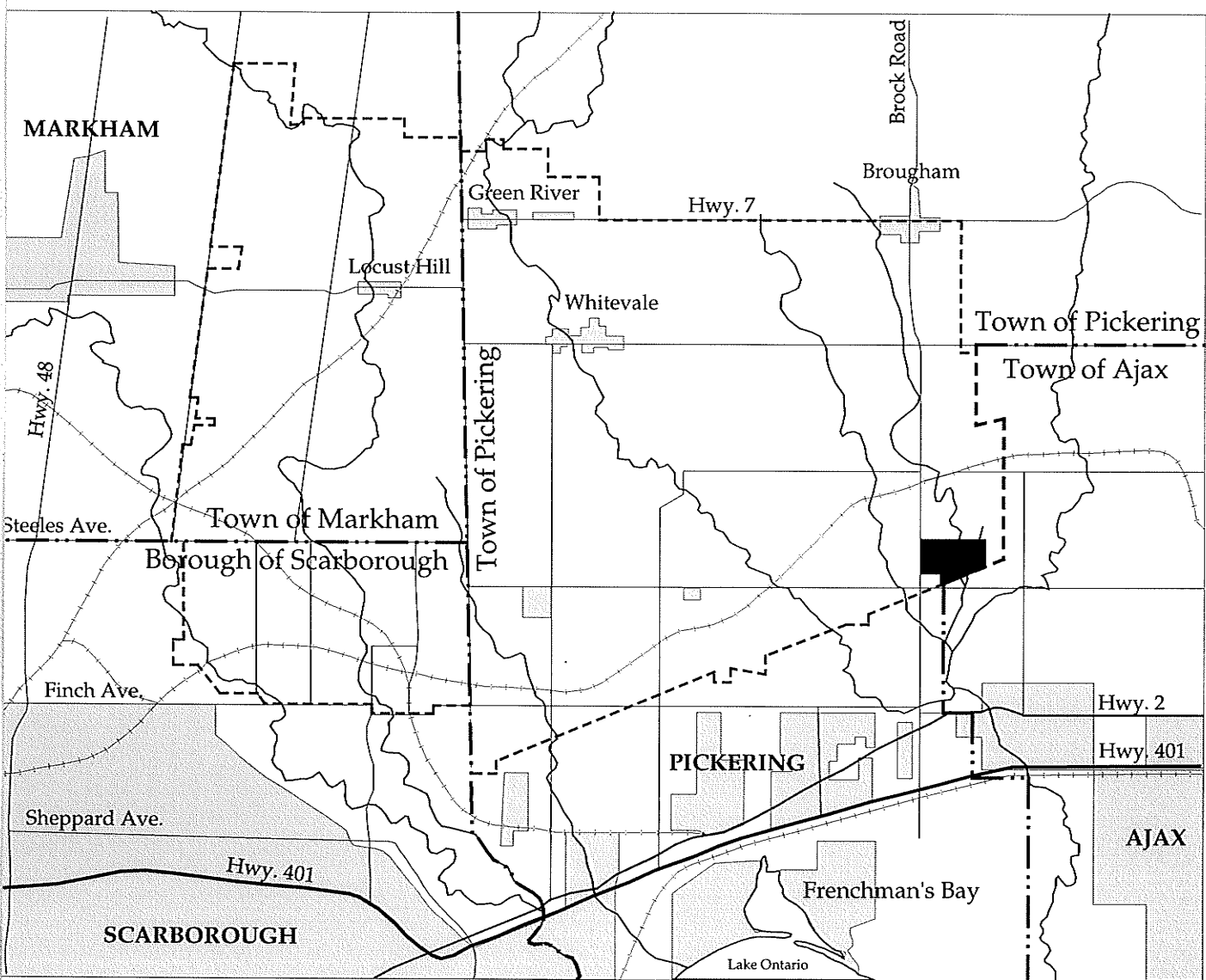
Chapter Three



This chapter describes the basis for the plan of Seaton, a new community to be developed by the Ontario Land Corporation, an agency of the Province of Ontario. Seaton is comprised of 10,200 hectares (25,000 acres) located north-east of Metropolitan Toronto. It came to be in response to a growing population within the Greater Toronto Area.

This section provides background information as well as a detailed analysis of the Pickering region. The analysis is organized in order of increasing detail: regional, local and site. The regional and local analysis focus on the site's relationship to the Seaton community and surrounding areas. The site analysis provides detailed information relating specifically to the site. The information is intended to provide a complete understanding of the site and relevant issues.

Fig. 3.1 Regional Map



Analyzing the Community

Regional Context

LOCATION

Pickering, Ontario is located in the Regional Municipality of Durham approximately 30 km (18 miles) northeast of Metropolitan Toronto, and 25 km (15 miles) west of Oshawa. The site is situated 3 km north of downtown Pickering, off Brock Road and lies just south of the proposed Seaton Community. Pickering, with approximately 70,000 residents, is considered part of the Greater Toronto Area whose combined population is over 3.3 million. (*see fig. 3.1 & 3.2*)

TOPOGRAPHY

The landscape of the Pickering Area is flat and gently rolling. The landform gradually slopes from the northwest near Hwy. 7 down to the southeast of the Duffin Valley, the most predominant topographic feature in the area. This valley is notable for its width and steep banks. To the west of the Duffin Valley the land is flat, while to the east there is an undulating and diverse terrain. The Urfe Creek tributary is less abrupt with gently sloping sides.

Fig. 3.2 Regional Location

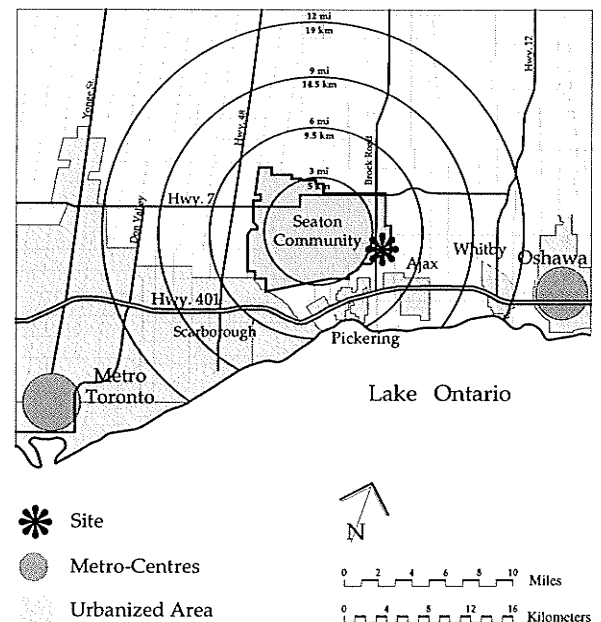
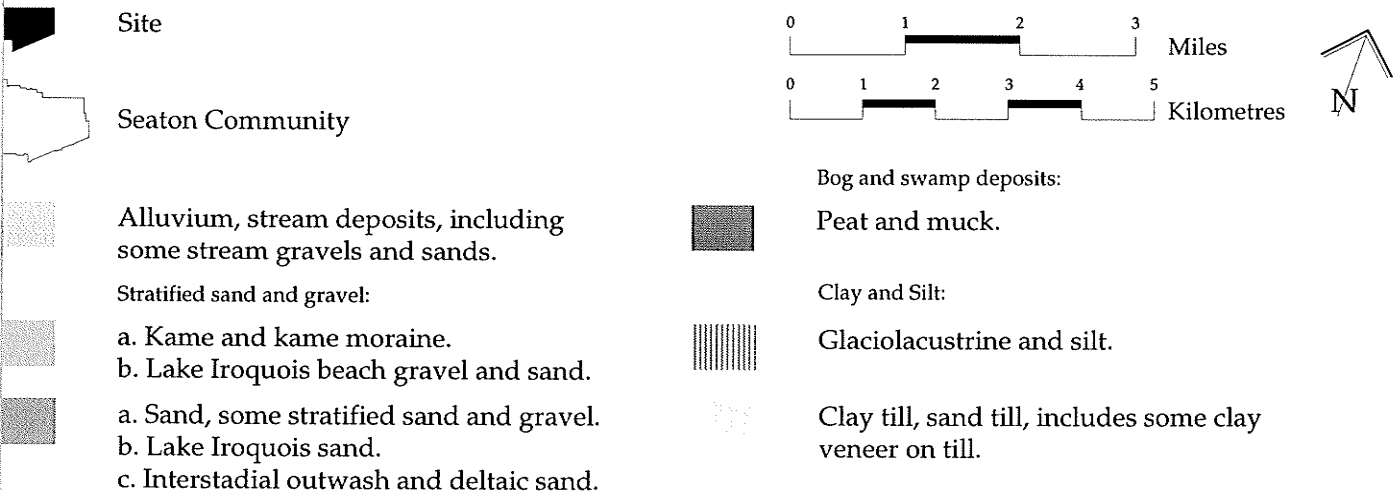
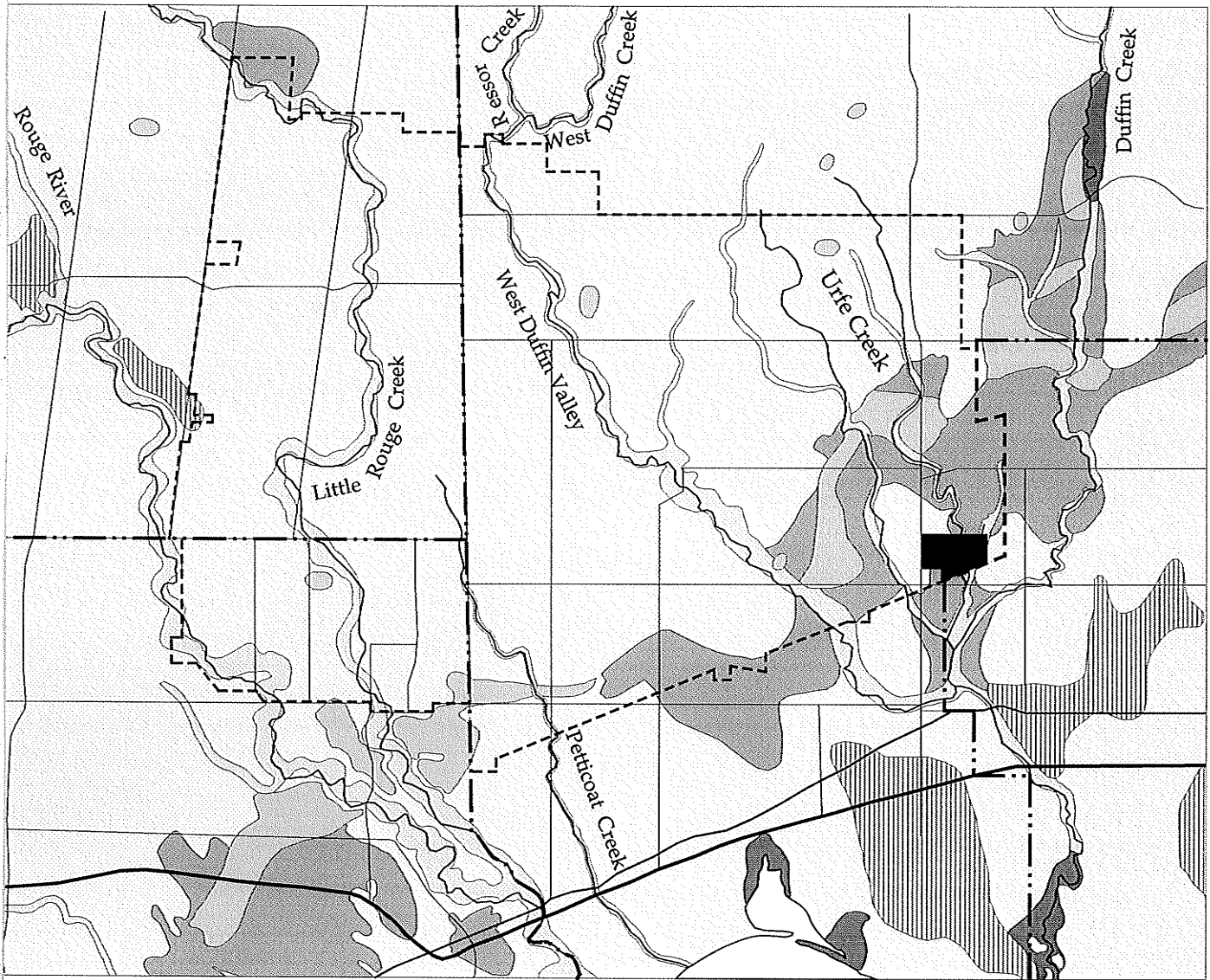
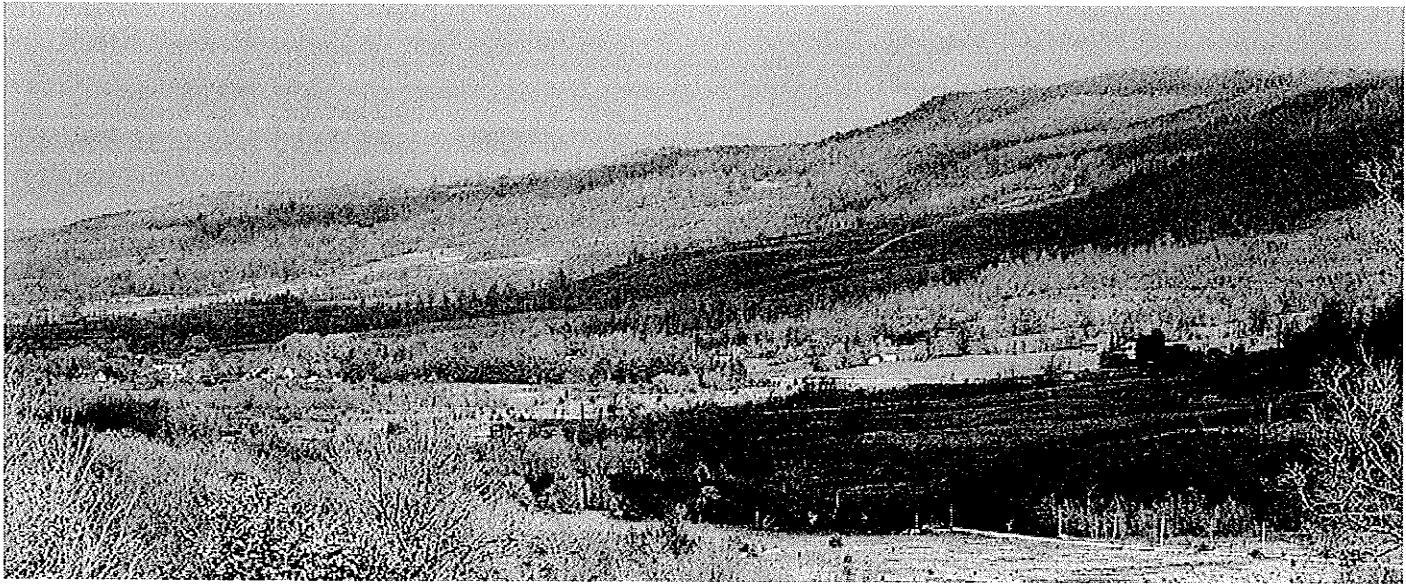


Fig. 3.3 Regional Soils Map





GEOLOGY

The site is located in the physiographic region known as the Iroquois plain. It is covered with fine-to-medium silty sands deposited from shallow water sediments dating back to the glacial period of Lake Iroquois. To the west of West Duffin Creek lie silt tills and to the east, dense stony and silty sand tills.

SOILS

The area is used primarily for agriculture. Clay loam soils cover over 40% of the area west of the West Duffin Creek. This area has few restrictions on the type of farming, or crops grown. To the east of the West Duffin Creek, poorer soil types and the diverse topography, limit agriculture. (*see fig. 3.3*)

SEATON COMMUNITY

In 1972, the Government of Ontario acquired a 10,200 hectares (25,000 acres) site northeast of Metropolitan Toronto for the future development of the Seaton Community. The area is intended to support a population of between 75,000 and 90,000. It consists of 3,200 hectares (8,000 acres) designated for Open Space System; 4,200 hectares (10,400 acres) to support agriculture and passive recreation; and the remaining 2,800 hectares (7,000 acres) to be set aside for the development of Seaton. (*see fig. 3.6*)

Fig. 3.4

The landform of the Niagara Escarpment, located North of the Greater Toronto Area.

OPEN SPACE SYSTEM

The Open Space System includes a network of open spaces that focus on the existing natural features of the region. On the regional scale the network includes natural valleys, and on the local level, stream tributaries and minor woodlots. Recreational areas are also considered to be a part of this framework. The open space system is intended to be accessible to all neighbourhoods and villages in the area. (*see fig. 3.6*)



Fig. 3.5
People consider open space to be significant with respect to their own personal health and enjoyment as well as an overall concern for the environment.

Conservation Areas

The Metropolitan Toronto and Region Conservation Authority (MTRCA) operates a number of parks that offer a wide variety of outdoor activities year round. The following is a brief description of parks in the region which fall under the authority of the MTRCA, and are a part of the Open Space System. (*see fig. 3.7*)

- Milne Park, 116 hectares (290 acres) south of Markham, has swimming and fishing.
- Greenwood, north of Pickering covers 300 hectares (750 acres). Its attractions are campsites and trout fishing on West Duffin Creek.
- Claremont, 160 hectares (400 acres) has 10.5 km (6 1/2 miles) of trails for hiking, horseback riding, camping, and trout fishing.

Fig. 3.6 Regional Development Map

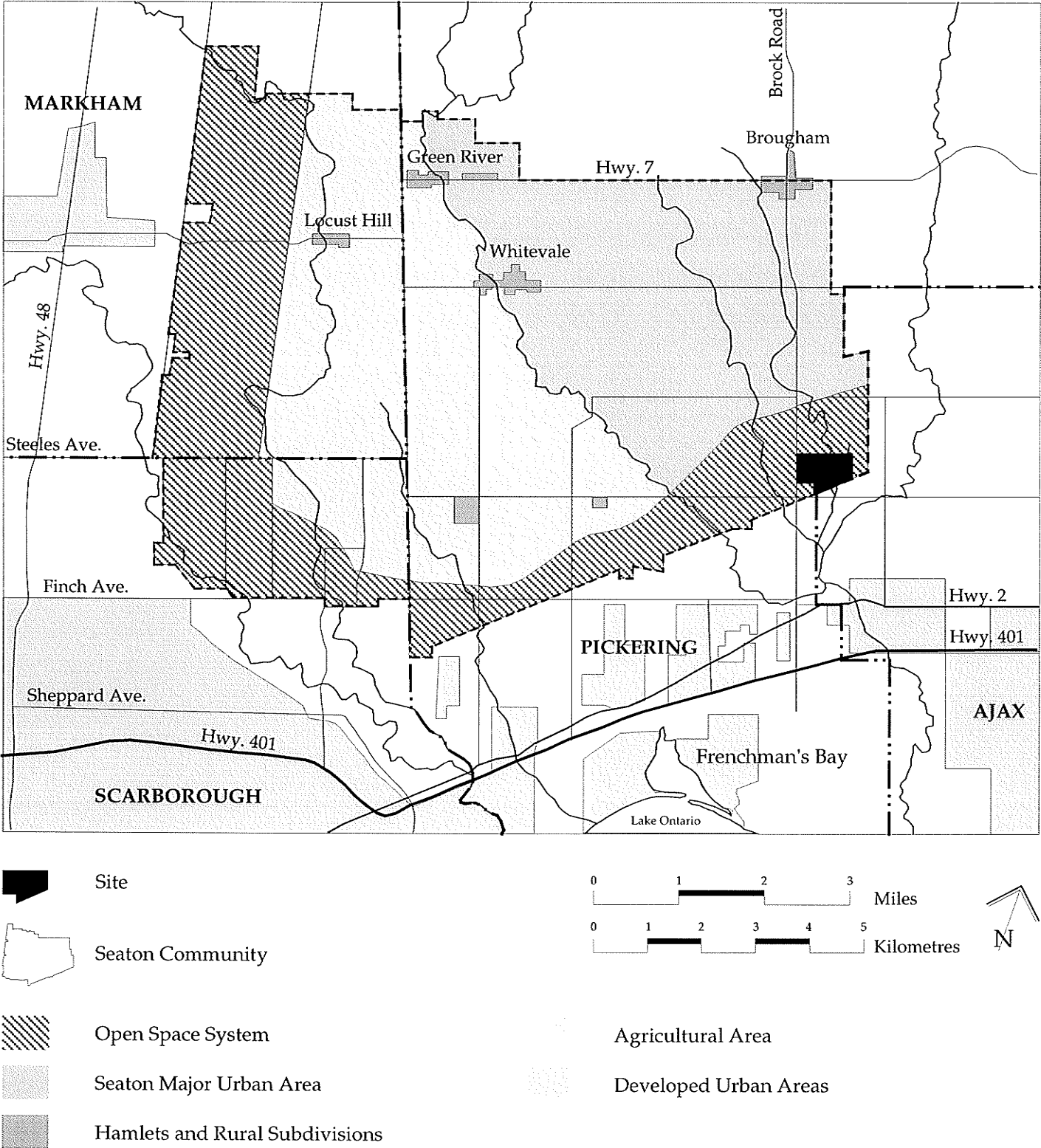
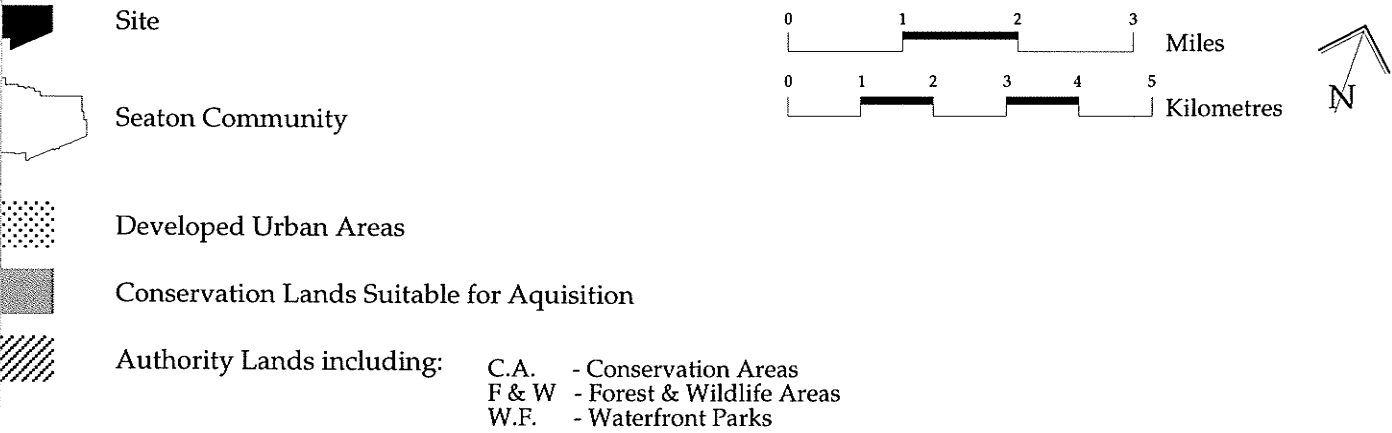
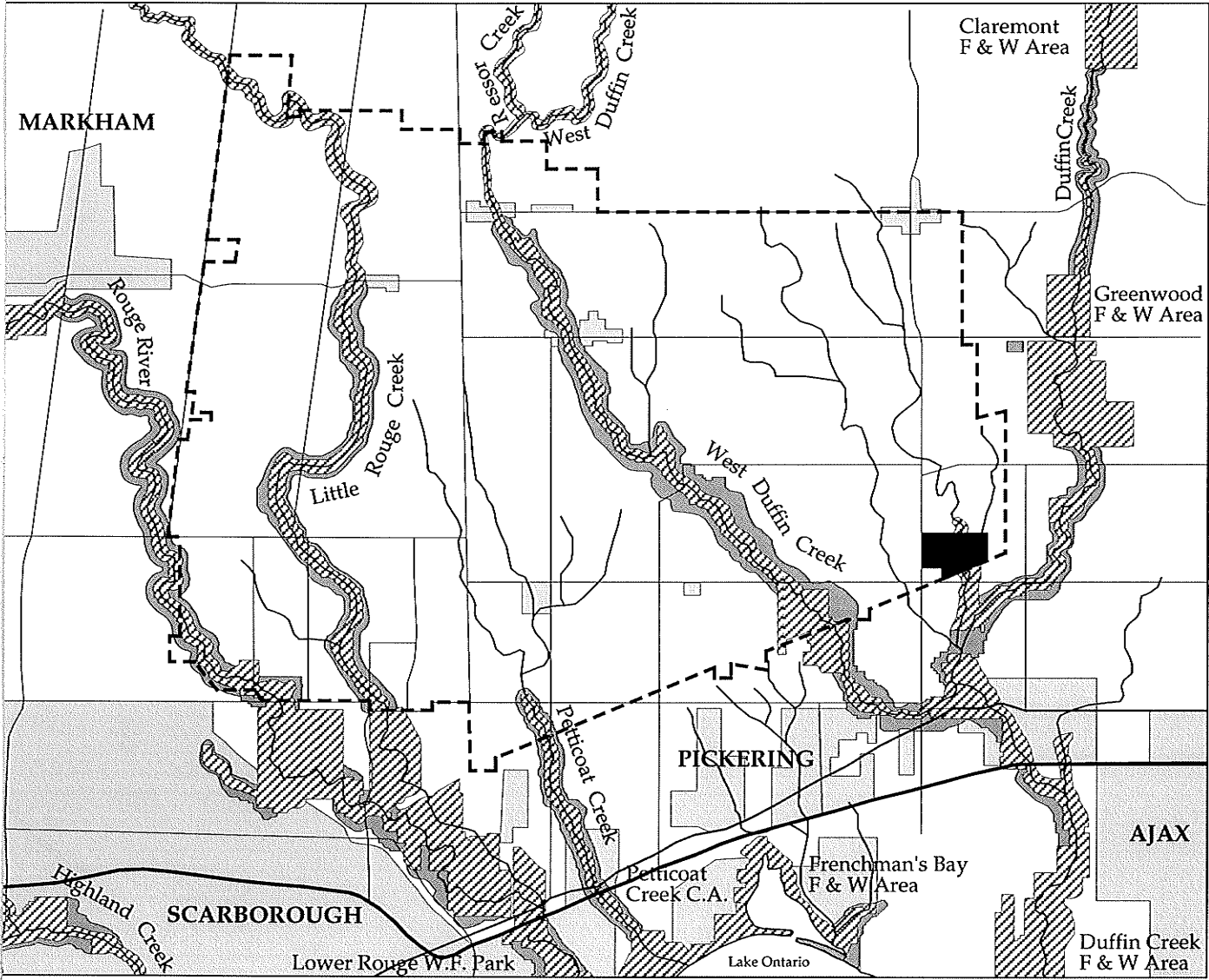


Fig. 3.7 Regional Conservation Map



TRANSPORTATION

Regional Access

The Provincial expressways, Hwy. 401 and the proposed Hwy. 407 will run parallel to each other. Both Highways will serve most of Metropolitan Toronto, as well as Southwestern Ontario to the East and West of the region. (*see fig. 3.9*)

Local Access

The existing road network will be expanded to provide direct access from the expressways to the local community. The local roads are currently two lane rural roads.

GO Transit

Commuters are served by the GO Trains which run from Metropolitan Toronto to the Liverpool Station approximately 6.5 km (4 miles) from downtown Pickering. The GO Express Buses continue from the Liverpool Station to Oshawa.

Public Transit

The Public Transit system serving the community of Pickering is expected to expand along with the development of Seaton. Bus services will be implemented on Brock Road connecting Seaton to the Liverpool GO Station.

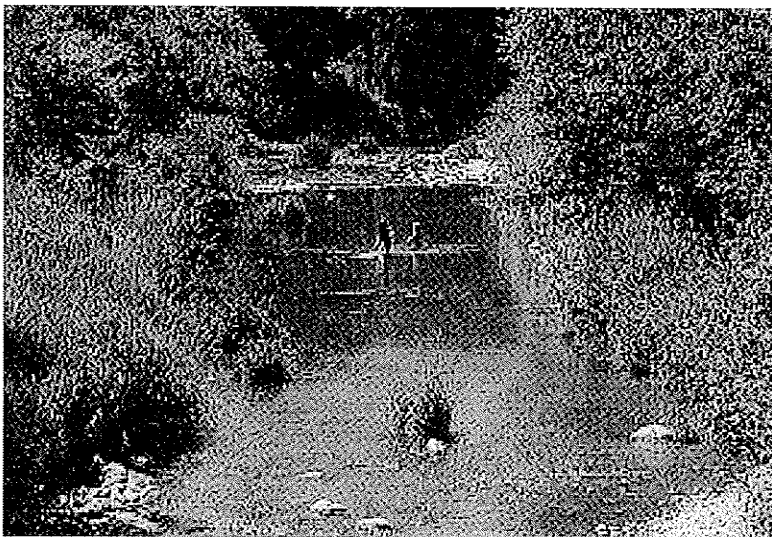
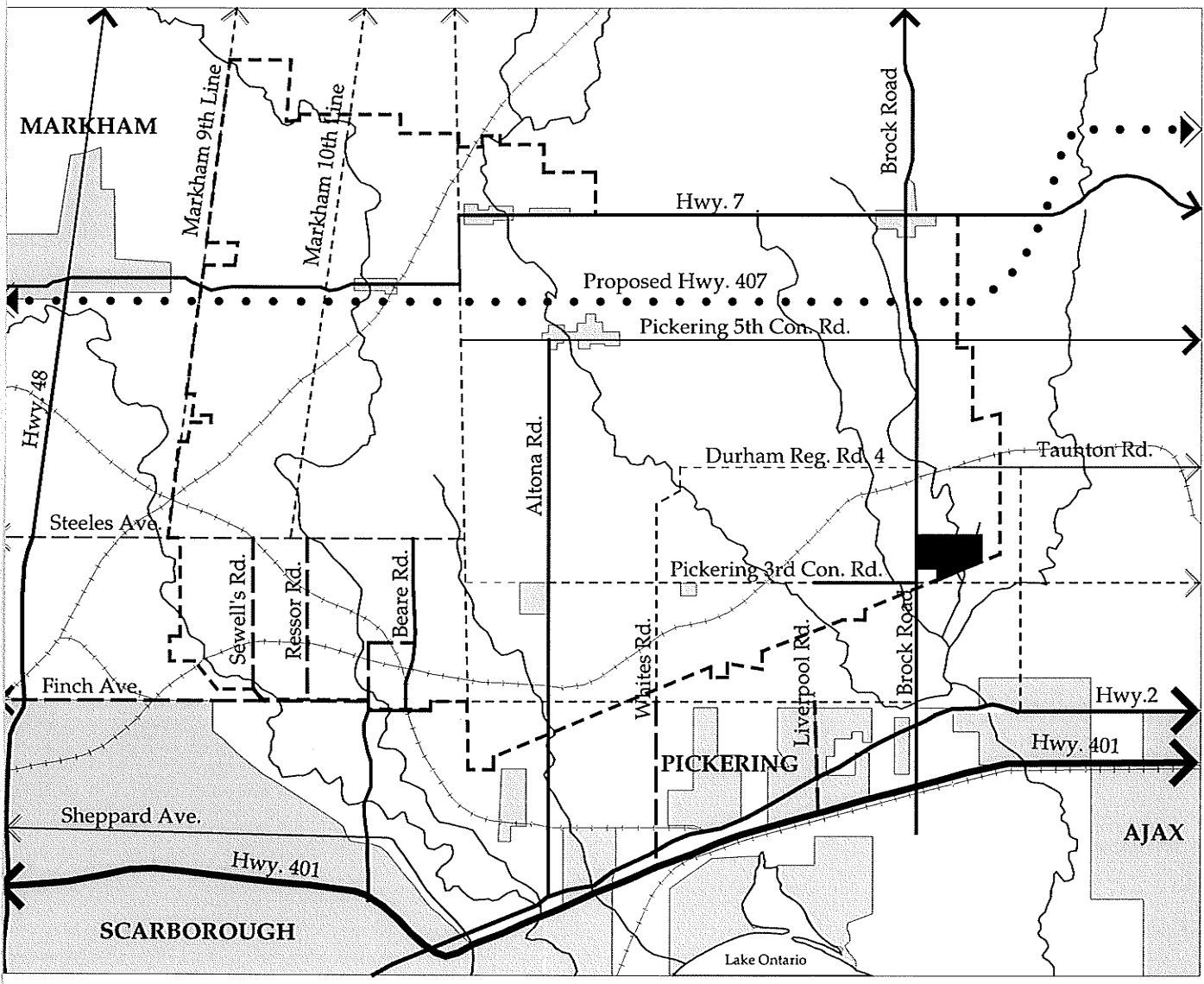


Fig. 3.8
The crowds, lack of privacy and demanding jobs of urbanized life can be stressful. The therapeutic values of a natural setting can help relieve the pressures of city life.

Fig. 3.9 Regional Transportation Map



PROFILE OF THE USER POPULATION

The population of Pickering's region is approximately 70,000, of which less than 8% live in rural communities. The urban population is expected to grow to more than 190,000 by the year 2001.

Forecast Population Growth

YEAR	PICKERING	AJAX	WHITBY	DURHAM
1986	48960	36550	45820	326185
1991	67630	55705	59165	409560
1996	77665	65380	67370	455120
2001	87550	71400	76215	492925
2006	96810	76505	82980	527230
2001	105150	81055	89065	558055

**Source - 1986 Statistics Canada Census
1991 - 2011 Durham Region Planning Dept.*

Population of Ethnic Groups

ETHNIC	PICKERING	AJAX	WHITBY	DURHAM
English	43365	32915	40510	287325
French	640	545	655	5270
Italian	540	240	685	3555
German	1110	570	600	4725
Chinese	160	100	135	800
Portuguese	135	100	50	950
Polish	100	120	225	2360
Other	1920	1260	2030	13730

**Source - 1986 Statistics Canada Census
Durham Region Planning Dept.*

RELIGIOUS COMPOSITION

A survey of the local church listings assisted in determining the religious composition of the area. These listings presented five main religious organizations, the remaining affiliations were summarized as "other".

Religion	Size of Congregation	Percentage of Religious Composition
Roman Catholic	5, 950	39.64%
Anglican	1825	12.16%
Baptist	1670	11.13%
United	1215	8.10%
Presbyterian	960	6.39%
Other	3390	22.58%

LOCAL CEMETERIES

The Province of Ontario lists a total of 44 cemeteries in the region of which 5 remain open for burials. The capacity of the cemeteries is expected to be depleted within 12 to 16 years. The following is a brief description (*see fig. 3.10*) :

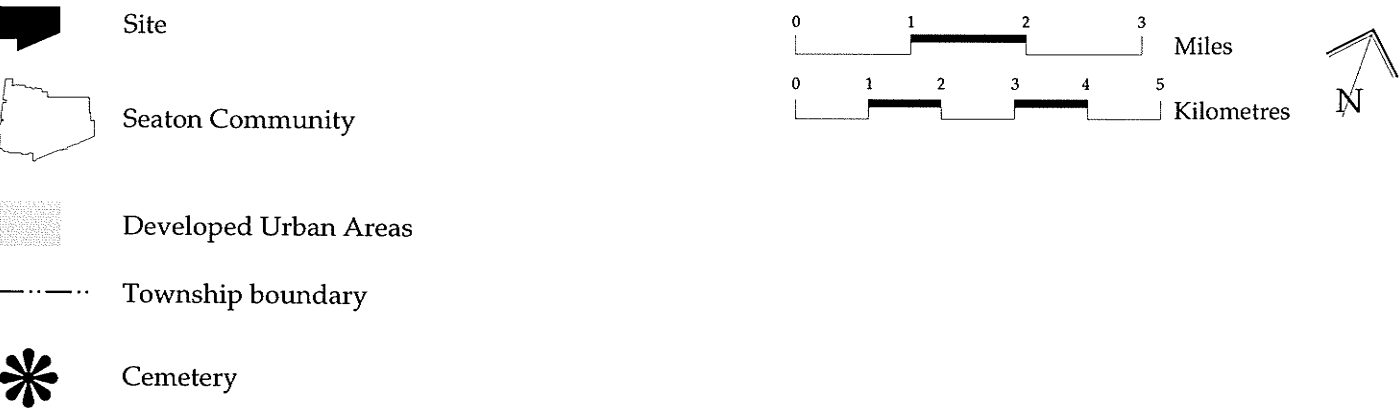
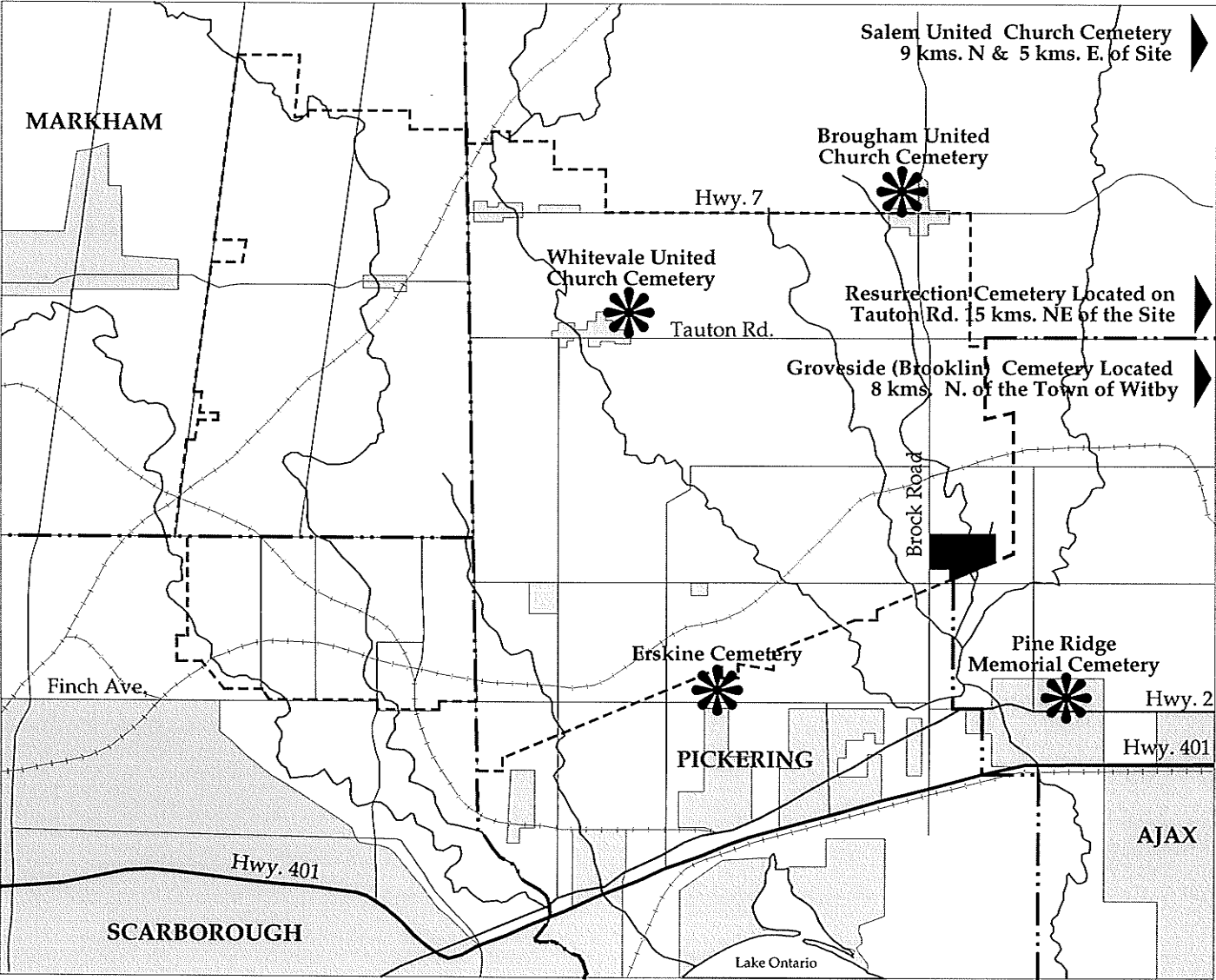
Pine Ridge Cemetery - Ajax

Pine Ridge Cemetery is a 63 acre cemetery of which only 10 acres have been developed for use. It is located in the north west corner of the Town of Ajax, and lies 1.2 km north and 1.8 km east of the site.

Erskine Cemetery - Pickering

Erskine Cemetery established in 1854, is a 17 acre non-denominational cemetery. It is one of the major cemeteries in the area, performing approximately 150 burials annually. Erskine Cemetery is located approximately 2.4 km south and 4 km west of the site.

Fig. 3.10 Regional Cemeteries Map



Groveside Cemetery

Groveside Cemetery located 8 km north of Whitby on Hwy. 12, is a 20 acre non-denominational cemetery. One of the main cemeteries in the area, it performs approximately 150 burials annually.

Salem United Church Cemetery - Greenwood

Salem United Church Cemetery, a pioneer cemetery established in 1840, is located east of the Town of Greenwood. The 14 acre non-denominational cemetery performs approximately 50 burials annually, and has 8 acres remaining to be developed. It is situated 9 km north and 5 km east of the site.

Resurrection Cemetery - Whitby

Resurrection Cemetery is located 15 km north east of the site, and consists of 50 acres, of which 35 have been developed. The cemetery provides for traditional burials, a mausoleum, and columbarium, averaging from 150 to 175 burials and entombments annually.

WOODLANDS

Most of the woodlots represent the rear lot lines of earlier farm operations, they are characterized by Upland Maple, Beech and Oak species. Along stream and tributary systems, the species consists primarily of White Cedar stands, mixed with Poplar and Willow species. Hedgerows are abundant, with Maple and White Pine as the dominant species.



Fig. 3.11
A sampling of vegetation types in interesting forms, textures and patterns located along Urfe Creek on the eastern portion of the site.

STREAMS

The most significant watercourse in the region is West Duffin Creek, and the tributaries of East Duffin Creek. West Duffin Creek is the watershed for the central part of the area. The main streams and their tributaries are primarily fed by surface runoff from agricultural lands and groundwater seepage.
(see fig. 3.3)



*Fig. 3.12
Access to natural areas allows for a more basic approach to recreation and education. These natural areas allow people to experience and understand the environment in which they live in.*

RECREATION AREAS

Parks

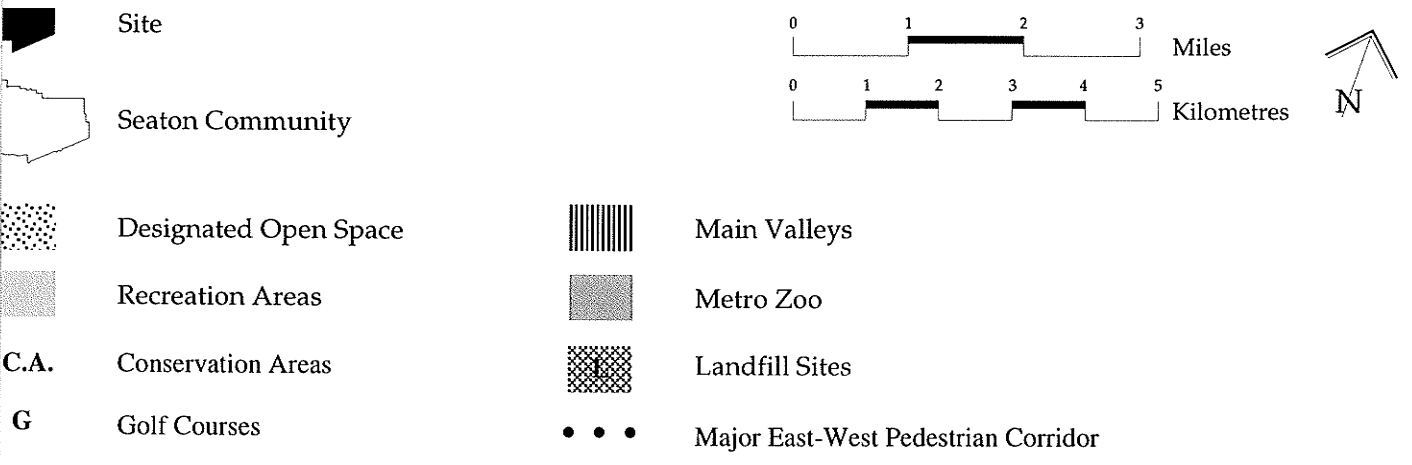
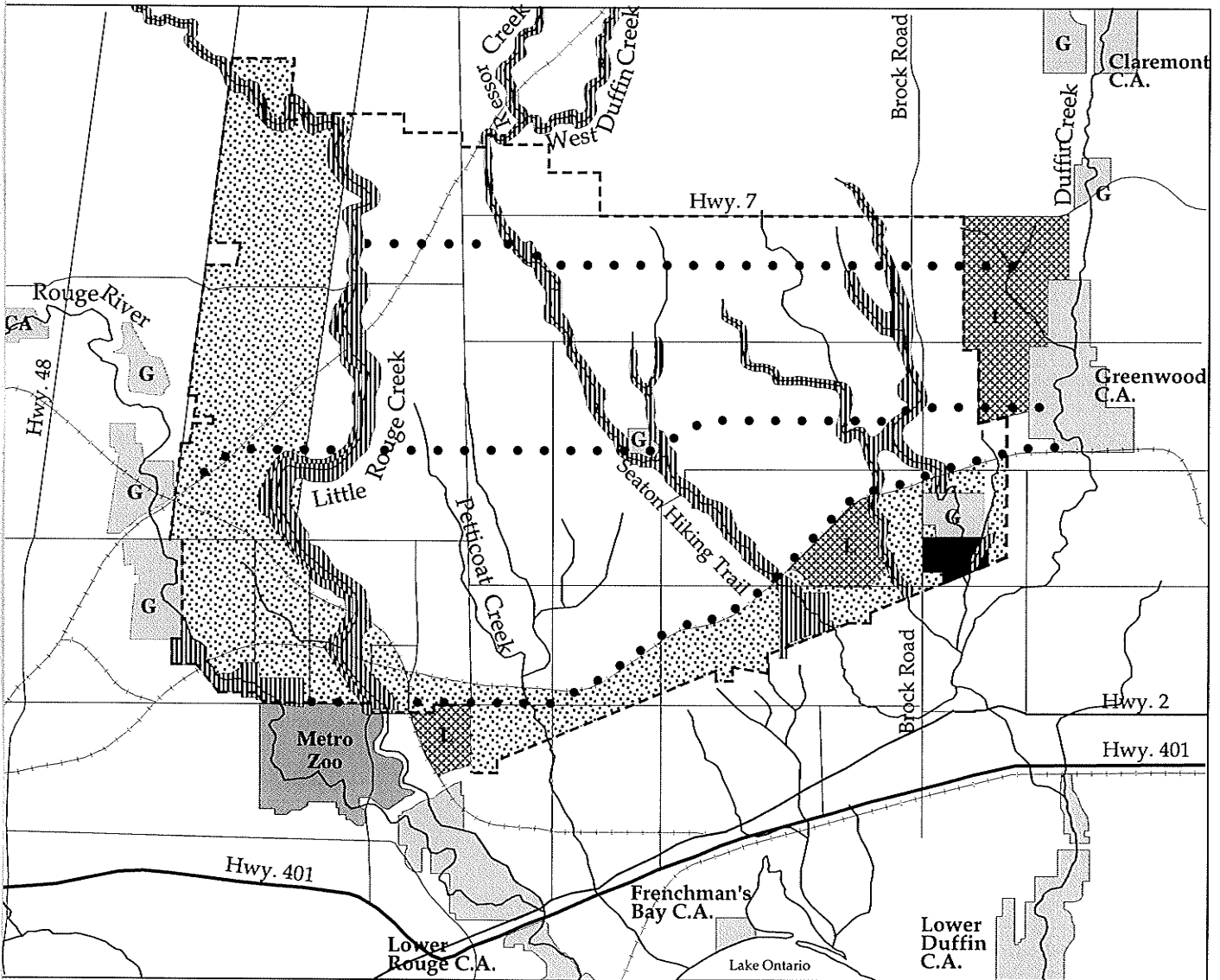
Apart from Conservation areas under the authority of MTRCA, other recreational facilities include four parks and camping grounds they are as follows:

Woodland Park located just south of Cedar Grove, is a well treed site primarily used as a trailer park. Little Rouge Creek passes through it, allowing a spillway to be closed off for swimming. There is also an archaeological site of historic significance.

Wilson Park, formerly a private park, has been returned to its natural state. Ownership will fall under the MTRCA, and the area will be used for public recreation.

Green River Park situated on the West Duffin Creek, is used primarily for picnics.

Fig. 3.13 Regional Open Space Framework



Cedar Grove Park located just north of Woodland Park is a combined sports and picnic ground. The park has a baseball diamond, outdoor barbeques, picnic tables and children's playground equipment. (see fig. 3.13)

Trails

The longest trail in the area is the Seaton Hiking Trail. The Seaton Trail runs along the West branch of the Duffin Creek a distance of almost 10 km, between Green River and Grand Valley Park. Other formal and informal trails exist along portions of other watercourses such as Petticoat Creek, Pine Creek, Frenchman's Bay, and within certain hydro corridors.

Golf Courses

There are two main golf courses within the area; Whitevale and Seaton Golf Course. Whitevale is a private 18 hole course

Fig. 3.14

A regional trail system would provide hiking, cycling, and cross-country skiing experiences that would also connect to other major physiographic features of the region.



alongside West Duffin Creek. Seaton Golf Course, is a public 18 hole course located just north of the site in a treed valley of Urfe Creek.

CLIMATE

Pickering has a climate characteristic of Southern Ontario. The mean daily temperature is 8°C, summer temperatures average 24°C, while winter temperatures average -12° C. In Pickering, extreme annual temperatures range from highs of near 40°C to lows near -30°C. (*see Appendix A*)

The mean annual precipitation in the area is 86 cms of which 36 cms fall between the months of May and September. Annual snowfall averages about 165 cms. In winter the major wind direction is from the northwest, and in the summer prevailing winds are predominantly from the southwest.

PAST LANDUSE OF PICKERING

Mennonite farmers arrived in the Pickering area from the United States between 1796 and 1812. It wasn't until after 1816 that the region experienced an increase in English, Scottish, Irish, and Welsh immigrants. This influx resulted in the settlement and intense cultivation of Pickering by the 1820's and 30's.

Lord Seaton , Lieutenant-Governor of Upper Canada from 1826 - 1836, encouraged agriculture, immigration, education, and rural growth outside of York (Toronto). Immigration agencies were set up in specific settlements to provide government funds to needy immigrants. In return, they were required to work improving communications, building roads, bridges and other facilities he felt necessary to improve agricultural production.

By the 1870's, the rural population dropped as people began to move West with the opening up of the present-day provinces of Manitoba and Saskatchewan. Farms were either being abandoned or consolidated into larger units resulting in the reduction of farm labourers and an increase on the reliance of machinery. The pattern for the 20th century farm had been established with the movement towards mixed farming in dairy and stock breeding.

The road grid pattern developed in response to the community's travel needs. Rural life revolved around the villages, which acted as a focal point for most community activity. This included the Whitevale, Green River, Locust Hill, Cedar Grove and Pickering area.

Local Context

DESCRIPTION

The majority of land in the surrounding area of the site is either abandoned, vacant or unused. At present the primary land use is agriculture. The Ontario Ministry of Housing has designated the area for open space/recreation, retail/commercial, institutional, utilities, and residential uses. (*see fig. 3.15*)

LAND OWNERSHIP

Approximately 75% of the land in the area is publicly owned, of which nearly half is owned by the Province of Ontario. Metropolitan Toronto owns the landfill site, and the MTRCA owns Grand Valley Park, west of Valley Farm Road.

Private ownership is restricted to properties along Brock Road and a few residential properties off Dersan and Tillings Road. Other residences are located along various concession and side roads.

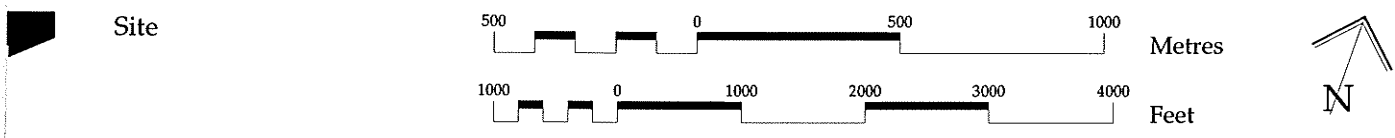
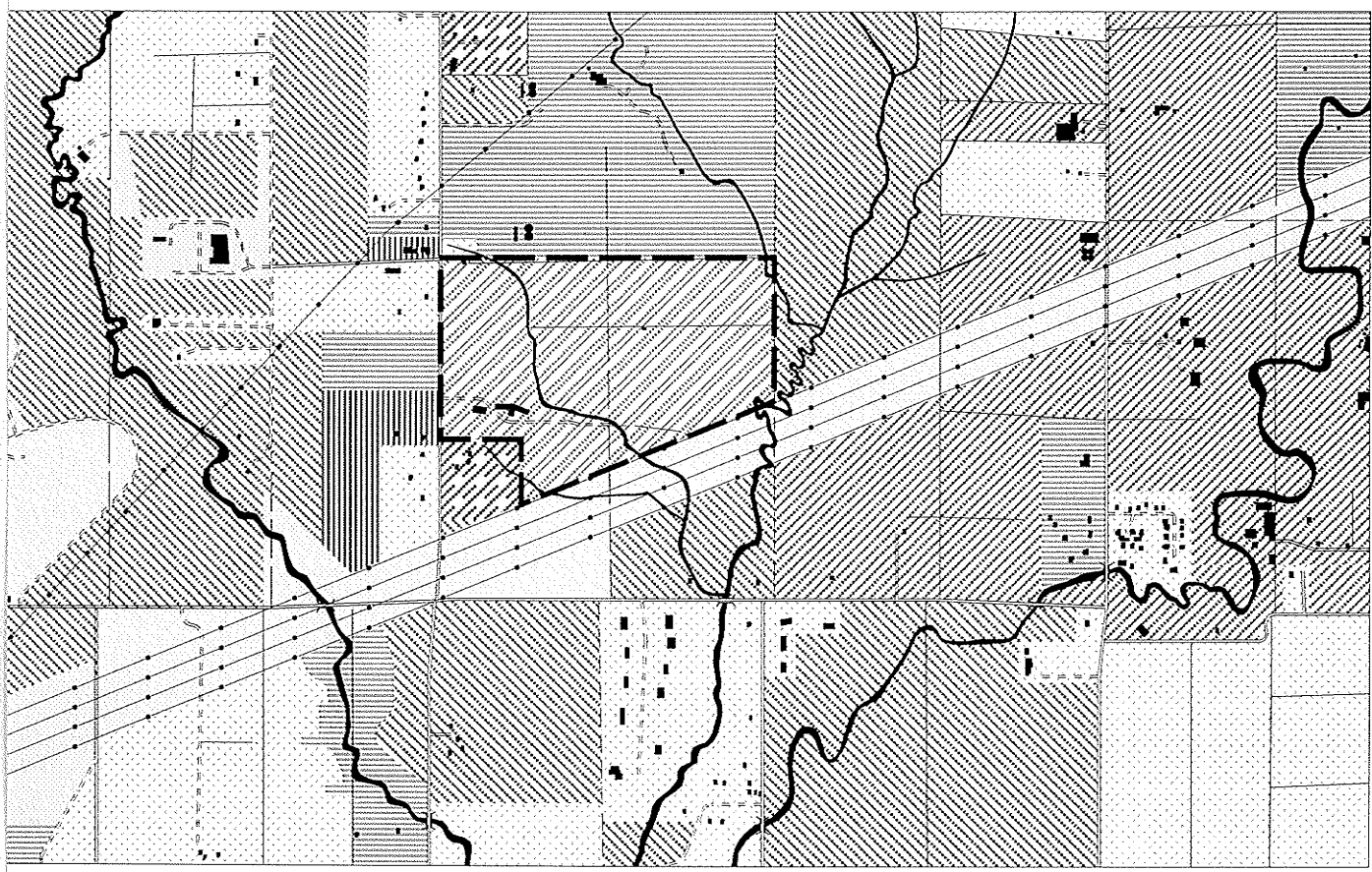
SITE DESCRIPTION

The site is located 3 km north of the Town of Pickering, on the east side of Brock Road and north of the 3rd Concession Road. The total area of the site is approximately 83 acres (33.76 hectares), of which 6.24 acres (2.52 hectares) are protected by the MTRCA. The site is formed by Part Lots 17 and 18, Concession 3, in the Town of Pickering. At present the site is used for agriculture.

The site is traversed by a number of small watercourses. The area to the east of the site, is designated as an open space conservation area. To the south, the Gatineau Hydro corridor parallels the site. Immediately north of the site lies the Seaton Golf Course which is considered an open space buffer. Brock Road forms the western site boundary. A fruit market is found along south-east corner of the site.

ANALYZING THE COMMUNITY

Fig. 3.15 Local Land Use Map











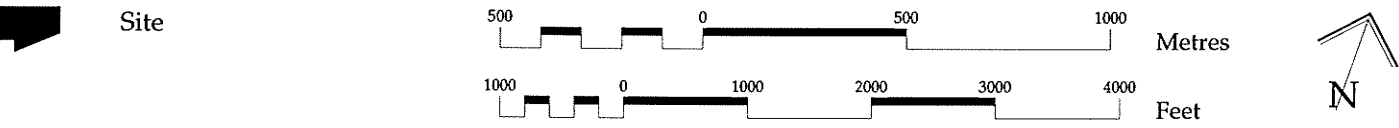
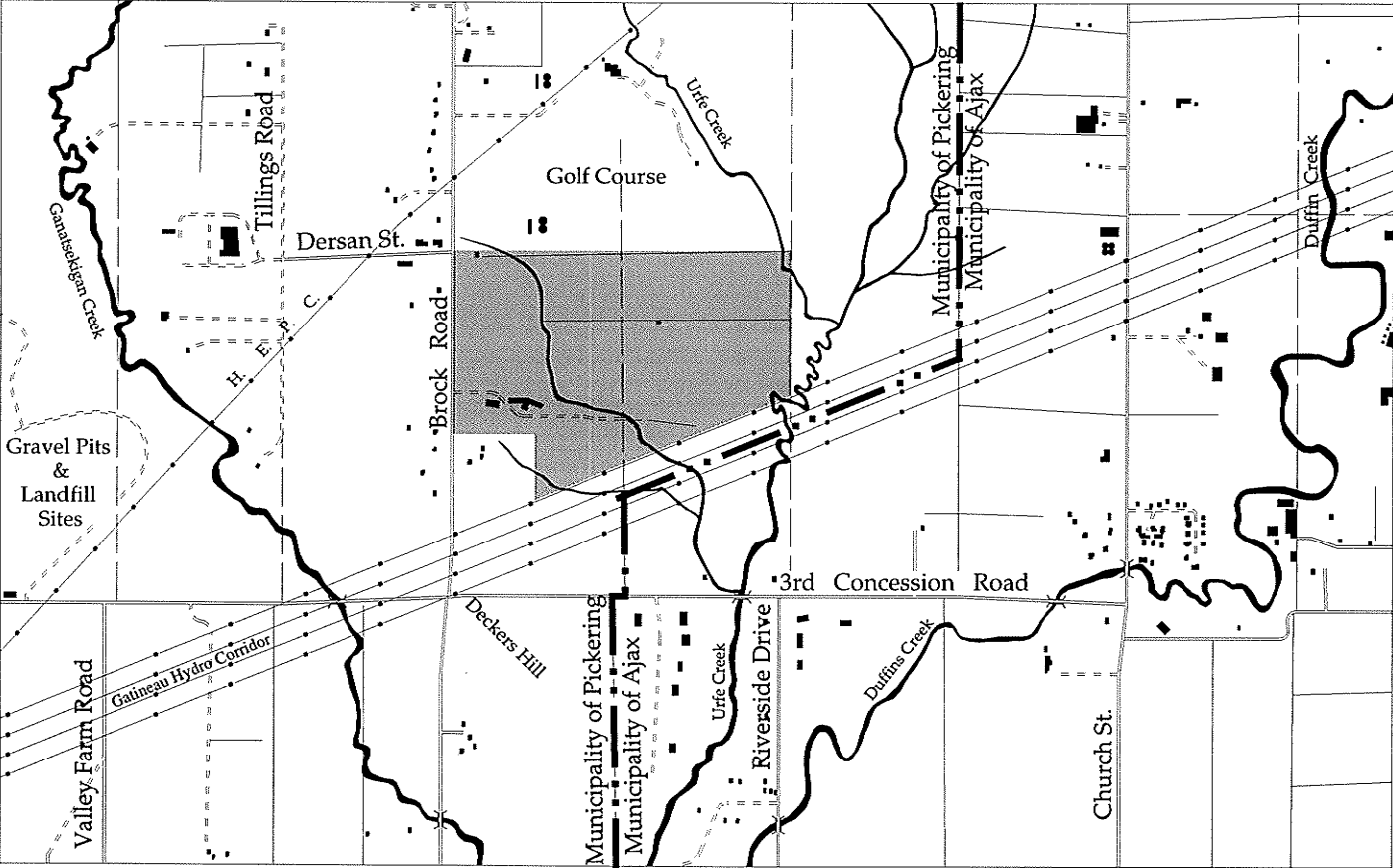
- EXISTING LAND USES:
- | | | | |
|---|--------------------------------|---|-------------------------------|
|  | Shopping/Service/Business |  | Agricultural |
|  | Residential |  | Utilities/Resource Extraction |
|  | Parks/Open Space/Community Use |  | Vacant Land |
|  | Industrial/Commercial/Service |  | Open Space/Cemetery |

Fig. 3.16 Local Transportation Map



- Site
- Municipality Boundary
- Ontario Hydro Transmission Line
- == Paved road
- Gravel Road

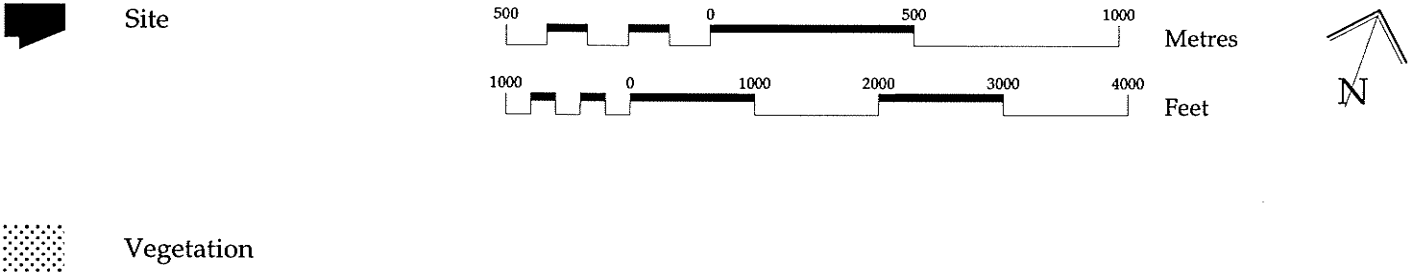
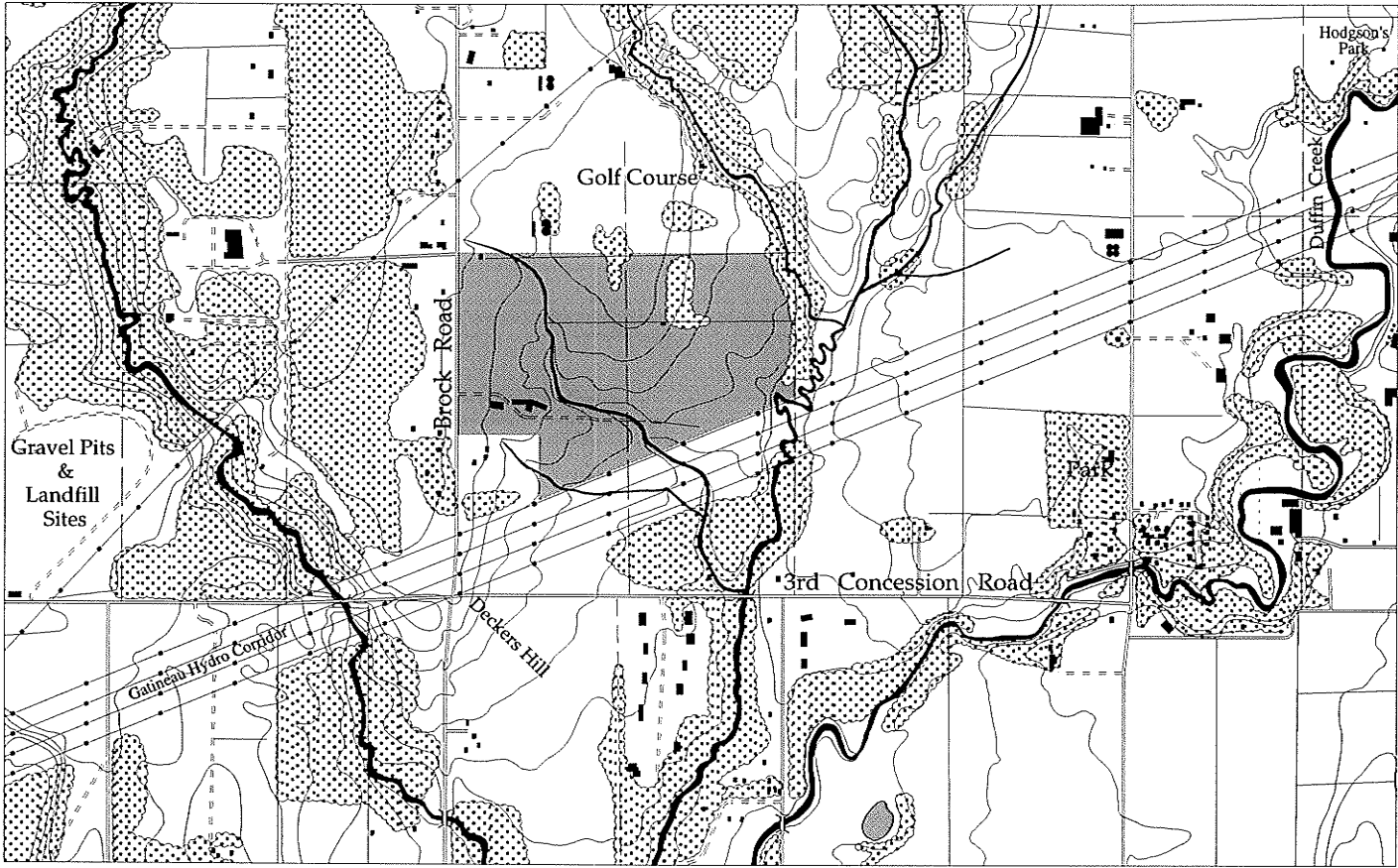
SITE ZONING

The site is situated in an area designated as open space. This area allows only passive recreation activities that can act as a buffer between the Pickering and Seaton communities. The site is zoned as "CEM-1" making the development of a cemetery permissible. The eastern portion of the site is protected by the MTRCA.

Site Limitations

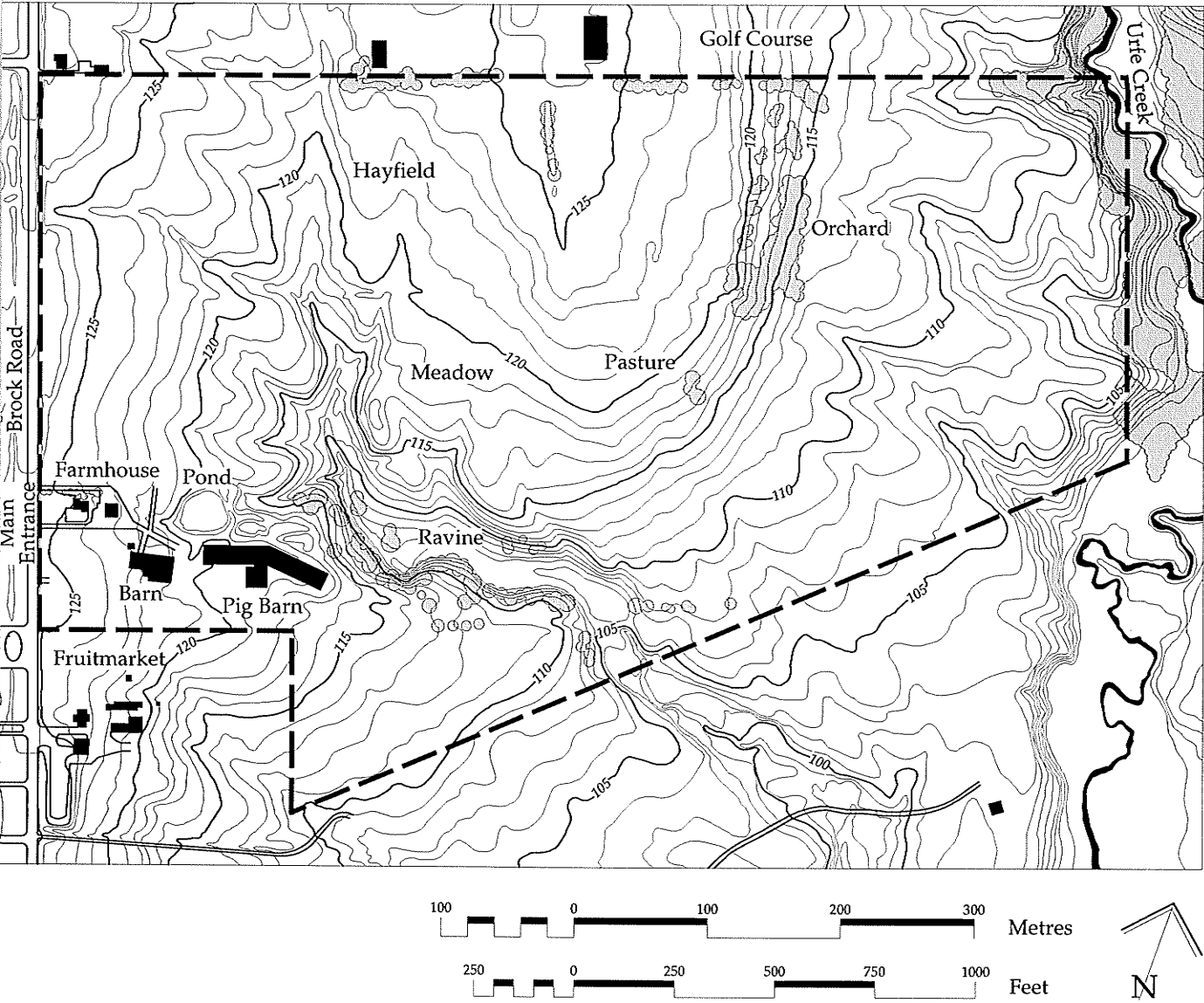
Department	Notes
Region of Durham Planning Dept.	Section 12.2.2 of the Durham Plan permits cemeteries within the 'Major Open Space' designation
Public Works Dept.	Water supply and sanitary sewer services are not available Requests a 10 ft. road widening on the Brock Road frontage
Durham Region Health Unit	Requires soil tests concerning ground water levels
Public Works Dept.	Storm water management will be required
Parks & Recreation	There is a need for this type of facility
Ministry of Resources	Does not conflict with any natural plans or programs
Ministry of Housing	The site reinforces the Regional Open Space system
MTRCA	A portion of the property extends into the East Duffin Creek Valley The valley lands to be zoned open space

Fig. 3.17 Local Landform & Vegetation Map

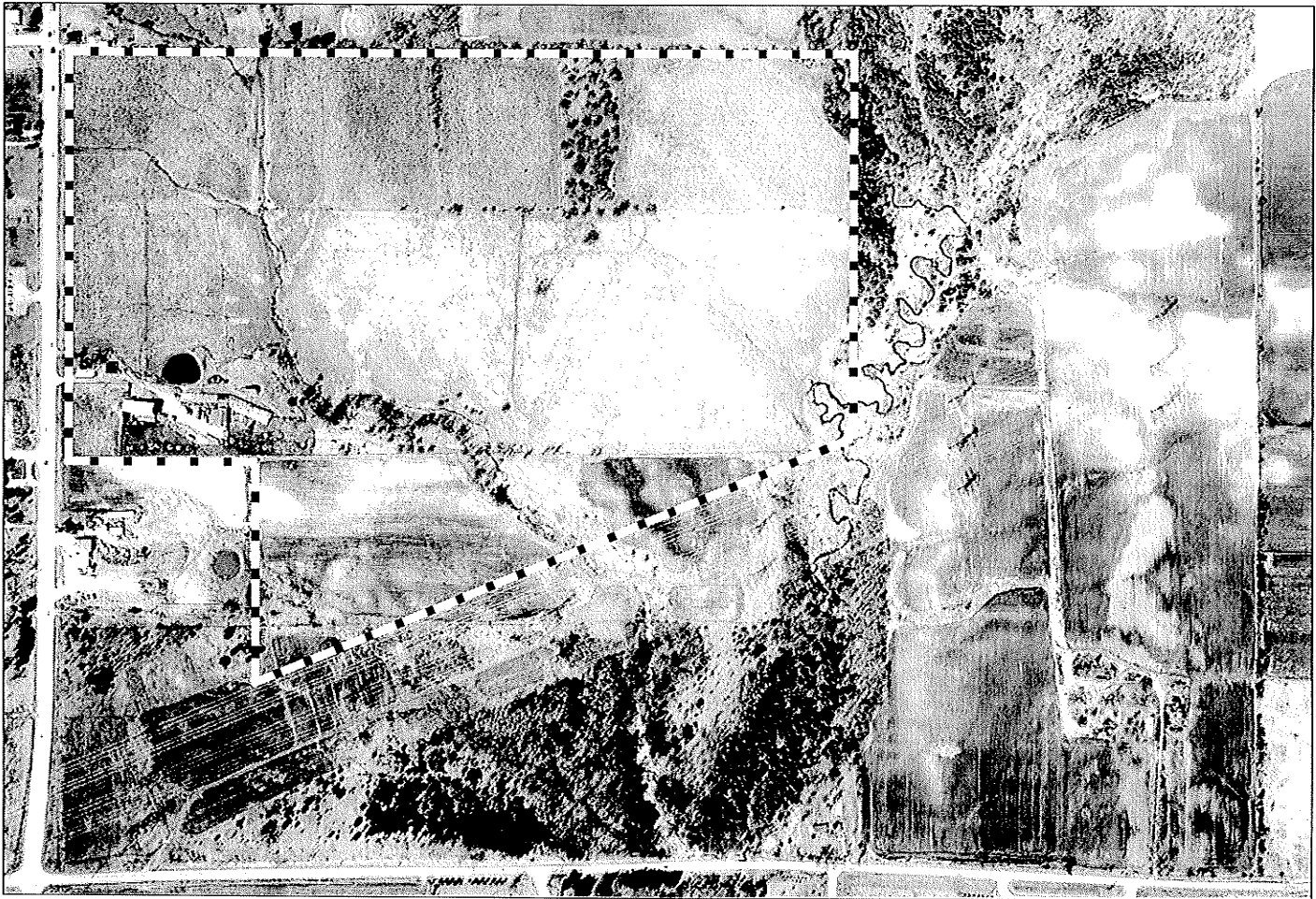


Note: Contour interval is 5 metres.

Fig. 3.18 Existing Site Conditions



Note: Contour Intervals in Metres.



Site Context

LANDFORM

The site consists of rolling hills that frame many significant views and vistas. The only significant landform on the site is the tributary valley of Urfe Creek located on the eastern portion of the site. Urfe Creek is a tributary that flows into the East Duffin Creek Watershed. (see fig. 3.18)

SOIL

The soils on the site are predominantly sandy with a high level of silt. These sands are at a 1-3 ft. depth, that graduates to a sandy silt till. The soil is poor for agriculture due to the poor drainage and the coarse bouldery nature of the terrain. (see fig. 3.3)

Fig. 3.19

An aerial photograph provides valuable information about the site, such as inventories and the identification of various resources.

A well-drained sandy soil can be easily excavated despite freezing temperatures an important consideration with respect to burial. The frostline in the Pickering region exists at a depth of 3 ft. below surface.

Fig. 3.20
 The land is currently being rented as farmland, but that will change as development occurs. The view is north-east of the site overlooking the meadow and orchard.



SURFACE WATER

The surface drainage on the site is dependent on two tributaries of Duffin's Creek. One tributary flows south, and the other flows southeast. The surface water discharged from the site flows southeast into the East Duffin Creek Watershed. (see fig. 3.18)

Groundwater

The topography of the site provides a gradient that could naturally drain the site into the ravine and creek if the soils were more permeable. The groundwater depth over most of the site is significantly lower than the 2.8m required for burial. This suggests that the site is not suitable for burial.

The required depth for single burials must be a minimum of 2.3 m below ground. To ensure that a .5 m separation exists between groundwater levels and the bottom of the graves, the depth of groundwater in areas intended for single burials must be a minimum of 2.8 m below ground. The groundwater depth over most of the site is less than the required 2.8 m. (see fig. 3.21)

Erosion

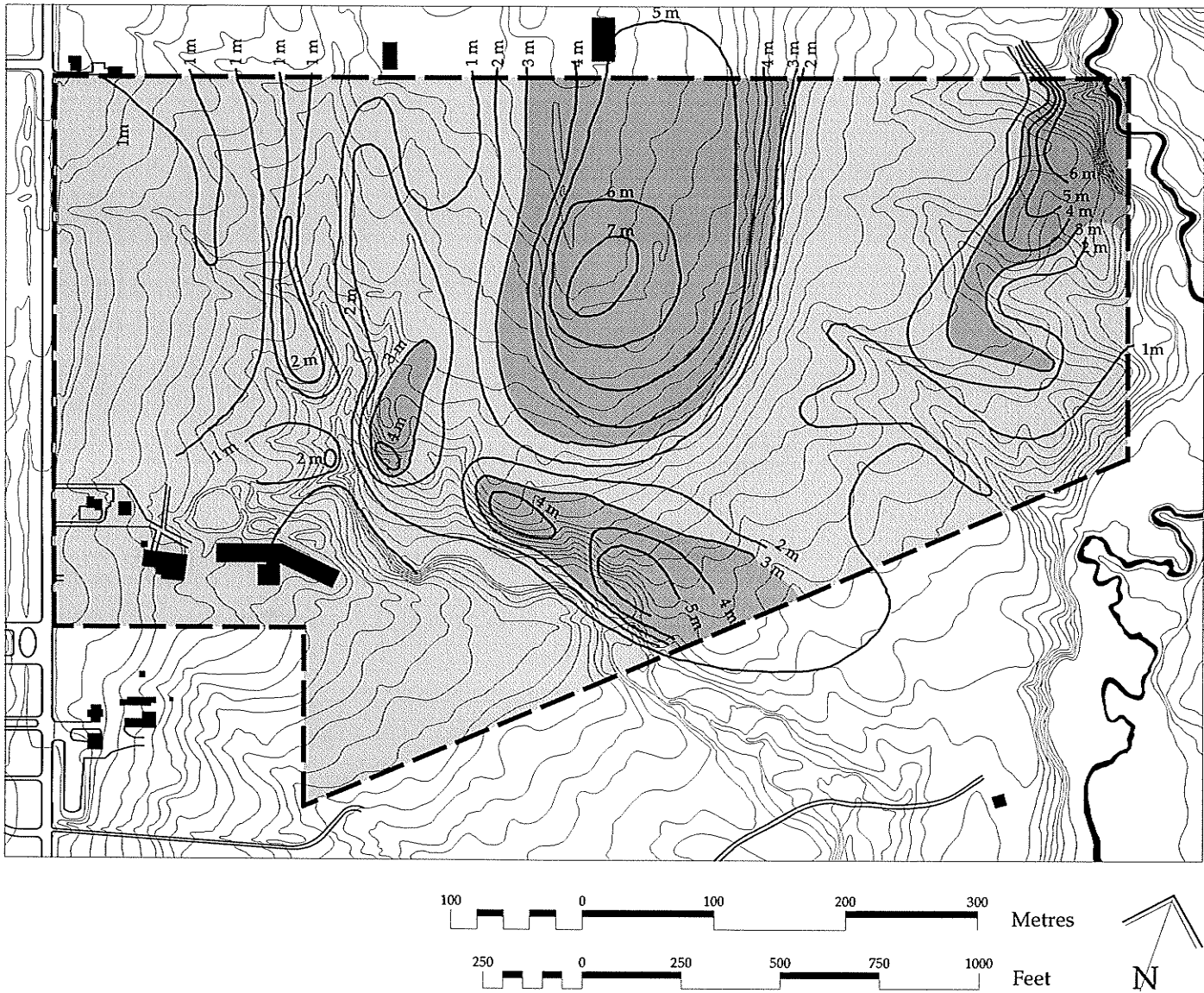
The combination of groundwater seepage and surface runoff have been the main cause of soil erosion along the stream banks.

ENVIRONMENTAL

Vegetation

The site is predominantly pastureland, with an apple orchard

Fig. 3.21 Site Ground Water Map



GROUNDWATER



Areas Suitable for Single Burials



Areas not Suitable for Single Burials

Note: Groundwater Depth in Metres

located north of the property, and hedgerows and woodlots along the eastern portion of the site. The dominant species along the stream and valley systems are maple, poplar, white pine, oak and willow. Other species such as beech, hophornbeam, and maples occur naturally in this area along with poplar and wildcherry.

Aquatic

Urfe Creek is a cold, spring fed tributary, that would support various fish species. The trees along the valley retain the shade required to ensure the cool water temperatures that fish such as Rainbow Trout require to spawn upstream.

Wildlife

There is a healthy population of mammal and bird species in the wooded areas along Urfe Creek, due to the large amounts of underbrush, as well as upper storey growth.

NATURAL SITE FEATURES

Urfe Creek

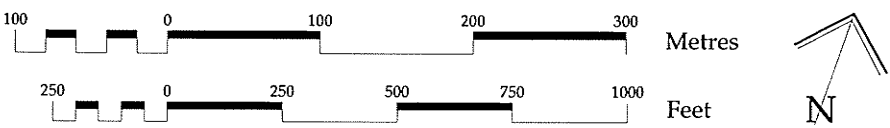
Urfe Creek is the main tributary that flows through the eastern portion of the site. The vegetation along the creek is characterized by Upland Maple, Beech, Poplar, Willow and low lying shrubs. (see fig. 3.22)



The woodland area along Urfe Creek is a mixture of mature deciduous and coniferous trees that provide a dense canopy of vegetation, with limited views. The vegetation in this area should be strengthened and left in its natural state. The reinforcement of vegetation in this area achieves several objectives: it creates a more park-like experience providing a variety of landscapes; it stabilizes soil along Urfe Creek maintaining the integrity of the valley system; and it promotes the preservation of a wildlife habitat.

Fig. 3.22
Looking north towards the woodlands along Urfe Creek.

Fig. 3.23 Site Vegetation Map



VEGETATION






- | | | | |
|--|--------------|---|---|
|  | Pasture land |  | Woodlands
poplar, white pine, willow |
|  | Meadow |  | Low Deciduous trees
maple, beech, wild cherry, fruit trees |
|  | Farmyard |  | Shrubs & Hedgerows |

Fig. 3.24
The pond is a significant landscape feature on the site. It currently is used as a farm irrigation pond, as well as creates a habitat for wildlife and aquatic plants. The pond is definitely a valuable wetland resource.



Pond/Ravine

The pond and ravine located near the entrance of the site acts as a focal point and is a significant landscape feature. The pond currently acts as a farm irrigation pond, and is an existing wetland resource. The ravine traverses the site in a northeast direction, adding recreational significance.

Pasture

The farm is primarily pastureland for the grazing of cattle. An apple orchard exists on a hilltop north of the property, at the highest point overlooking the site. (see fig. 3.23)

CIRCULATION

Vehicular Access

Brock Road provides good access to the site from Pickering. As the community of Seaton develops Brock Road will be widened accommodating higher volumes of traffic. The operating speed for vehicles along Brock Road will be limited to 60 km/hr in urban areas.

Vehicular access onto the site occurs at one entry point, off of Brock Road. This entry point is located near the farmhouse and is currently the only road that is accessible to the main road. (see fig. 3.25)

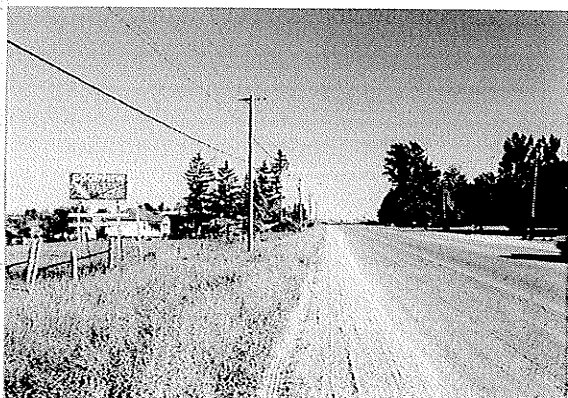


Fig. 3.25
View of Brock Road looking south. Brock Road provides the main vehicular access into the site. This existing entry does not need to be retained and an alternate entry may be desirable. The entry should be well defined, providing high visibility and orientation into the site.

Fig. 3.26 Site Slope Analysis Map

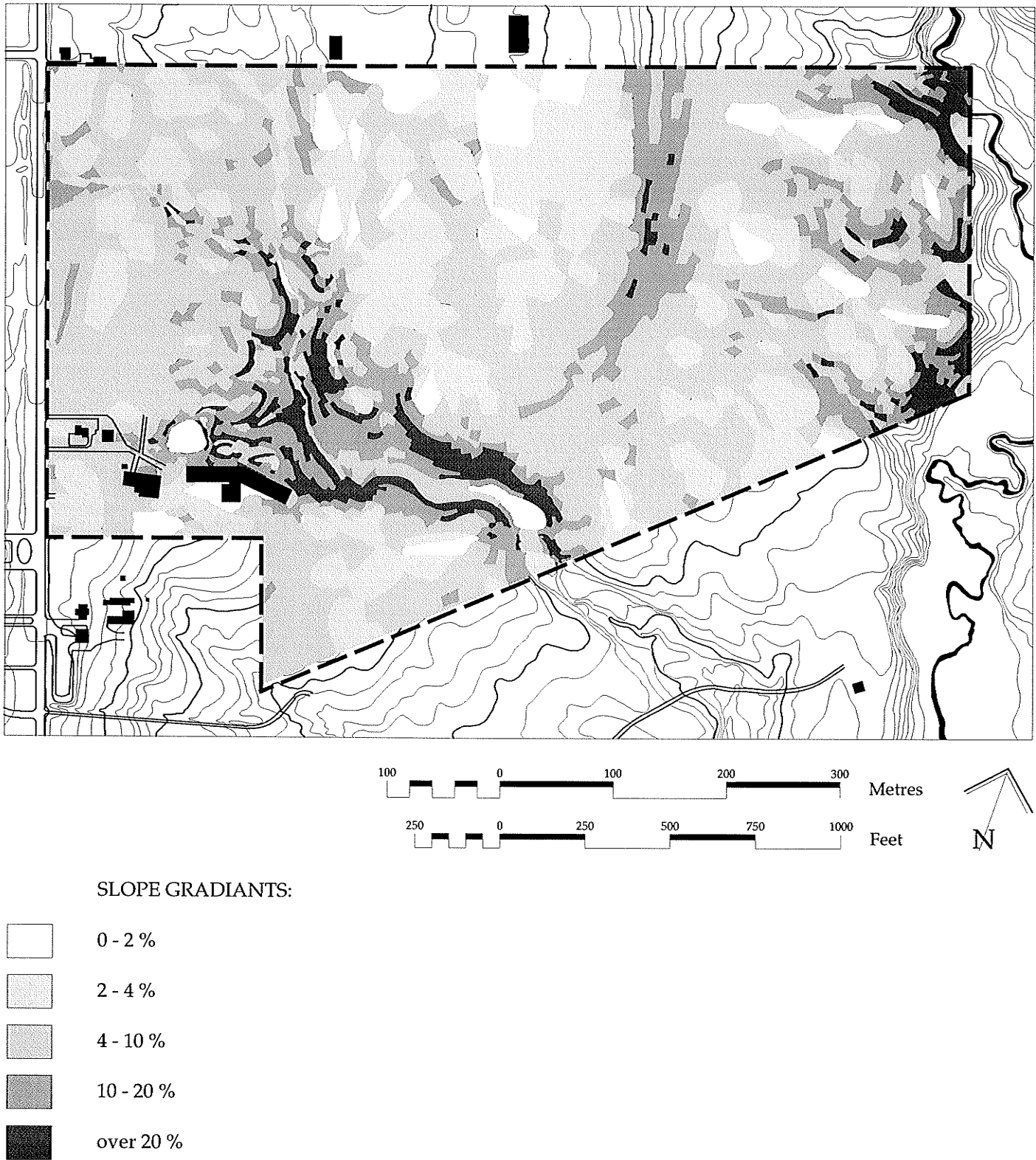
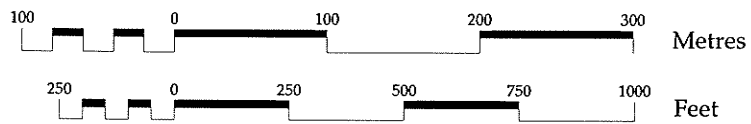
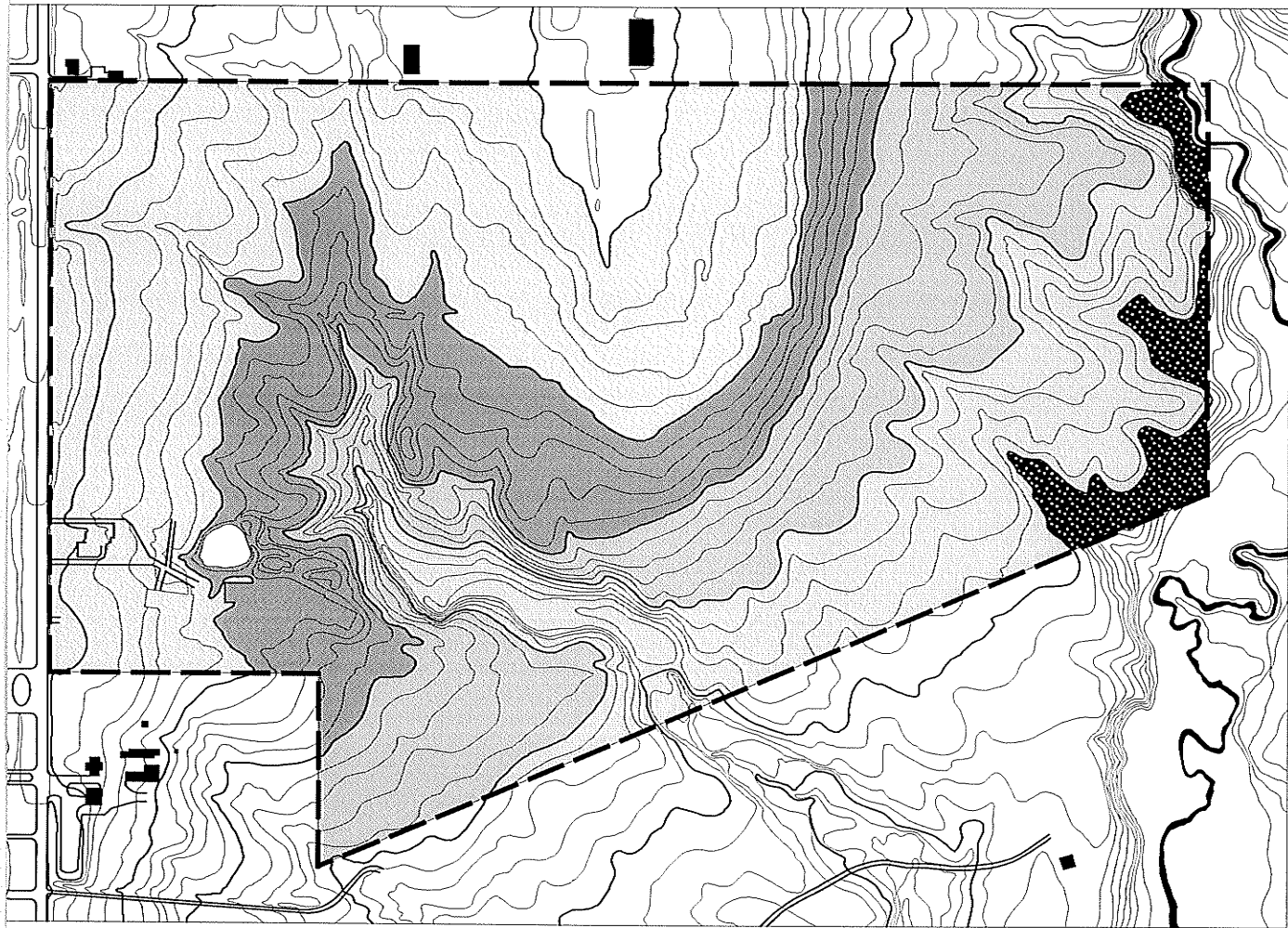


Fig. 3.27 Site Landform Map

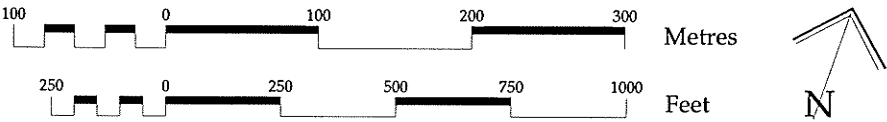
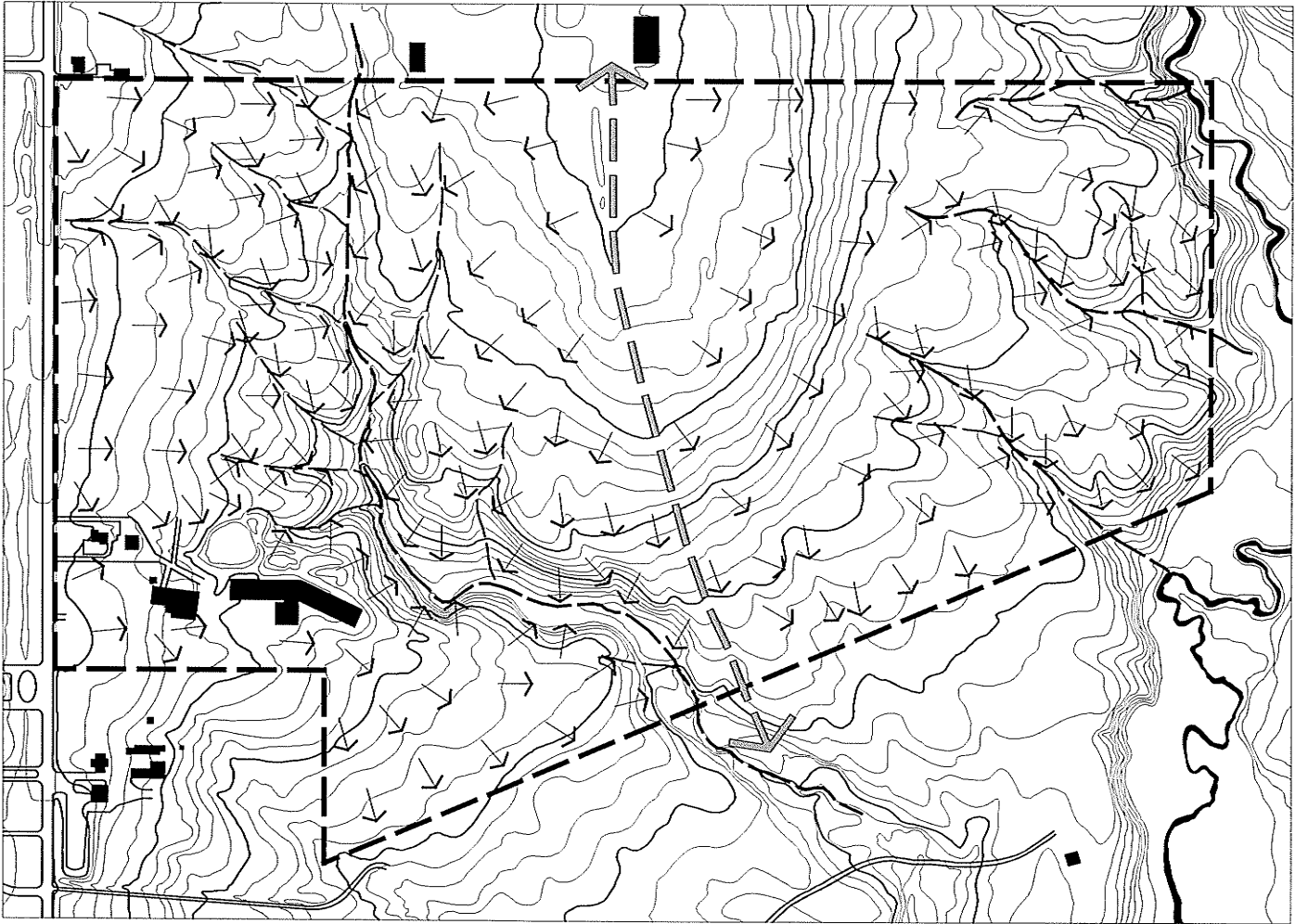





ELEVATION ABOVE SEA LEVEL

- El. 125 m — Highest Point (flat)
- El. 125 - 120 m
- El. 120 - 115 m
- El. 115 - 110 m
- El. 110 - 105 m
- El. 105 m — Lowest Point

Topographic Orientation of Landform
Northwest - Southeast

Fig. 3.28 Site Drainage Pattern Map



-  Direction of Drainage
-  Gully
-  Ridge

Bicycle/Pedestrian

An open-node system will be introduced as the development of Seaton occurs connecting other recreational parks to the site. A bicycle/pedestrian path will be incorporated along Urfe Creek to link various recreational facilities.



Fig. 3.29
The gable style roof of the farmhouse displays characteristics of an Anglo settlement, typical of the Southwestern Ontario farmscape. However, it does not provide any historical significance to the site.

EXISTING BUILT FEATURES

Structure

The farmhouse and the barn are the two main structures on the site. The barn is distinctive of the Southern Ontario style, reminiscent of an Anglo settlement. The barn still retains its basic Southern Ontario features, with the north ramp, stone stable, east-west orientation, and a heavy post-and-beam structure.

Other structures that exist on the site are the cattle and pig barns. These barns are in poor condition and add little significance to the site. (*see fig. 3.18*)

Fence

The old wood posts and wire fencing divides the farm into different sections. The wooden fence is characteristic of the Southern Ontario farmscape, marking the boundaries of the farm and other sectors that are used for other purposes.

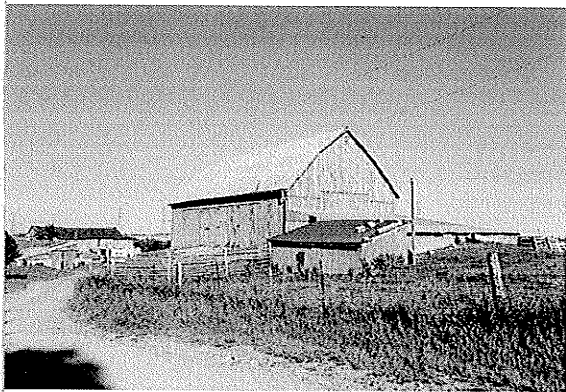
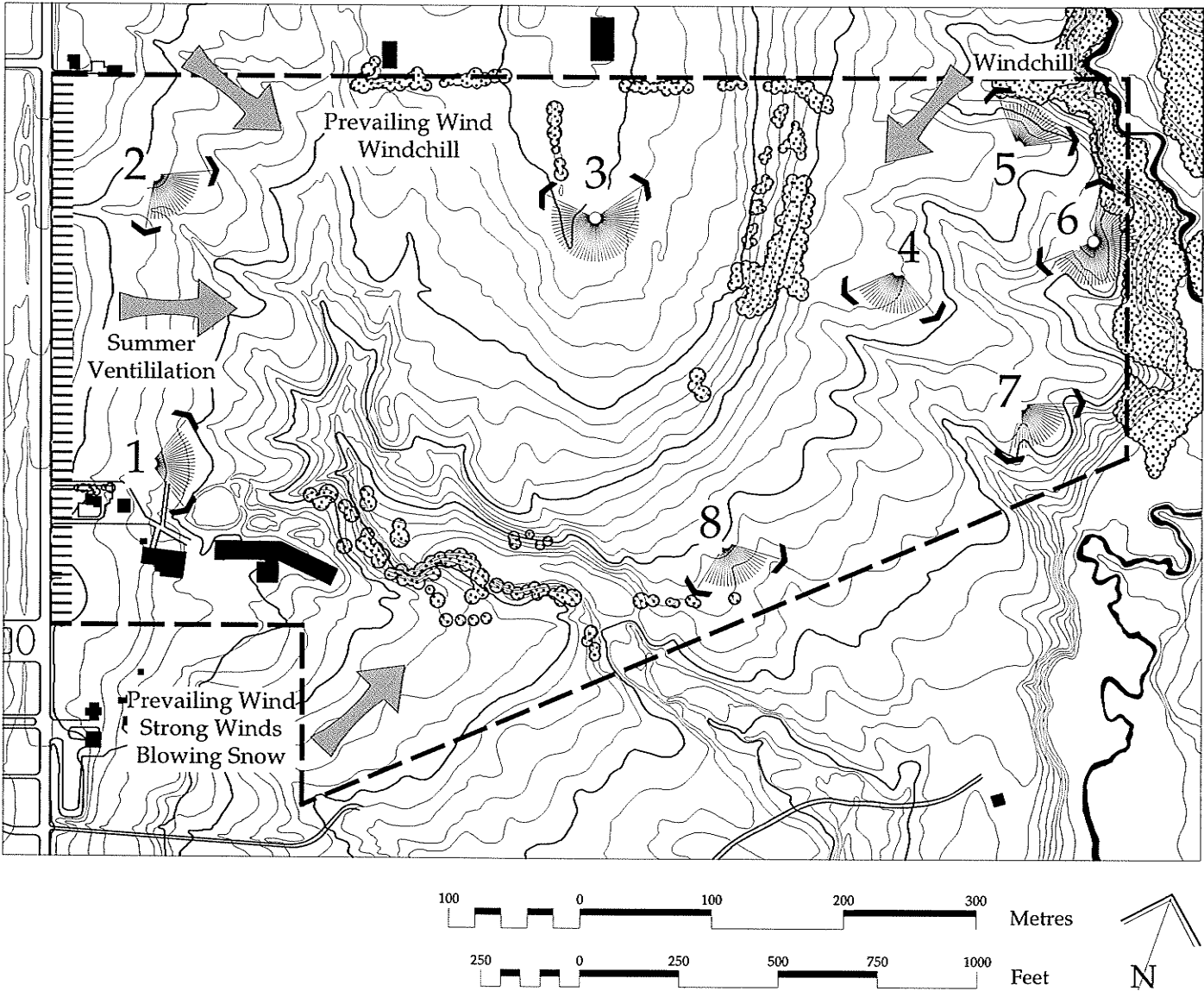


Fig. 3.30
The existing barn structure is an important architectural feature on the site and may be utilized by being converted into a floral shop, gallery and café.

Fig. 3.31 Site Aesthetics Map



- | | | | |
|---|---|-------|--|
| 1 | A view from the entry overlooking the pond and the meadow | 4 | A open vista overlooking the clearing |
| 2 | A Panoramic view from Brock Road overlooking the site | 5,6,7 | Panoramic views overlooking Urfe Creek, in the dense woodland area |
| 3 | Orientation vista, a visual panorama that has a strong locational reference | 8 | Negative views overlooking the Gatineau Hydro Corridor |

≡≡≡ Noise Exposure

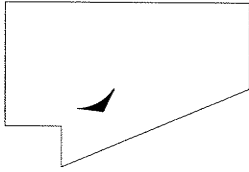


Fig. 3.32
The hydro corridor is an imposing structure with negative views to the south. Plantings should be enforced to screen undesired off site views.

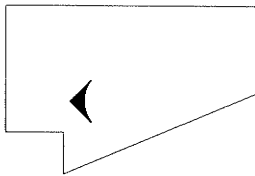


Fig. 3.33
Looking west from bottom of ravine towards main entrance and barn.



Hydro Corridor

The Gatineau Hydro corridor runs south of the property line and is an imposing structural form on the landscape.

VIEWS AND VISTAS

Southwestern Ontario is quite impressive with it's rolling hills and dotted patterns of farmsteads, giving character and appeal to our culture and landscape. The site is in a region south of the Niagara Escarpment, with hills and valleys framing significant views.

The topography of the area is relatively flat, with treed areas defining stream and valley systems. On approach to the site, the landscape slopes away from the road creating a long open vista over the farm. The site is mostly pastureland, consisting of rolling hills. On the hillside in the pasture located north of the property, is a high viewing area, from this point a panoramic view overlooks the entire landscape, and from this point the road. This is one of the major views of the site. The negative views exist south of the site towards the Gatineau Hydro corridor.

The buildings on the site, which include a farmhouse, barn, service shed, and pig barn reveal the rural character of the Southwestern Ontario farm. Within the site the most significant view is north of the property from which point the visitor is able to view the entire site and still have reference to the main road. This area is a prime location for development with southern exposure to the sun. View to the south of the site, do not offer much aesthetic value should be screened with planting.

NOISE

Landuses in the surrounding neighbourhood in general do not generate significant noise levels to warrant any concern. The main concern will be exposure to Brock Road, the major corridor along the site.

Chapter Four

This chapter puts forward a philosophical approach which will guide the design of the cemetery/park. It identifies the scope and nature of the design as well as the services which will be provided.

The goals and objectives outlined in this chapter set the tone for the design of the cemetery/park. In addition specific functional requirements including site development criteria are discussed.

The design program provides general information and qualitative descriptions of the various components and spaces which comprise the design.

Design Intentions

Background

The North American cemetery as we know it today has evolved significantly from its early origins as a churchyard cemetery. It held a key role in the life of the small community, but with the coming of the Industrial Revolution, as cities grew and became overcrowded, so did the churchyard cemetery. It was at this point that the 18th century *rural* cemetery appeared outside of the city as response to the congested conditions. As such, they inadvertently became the first planned open spaces, providing refuge from the deplorable conditions of the Industrial city.

Although beneficial, they were not without their limitations. One was able to enjoy the open space and natural setting however, the recreational aspect of such a visit conflicted with the need to respect the dignity of the dead. The decline of the rural cemetery as a place of refuge is attributable to the introduction of the urban park, which provided many of the same opportunities as the rural cemetery, but without its restrictions. Over time, the role of the cemetery was delegated to strictly burials and it no longer occupied as central a place in society as it once did. Cemeteries came to be viewed not as a place of refuge from the city but as occupying pieces of valuable

land which could be used for other more useful purposes.

This study seeks an approach which challenges our perceptions of the cemetery as strictly a place of burial to one which serves a more active role within the community. It explores the significance of the cemetery in a society which values open space.

Approach

The goal of the design is to redefine the role of the cemetery in response to the needs of modern society. It proposes the joining of two seemingly opposing uses and combines both cemetery and park to form a '*community sanctuary*'. This proposed model embodies the serenity and spirituality of the burial place with the vitality of the park by providing a refuge for both the physical and spiritual recovery of the individual. Whether through recreational facilities, education, or historical artifact, this approach may help influence how people think and feel about the cemetery landscape.

In order to explore the 'sanctuary' as a community resource offering more than the traditional burial amenities, the design principles of the 18th century rural cemetery will be reviewed and adapted to a modern context. The following issues will be examined:

1. *Cemetery as a Park/Park as Cemetery*
To establish the cemetery as a public, year-round environment for passive recreation.
2. *Community Resource*
To provide the community with historical, cultural, educational, environmental and recreational resources.
3. *Regional Link-Node Network*
To link the site to other recreational resources in the area as an extension of an open space network.
4. *Refuge*
To provide a refuge from the stress, pressure and pace of urban life — a place of contemplation for the physical and spiritual well being of the individual.

The landscape progresses through a series of transitions between 'park' and 'cemetery', ranging from structured to 'natural'. The entry into the site is a formalized and controlled environment and the staging area from which a journey through the landscape begins. The site is a transitional landscape from the cultural influences of the urban environment to the serenity of nature, moving through subtle transitions.

Culture and Community

The focus is on orientation and the integration of both building and landscape. The buildings fit discreetly in to the landscape, yet have a sufficient visual profile to help orient the visitor. A centralization of amenities unifies the different functions and services. This centralized area is a more formalized and controlled landscape acting as a control point to the site.

Garden Aesthetic: Artifacts In Context

The focus of the garden aesthetic will be on individual, smaller, more intimate spaces for spiritual contemplation and reflection.

Nature

The landscape gradually moves towards a more natural environment. The focus on the woodlands area is on conservation and preservation. Design elements placed in the context of 'unspoiled' nature become isolated elements from their urban setting.

Program

The program provides the designer with the appropriate level of information for conceptual design.

Summary of the Design Elements

USE AREAS

<i>Burial</i>	The landscape should be the predominant element in the burial areas. The use of flat markers will be mandated to reinforce an open feeling.
---------------	---

<i>Gardens(s)</i>	The gardens will reflect the needs and values of the community. They are architectural in nature with emphasis on the continuity between indoor and outdoor spaces.
<i>Open space</i>	The site will offer both 'open' and 'closed' outdoor spaces that will take advantage of major views overlooking the site.
<i>Trails</i>	Hiking and bicycle trails will be introduced along the banks of Urfe Creek. They will be designated exclusively for bicycles and pedestrian traffic, physically separated from vehicular traffic.
<i>Picnic Areas</i>	Picnic areas will be placed in close proximity to parking and recreational facilities.
<i>Main Entry</i>	The main entry serves as an introduction to orient visitors to the site. It provides access to the main facilities including Administration, Recreation and Burial as well as other amenities. Access into the site will be from Brock Road.
<i>Circulation</i>	The circulation system should be clear, organized and provide visual cues for orientation. Pedestrian circulation should be encouraged over vehicular circulation.
<i>Service Roads</i>	Restricted access will be provided for service and emergency vehicles only.
<i>Visitor Parking</i>	Visitor and staff parking should be located within site boundaries. Large parking areas are to be avoided and should be integrated into the site as much as possible.

Staff Parking Staff activities should not be inhibited by visitor movement. Parking should be convenient to the public and to the staff.

Maintenance Yard Maintenance vehicles should be provided with a parking area near the service entry.

MAJOR STRUCTURES

Office/Admin. This is the main building in which the management and administrative duties are conducted. It should be located near the main entry and be modest in scale so as not to interfere with the existing character of the area.

Info. Centre The information centre should be located near the main entry and serves as a gathering space to orient visitors to the site. It also allows access to other amenities such as washrooms, café and the floral shop.

Conservatory The conservatory will focus on botanical gardens, expanding people's knowledge of plants and their environment. This would include an understanding of plant diversity, evolution, and ecological relationships.

Chapel(s) The chapel should be located in a serene environment to serve as a place where people may assemble for worship and prepare for burial services. It should seat 150 people and be easily accessible by vehicular circulation.

Crematorium The crematorium, used for the cremation of human remains, should be discrete yet accessible from the chapel. The area will be secured and have controlled access at all times.

<i>Mausoleum</i>	The Mausoleum is a place that is used for the interment of human remains either sealed in crypts or compartments. It should be open and accessible at all times and serve as an element in the landscape.
<i>Columbarium</i>	The Columbarium is a facility that is used for the purpose of storing the ashes of cremated remains. It should be open and accessible at all times and serve as an element in the landscape.
<i>Service Buildings</i>	Service buildings are used for the storage, care, repair and equipping of vehicles and should be screened from view. Site servicing should be within close proximity of Brock Road.
<i>Greenhouse(s)</i>	The greenhouse is used for the shelter, care and growing of plants and plant materials. It should not be accessible to the general public and would accommodate the conservatory, floral shop, and chapel as well as the overall care of the grounds.

MINOR STRUCTURES

<i>Monuments/Sculpt.</i>	Monuments/Sculptures should be placed in designated areas in the landscape. Markers serve as the most common form of remembrance and memorial for the visitor, while they may also provide visual cues for orientation.
<i>Fountains</i>	Fountains should enhance the aesthetic value of the landscape, alleviate noise, provide orientation, and create nodes and people places.

AREA SUMMARY

The area summary is brief estimate of the area required for the following amenities:

Component	Net m ²
<i>Office/Administration</i>	
Reception	15
Administration	110
Library	100
Lounge	30
Washrooms	40
Support Facilities	100
	395 m ²

<i>Info. Centre/Conservatory</i>	
Entrance	15
Floral shop	100
Café	80
Orientation/Education	180
Conservatory	600
Washrooms	40
	1015 m ²

<i>Chapel/Crematorium</i>	
Entrance	45
Chapel/Minister's study	300
Vestry	50
Offices	45
Washrooms	20
Body/Casket/Vault storage	150
Utility Rooms/Incinerator	100
	710 m ²

<i>Service Buildings</i>	
Greenhouses 3 @ 200	600
Equipment Storage	15
Work Area	50
Maintenance/Security Office	25
Washrooms	20
Refuse/Storage/Repair	60
	770 m ²

Total Gross Area	2890 m²
-------------------------	---------------------------

DESIGN MATRICES

The design matrices provide a means of graphically conveying important relationships of the program requirements to the site. Each component has its own set of criteria, that will affect its location on the site.

Fig 4.1 Suitability Criteria for Use Areas

This matrix describes the suitability of use areas with respect to specific design factors consisting of slope, drainage, soils, vegetation, surface water, ground water, accessibility, views, orientation, and security. Suitabilities are described as being either optimum, moderate, or poor.

USE AREAS \ DESIGN FACTORS		Burial	Gardens	Open Space	Trails	Picnic Areas	Main Entry	Pedestrian Circulation	Service Roads	Visitor Parking	Staff Parking	Maintenance Yard
SLOPES	0 - 4%	●	●	●	●	●	●	●	●	●	●	●
	5 - 10%	●	●	●	●	●	●	●	●	○	○	○
	11 - 20%			○	○							
	20% +											
DRAINAGE	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor			○								
SOILS	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor	○	○	○	○	○	○	○	○	○	○	○
VEGETATION	Dense	○			●	●		●	○	○	○	○
	Sparse	●	●	●	●	●	●	●	●	●	●	●
	Open	●	●	●	○	●	●	●	●	●	●	●
SURFACE WATER	Proximity	●	●	●	●	●	●	●	●	●	●	●
GROUNDWATER	0 - 1m (frostline)		○	●	●	●	○	○	○	○	○	○
	1 - 3m		●	●	●	●	●	●	●	●	●	●
	3m +	●	●	●	●	●	●	●	●	●	●	●
ACCESSIBILITY	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●		●	●	●	●	●
	Poor			○		○						
VIEWS	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor	○	○	○	○	○	○	○	○	○	○	○
ORIENTATION	Solar	●	●	●	●	●	●	●	●	●	●	●
	Wind	●	●	●	●	○	●	●	●	●	●	●
SECURITY	Access						●		●		●	●

● Optimum Suitability

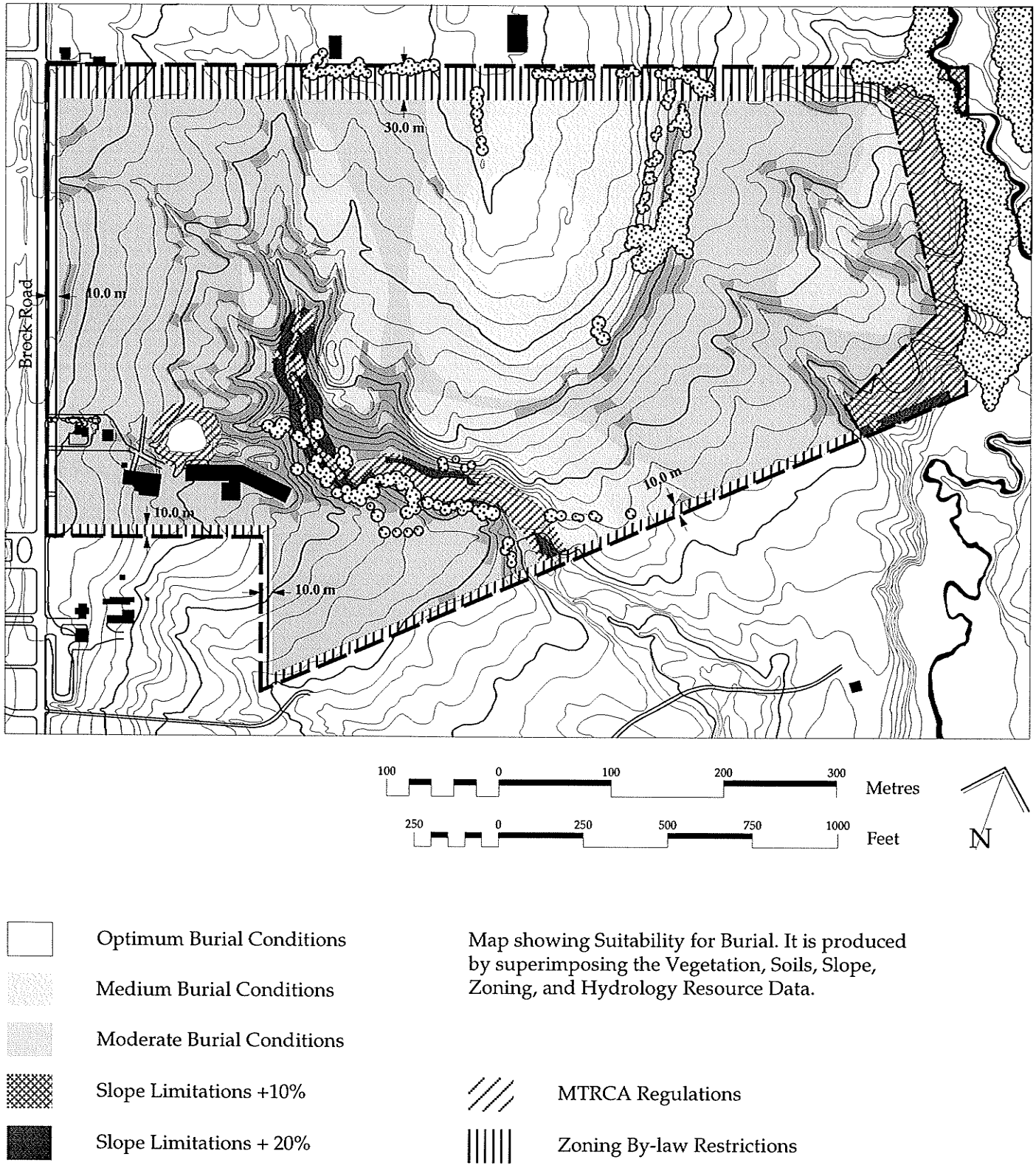
● Moderate Suitability

○ Poor Suitability

SUITABILITY MAPS

“The determination of the optimum or acceptable suitability of a site or portions thereof does not necessarily mean that the site should be developed for a given function. Suitability

Fig. 4.2 Suitability Conditions for Burial Requirements



merely suggest the degree to which a site is suitable for a given function”.

Time-Saver Standards for Site Planning
— Joseph DeChiara

The program and the site were brought together in a synthesis, and the constraints and opportunities of the site were explored in terms of the program needs. Programmatic elements were evaluated with respect to site opportunities and constraints of the capabilities of the site to support the various functions. The end result shows optimum areas for both development and burial.

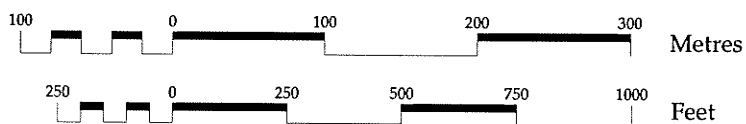
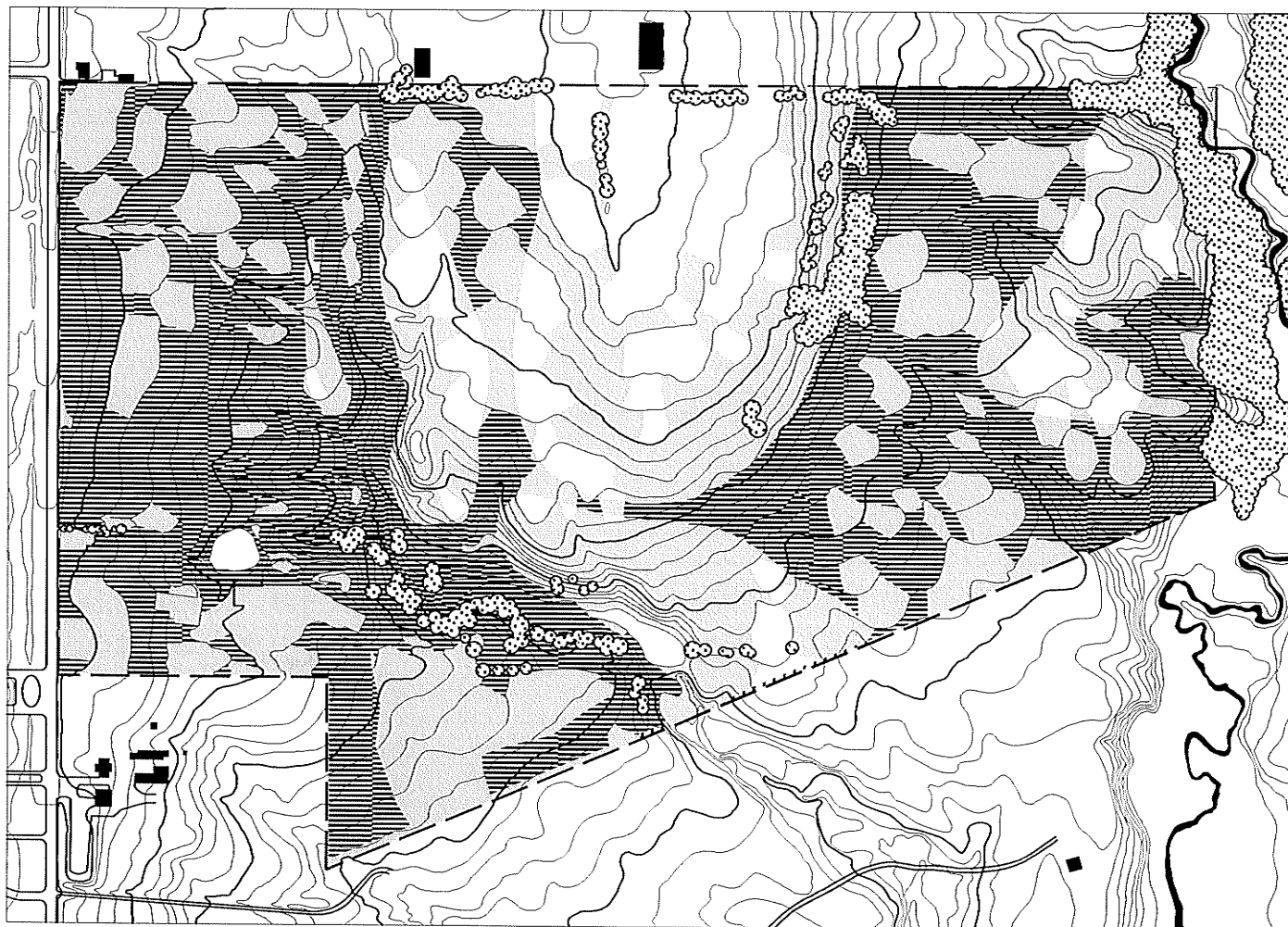
Fig. 4.3 Suitability Criteria for Major/Minor Structures






This matrix describes the suitability of major/minor structures with respect to the specific design factors as outlined.

DESIGN FACTORS \ MAJOR/MINOR STRUCTURES		Office / Admin.	Info. Centre	Conservatory	Chapel	Crematorium	Mausoleum	Columbarium	Service Buildings	Greenhouse(s)	Monuments / Sculpt.	Fountains
SLOPES	0 - 4%	●	●	●	●	●	●	●	●	●	●	●
	5 - 10%	●	●	●	●	●	●	●	●	●	●	●
	11 - 20%	○	○	○	○	○	○	○	○	○	○	○
	20% +											
DRAINAGE	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor							○			○	○
SOILS	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor	○	○	○	○	○	○	○	○	○	○	○
VEGETATION	Dense	○	○		●	●	●	●	○		●	●
	Sparce	●	●	●	●	●	●	●	●	●	●	●
	Open	●	●	●	●	●	●	●	●	●	●	●
SURFACE WATER	Proximity	●	●	●	●	●	●	●	●	●	●	●
GROUNDWATER	0 - 1m (frostline)	○	○	○	○	○	○	○	○	○	○	○
	1 - 3m	●	●	●	●	●	●	●	●	●	●	●
	3m +	●	●	●	●	●	●	●	●	●	●	●
ACCESSIBILITY	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair					●	●	●	●		●	●
	Poor										○	○
VIEWS	Good	●	●	●	●	●	●	●	●	●	●	●
	Fair	●	●	●	●	●	●	●	●	●	●	●
	Poor					●	○	○	●	●	●	●
ORIENTATION	Solar	●	●	●	●	●	●	●	●	●	●	●
	Wind	●	●	●	●	●	●	●	●	●	●	●
SECURITY	Access	●	●	●	●	●			●	●		

● Optimum Suitability ● Moderate Suitability ○ Poor Suitability

Fig. 4.4 Suitability Conditions for Structures



-  Optimum Suitability for Structures
-  Moderate Suitability (slopes 5-10%)
-  Least Suitability (groundwater/slope)
-  Zoning Restrictions - Unsuitable
-  MTRCA Regulations - Unsuitable

Map showing Suitability for Structures. It is produced by superimposing the Vegetation, Soils, Slope, Zoning, and Hydrology Resource Data.

It should be noted that construction for all structures will occur above ground.

Fig. 4.5 Relationship Criteria for Design Components

This matrix describes the suitable adjacencies between the design components. These are also described as being either optimum, moderate, or poor.

Design Components	Burial	Gardens	Open Space	Trails	Picnic Areas	Main Entry	Pedestrian Circulation	Service Roads	Visitor Parking	Staff Parking	Maintenance Yard	Office / Admin.	Info. Centre	Conservatory	Chapel	Crematorium	Mausoleum	Columbarium	Service Buildings	Greenhouse(s)	Monuments / Sculpt.	Fountains
Burial	●	●	●	○	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Gardens	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Open Space	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Trails	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Picnic Areas	○	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Main Entry	●	●	●	○	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Pedestrian Circulation	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Service Roads	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Visitor Parking	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Staff Parking	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Maintenance Yard	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Office / Admin.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Info. Centre	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Conservatory	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chapel	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Crematorium	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Mausoleum	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Columbarium	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Service Buildings	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Greenhouse(s)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Monuments / Sculpt.	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fountains	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

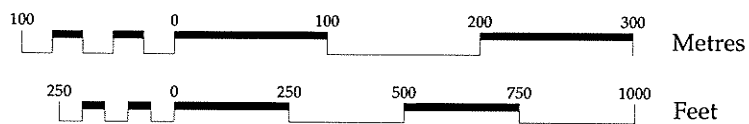
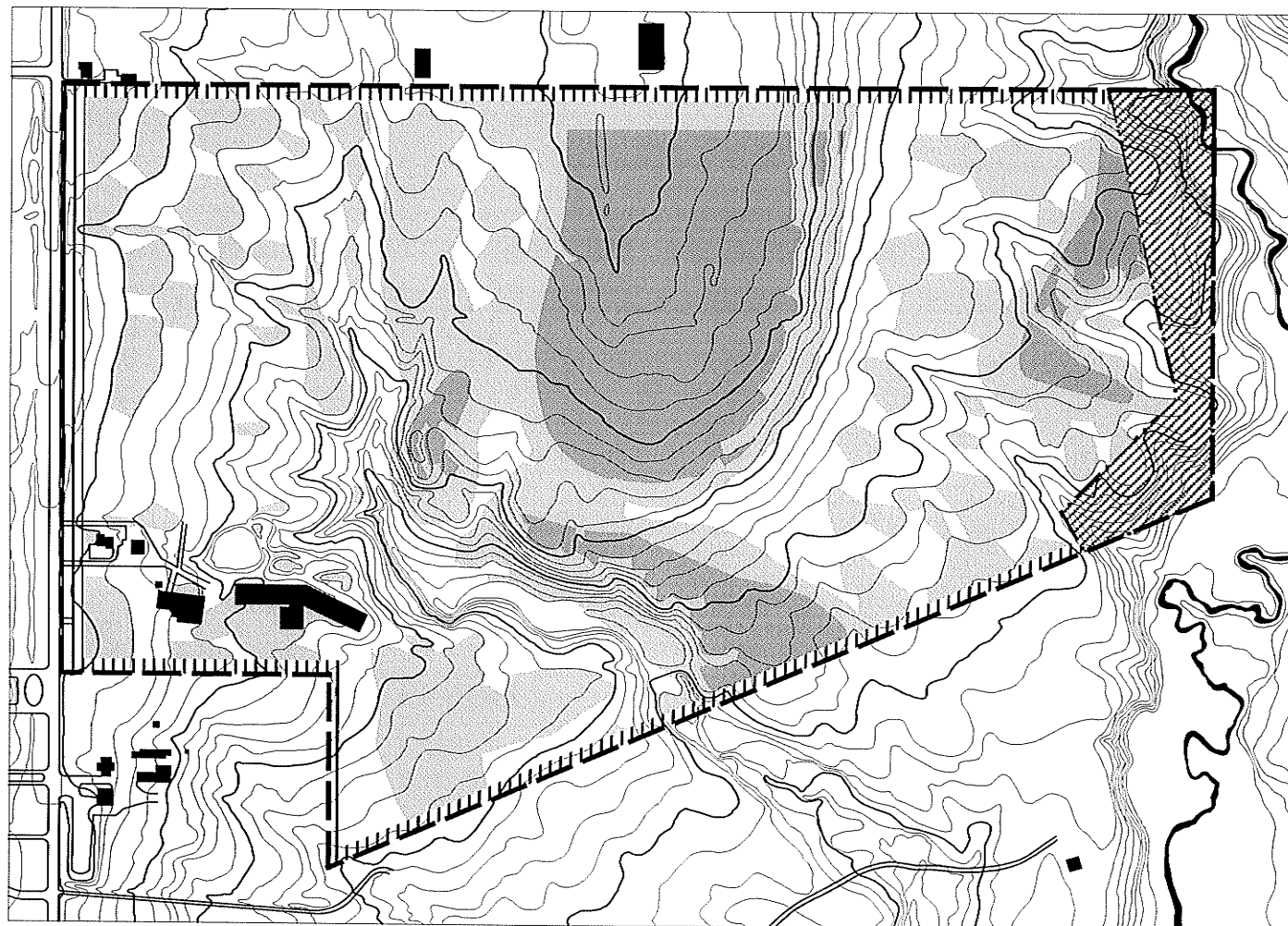
Suitability Conditions for Burial Requirements





This map shows suitability for burial and is produced by superimposing the vegetation, soils, slope, zoning, and hydrology resource data. Suitabilities are described in terms of either optimum conditions, degrees of hazard, and areas which fall within MTRCA regulations. Degrees of hazard range from 1 to 3, where 1 consists of a conflict with only groundwater within 2.8 metres of the surface, 2 consists of a conflict with slope greater than 10% and groundwater, and 3 consists of a conflict with zoning, slope, and groundwater. See fig. 4.2.

Suitability Conditions for Structures

This map shows the suitability for development. It is produced by superimposing the vegetation, soils, slope, zoning, and hydrology resource data. Suitabilities are described as above with the exception of groundwater which now constitutes a hazard if found within the 1 metre frost zone below the surface. See fig. 4.4.

Fig. 4.6 Composite of Optimum Suitability



-  Optimum Suitability for Single Burial Sites
-  Optimum Suitability for Structures
-  Zoning Restrictions - Unsuitable
-  MTRCA Regulations - Unsuitable

Composite of Optimum Suitability for Buildable Areas

This map is based on a composite of the optimum conditions found in the two previous maps. *See fig. 4.6.*

Chapter Five

This chapter discusses the concept, framework and elements which form the design. It provides an understanding of the generating ideas and principles which guide the final solution. A compilation of drawings and sketches, illustrating the design process are included.

Design & Development

Overview

This chapter describes the development of the design in three parts. The first, a description of the Concept, describes the ideas and principles guiding the design. The second, a Broad Overview, describes the framework in which the individual elements of the design are placed. The third, a Detailed Overview, describes the individual elements incorporated within the design. A compilation of drawings and sketches, illustrating the design process which leads to the final solution, completes the chapter.

Concept

The redefinition of the cemetery begins with the acceptance of the notion of life and death as a dialectic— one cannot exist without the other. Death is a companion to life, we are certain to meet it, yet it remains a mystery to us, for at what point it interrupts the continuum of life is unknown. We can only understand one in terms of the other.

As has been outlined earlier in this document, death in our society is seen as a thing unto itself and expressed as such in the way our cemeteries are designed and planned — as

underutilized entities consuming valuable land and serving no other useful purpose other than as a place to keep the dead. They demonstrate a certain solemnity and are often perceived as places to avoid. One does not normally 'enjoy' a cemetery as one might enjoy a park. The design proposed in this document seeks to challenge these perceptions and to express the view that life and death are intertwined. It proposes to create an entity which embodies aspects of both park and cemetery such that a third, new typology is formed.

The duality of life and death is expressed within the design in the form of two opposing geometries — the line and the circle. The line represents the continuum of life, the journey shared by all living things. Just as life is a succession of events, so the line becomes a succession of nodes and points along its path, the end being certain yet unclear.

The design represents the connection of body, mind, and spirit such that the individual can achieve physical and emotional well-being. The ordering of the geometry helps to create places where activities occur, meeting places, resting places, communal areas, exercise areas, and venues for gathering and rituals to be performed.

Cemeteries are 'sacred places' owing to the spiritual value that we attribute to human existence. In every society, there exist many rituals and laws pertaining to the dead. In general, we recognize and respect the sacred nature of the cemetery as a place of spirituality and contemplation.

In many cultures, the sacredness of a place is often represented by a circle, the inside of which signifies a special area distinct from that lying outside of its boundary. It is these spiritual qualities of the circle which are adopted and applied in the design of burial place.

The dual nature of life and death, as represented through the line and the circle, are superimposed onto the site. Each is distinct in its own geometry and character, but combined they form a new domain, a place set apart from the urban environments of our daily life, providing a sanctuary to achieve physical and emotional well-being.

Broad Overview

Using the concept as the starting point, a series of gestures in the landscape create a framework in which various elements of the design are organized. The first is a grid placed over the entire site, alluding to the physical structure of the urban and rural environment. Extending eastward from the 'urban' boundary defined by Brock Road, the grid slowly disintegrates into the 'natural' order of the parklands. A line representing the continuum of life is then placed on the grid in an approximate east-west orientation across the breadth of the site in response to suitable site conditions as determined in the site analysis. This line is the main circulation spine for the site along which a succession of nodes and destinations are placed. A circle representing the sacred space is then located on the most suitable and prominent position of the site. Within the boundary of the sacred circle lie the burial grounds. To emphasize and further distinguish the burial grounds, a 'spiritual' grid is superimposed over the urban grid and rotated to align with the rising and setting of the sun, signifying the passage of time from birth through to death. Many religions and related philosophies are spiritually linked to the east-west/rising-setting of the sun, which is reflected in the orientation of houses of worship or other monuments. Other burial areas located in zones having a sufficiently low water table, not contained within the sacred circle itself, are symbolically linked to it with arcs which are perceived to be segments of a greater circle centred on the sacred ground. The rotated grid is extended into these outlying burial areas and is contained within the arcs.

Within the overall framework, a series of transitions exist which link the individual components together into a unified composition. These zones of transition embodied by the superimposed grids of cemetery and park circulation serve both recreational and ritual purposes and the true nature of the design is made evident as the boundaries between the park and the cemetery become blurred. Urban gives way to natural; the continuum of life is brought together with the sacred circle; and the grid becomes eroded into the landscape as the relationship between nature and culture is redefined.

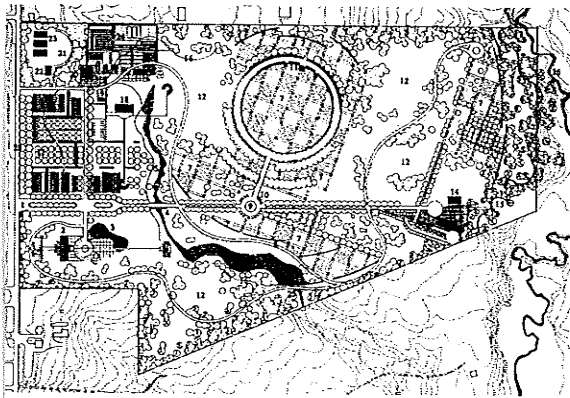


Fig. 5.1 Site Plan.

Detailed Overview

This section outlines specific elements which are used in the actual design and placed within the site in response to the framework outlined above.

CIRCULATION

Vehicular

The entrance to the site is the beginning of a procession leading from the urban to the natural. It commences as a divided vehicular path which narrows as it progresses into the natural landscape, eventually giving way to pedestrian circulation to complete the procession. The various destinations within the site are reached by means of secondary circulation routes off of this primary pathway. Parking zones are identified adjacent to key areas to accomodate visitor parking.

Pedestrian

The pedestrian pathways within the park-like elements of the site are free-flowing and serpentine in nature to contrast with the structured circulation of the burial areas.

Service

The only devoted service route lies along the northern boundary of the site where it poses no obstruction to existing public circulation routes. Servicing is also provided via circulation routes and parking areas as required. In the case of burial areas, these include pedestrian circulation routes.

MAJOR STRUCTURES

Chapel and Crematorium

The chapel and crematorium are placed at the end of the processional path within the natural landscape. They exist as objects within the landscape and are set to one side of the path so as not to interrupt the symbolic journey of life. The chapel and crematorium together define a small plaza which acts as a terminus to the vehicular traffic of the processional road and the genesis of a pedestrian path into the natural ravine. The chapel itself is oriented to the 'spiritual' grid along its axis. In order to access the chapel complex, one must walk along a designated route to maintain the serenity of its location. Direct vehicular access is not available other than that permitted for

the funeral procession itself.

Mausoleum

The mausoleum is an integral part of the sacred circle defining the burial grounds. It emerges from the earth as a sculptural element defining the northern boundary of the circle and reinforcing the cyclical concept of the physical body returning to the earth.

Conservatory

The conservatory is engaged in the urban grid and is located off the main route set within the agrarian landscape of the site. It is associated with the gardens and becomes a place of contemplation and meditation.

Administration

The administration building is engaged in the urban grid and is located near the entrance off of the main circulation route to provide ease of accessibility and to enhance its visibility.

Barn

The barn is a 'found' artifact within the site, originally existing there but converted into a cafe and gift shop, serving as a memory of the previous life of the site. It is located in the transition zone between the agrarian and the park landscapes. Circulation and access to the barn are still oriented to the urban grid, however, the barn is allowed to 'disengage' itself from the grid and open towards the parklands.

Service

The service buildings and greenhouses are firmly entrenched in the urban grid and are located off of Brock Road to facilitate the supply of goods and materials into the site. They are placed on a higher portion of the site such that it is not possible to look down upon them and they can easily be screened from view with vegetation.

MINOR STRUCTURES

Bridge

A bridge is placed along the main processional path across the cascading waters of the ravine.

Dam

A dam is located at the base of the ravine to create a new lake within the site while providing a pedestrian access across the ravine in the form of a trail.

OUTDOOR SPACES

Water Elements

A series of minor dams in the top portion of the ravine create cascading water and pools. Another dam is located further downstream to form a new lake within the park-like portion of the site and enhances the picnic grounds along its shore. An existing farmyard pond is maintained and serves as a visual feature for the administrative building.

Gardens

The gardens are formal in nature and are located adjacent to the conservatory. They are provided as an enrichment to the overall conservatory experience.

Node

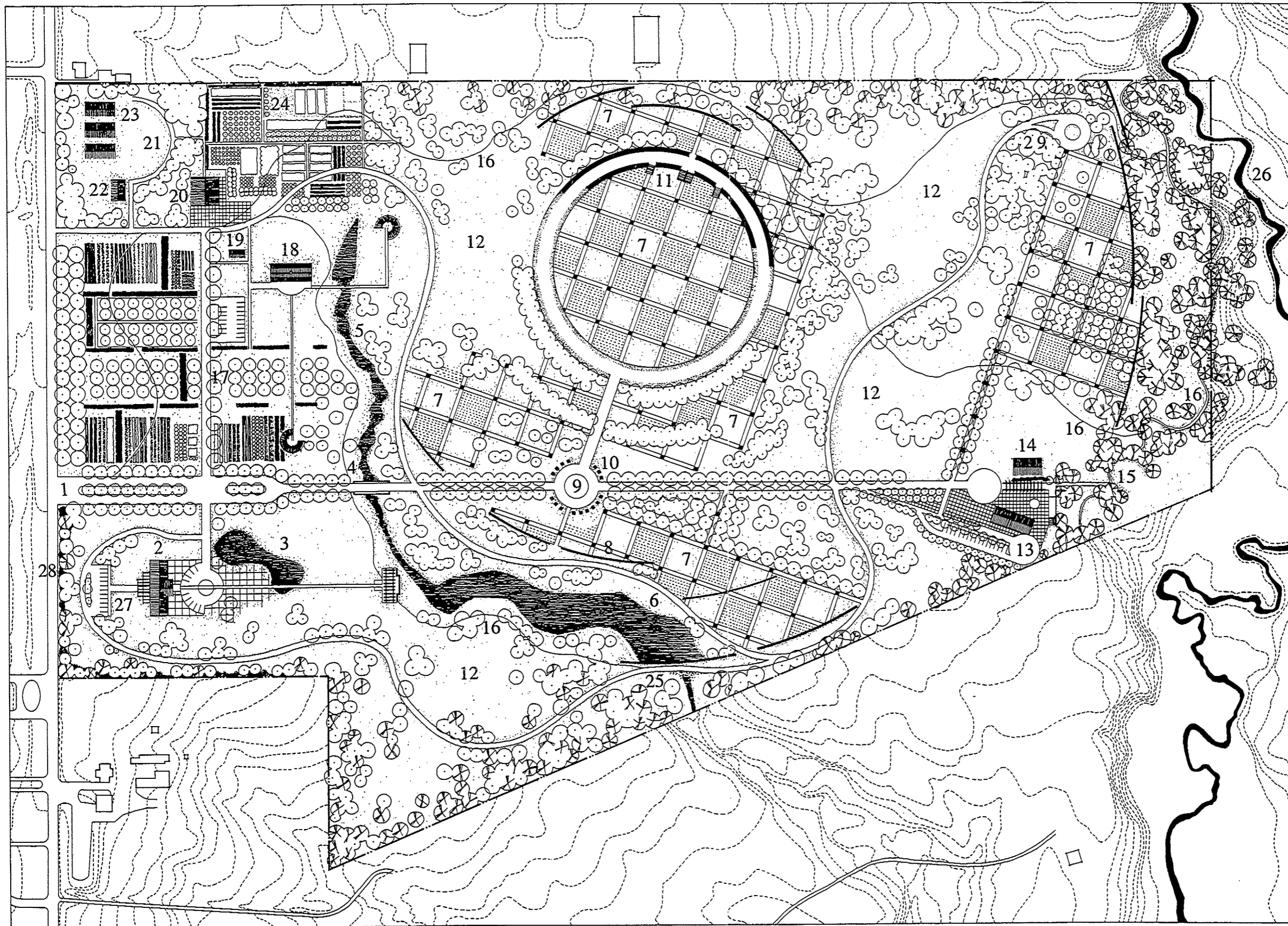
A node is located at the point where the sacred ground is linked to the main processional path. It identifies the departure from the continuum of life and the beginning of a ceremonial route ascending to the main burial ground within the sacred circle. Only upon reaching the apex is the sacred circle revealed to the observer.

Lookout

A lookout space is placed in a clearing located along the end of the processional path and overlooks the serenity of nature. It is meant as a place for the contemplation surrounded by life and removed from notions of death.

Design Sketches & Drawings

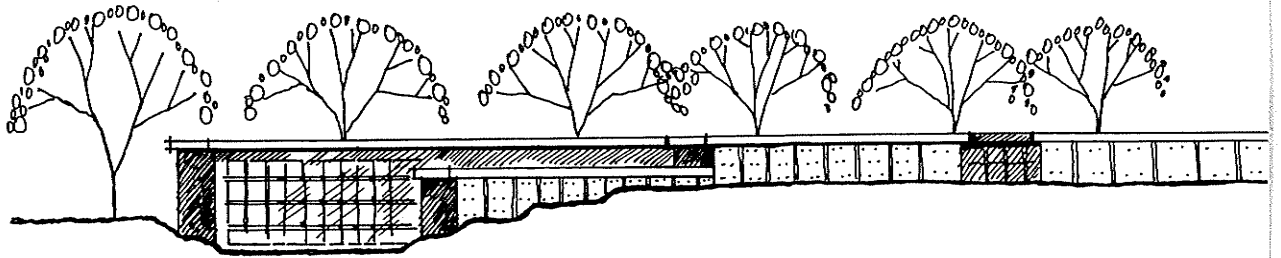
SITE PLAN



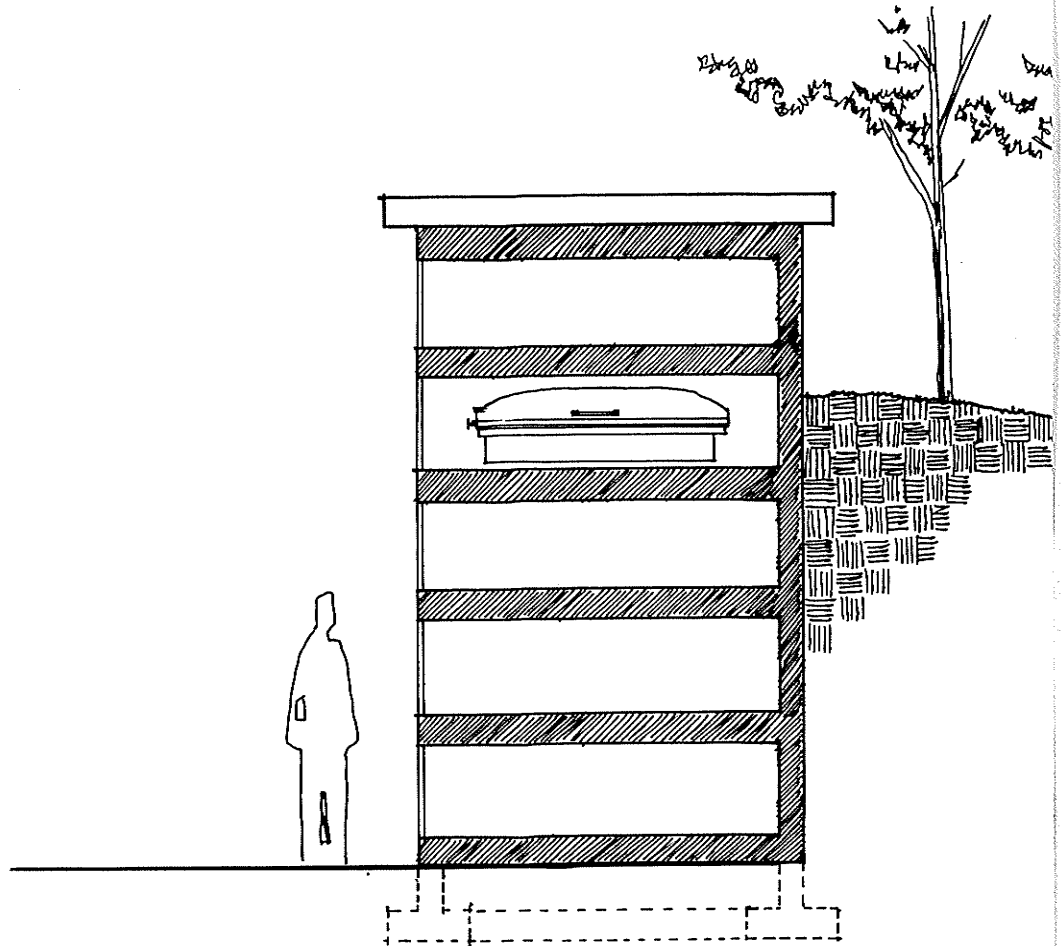
LEGEND

1. Main Entry
2. Administration
3. Pond
4. Bridge
5. Cascades
6. Lake
7. Burial
8. Columbarium
9. Node
10. Monuments
11. Mausoleum
12. Open Space
13. Chapel
14. Crematorium
15. Lookout
16. Trails
17. Arboretum
18. Barn
19. Information Centre
20. Conservatory
21. Maintenance Yard
22. Service Building
23. Greenhouses
24. Gardens
25. Earth Dam
26. Urfe Creek
27. Staff Parking
28. Brock Road
29. Casual Parking

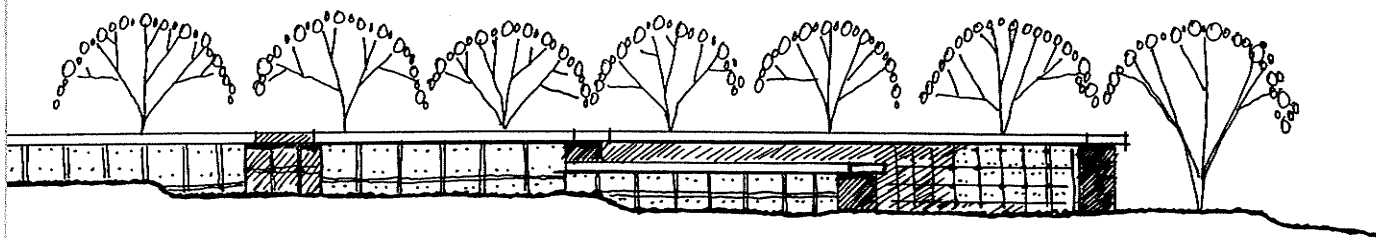
MAUSOLEUM



ELEVATION — Mausoleum 1:500

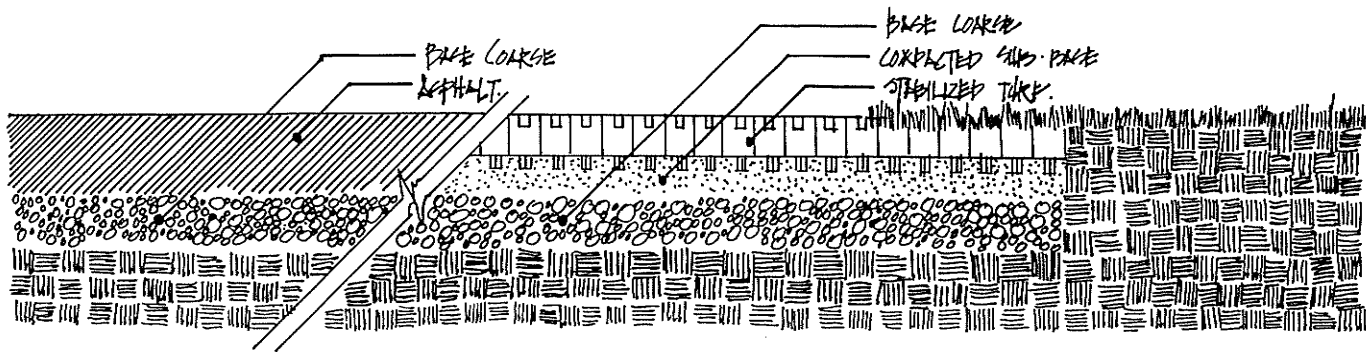


SECTION — Mausoleum 1:50

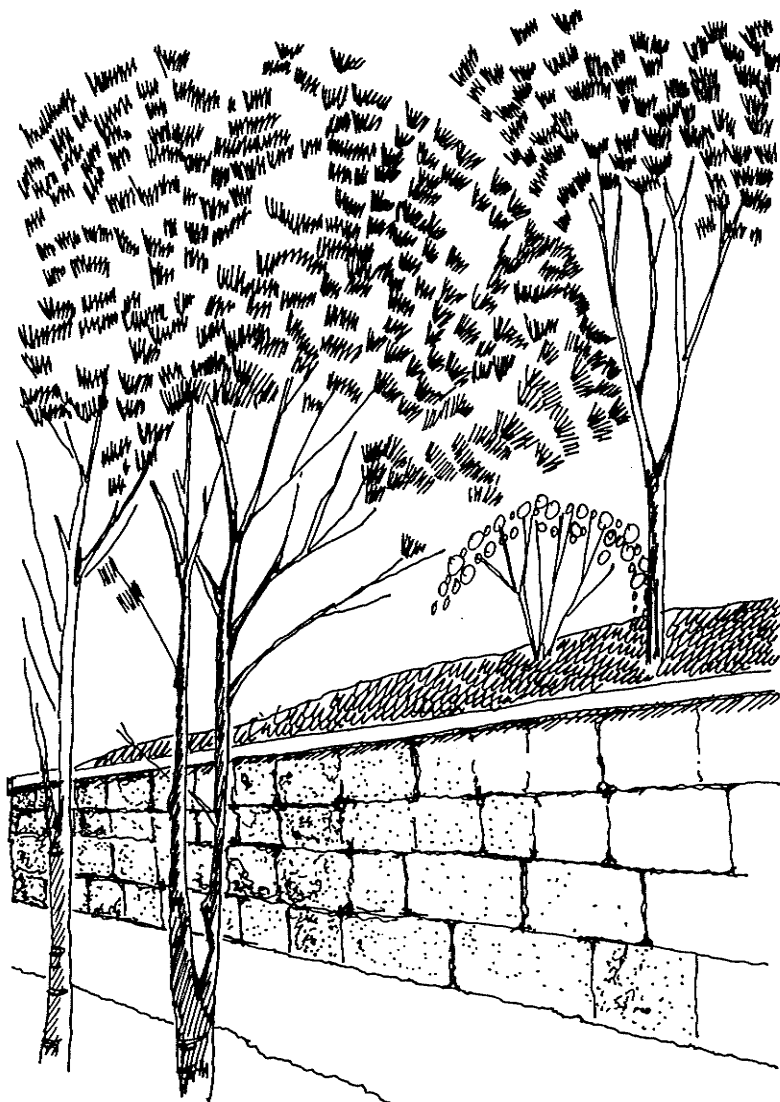


PERSPECTIVE VIEW — Burial Area

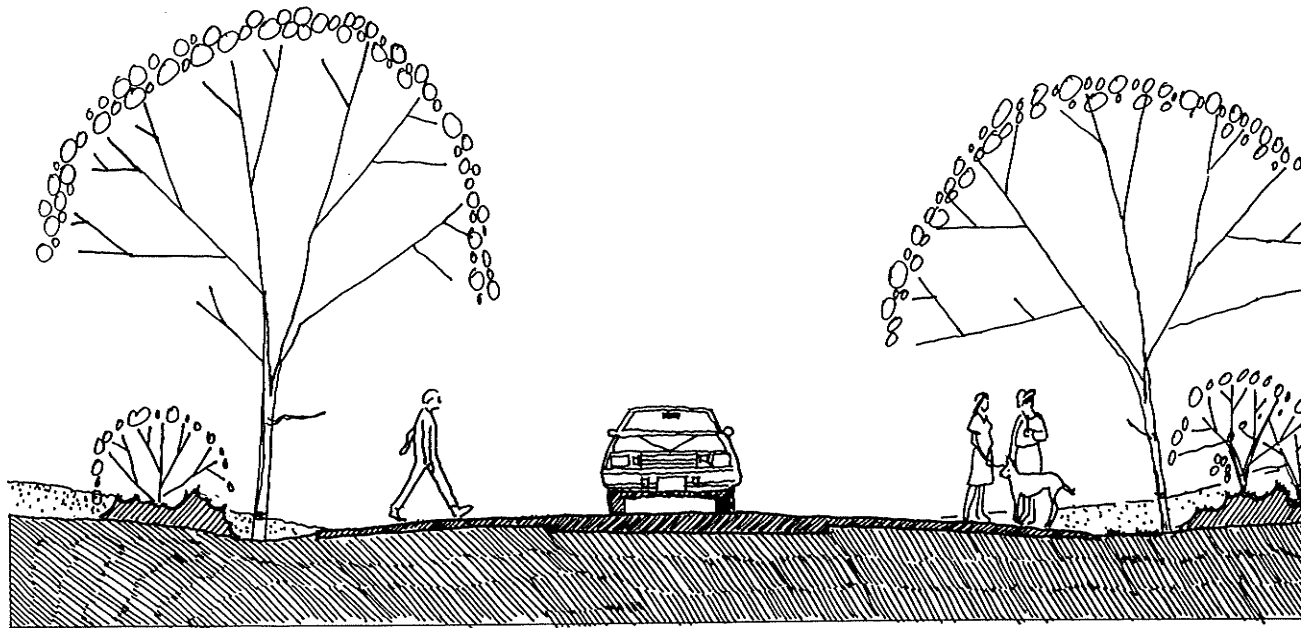
BURIAL AREAS



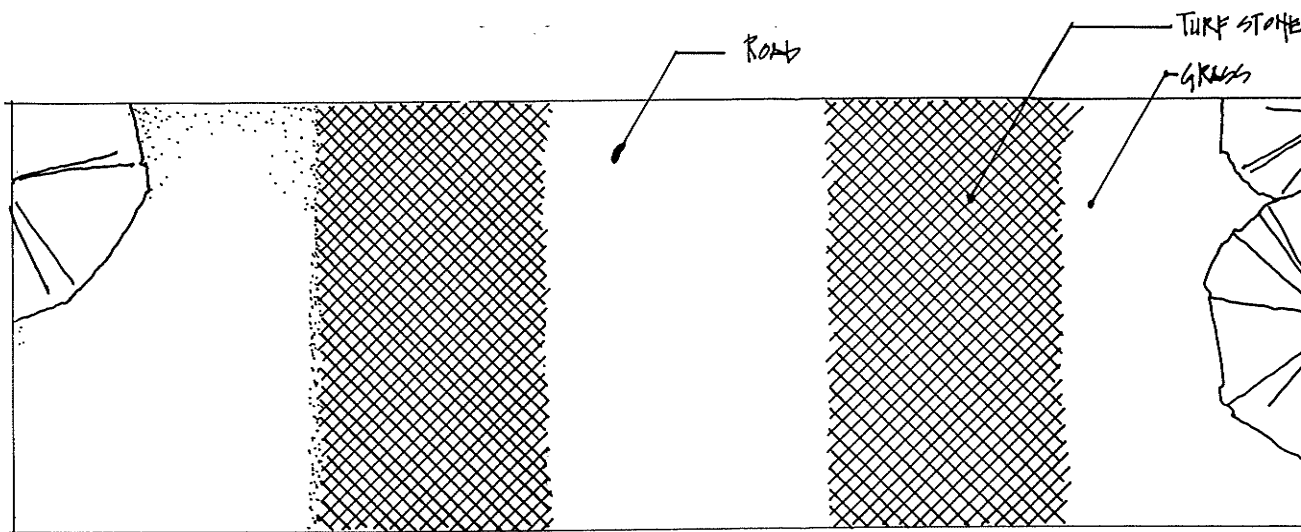
SECTION DETAIL — Park Road N.T.S.



PERSPECTIVE VIEW — Arc



SECTION — Park Road 1:100



PLAN DETAIL — Park Road 1:100

Sketches

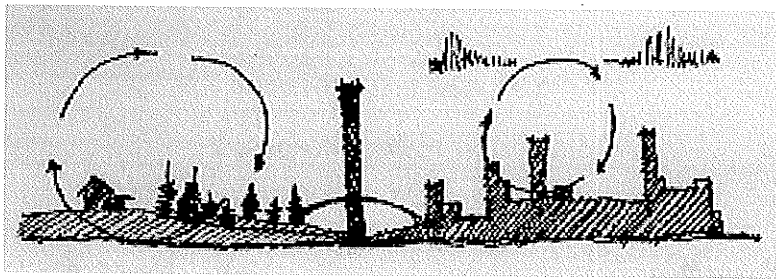


Fig. 5.2
Design Sketch: Death as a transition between two distinct worlds.

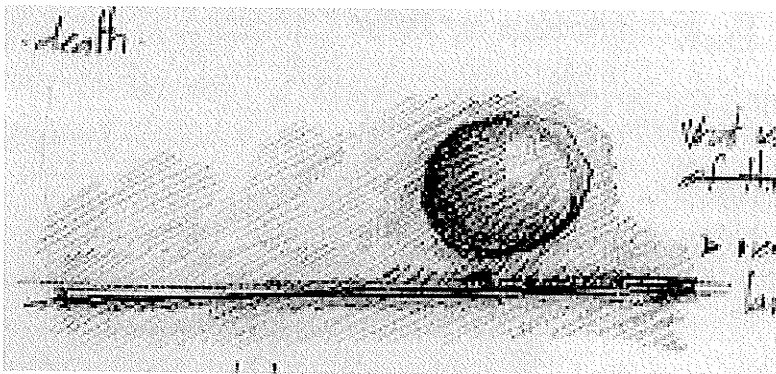


Fig. 5.3
Design Sketch: The dialectic between the circle and the line.

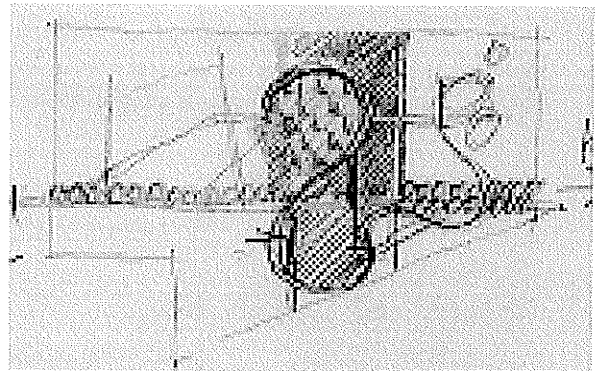


Fig. 5.4
Design Sketch: The concept of duality, how does one become the other.

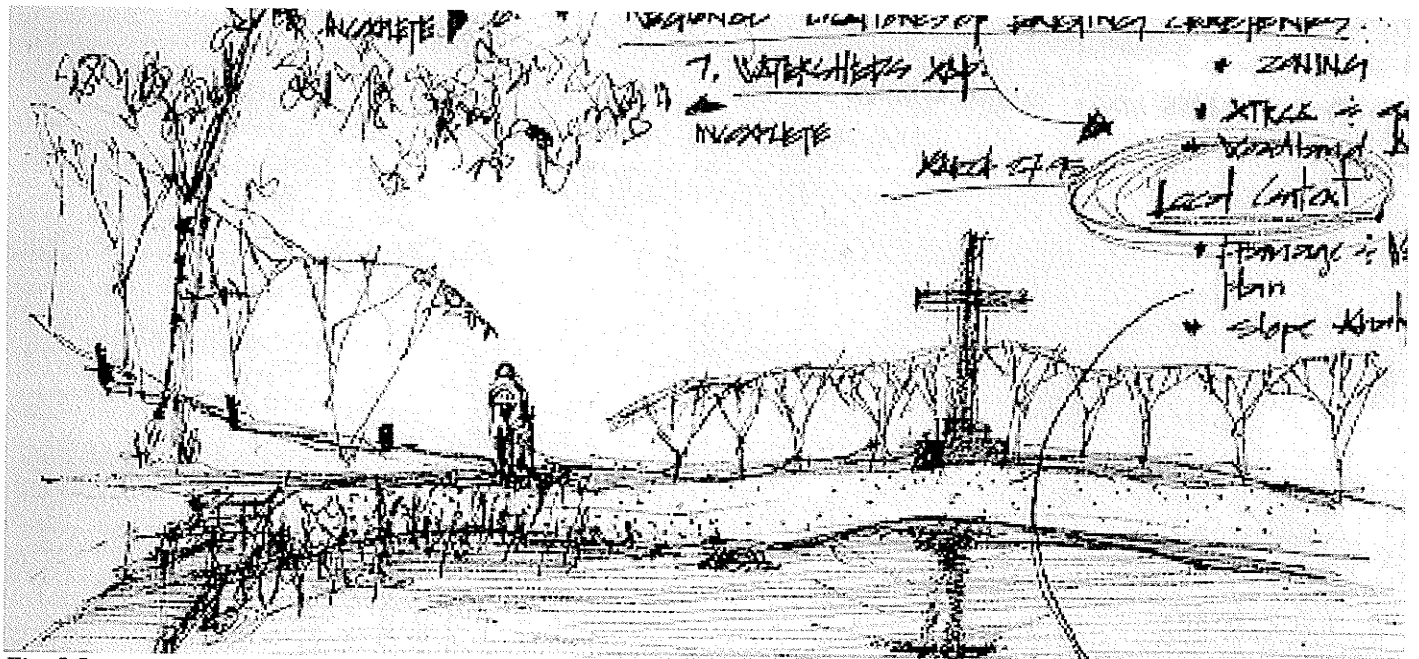


Fig. 5.5
Design Sketch: Perspective.

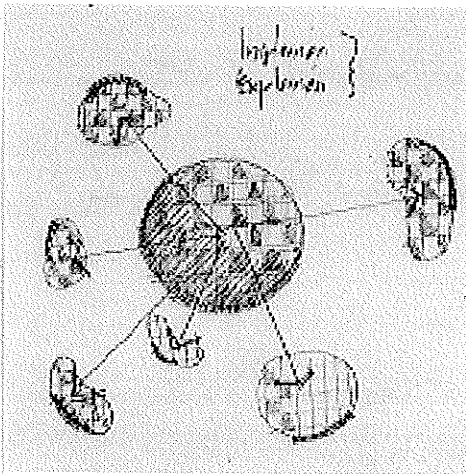


Fig. 5.6
Design Sketch: Implosion/Explosion (Burial Arcs).

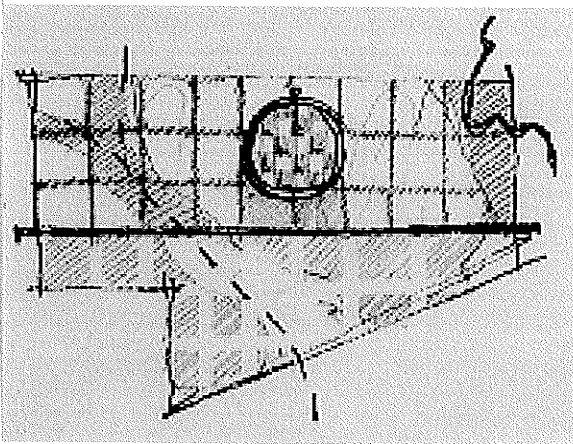


Fig. 5.7
Design Sketch: One becomes the translation of the other.

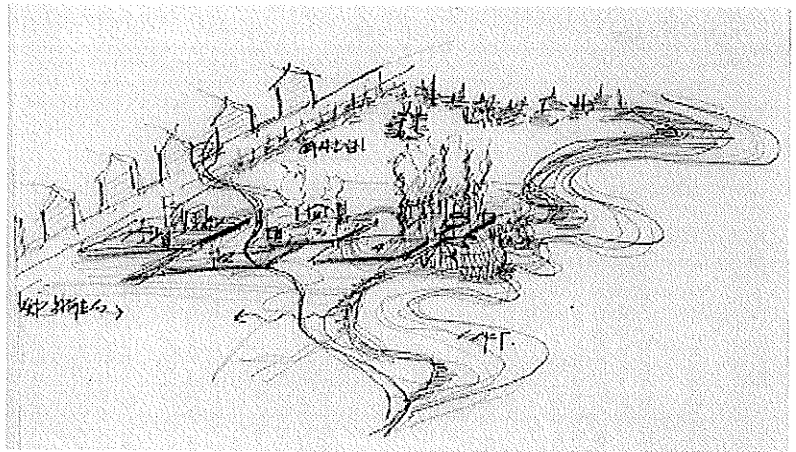


Fig. 5.8
Design Sketch: Perspective.

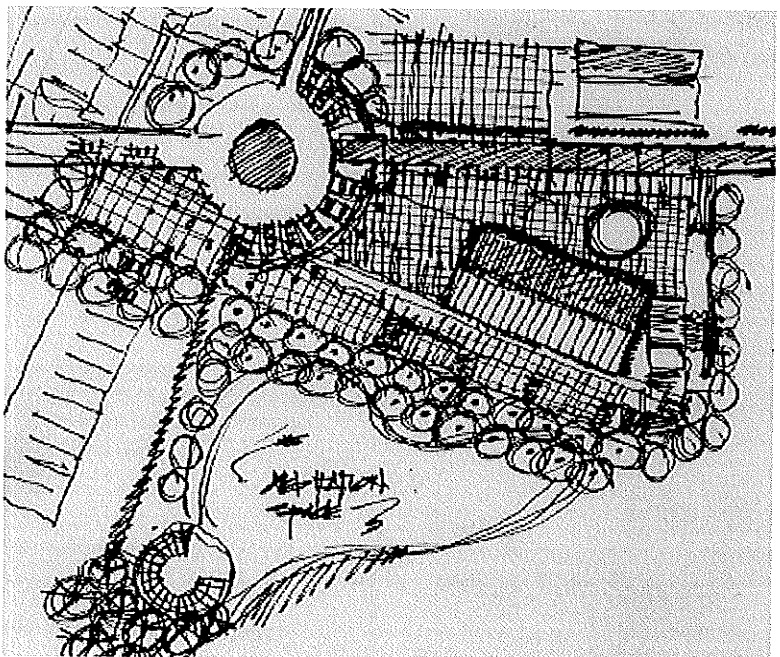


Fig. 5.9
Design Sketch: Developmental Design of the chapel.

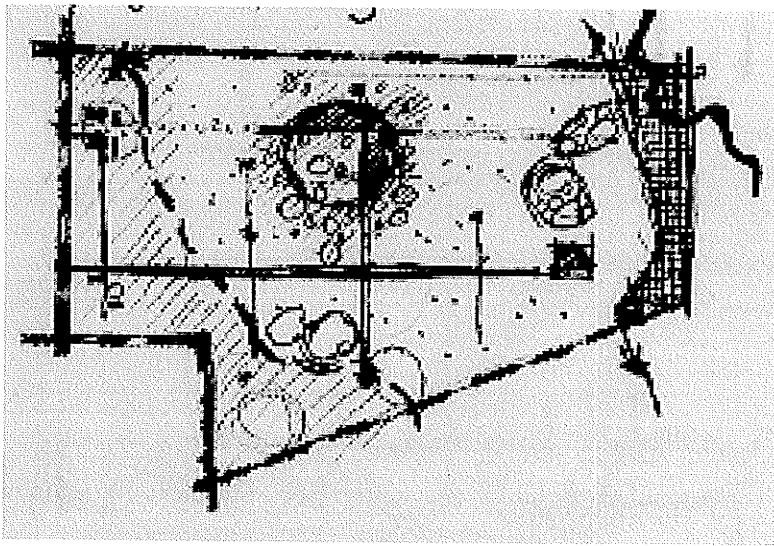


Fig. 5.10
Design Sketch: Geometry and Destination points.

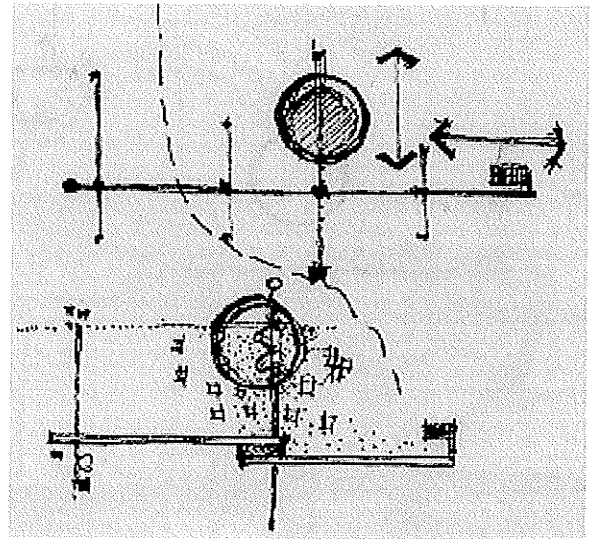


Fig. 5.11
Design Sketch: Conceptual studies.

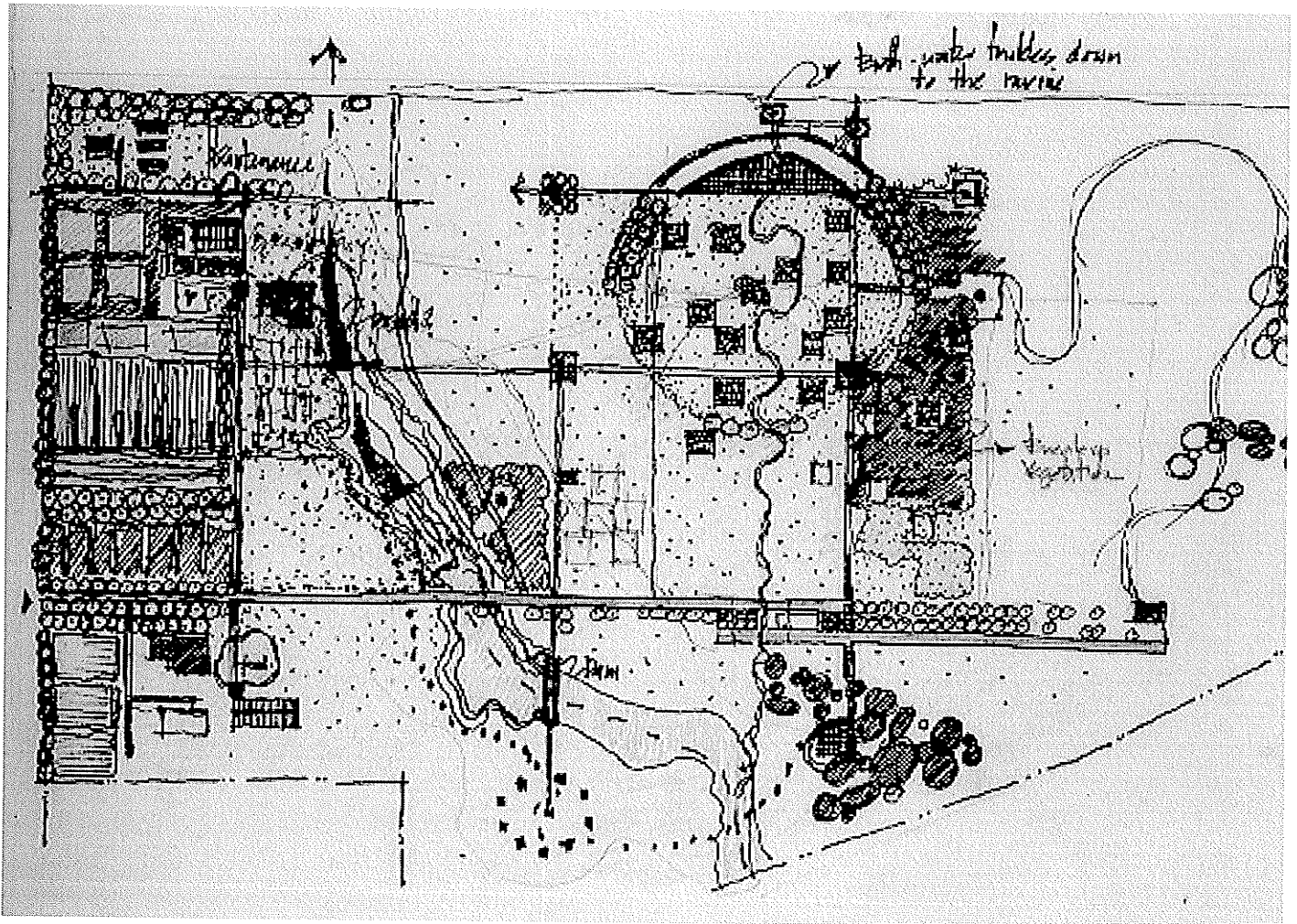


Fig. 5.12
Design Sketch: Early Developmental Design

Model

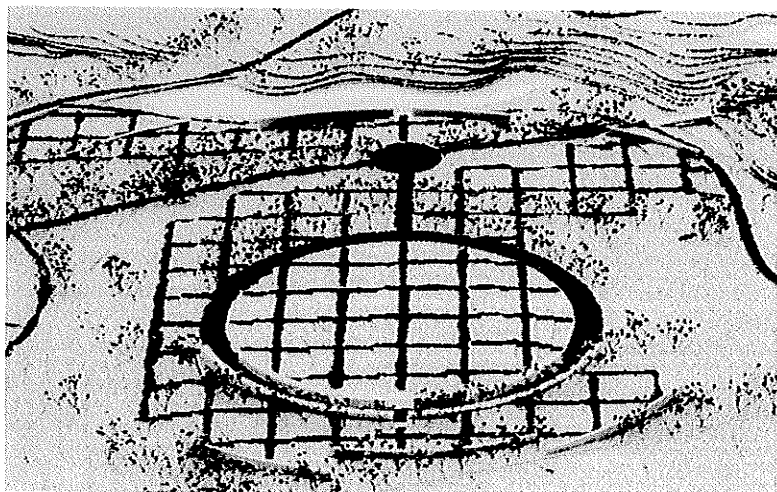


Fig. 5.13
View of the main burial area looking along the axis towards the lake.

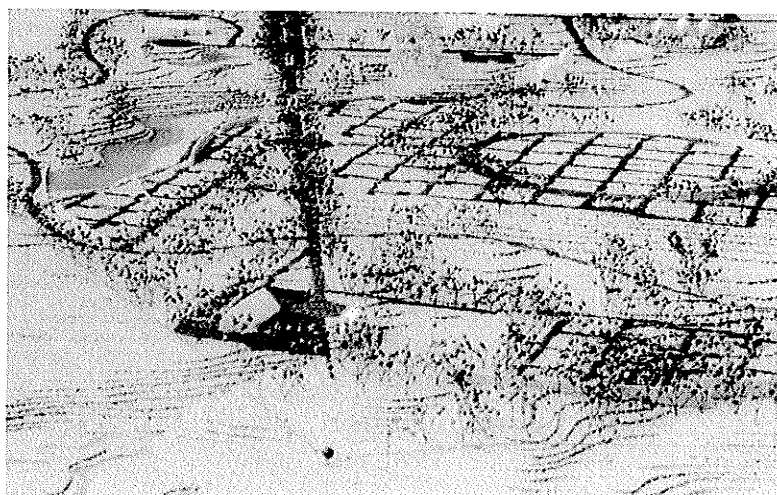


Fig. 5.14
View of the chapel looking back along the main promenade.

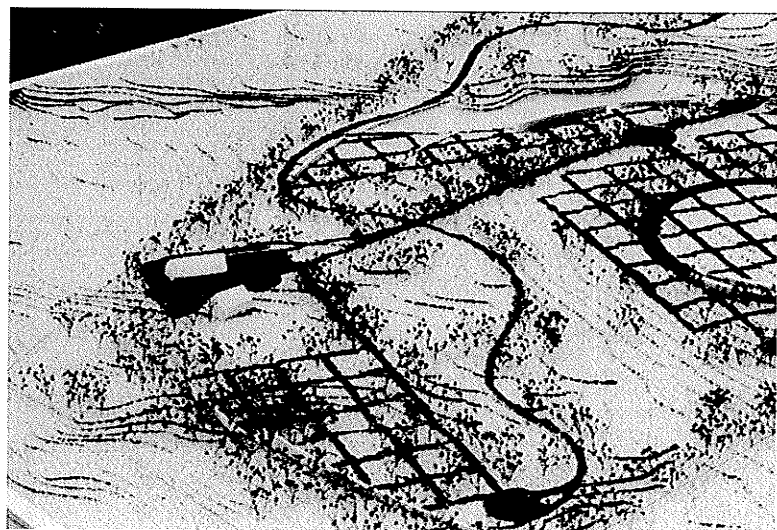


Fig. 5.15
View showing the integration that exists between park and burial.

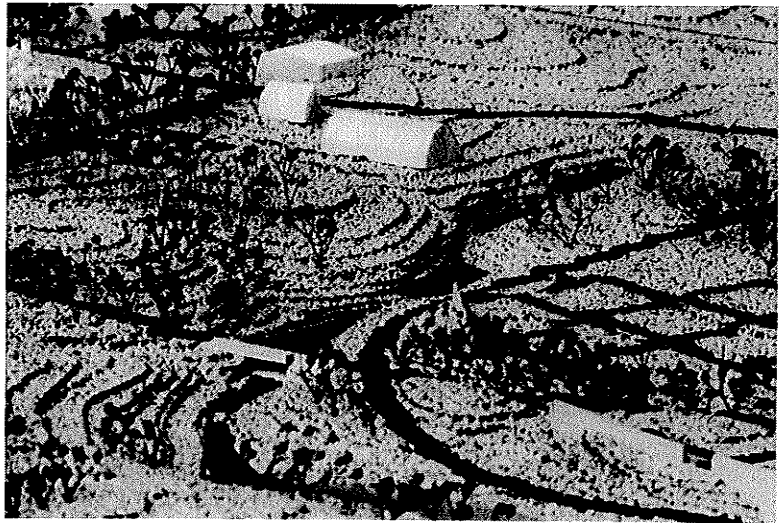


Fig. 5.16
View of the park road winding around the ravine towards the conservatory and café.

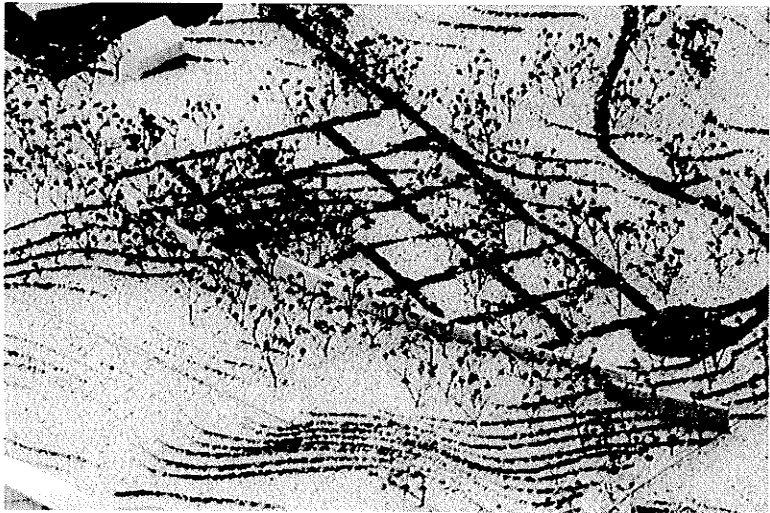


Fig. 5.17
The burial arcs help hold back the topography and creates an interesting form along the eastern boundary of the site.



Fig. 5.18
View showing the main processional path.

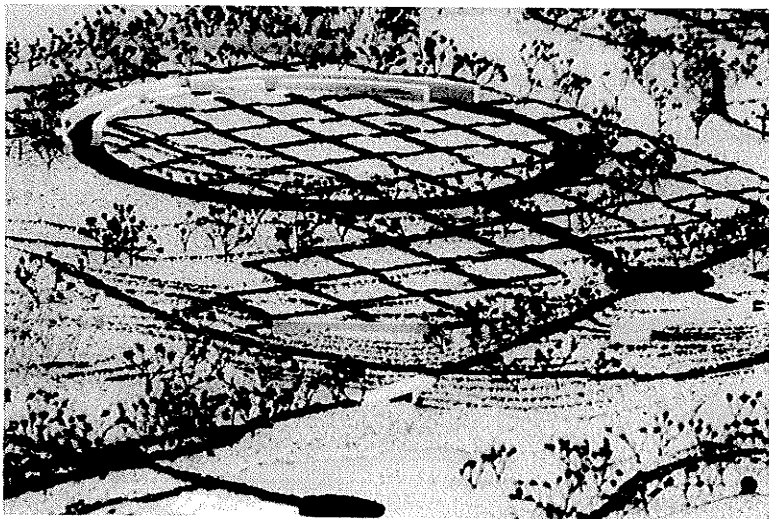


Fig. 5.19
View of the bridge along the main path, crossing the cascading waters of the ravine.

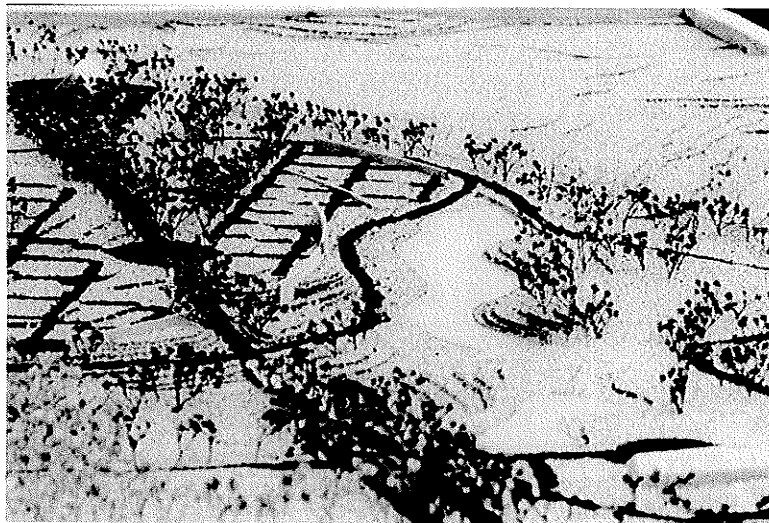


Fig. 5.20
View of the burial areas contained by the arcs, perceived to be segments of a greater circle.

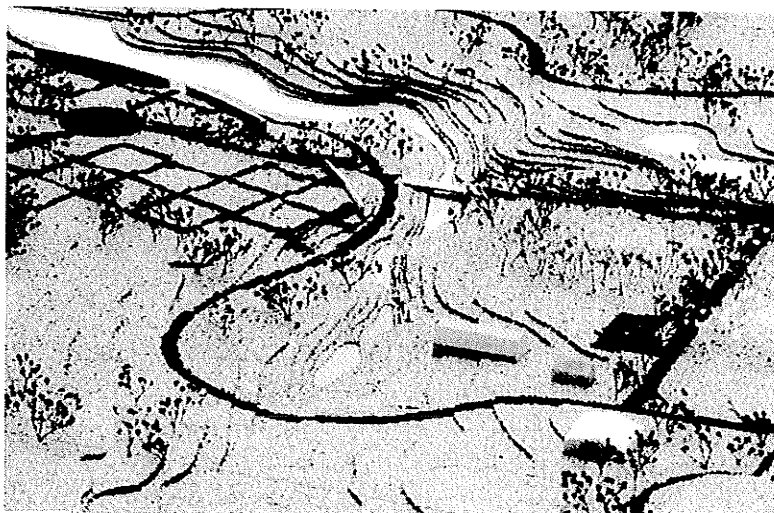


Fig. 5.21
View looking down the ravine from the gardens and conservatory towards the lake.

Summary

Summary

The intent of this study was to investigate the notion of the cemetery as it exists in contemporary society. As we have seen, the cemetery's role within the community has changed from a place of refuge and escape from the city, to one of being nothing more than a place for the internment of the dead. Ever since the decline of the rural cemetery and the rise of the urban park, our views of the cemetery have been prejudiced and conditioned by this perception. What the rural cemetery once provided in terms of open space, nature, and amenities have today been taken over by the urban park and its significance as an important part of the community has been severely diminished.

The cemetery is a part of every community and as such represents a significant portion of 'unused' open space. The problem of finding a more useful role for the cemetery within the life of the community is not unique to Pickering. Urban sprawl throughout North America has meant that many cemeteries which were once at the outskirts of the community have become a part of the community itself, albeit a seemingly unuseful part. The challenge has become one of making the cemetery a useable open space which contributes to the community in a way it originally did.

The task set out in this study is one of redefining the role of cemetery, and at the same time, the park. This has been stated as the creation of a *community sanctuary* — a place of refuge and escape from the pressures and pace of urban life. This approach does not mean the simple return to the cemetery of the past but rather an integration of the aspects of the cemetery and the park such that each takes on the characteristics of the other to form a third, new entity. A duality takes place such that the cemetery, and the park, is redefined within contemporary society and becomes a valuable new community resource.

The essence of this study is not to promote the creation of 'new' cemeteries or parks, nor the advocacy of a new 'style' of cemeteries. It is not the design per se which is intended to stand out, but rather the *approach* to the identification and reclamation of wasted and lost space within our cities such that they may once again become useful and valuable parts of the community. More than anything, it has to do with *perceptions* and the changing of those perceptions and attitudes in a manner which improves the nature of our environment.

Appendices

- Appendix A: Climatic Data
- Appendix B: Regional Analysis of Pickering District
- Appendix C: Pickering/Ajax Church Listings
- Appendix D: Planning Considerations
- Appendix E: Aerial Photograph
- Appendix F: Site Photographs

Appendix A: Climatic Data

The site is located at approximately 43 degrees N latitude, and 79 degrees W longitude, 140 metres above sea level. All climatic data is from Environment Canada, Atmospheric Environment Service.

Fig. A1 Percentage Frequency of Cloud Cover

Month	Clear	Scattered	Broken	Overcast
January	20.1	10.1	24.2	45.6
February	23.2	10.7	23.8	42.3
March	26.1	10.5	23.5	39.9
April	27.9	11.8	25.8	34.5
May	27.8	13.8	29.9	28.5
June	27.7	17.1	32.7	22.5
July	32.7	19.7	32.4	15.2
August	32.2	18.1	30.5	19.2
September	31.6	15.4	29.4	23.6
October	28.8	12.6	29.7	28.9
November	15.3	9.8	29.4	45.5
December	16.7	8.8	23.9	50.6

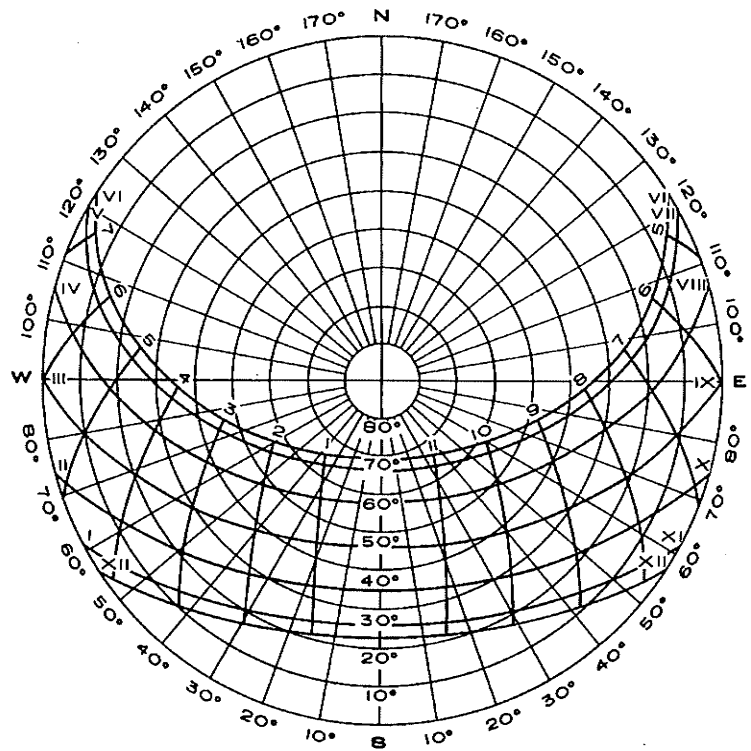
Fig. A2 Mean Temperature (C°)

Month	High	Low	Mean	Extreme High	Extreme Low
January	-2.5	-10.9	-6.7	16.7	-31.1
February	-1.6	-10.5	-6.1	12.2	-31.1
March	3.3	-5.2	-1.0	25.6	-28.9
April	11.5	0.8	6.2	29.4	-17.2
May	18.4	6.1	12.3	34.4	-5.6
June	23.9	11.5	17.7	36.7	0.6
July	26.8	14.2	20.6	36.1	3.9
August	25.8	13.6	19.7	38.3	1.1
September	21.3	9.6	15.5	36.7	-3.9
October	14.6	3.9	9.3	30.6	-8.3
November	7.2	-0.6	3.3	25.0	-18.3
December	0.4	-7.4	-3.5	18.9	-31.1

Fig. A3 Mean Humidity/Wind Conditions/Sunshine

Month	Relative Humidity	Prevailing Direction	Speed (km/h)	Bright Sunshine
January	80%	WSW	18.4	92.1 hrs.
February	79%	N	17.6	111.6 hrs.
March	77%	N	17.6	145.0 hrs.
April	70%	N	17.3	182.3 hrs.
May	68%	N	14.9	232.7 hrs.
June	70%	N	13.4	252.5 hrs.
July	69%	N	12.5	280.5 hrs.
August	73%	N	12.3	251.5 hrs.
September	76%	N	13.0	191.8 hrs.
October	77%	W	14.1	149.1 hrs.
November	81%	W	16.7	81.1 hrs.
December	82%	W	17.1	75.2 hrs.

Fig. A4 Stereographic Sunpath Diagram (44 Degrees North Latitude)



Appendix B: Regional Analysis of Pickering District

The following maps provide supplementary information for the Pickering District on a regional level.

- Fig. B1 Planning Communities.
- Fig. B2 Neighbourhoods, Villages and Areas.
- Fig. B3 Environmental Resources.
- Fig. B4 Rural Area Major Land Holdings.
- Fig. B5 Existing Commuter Road/Rail Connections.
- Fig. B6 Planned/Potential Commuter Road & Rail Connections.
- Fig. B7 Proposed Pickering Trail System.
- Fig. B8 Heritage Resources
- Fig. B9 Noise Exposure Forecast and Minister's Zoning Orders.

Maps created from information in "Planning Background Number one, Pickering District Plan Review", Pickering Planning Department, 1981.

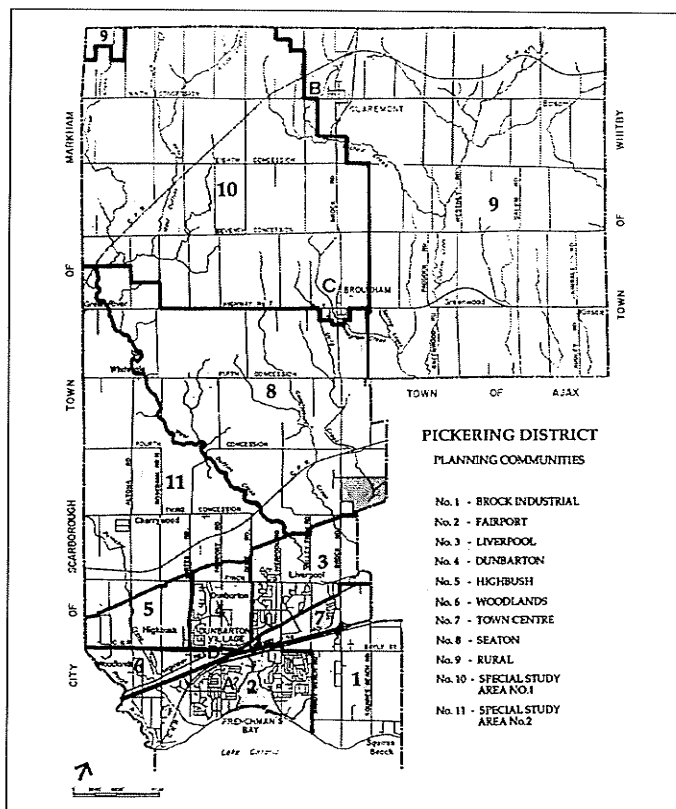


Fig. B1 Planning Communities

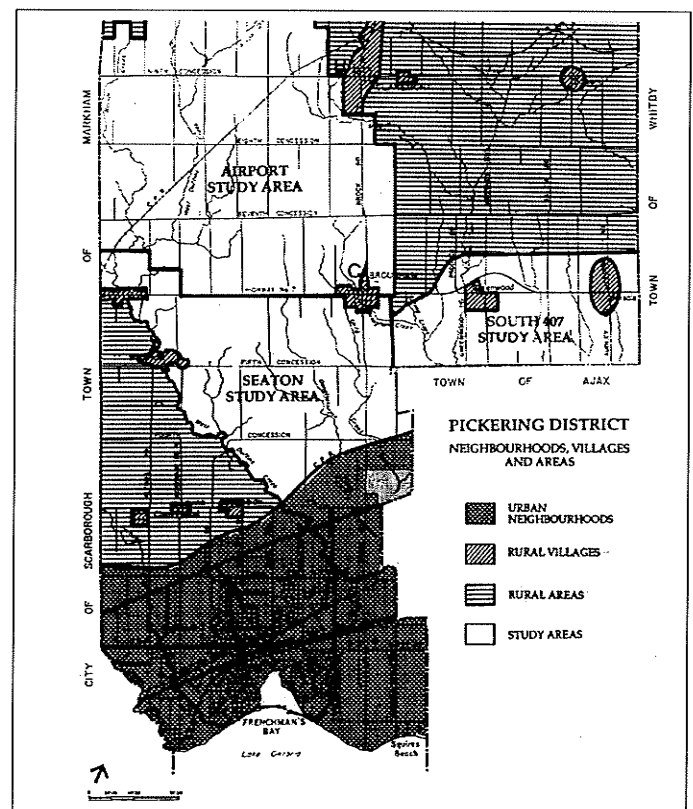


Fig. B2 Neighbourhoods, Villages and Areas

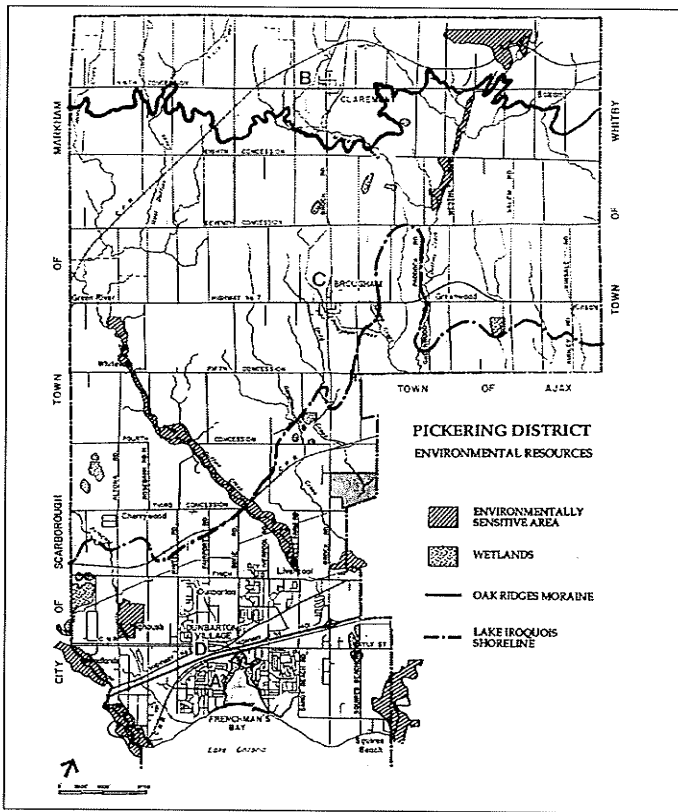


Fig. B3 Environmental Resources

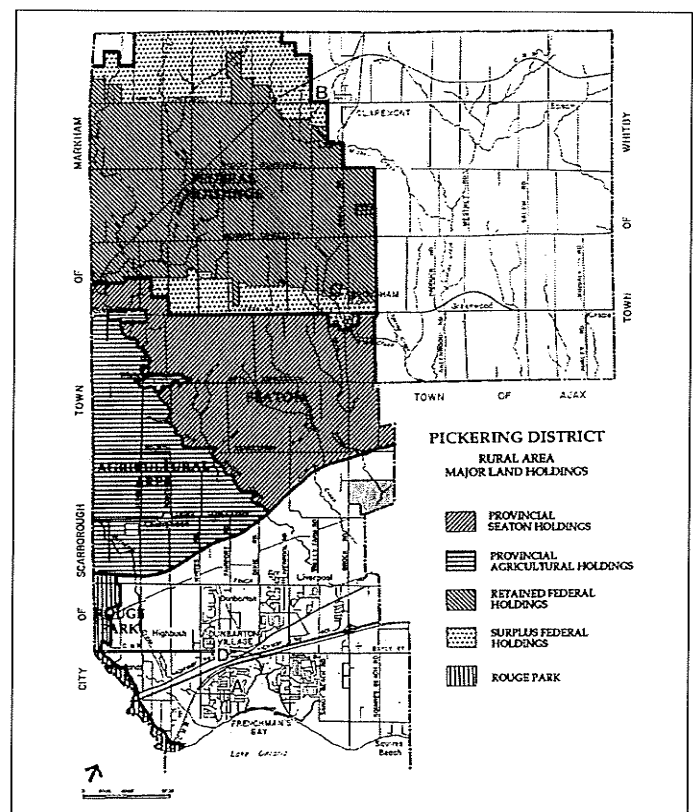


Fig. B4 Rural Area Major Land Holdings

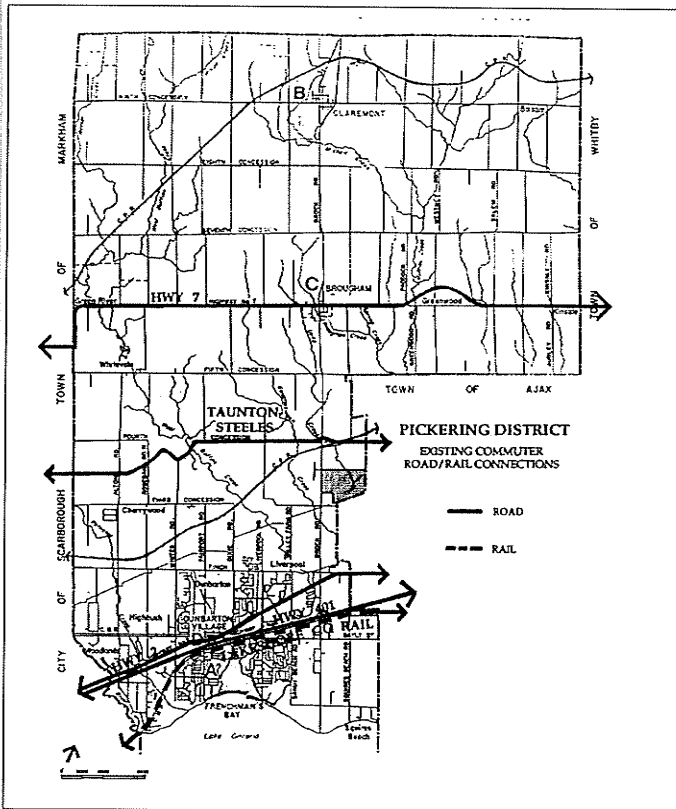


Fig. B5 Existing Commuter Road/Rail Connections

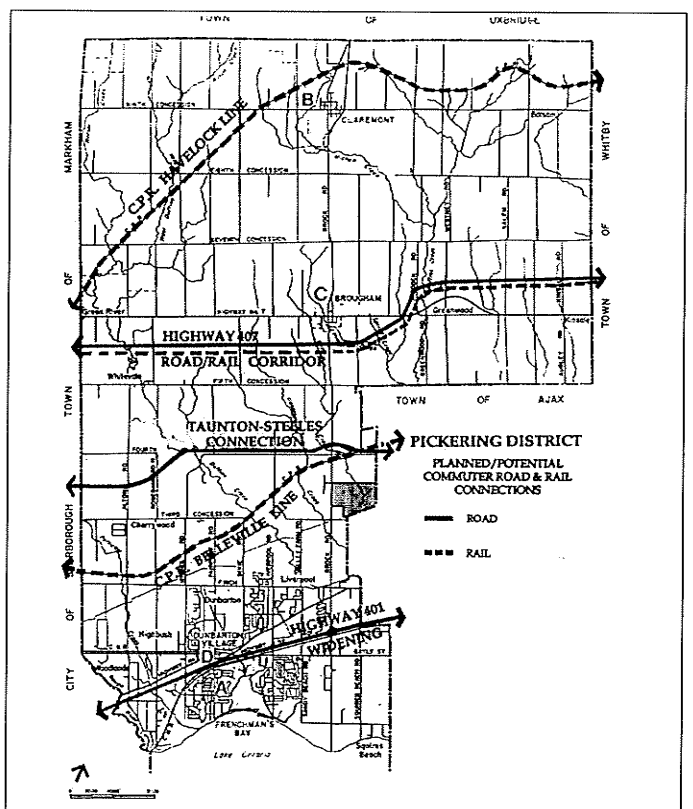


Fig. B6 Planned/Potential Commuter Road/Rail Connections

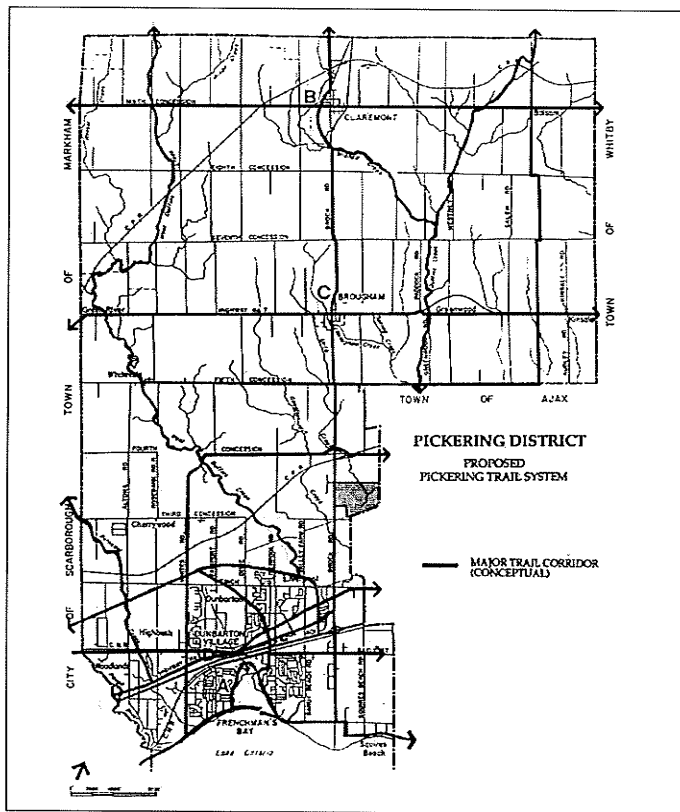


Fig. B7 Proposed Pickering Trail System

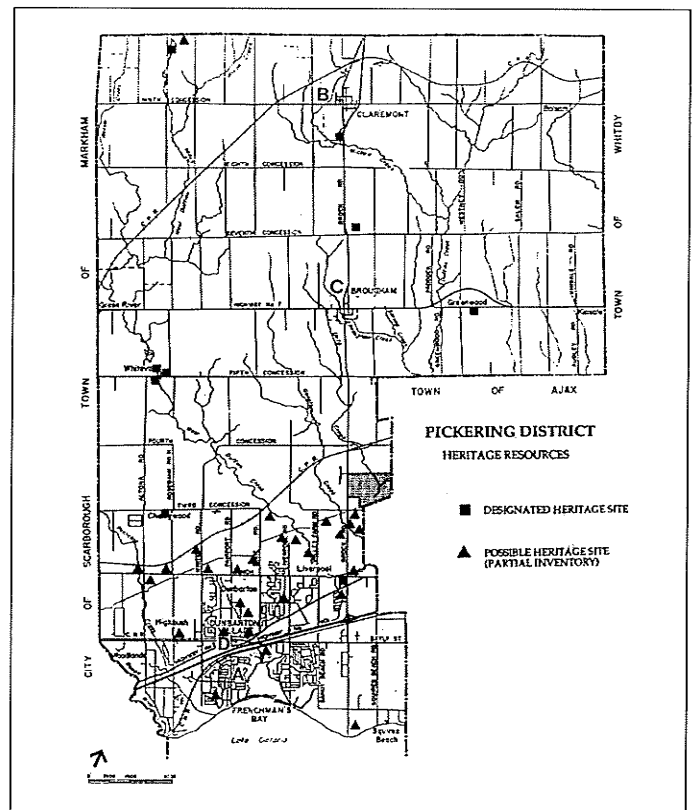


Fig. B8 Heritage Resources

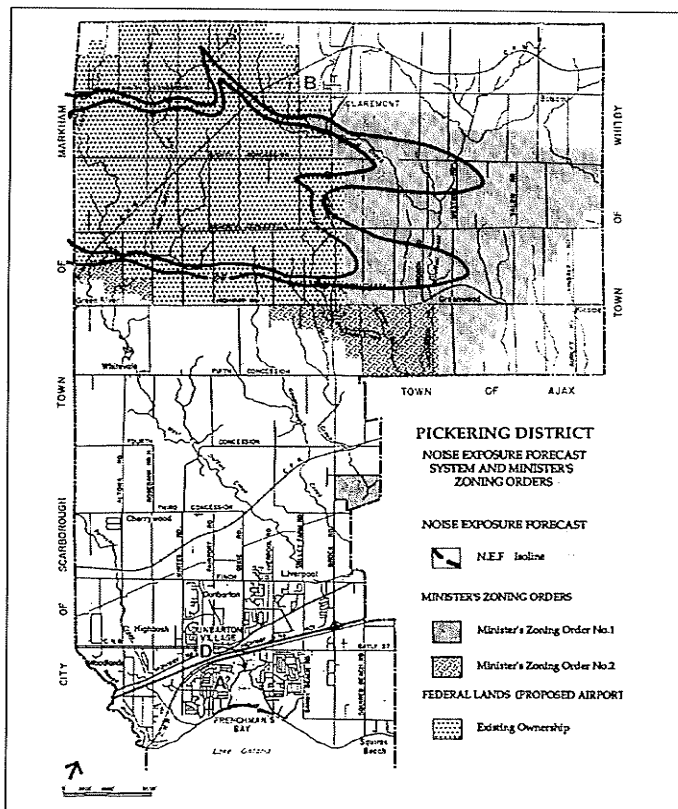


Fig. B9 Noise Exposure Forecast and Minister's Zoning Orders

Appendix C: Pickering/Ajax Church Listing

<i>Religion</i>	<i>Size of Congregation</i>
<i>Anglican</i>	
Church of Holy Trinity	1,000
St. George's Anglican Church	225
St. Martin's Anglican Church	150
St. Paul's On The Hill Anglican Church	450
<i>Associated Gospel</i>	
Steeple Hill Community Bible Church	400
<i>BAHA'I Faith</i>	120
<i>Baptist</i>	
Ajax Baptist Church	200
Bayfair Baptist Church	1,000
Claremont First Baptist Church	50
Faithway Baptist Church & Schools	220
Pickering Community Baptist Church	200
<i>Christian & Missionary Alliance</i>	
Ajax Alliance Church	200
Ajax Christian Community Fellowship	100
Lake Driveway Christian Assembly	100
<i>Church of Christ</i>	125
<i>Church of Nazarene</i>	100
<i>Community Church</i>	
New Life Community Church	100
<i>Hindu</i>	
Satya Sanatan Dharma Cultural Sabha	1,290
<i>Jehovah's Witness</i>	
Kingdom Hall	n/a
<i>Lutheran</i>	
Disciples of Christ Lutheran Church	60
Peace Lutheran Church	90

<i>Mennonite</i>	
Durham Mennonite Fellowship	50
<i>Mormon</i>	
Church of Latter-Day Saints, Mormon	400
<i>Non-Denominational</i>	
Christian Faith Outreach Centre	60
Pickering Community Church	60
<i>Pentecostal</i>	
Christian Life Centre	450
Pentecostal Lighthouse	60
Pickering Pentecostal Church	150
Southside Worship Centre	80
<i>Presbyterian</i>	
Amberlea Presbyterian	275
St. Andrew's Presbyterian Church	260
St. Timothy's Presbyterian Church	225
So-Mang Korean Presbyterian Church	200
<i>Quakers</i>	
Religious Society of Friends (Quakers)	245
<i>Roman Catholic</i>	
Holy Redeemer Roman Catholic Church	750
St. Bernadett's Roman Catholic Church	1,200
St. Francis De Sales Roman Catholic Church	1,000
St. Isaac Jogues Roman Catholic Church	3,000
<i>Salvation Army</i>	
	40
<i>Seventh-Day Adventist</i>	
Steeple Hill Community Bible Church	400
<i>United</i>	
Claremont Pastoral Charge United Church	85
Dunbarton - Fairport United Church	300
Pickering Village United Church	510
St. Paul's United Church	320

Source: Toronto Trust Cemeteries.

Appendix D: Planning Considerations

1. The site is zoned and licensed for cemetery, crematorium and mausoleum use. Refer to fig. D1.
2. Uses permitted include: cemetery, cemetery administrative office, cemetery equipment building, cemetery greenhouse, columbarium, mausoleum, 1 dwelling unit for staff member, and agricultural uses not having a building.
3. Proposed grave sites must not be located any closer than 30 metres to a lot line on which a water well exists or may be located in the future. This requirement should be enforced along the north lot line. Grave sites must also be a minimum of 15 metres away from any open water courses and 30 metres away from existing well sites and individual lots on the west property line. (*Durham Regional Health Unit*)
4. Filling and grading should be carried out in such a manner as to ensure adequate runoff. (*Durham Regional Health Unit*)
5. In areas of high groundwater, enough fill must be provided to ensure a minimum of 0.5 metres of unsaturated soil between the bottom of the grave and high groundwater level. The method for disposal of underdrain water to open water courses must be approved by the Ministry of the Environment. (*Durham Regional Health Unit*)
6. The Metropolitan Toronto and Region Conservation Authority designates a limit of fill or "fill regulation line" across the east side of the site along Urfe Creek. (*Ontario Regulation 170 RRO 1980*) Refer to fig. D2.
7. The Town of Pickering requires a 10 metre setback on the north and south property lines. A 15 metre setback for buildings is required along Brock Road. (*By-Law 1927/84*) Refer to fig. D2.
8. Building area requirements: minimum lot area – 33 hectares, minimum lot frontage – 417 metres and maximum building height – 18 metres.
9. A memorial stone or monument which is less than 0.3 metres in height, and is at least 3 metres from the lot line may be erected, altered or used outside the building envelope.

10. A mausoleum or columbarium which does not exceed 2 metres in height and has exterior dimensions such that the volume enclosed thereby does not exceed 15 cubic metres shall be considered to be a memorial stone or monument.

Fig. D1 Site Description and Zoning

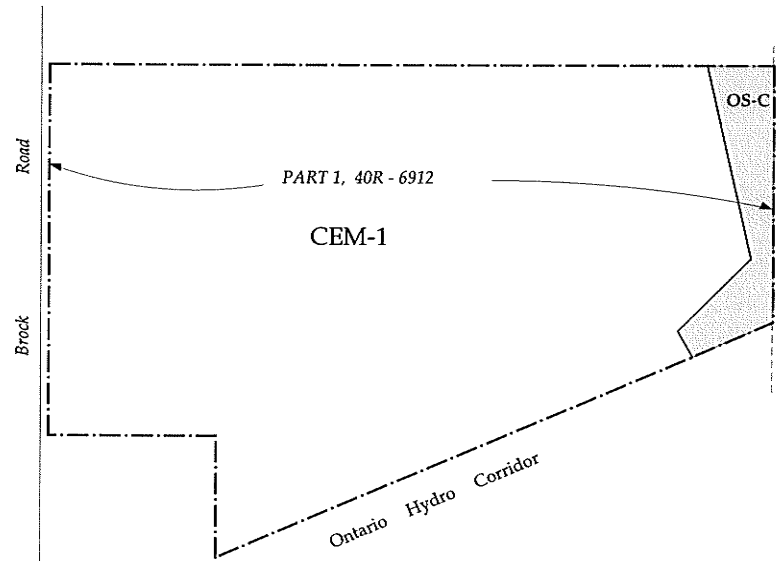
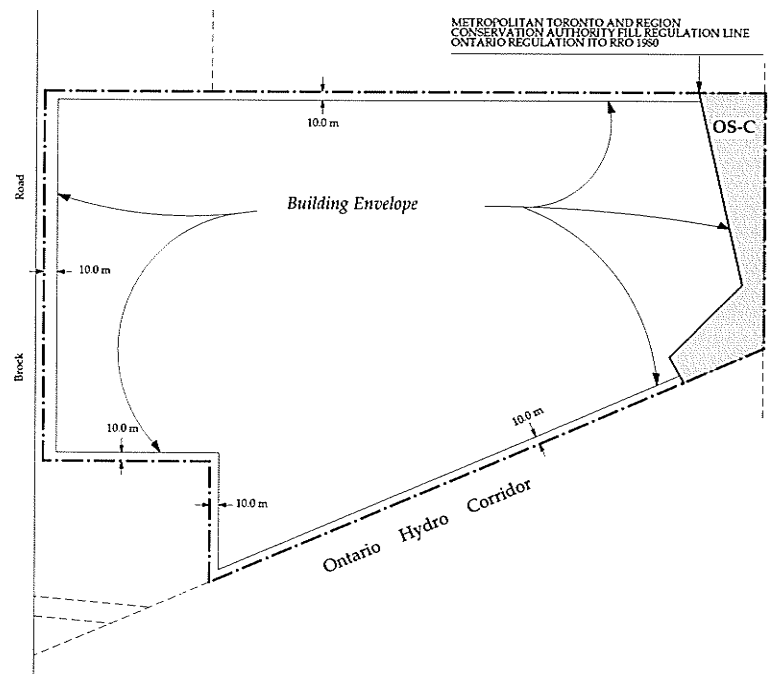


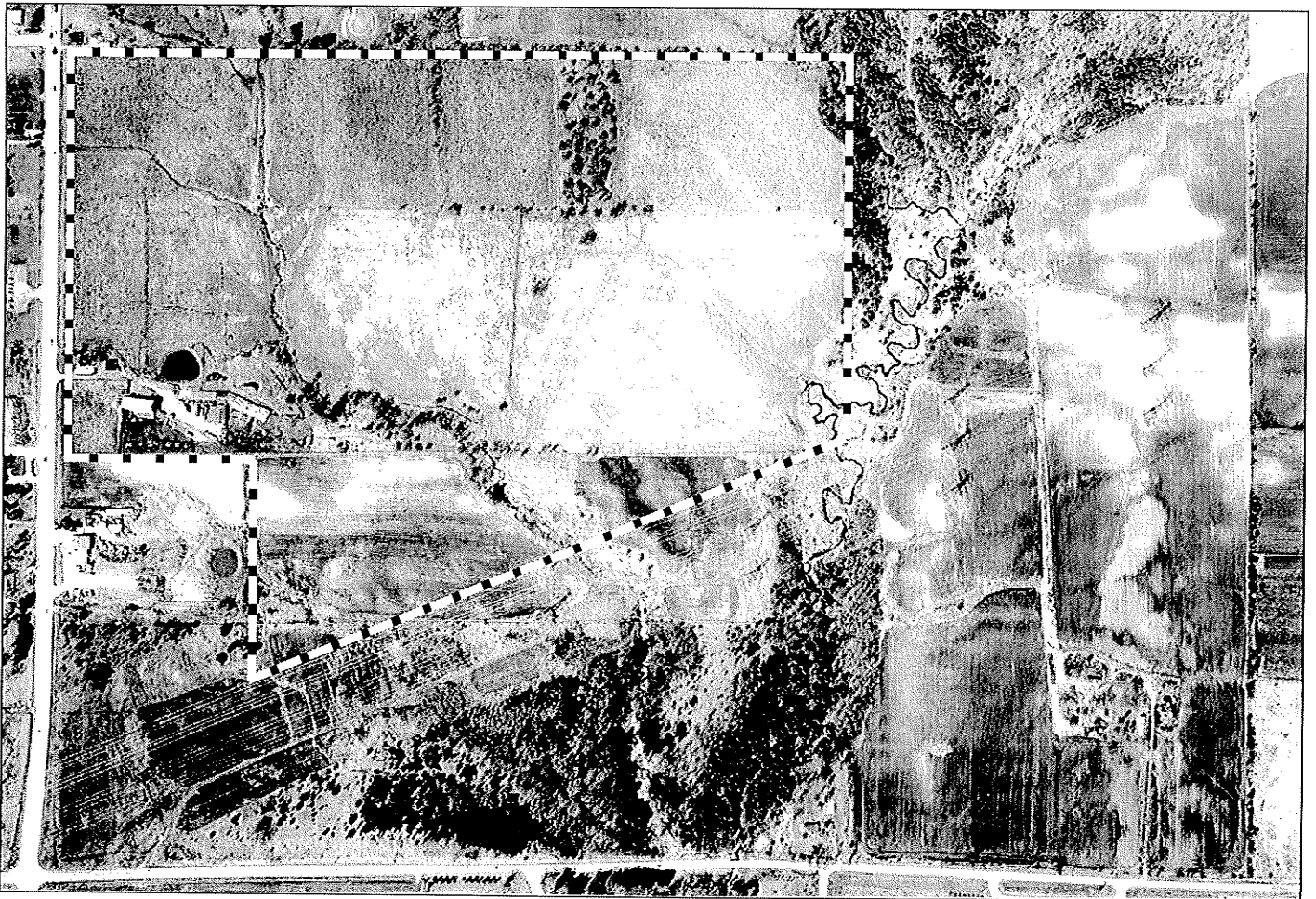
Fig. D2 Planning Considerations



Appendix E: Aerial Photograph

The following aerial photograph of the site (outlined with a white dashed line) reveals existing site features which include the farm house, barn, pig barn, pond, creek, ravine, meadow, pasture, hayfield, old orchard and woodlot.

Fig. E1 Aerial Photograph



Source: Aquarius Flight Inc., 1989.

Appendix F: Site Photographs

Refer to the key plan (fig. F1) to locate the viewpoint for each of the following photographs.



Fig. F2 Typical barn structure for the Southwestern Ontario farm.

Fig. F1 Key Plan - Site Photographs

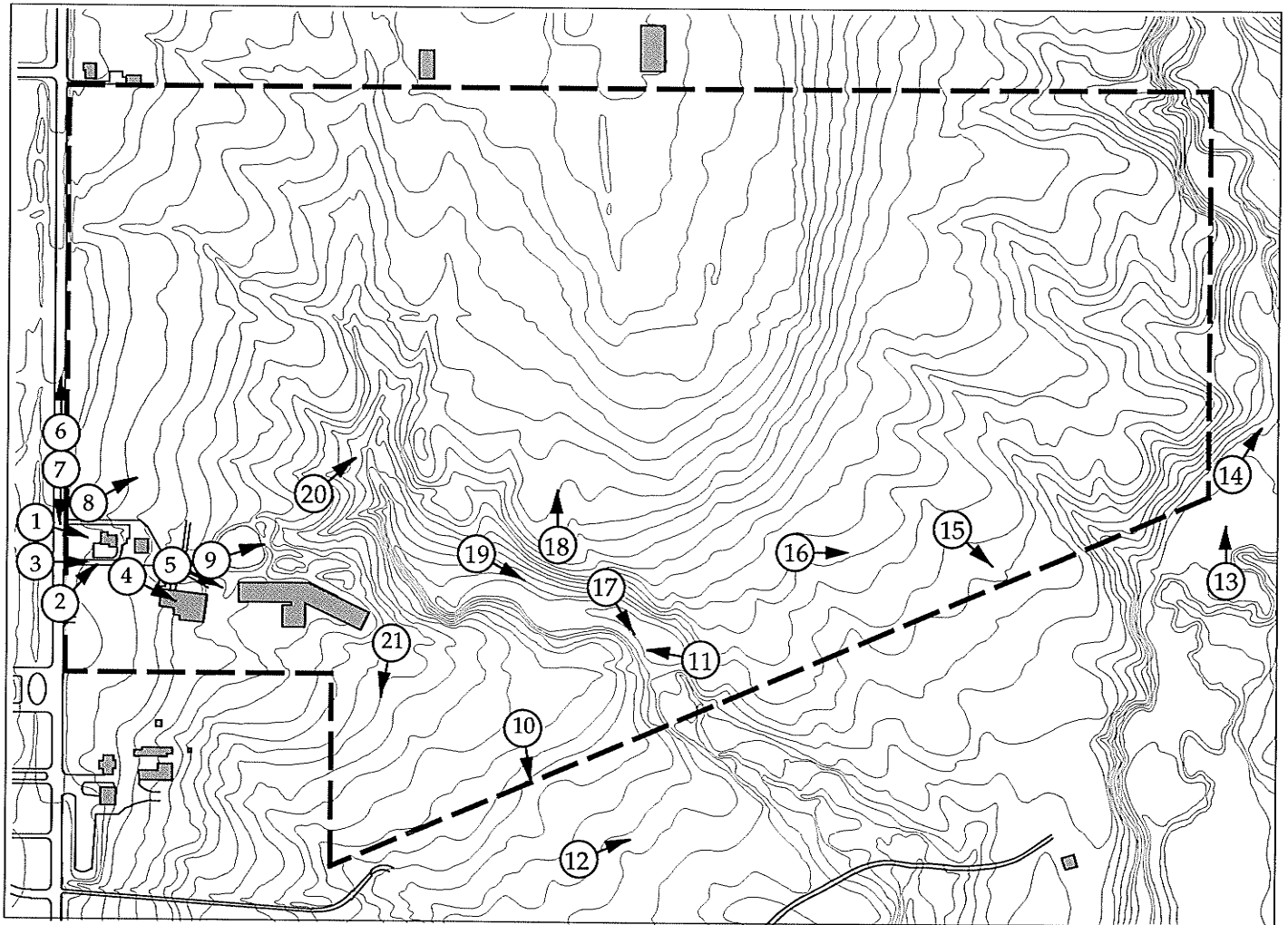


Fig. F3 Viewpoint No. 1 – Looking eastward towards farmhouse and barn.

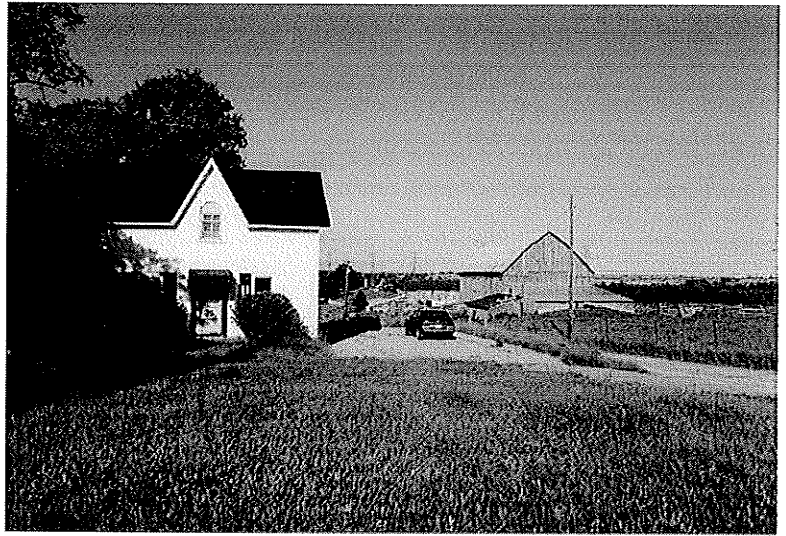


Fig. F4 Viewpoint No. 2 – The gable style roof of the farmhouse is typical of an anglo-saxon settlement.



Fig. F5 Viewpoint No. 3 – Looking eastward towards barn from main entrance.



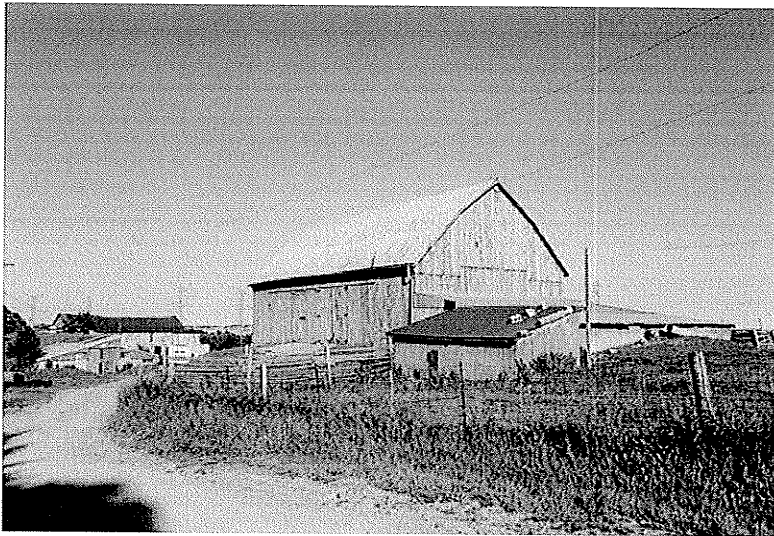


Fig. F6 Viewpoint No. 4 – The barn is an important architectural feature of the site. The west/east orientation, heavy post and beam structure, mortise and tenon joinery and vertical board batten siding are typical features of a Southern Ontario barn. The loft built over the stable is accessed by a built-up earth ramp on the north side.

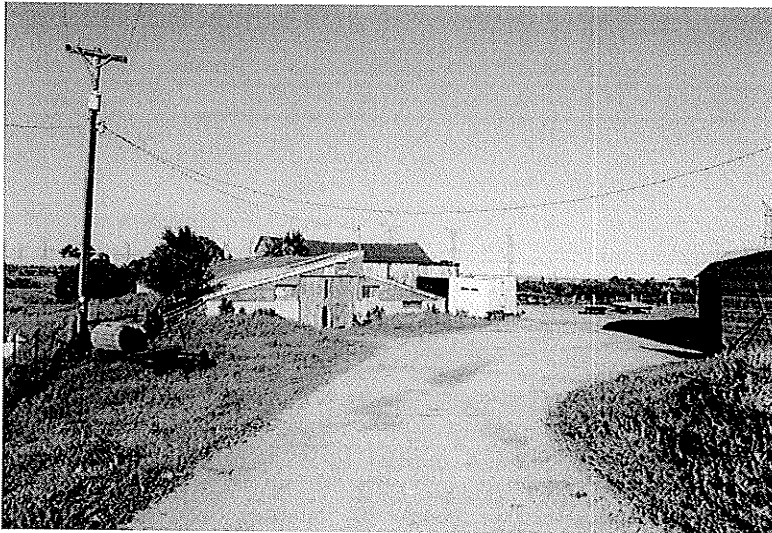


Fig. F7 Viewpoint No. 5 – The pig barn is in poor condition and has no architectural significance.



Fig. F8 Viewpoint No. 6 – Looking north along Brock road.

Fig. F9 Viewpoint No. 7 – Looking south along Brock road.

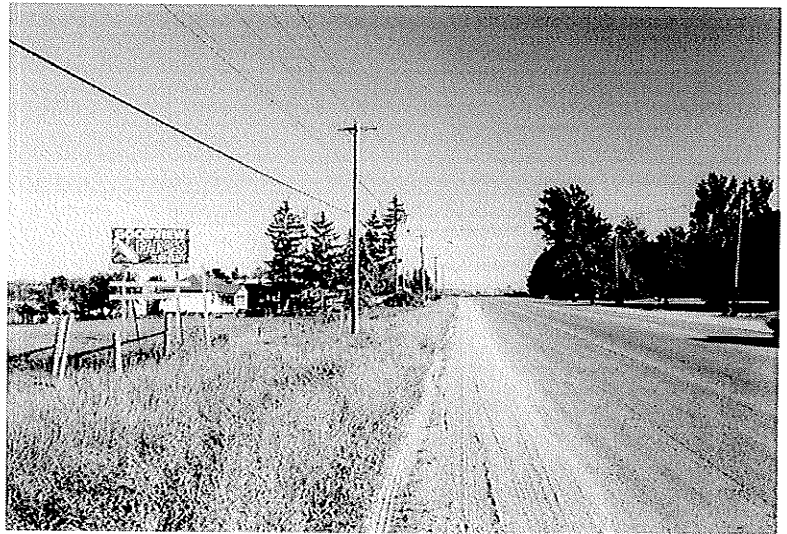


Fig. F10 Viewpoint No. 8 – Looking north-east over-looking the meadow.



Fig. F11 Viewpoint No. 9 – Looking north-east over-looking pond and meadow.





Fig. F12 Viewpoint No. 10 – Looking south towards the Gatineau hydro corridor.



Fig. F13 Viewpoint No. 11 – Looking west from bottom of ravine towards main entrance and barns.

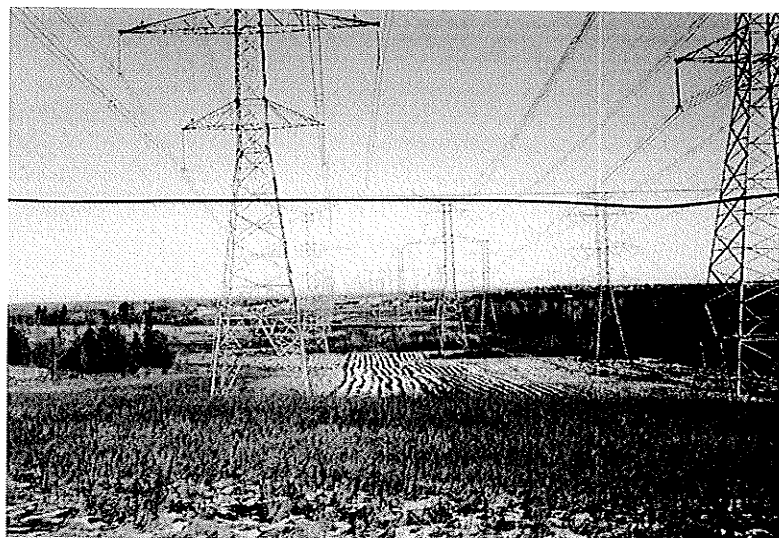


Fig. F14 Viewpoint No. 12 – Looking north-east along the Gatineau hydro corridor.

Fig. F15 Viewpoint No. 13 – Looking north towards the woodlands along Urfe creek (note the hydro tower towards center-left of image).



Fig. F16 Viewpoint No. 14 – Looking north into the woodlands along Urfe creek.



Fig. F17 Viewpoint No. 15 – Looking eastward along the site's southern boundary with the Gatineau hydro corridor in the distance.





Fig. F18 Viewpoint No. 16 – Looking eastward along service road towards open field.



Fig. F19 Viewpoint No. 17 – Looking south down ravine towards southern boundary (the Gatineau Hydro corridor is behind the trees).



Fig. F20 Viewpoint No. 18 – Looking north towards meadow from ravine.

Fig. F21 Viewpoint No. 19 – Looking south-east from bottom of ravine.



Fig. F22 Viewpoint No. 20 – Looking north-east across the meadow towards the old orchard.



Fig. F23 Viewpoint No. 21 – Abandoned artifacts located to the rear of pig barn.



Figure Credits

CHAPTER ONE

- Page 15** *title page*, reprinted from Hugh Meller, *London Cemeteries, An illustrated Guide and Gazetteer* (England, Avebury Publishing Company, 1981), p. 319.
- Page 17** *fig. 1.1*, reprinted from Hugh Meller, *London Cemeteries, An illustrated Guide and Gazetteer* (England, Avebury Publishing Company, 1981), p. 16.
- Page 18** *fig. 1.2*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), cover page.
- Page 19** *fig. 1.3*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 19.
- Page 20** *fig. 1.4*, reprinted from Metropolitan Toronto and Region Conservation Authority, *The Greenspace Strategy for the Greater Toronto Region 1990*, cover page.

CHAPTER TWO

- Page 23** *title page*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 101.

- Page 25** *fig. 2.1*, reprinted from Dr. Frances Clegg, *Cemeteries for the Living* (Landscape Design, October 1989), p. 17.
- Page 26** *fig. 2.2*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 13; *fig. 2.3*, *ibid.*, p. 107.
- Page 27** *fig. 2.4*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 11; *fig. 2.5*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 143.
- Page 28** *fig. 2.6*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 33; *fig. 2.7* reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 14.
- Page 29** *fig. 2.8*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 14; *fig. 2.9*, reprinted from Richard A. Etlin, *The Architecture of Death* (Massachusetts, The MIT Press, 1984), p. 362; *fig. 2.10*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 51.
- Page 30** *fig. 2.11*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 16; *fig. 2.12*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 52; *fig. 2.13*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 16.
- Page 31** *fig. 2.14*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 16.
- Page 32** *fig. 2.15*, reprinted from Sharyn Thompson, *Florida's Historic Cemeteries: a preservation handbook* (Florida: Historic Tallahassee Preservation Board & Florida Department of State, 1989), p. 44; *fig. 2.16*, *ibid.*, p. 9.
- Page 33** *fig. 2.17*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 18; *fig. 2.18*,

ibid., p. 60.

- Page 34** *fig. 2.19*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 18.
- Page 35** *fig. 2.20*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 18; *fig. 2.21*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 55; *fig. 2.22*, reprinted from Ann Leighton, *American Gardens of the Nineteenth Century* (Amherst, The MIT Press, 1987), p. 139.
- Page 36** *fig. 2.23*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 102.
- Page 37** *fig. 2.24*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 22; *fig. 2.25*, ibid., p. 23., *fig. 2.26*, ibid., p. 23.
- Page 38** *fig. 2.27*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 29.
- Page 39** *fig. 2.28*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 28; *fig. 2.29*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 189; *fig. 2.30*, ibid., p. 169.
- Page 40** *fig. 2.31*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 31.
- Page 41** *fig. 2.32*, reprinted from Kenneth t. Jackson, Camilo José Vergara, *Silent Cities: the evolution of the American cemetery* (New York, Princeton Architectural Press, 1989), p. 107; *fig. 2.33*, ibid., p. 68.
- Page 42** *fig. 2.34*, reprinted from Hugh Meller, *London Cemeteries, An illustrated Guide and Gazetteer* (England, Avebury Publishing Company, 1981), p. 84.
- Page 43** *fig. 2.35*, reprinted from David Charles Sloane, *The Last Great Necessity: cemeteries in American history* (Maryland, The John Hopkins University Press Ltd., 1991), p. 4-5.

CHAPTER THREE

- Page 45** *title page*, reprinted from Ministry of Natural Resources, *Options for Greater Toronto Area Greenlands Strategy* 1990, p. 1.
- Page 46** *fig. 3.1*, Regional Map.
- Page 47** *fig. 3.2*, Regional Location Map.
- Page 48** *fig. 3.3*, Regional Soils Map.
- Page 49** *fig. 3.4*, Niagara Escarpment Commission, *Guesta Magazine* 1990-1991, p. 4.
- Page 50** *fig. 3.5*, reprinted from Ministry of Natural Resources, *Options for Greater Toronto Area Greenlands Strategy* 1990, p. 4.
- Page 51** *fig. 3.6*, Regional Development Map.
- Page 52** *fig. 3.7*, Regional Conservation Map.
- Page 53** *fig. 3.8*, reprinted from Ministry of Natural Resources, *Options for Greater Toronto Area Greenlands Strategy* 1990, p. 5.
- Page 54** *fig. 3.9*, Regional Transportation Map.
- Page 57** *fig. 3.10*, Regional Cemeteries Map.
- Page 58** *fig. 3.11*, Site Photograph, *see Appendix F*.
- Page 59** *fig. 3.12*, reprinted from Ministry of Natural Resources, *Options for Greater Toronto Area Greenlands Strategy* 1990, p. 5.
- Page 60** *fig. 3.13*, Regional Open Space Framework.
- Page 61** *fig. 3.14*, reprinted from Ministry of Natural Resources, *Options for Greater Toronto Area Greenlands Strategy* 1990, p. 12.
- Page 64** *fig. 3.15*, Local Land Use Map.
- Page 65** *fig. 3.16*, Local Transportation Map.
- Page 67** *fig. 3.17*, Local Landform & Vegetation Map.
- Page 68** *fig. 3.18*, Existing Site Conditions.
- Page 69** *fig. 3.19*, Aerial Photograph, *see Appendix F*.
- Page 70** *fig. 3.20*, Site Photograph, *see Appendix F*.
- Page 71** *fig. 3.21*, Site Ground Water Map.

- Page 72** *fig. 3.22, Site Photograph, see Appendix F.*
- Page 73** *fig. 3.23, Site Vegetation Map.*
- Page 74** *fig. 3.24, Site Photograph; fig. 3.25, ibid.*
- Page 75** *fig. 3.26, Site Slope Analysis Map.*
- Page 76** *fig. 3.27, Site Landform Map.*
- Page 77** *fig. 3.28, Site Drainage Pattern Map.*
- Page 78** *fig. 3.29, Site Photograph; fig. 3.30, ibid.*
- Page 79** *fig. 3.31, Site Aesthetics Map.*
- Page 80** *fig. 3.32, Site Photograph; fig. 3.33, ibid.*

CHAPTER FOUR

- Page 92** *fig. 4.1, Suitability Criteria for Use Areas, matrix.*
- Page 93** *fig. 4.2, Suitability Conditions for Burial Requirements,*
map.
- Page 94** *fig. 4.3, Suitability Criteria for Major/Minor Structures,*
matrix.
- Page 95** *fig. 4.4, Suitability Conditions for Structures, map.*
- Page 96** *fig. 4.5, Relationship Criteria for Design Components,*
matrix.
- Page 97** *fig. 4.6, Composite of Optimum Suitability, map.*

CHAPTER FIVE

- Page 104** *fig. 5.1, Site Plan.*
- Page 115** *fig. 5.2, Design Sketch.*
- Page 115** *fig. 5.3, Design Sketch.*
- Page 115** *fig. 5.4, Design Sketch.*
- Page 115** *fig. 5.5, Design Sketch, Perspective.*
- Page 115** *fig. 5.2, Design Sketch.*
- Page 115** *fig. 5.3, Design Sketch.*
- Page 115** *fig. 5.4, Design Sketch.*

- Page 115** *fig. 5.5, Design Sketch, Perspective.*
- Page 116** *fig. 5.6, Design Sketch.*
- Page 116** *fig. 5.7, Design Sketch.*
- Page 116** *fig. 5.8, Design Sketch, Perspective.*
- Page 116** *fig. 5.9, Design Sketch.*
- Page 117** *fig. 5.10, Design Sketch.*
- Page 117** *fig. 5.11, Design Sketch.*
- Page 117** *fig. 5.12, Design Sketch.*
- Page 119** *fig. 5.13, Model Photograph.*
- Page 119** *fig. 5.14, Model Photograph.*
- Page 119** *fig. 5.15, Model Photograph.*
- Page 120** *fig. 5.16, Model Photograph.*
- Page 120** *fig. 5.17, Model Photograph.*
- Page 120** *fig. 5.18, Model Photograph.*
- Page 121** *fig. 5.19, Model Photograph.*
- Page 121** *fig. 5.20, Model Photograph.*
- Page 121** *fig. 5.21, Model Photograph.*

APPENDIX A

- Page 129** *fig. A1, A.2, A.3, reprinted from Environment Canada, Atmospheric Environment Service.*
- Page 130** *fig. A4, reprinted from Charles G. Ramsey, Ramsey/Sleeper Architectural Graphic Standards, 8th Edition (New York, John Wiley & Sons, Inc., 1988), p. 733.*

APPENDIX B

- Page 131** *fig. B1-B9, reprinted from Pickering Planning Department, Planning Backgrounder Number One, Pickering District Plan Review, 1993.*

APPENDIX C

- Page 135** *fig. C1, reprinted from Toronto Trust Cemeteries, Feasibility Study, 1985.*

APPENDIX D

Page 131 *fig. D1, D2*, reprinted from Corporation of the Town of Pickering, Planning Department, *Zoning By-law 1927/84*. 1984.

APPENDIX E

Page 139 *fig. E1*, Aerial Photograph, *Aquarius Flight Inc.*, 1989.

APPENDIX F

Page 141 *fig. F.1-F.23*, Key Plan, Site Photographs.

Bibliography

PUBLICATIONS:

Andrews, Malcolm. *The Search for the Picturesque: Landscape Aesthetics and Tourism in Britain, 1760-1800*. Stanford: Stanford University Press, 1989.

Colvin, Howard. *Architecture and the After-Life*. London: Yale University Press, 1991.

Constant, Caroline. *The Woodland Cemetery: Toward a Spiritual Landscape*. Stockholm: Caroline Constant and Bygglörlaget, 1994.

Curl, James Steven. *The Victorian Celebration of Death*. Great Britain: David & Charles Limited, 1972.

De Chiara, Joseph and John Callender. *Time-Savers Standards for Building Types, 2nd Edition*. New York: McGraw-Hill Book Company, 1980.

De Chiara, Joseph and Lee E. Koppelman. *Time-Savers Standards for Site Planning*. New York: McGraw-Hill Book Company, 1984.

Etlin, A. Richard. *The Architecture of Death: The Transformation of the Cemetery in Eighteenth Century Paris*. Cambridge: The MIT, 1984.

Jackson, T. Kenneth, and Vergara, Camilo José. *Silent Cities: The Evolution of the American Cemetery*. New York: Princeton

Architectural Press, 1989.

Karasov, Deborah and Waryan, Steve. *The Once and Future Park*. New York: Princeton Architectural Press, 1992.

Leighton, Ann. *American Gardens of the Nineteenth Century: "For Comfort and Affluence"*. Amherst: The MIT Press, 1987.

Lynch, Kevin. *Managing the Sense of a Region*. Cambridge: The MIT Press, 1976.

Lynch, Kevin. *The Image of the City*. Cambridge: The MIT Press, 1988.

Meller, Hugh. *London Cemeteries: An Illustrated Guide and Gazetteer*. Amersham: Avebury Publishing Company, 1981.

Molnar, J. Donald and Rutledge, Albert, J. *Anatomy of a Park*. Illinois: Waveland Press Inc., 1986.

Ragon, Michel. *The Space of Death: A study of Funerary Architecture, Decoration, and Urbanism*. Charlottesville: University Press of Virginia, 1983.

Simonds, John Ormsbee. *Landscape Architecture: A Manual of Site Planning and Design*. New York: McGraw-Hill Inc., 1983.

Sloane, David Charles. *The Last Great Necessity: Cemeteries in American History*. Baltimore: John Hopkins University Press, 1991.

Stokes, Samuel and others. *Saving America's Countryside: A Guide to Rural Conservation*. Baltimore: John Hopkins University Press, 1989.

Thacker, Christopher. *The History of Gardens*. California: University of California Press, 1979.

Thompson, Sharyn. *Florida's Historic Cemeteries: A Preservation Handbook*. Florida: Historic Tallahassee Preservation Board & Florida Department of State, 1989.

Trancik, Roger. *Finding Lost Space: Theories of Urban Design*. New York: Van Nostrand Reinhold, 1986.

REPORTS/GOVERNMENT PUBLICATIONS:

Corporation of the Town of Pickering. *Zoning By-Law Amendment Application A 35/82; Application to Amend Minister's Zoning Order No. 2 M 7/82. The Trustees of the Toronto General Burying Grounds. Part Lots 17 and 18, Concession 3 Town of Pickering*. 1982.

- Corporation of the Town of Pickering. *Planning Report # 5/83. Zoning By-Law Amendment Application A 35/82; Application to Amend Minister's Zoning Order No. 2 M 7/82. The Trustees of the Toronto General Burying Grounds. Part Lots 17 and 18, Concession 3 Town of Pickering.* 1983.
- Corporation of the Town of Pickering. *By-Law No. 3037: Rural Area Zoning By-Law.* 1993.
- Corporation of the Town of Pickering. *Zoning By-Law 1927/84.* 1984.
- Metropolitan Toronto and Region Conservation Authority. *The Watershed Plan of The Metropolitan Toronto and Region Conservation Authority.* 1986.
- Ministry of Natural Resources. *Options for a Greater Toronto Area Greenlands Strategy.* 1990.
- Metropolitan Toronto and Region Conservation Authority. *The Greenspace Strategy for the Greater Toronto Region.* 1989.
- Morrison Beatty Limited. *Hydrogeological Study Phase II of a Proposed Cemetery Site, Part of lots 17 and 18, Concession 3, Town of Pickering.* 1983.
- Nostrand, John van. *Seaton: The Form of its History. A Socio-Economic History of the Seaton Lands with the North Pickering Planning Area.* Ontario Ministry of Housing.
- Ontario Land Corporation. *Seaton in the Town of Pickering: Supporting Documentation for Official Plan Amendment Regional Municipality of Durham.* Ontario Ministry of Housing. 1980.
- Ontario Ministry of Housing. *Minister's Zoning Order #1. Order Made by the Minister Under the Planning Act; Restricted Area - County of Ontario, Township of Pickering.* 1972.
- Ontario Ministry of Housing. *Minister's Zoning Order #2. Order Made by the Minister Under the Planning Act; Restricted Areas-Regional Municipality of Durham, Town of Pickering.* 1974.
- Pickering Planning Department. *Planning Backgrounder Number One, Pickering District Plan Review: Emerging Planning Issues and Priorities in the Town of Pickering.* 1993.
- Regional Municipality of Durham. *Review of the Durham Regional official plan: Attachment No.1 to Commissioner's Report 91-P-70 as Recommended by Planning Committee.* 1991.
- Toronto Trust Cemeteries. *Funeral/Burial, Rites/Practices.* Toronto: Toronto Trust Cemeteries. 1985.

Toronto Trust Cemeteries. *Arboretum Guide: Mount Pleasant Cemetery*. Toronto: Toronto Trust Cemeteries. 1989.

ARTICLES:

Buchanan, Jamie. "A Modern Memorial." *Landscape Design*, October 1989, pp. 28-29.

Clegg, Francis. "Cemeteries for the Living." *Landscape Design*, October 1989, pp. 15-16.

Etlin, Richard A. "The Geometry of Death." *Progressive Architecture*, May 1982, pp. 134-137.

Nielsen, Hesser Erik. "A Danish Churchyard." *Landscape Design*, October 1989, pp. 33-36.

Weller, Sam. "Cemeteries - Designing for the Public," *Landscape Design*, October 1989, pp. 10-11.

Woudstra, Jan. "The European Cemetery," *Landscape Design*, October 1989, pp. 19-20.

MAPS:

Karrow, P.F. *Markham-Newmarket Area; Map 2124, Industrial Mineral Resource Sheet. Scale 1:63,360*. Compiled 1968. Ontario Department of Mines.

Sharpe, D.R. *Quaternary Geology, Toronto and Surrounding Area; Ontario Geological Survey Preliminary Map P. 2204, Geological Series. Scale 1:100 000*. Compiled 1980. Ontario Ministry of Natural Resources.

Surveys and Mapping Branch. *Ontario Topographic Map. Sheet 10 17 6500 48550. Scale 1:10 000. Revised 1985*. Ontario Ministry of Natural Resources.

Surveys and Mapping Branch. *Ontario Topographic Map. Sheet 10 17 6500 48600. Scale 1:10 000. Revised 1985*. Ontario Ministry of Natural Resources.

Surveys and Mapping Branch. *Ontario Topographic Map. Sheet 10 17 6550 48550. Scale 1:10 000. Revised 1985*. Ontario Ministry of Natural Resources.

Surveys and Mapping Branch. *Ontario Topographic Map. Sheet 10 17 6550 48600. Scale 1:10 000. Revised 1985*. Ontario Ministry of Natural Resources.