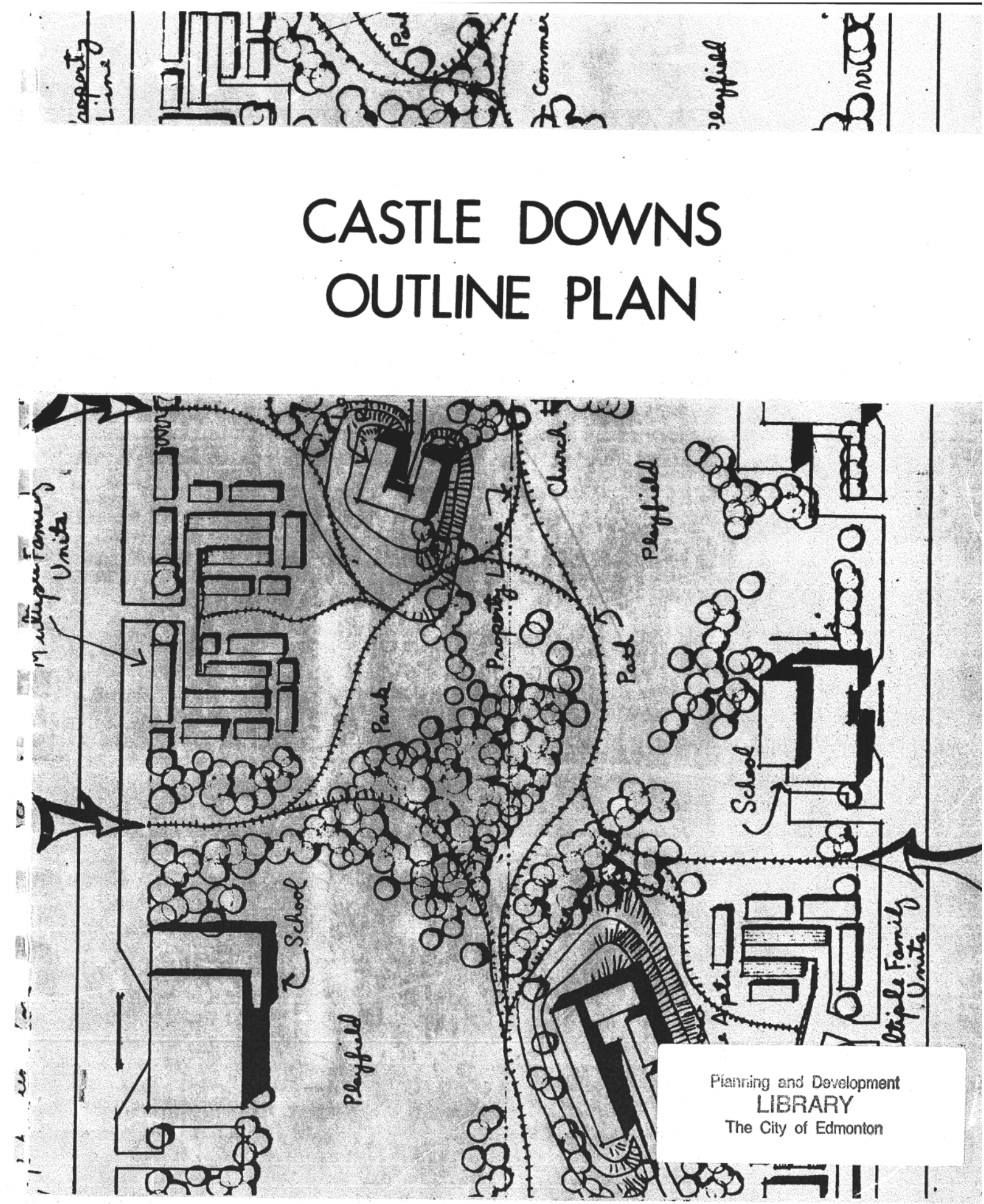
CASTLE DOWNS
OUTLINE PLAN



JUNE 1979

Castle Downs Outline Plan

Office Consolidation October 2012

Prepared by:
Planning and Policy Services Branch
Planning and Development Department
City of Edmonton

The Castle Downs Outline Plan was approved by a resolution of Council in October 6, 1971. In October 2012, this document was consolidated by virtue of the incorporation of the following amendments to the original Plan.

Approved by Resolution December 12, 2006 (to accommodate housing development for first time homebuyers on a vacant surplus school building envelope located on a school/park site)

Approved by Resolution October 15, 2012 (to accommodate Medium Density Residential uses for senior housing on surplus school building envelope located on a school/park site)

Editor's Note:

This is an office consolidation edition for the Castle Downs Outline Plan (Baranow Area) as approved by a resolution of Council in October 6, 1971. All names of City departments have been standardized to reflect their present titles. Private owner's names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. Furthermore, all reasonable attempts were made to accurately reflect the original document. All text changes are noted in the right margin and are italicized where applicable.

This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original document, available at the office of the City Clerk.

City of Edmonton
Planning and Development Department

CASTLE DOWNS OUTLINE PLAN

This document consolidates into one report the Outline Plan dated October 5, 1971, the Supplement dated October 6, 1971 and reflects the amendments required by the City of Edmonton as a condition of approval.

CONSOLIDATED EDITION October 2012

NORTH EDMONTONOUTLINE PLAN

OCTOBER, 1970

REID, CROWTHER & PARTNERS LIMITED Consulting Engineers & Planners

CONSULTING ENGINEERS
AND PLANNERS

Reid, Crowther & Partners Limited

10350 - 124th Street, Edmonton, Alberta, Canada T5N 3V9 Telephone (403) 482-4411

PLEASE REFER TO FILE No.

October 5, 1971

"LETTER OF TRANSMITTAL"

Municipal Planning Commission
City of Edmonton
City Hall
Edmonton, Alberta

Attention: Mr. S.C. Rodgers, Secretary

Dear Sir:

Re: Castle Downs Outline Plan

We take pleasure in submitting the Outline Plan for Castle Downs.

The Outline Plan was submitted to you on December 29, 1970 for circulation as The North Edmonton Outline Plan. The plan has subsequently been amended to incorporate additional City of Edmonton and other public agency requirements. The report and plan, as now submitted, is that which has been approved by the Municipal Planning Commission. A list of amendments is appended.

The area has been formally named Castle Downs since preparation of the original document.

The Outline Plan described in this document has been prepared in close co-ordination with the City of Edmonton throughout its development.

Yours very truly,

REID, CROWTHER & PARTNERS LIMITED

V.D. Thierman, P.Eng.

Enclosures
VDT:bla

AMENDMENTS *(Incorporated into the document prior to City Council approval)*

Amended by Editor

1. Maps 14 and 20 are superceded by Map 14A (follows Maps 12 and 13 after Page 47.

2. Map 24 (Bus Routes) is added after Map 23.

3. "Land Use Requirements" Pages 19 - 21 are superceded by "Land Use Requirements - Amendments" (Pages 19R - 21R).

4. Appendix II "School and Park Standards" have been deleted since they comply with City standards.

5. Appendix II "Land Use and Population Summary" (Pages 6 - 7) is superceded by "Land Use and Population Summary - Amendments" (Pages 3 and 4).

6. Appendix IIC "Greisbach Armed Forces Base" has been added.

7. Appendix IV "Edmonton City Council Conditions of Approval" has been added.

8. Map 4A (North Edmonton Zoning Considerations) has been added after Map 4.

9. Maps 9A, 9B, 9C and 9D (School Service Areas) have been added after Page 20R.

10. Map 25 (General Road System) follows Map 24.

CONSULTING ENGINEERS
AND PLANNERS

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10350 - 124th Street, Edmonton, Alberta, Canada T5N 3V9 Telephone (403) 482-4411

PLEASE REFER TO FILE No. 2632

October , 1970

LETTER OF TRANSMITTAL

Municipal Planning Commission,
City of Edmonton,
City Hall, Edmonton, Alberta

Attention: S. C. Rodgers, Secretary

Dear Sirs:

Re: North Edmonton Outline Plan

We are pleased to submit the following Outline Plan for the consideration of your Commission and of City Council.

It is recommended in this report, that of the 9-1/2 square miles involved in the north Edmonton annexation, the area west of Highway 28 be the first stage of development and the area to the east of Highway 28, the second stage.

The population of Stage I will be approximately 40,000 persons and of Stage II, 60,000. This report contains the Outline Plan for Stage I.

The boundaries of the Outline Plan are established by the Northwest Freeway to the west, the Bypass Freeway to the north, Highway 28 to the east, and 137 Avenue to the south.

In preparing the Plan, consideration has been given to the overall requirements of the north metropolitan area, and care has been exercised in terms of compatibility of land uses and of maintaining a high environmental quality.

The boundaries of the Plan contain some 1900 acres of developable land. Within the area, the Plan provides a balanced community development with respect to the variety of housing types and income levels, and with respect to social, educational, recreational and commercial services at the local and community level.

Site advantages offered by slopes, views, rights of way and existing tree cover have been effectively utilized in the design, by means of the lineal core concept, by the major footpath system, and by major park locations.

Traffic and utility studies have been conducted to determine transportation and service requirements and to evaluate alternate concepts.

A significant factor in the Plan has been the introduction of a 35 acre lake to retain rainwater runoff and optimize the city system. In addition to serving this functional requirement, it has presented a range of opportunities in urban design, in adding variety to the park system and in enhancing the community environment.

The following are the salient features of the Outline Plan:

The 1900 acres has been planned at a density of 21 persons per acre to accommodate a population of 40,000 persons in 11,400 dwelling units. These will include single family, duplex, town housing, apartments and high rise development.

The services provided to meet the needs of this population include:

- a 40 acre community and shopping centre. This is located at the west side of the lake, central to the area and at the junction of the major arterial road system. Multiple dwellings will be grouped in this area to take advantage of community services and the open space offered by the lake which will have full pedestrian access around its perimeter.

An 85 acre high schools/district park area, central to the development area, which utilizes existing woodland and is at the junction of the major footpath system.

Elementary and junior high schools, local shopping, churches, parks and multiple dwelling units will be grouped in a lineal core moving centrally through the development and serviced by collector roads and the major footpath system. Single family dwellings surround this core in a clearly defined manner and have good access to it.

A regional park is proposed west of 113A Street, south of the Bypass Freeway in an exceptionally scenic and wooded area.

The transportation system has been designed so that it will operate effectively both before and after Stage II has been developed and also before and after the construction of the freeways. The system provides for the segregation of traffic by volume and function into major and minor arterials roads and collector and local streets. It provides for alternate bus routings to serve the area, and to link with proposed rapid transit development.

This plan is presented in the belief that it will meet the requirements of Edmonton's northward expansion in an orderly and economic manner, and will provide an enjoyable environment for the people of this area.

Respectfully submitted,

REID, CROWTHER & PARTNERS LIMITED

F. Marlyn, Senior Planner

FM:awg

NORTH EDMONTON OUTLINE PLAN CONTENTS

NORTH EDMONTON MAPS

NORTH EDMONTON MAPS (continued)

Appendix I

Appendix III

1. ACKNOWLEDGEMENTS

The assistance of the following authorities during the preparation of this Outline Plan is gratefully acknowledged.

Alberta Government Telephones; Calgary Power Ltd.;
Central Mortgage and Housing Corporation; City of Edmonton
Engineering Department;
- Roadways and Design Section;
- Traffic Section;

City of Edmonton Fire Department; City of Edmonton Health
Department; City of Edmonton Library Board;
City of Edmonton Parks and Recreation Department;
City of Edmonton Planning Department; City of Edmonton
Police Department;
City of Edmonton Social Service Department;
City of Edmonton Water and Sanitation Department;
- Sewer and Drainage Section;
- Water Section;

Department of Highways and Transport;
- Planning Branch;

Department of National Defence;
- Canadian Forces Base, Edmonton; Department of

Transport;
Edmonton Power;
Edmonton Public School Board;
Edmonton Regional Planning Commission; Edmonton Separate
School Board;
Edmonton Telephones;
Edmonton Transit System;
North Edmonton Mutual Telephone Co.

Notwithstanding any part or policy of this Plan, an opportunity to develop housing for first time homebuyers exists on a vacant surplus school building envelope on the school/park site located east of 121 Street between 146 Avenue and 152 Avenues: and at the southwest corner of Warwick Road and Dunluce Road and as specified under the Community Services Zone. The Community Services Zone reflects the underlying, pre-existing zoning and will, in addition, allow for row housing and related accessory uses. The housing opportunity will occur on an area equal to the portion of the surplus school building envelope. The precise location of this housing within the entire School/Park site will be reviewed and determined by the City. The dwelling units and population generated by this development under the Community Zone are not included in the statistical summary.

Resolution
December 12, 2006

The school/park site is amended to include the opportunity for medium density housing for seniors on the surplus school building envelope. The precise location of this housing within the entire School/Park site will be determined by the City. The dwelling units and population generated by this development are not included in the land use and population statistics.

Resolution
October 15, 2012

2. INTRODUCTION

a) Background

The development of the area contained within this Outline Plan will add a major new community to the City of Edmonton. The decision to proceed with the project was made on October 23, 1969, when the Mayor and Council of the City of Edmonton gave its consent in the necessary statutory form to the annexation of the land involved in the *private corporations'* annexation proposal and approved in principle the servicing of such lands commencing at an early date.

Amended by Editor

b) Location

The area involved consists of nine and a half sections of land in north Edmonton shown on Map 1.

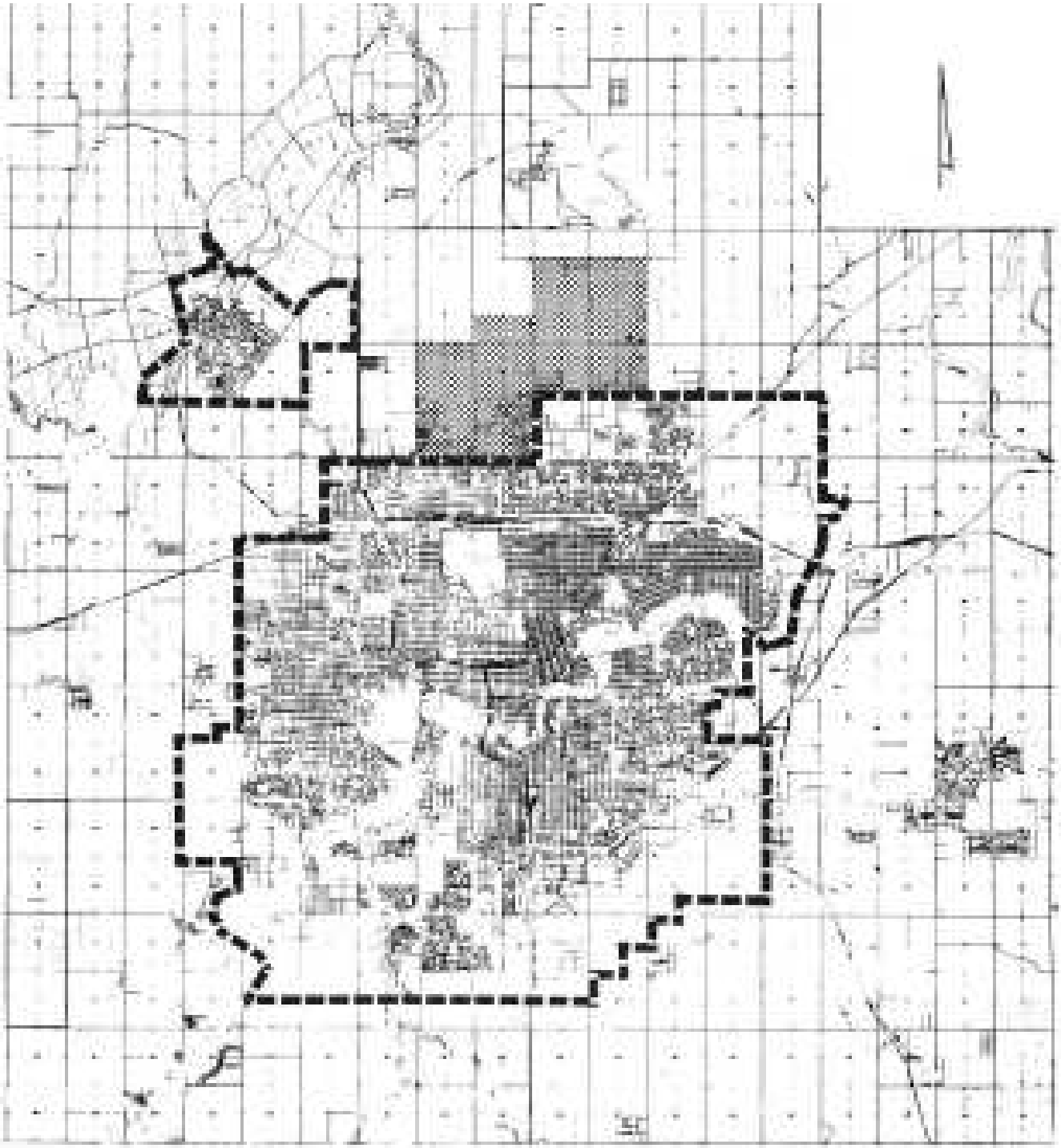
A necessary requirement for the development of the area is the preparation of an outline plan showing the general scheme of subdivision and designating the parts intended for different types of use; and indicating the provisions to be made for services, the relation to the overall road pattern, and to existing uses of land in the general area.

In order that the development may proceed expeditiously, *a private corporation*, as the largest land owner in the area, has commissioned this Outline Plan. Acceptance of this Plan will permit the 3-1/2 sections of land between 127 Street and Highway 28, north of 137 Avenue; to be developed and establish a framework for the planning of the total area.

Amended by Editor

c) Units of Development

For Outline Plan purposes the area west of Highway 28 is designated Stage 1, and will contain an estimated population of some 40,000 persons. The area east of Highway 28 is designated Stage II, and will contain an estimated population of 60,000 persons. (see Map 2).



AN OUTLINE PLAN FOR NORTH EDMONTON

SITE LOCATION

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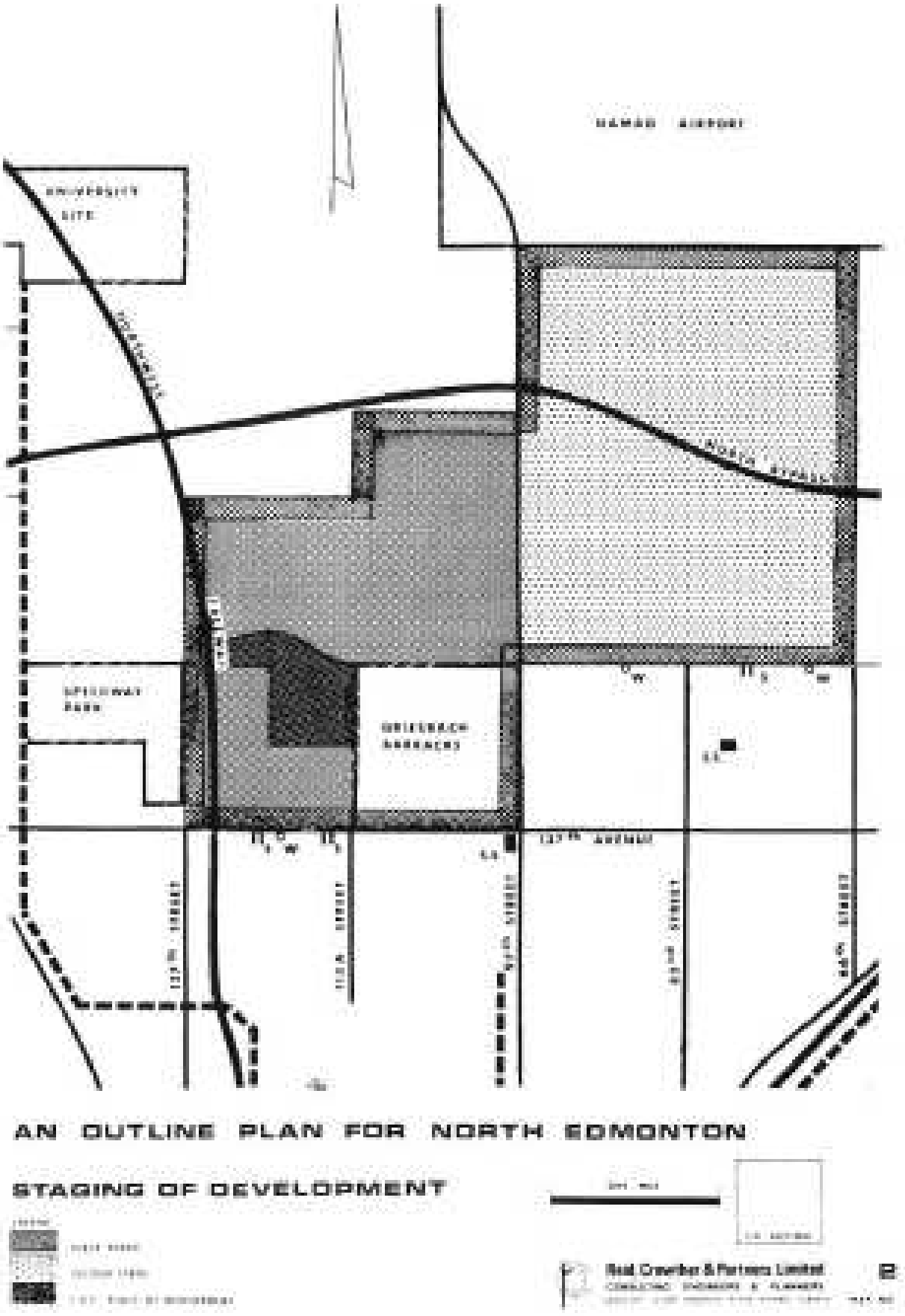


AN OUTLINE PLAN FOR NORTH EDMONTON

STAGING OF DEVELOPMENT

Reid Crowther & Partners Limited

3. METROPOLITAN FACTORS AFFECTING THE DEVELOPMENT

A development of this nature must of necessity consider the various factors influencing development in the northern part of the metropolitan area. These include:

a) Existing Residential Development

Residential development west of 97 Street extends to the south boundary of 137 Avenue. East of 97 Street, development has reached 153 Avenue in Londonderry and Steele Heights, and is in the process of extending to 153 Avenue in Dickensfield . The Outline Plan, therefore, represents an orderly northward expansion from existing development.

b) Adjoining Major Land Uses

- Griesbach Armed Forces Base - This armed forces base is located in Section 29, (see Map 3) and is a self contained development, with no road access onto either 153 Avenue or 113A Street. The northern part of the site is occupied by residential development for the personnel of the armed forces operation. These uses are completely compatible with residential uses in the Outline Plan area.

Note: For updated information regarding the Griesbach site please refer to the Griesbach NASP. Amended by Editor

- Speedway Park - is located west of 127 Street, (see Map 3). This is an auto racing track which periodically during the summer and fall stages racing events. Existing City of Edmonton studies indicate no undue level of sound within areas proposed in this Plan for residential development.

Amended by Editor

The Northwest Freeway (see Map 4) will be located at least 1500 feet (*457.2 metres*) east of 127 Avenue. The non residential uses existing in this intermediate area; saddle clubs, tree nurseries, etc., will form a natural transitional buffer between Speedway Park and the proposed residential development.

Note: For Updated information regarding the development of the former Speedway Park please refer to the Palisades ASP, Hudson NSP and Cumberland NSP. Amended by Editor

- Namao Airport - The presence of Namao Military Airport is a significant factor in establishing the northern limits of Edmonton's development and in defining the protective area between the city and St. Albert (see Map 3).

Two basic studies have been carried out with regard to the influence of Namao Airport on urban development in the Outline Plan area. The first study was carried out by the Edmonton Regional Planning Commission,[1] and in Figure 7 of its report provides guidelines in this regard.

A second study was carried out by the Department of National Defence

[1] Airport Study - Edmonton Regional Planning Commission, 1969

at the request of the City of Edmonton.[2] This study in map form contains the 100 CNR contour, which establishes suitability for residential purposes. On Map 3, areas of airport flight path influences are defined to the southwest and the southeast. It is recommended that these lines be used to define the extent of residential development. These lines take into account the results of all the official studies and indicate the long term concern for the urban environment.

- The New University (see Map 3) - will be clearly separated from the Outline Plan area by the protective zone between the city and St. Albert. The University will, however, influence both the demand for housing in this area and the road improvement and mass transportation staging program for the north and northwest.

- The Town of St. Albert (see Map 3) Under its Outline Plan, the proposed expansion of the Town will be to the northeast and north-west. A clear separation of the Outline Plan area from the present and future areas of development of the town can be provided by maintaining, in the area of influence of the flight path, appropriate low density, non residential uses.

- Other Factors - The Northern Alberta Railway (see Map 4) is located one mile west of the western boundary of the Outline Plan area. The Regional Planning Commission has zoned portions of land along the track for light industry, but no significant industrial development has occurred. Light industrial uses would, however, in no way adversely affect the development of this Outline Plan area.

- Major Shopping Centres in North Edmonton - The closest major shopping centre is Northgate. This has a retail area of 250,000 square feet (*23225.8 square metres*) and is located at the southeast corner of 97 Street and 137 Avenue. To the northwest, St. Albert's shopping centre is five miles (*8 kilomentres*) away, and to the southwest, Westmount shopping centre is approximately four miles (*6.4 kilometres*). Amended by Editor

Besides these environmental factors in North Edmonton which influence the Outline Plan, there are two other major factors; transportation and utilities.

c) Existing and Proposed Transportation Facilities

The area of the City north of 127 Avenue is separated from the central business district and remainder of the city by the *Railway* tracks, and the Industrial Airport. Present routes crossing or bypassing these barriers from the Outline Plan area are 66 Street, 82 Street, 97 Street, 127 Street and the St. Albert Trail. The majority of traffic from Stage I of the Outline Plan area will prefer to use 97 Street and 127 Street because of the most direct access to the central business district. The St. Albert Trail and 82 Street will also be used but to a lesser extent, particularly by traffic having destinations south of the river. At the present time, 137 Avenue is the only east west arterial bounding or passing through the area. Amended by Editor

Proposals for future transportation facilities include the North Bypass Freeway, part of the city ring road, which will pass through the Outline Plan

[2] Letter and map from Deputy Minister of National Defence to City Planner, December 17, 1969.

area, and the City's proposed Northwest Freeway which will bound the area on the west. In addition, a northeast freeway is planned which will pass about two miles (*3.2 kilometres*) to the east of the Outline Plan area. These proposed routes are indicated on Map 4.

Amended by Editor

The possibility also exists of a major arterial route crossing the tracks on the line of 113 A Street, though there are no commitments for such a route at this time.

Other transportation facilities which may affect the plan are possible rapid transit routes as shown on Map 4.

– a line running north from the central area, past NAIT, and then north along 97 Street similar to the north central line proposed by the Bechtel Study of 1963.

– an extension of the first stage rapid transit from the industrial airport to utilize the NAR right of way along 142 Street west of the Outline Plan area.

– an extension of this first stage rapid transit along the median of the proposed Northwest Freeway.

d) <u>City Utility Capacities and Connections</u>

– <u>Water Supply</u>

Edmonton Water has indicated that its current designs were prepared on the basis of providing water for an additional 50,000 to 60,000 persons in the area north of 137 Avenue west of Griesbach Barracks, and in the area north of Dickensfield.

It is estimated that the population west of 97 Street (Stage 1) will be in the order of 40,000 when fully developed. Therefore, there will be sufficient water to service Stage I of the development.

It is estimated that an additional 60,000 persons can be accommodated in Stage II of the proposed development. This total population of approximately 100,000 persons exceeds the population which Edmonton Water have currently planned for in the area north of 137 Avenue. An extension of the system will therefore be required in the normal course of development, and in accordance with the City's long term plans.

<u>- Sanitary Sewer</u>

Connections to the existing sanitary sewerage system can be made at two locations on 137 Avenue, in the vicinity of the lane east of 115 Street and in the vicinity of 122 Street (see Map 4). The City Engineering Department indicates that these two existing sewers have a combined capacity to service about 40,000 persons.

A 21 inch (*53 centimeter*) diameter trunk sewer serving the Namao armed forces has been constructed through the development area adjacent to Highway #28. There would appear to be some currently unused capacity in this main, however, to utilize this it would be necessary to obtain permission from

Amended by Editor

the owner, the Department of National Defence. Design of adjacent subdivisions will, of course, allow for the retention of this trunk sewer main.

- Storm Sewer

A 90 inch (*229 centimetre*) diameter trunk storm sewer presently terminates in the vicinity of 101 Street and 137 Avenue. This storm sewer trunk was proposed originally to service the area from 137 Avenue one mile (*1.6 kilometres*) north between the west boundary of Griesbach Barracks (113A Street) and the St. Albert Trail. This area comprises approximately 2-3/4 sections of land. Amended by Editor

The full capacity of this storm trunk sewer would only service slightly in excess of two sections of the Outline Plan area, using the design currently employed by the City. It is, therefore, evident that either additional trunk capacity or storage of the runoff is required if the majority of the land in Stage I of the Outline Plan is to be served. Initial investigation carried out by *a private corporation* indicated that the construction of a lake having the dual purpose of providing storage for storm runoff and the second benefit of adding to the aesthetic value of the area, could achieve sufficient storage to reduce the rate of runoff to less than the storm sewer capacity available. Amended by Editor

4. SITE CHARACTERISTICS

It is an objective of the Plan to fully utilize the potential of the site. In this regard the following characteristics of the site are relevant:

a) Slope and Drainage (see Maps 3 and 5)

The boundaries of the proposed development define a natural drainage area. There is a crescent of high ground stretching from the northwest to the northeast that slopes gently southward. There is a difference in elevation of 25 to 30 feet (*7.6-9.1 metres*) between the northern and southern boundaries of the area.

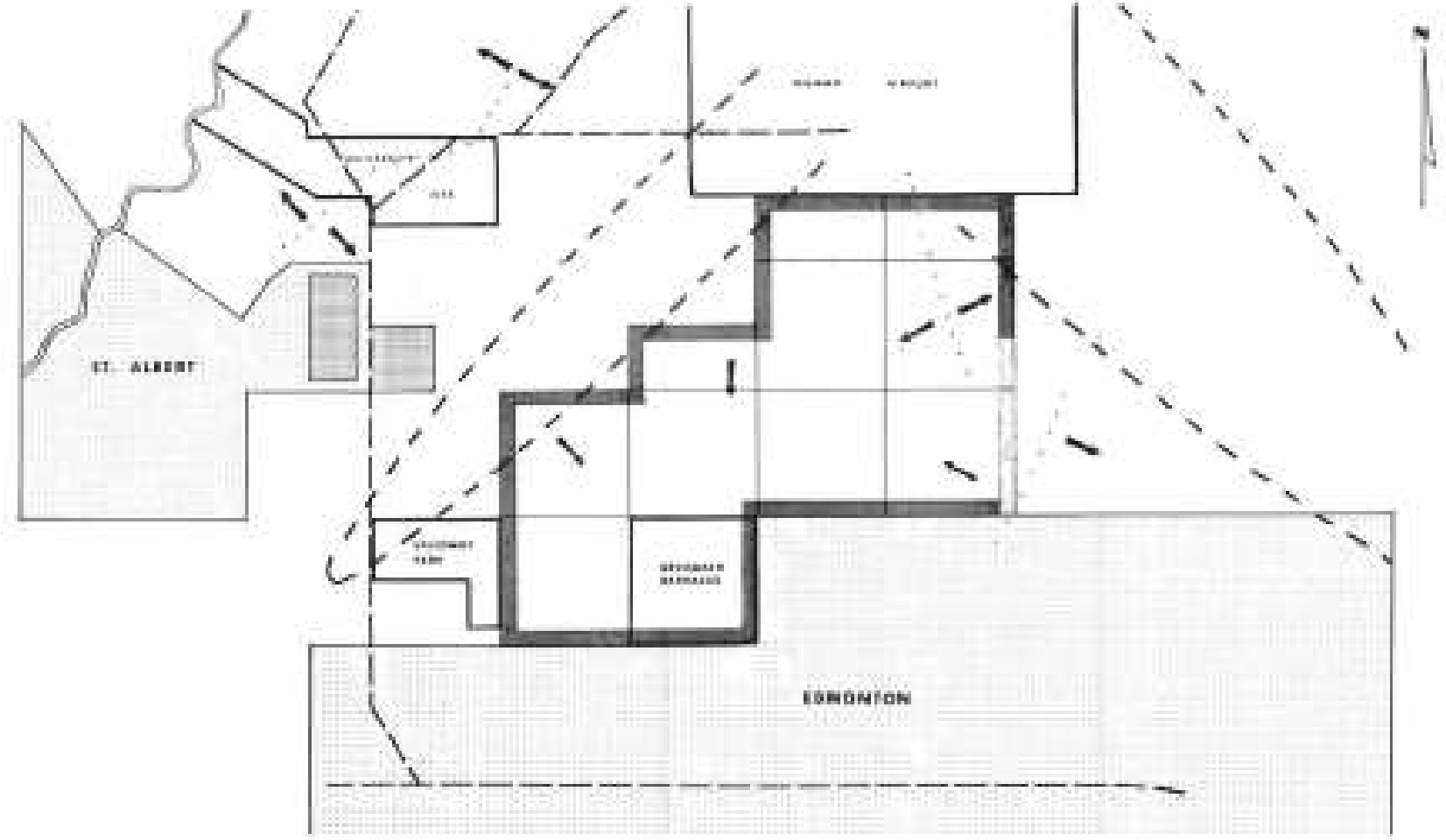
Amended by Editor

The site is on the high ground of the North Saskatchewan watershed and its south facing slopes provides in a number of locations, views of downtown Edmonton. These views can be used in the design in a number of ways, particularly in the siting of high rise developments.

b) Soils and Foundation Conditions

The Alberta Soil Survey designates the greater part of the area as Malmo silty clay loam, with a portion of the northeast area being Wetaskiwin silty clay loam. No part of the area is designated - peaty meadow or sedge and moss peats.

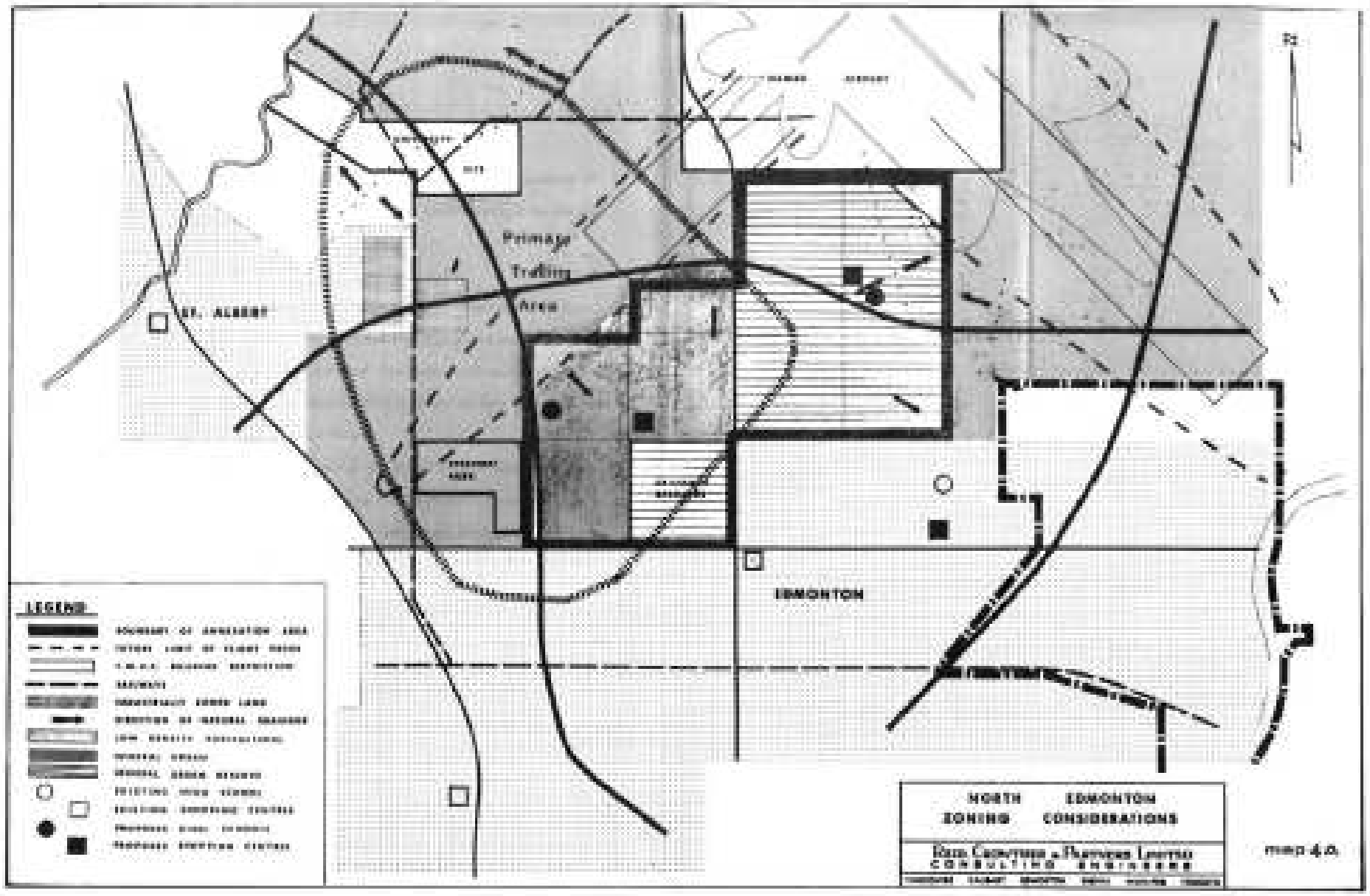
A soils analysis and drilling program was carried out which confirmed the adaptability of the area for various urban developments and reservoir purposes.



AN OUTLINE PLAN FOR NORTH EDMONTON

SURROUNDING INFLUENCES

Castle Downs Outline Plan – Office Consolidation 9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NORTH EDMONTON
ZONING CONSIDERATIONS
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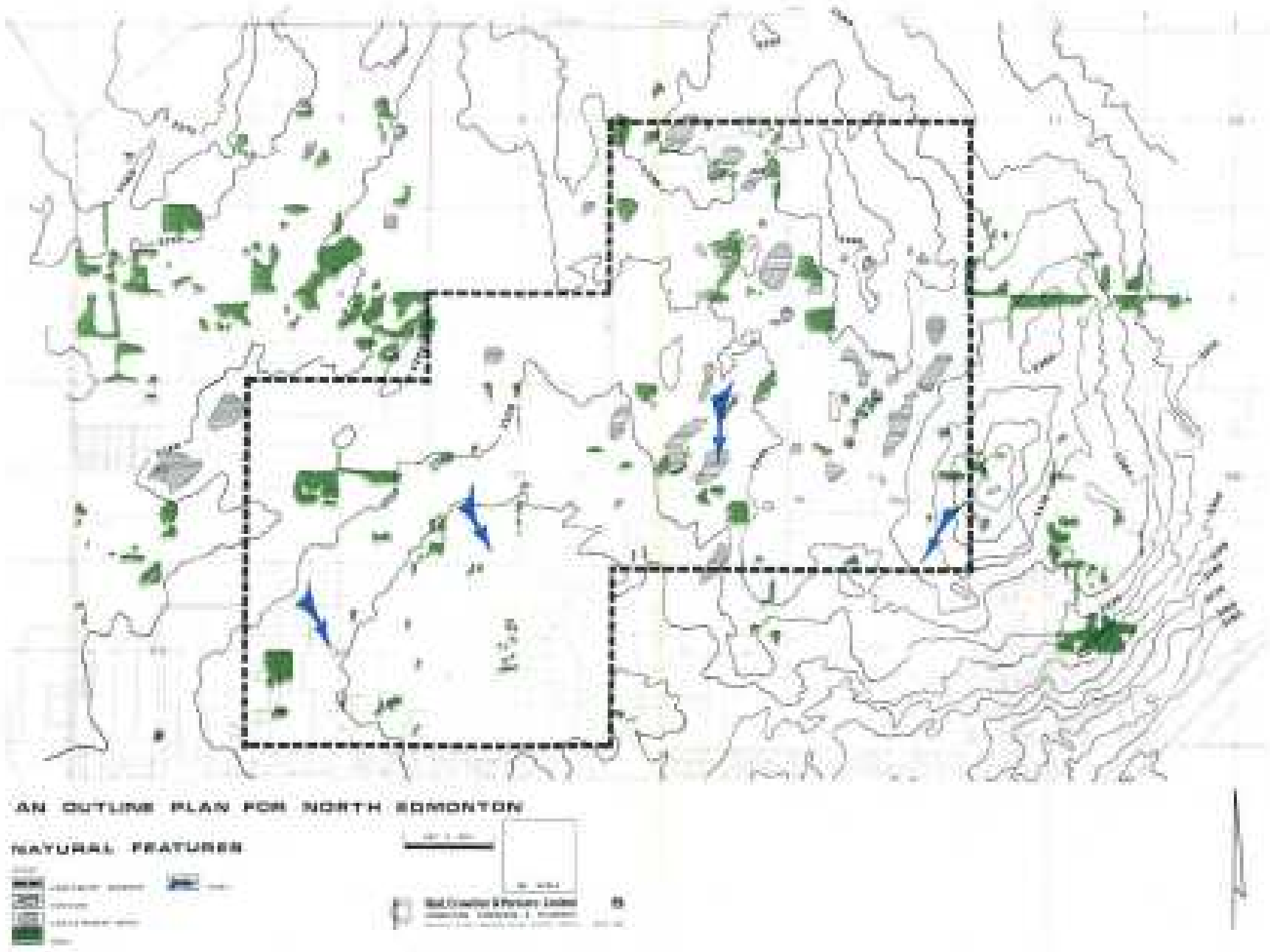

AN OUTLINE PLAN FOR NORTH EDMONTON
NATURAL FEATURES

c) Vegetation

NOTE: As a condition of approval, the District Park was positioned more to the east. See approved Outline Plan Map T.4A.

An evaluation of the cover in the area was carried out by Michael Sauze of Sauze Forestry Service Ltd. His report is contained in Appendix I. This is valuable in terms of its identification of the areas suitable for regional and district parks, for its designation of the stands which should be preserved, and for its suggestions on the use of the aspen groves as protective cover for the planting of other species.

The report identifies the types of trees in the area which include Trembling Aspen, Balsam Poplar, White Birch, Willow Alder, rose bushes and more exotic species planted by the local inhabitants. It also discusses quality, age and size of the tree cover.

Both the tree groups of 40 acres (*16.2 hectares*) or more and the smaller stands have been significant factors in the design. In particular areas 6, 9, 10, 12 and 13 in Map 21 (Appendix I). Amended by Editor

Based on the findings of the tree cover evaluation prepared by Mr. Sauze it is the policy of the Plan to retain the maximum existing tree cover possible. The design has designated the major wooded area as District Park, has utilized the tree cover along the quarter lines as part of the footpath system, and has included some of the smaller areas within neighborhood school and park boundaries.

Even in areas where the tree cover is not of the highest quality, it can easily be improved by underplanting.

d) Existing Land Use in the Area (see Map 6)

The area is essentially rural or semi rural with small holding subdivisions in section 30 and in the southwest quarters of 33 and 34**.** Non agricultural uses include a trailer court in the southeast quarter of section 32. A variety of uses occur in section 30, fronting on 127 Street and on 137 Avenue; these include storage uses, a mink ranch, tree nurseries and saddle clubs. A hotel has recently been approved for the northeast corner of 127 Street and 137 Avenue.

The non residential uses along 127 Street are in the main appropriate, since they are bounded by Speedway Park on the west and will be bordered by the proposed Northwest Freeway in the east, (see Map 4) thus making this corridor unsuitable for residential development.

e) Power Lines and Pipelines (see Map 6)

Two utility rights of way are of significance for the Outline Plan. The Calgary Power line traverses the area from east to west.

It has a 120 feet (*36.6 metre*) right of way with approximately four towers per mile. These towers occupy a 15 feet square (3*.7 square metres*) at their base. Amended by Editor

Since this right of way amounts to fourteen and a half acres (*5.9 hectares*) per mile, and a total of thirty seven acres (*15 hectares*) total in Stage I, it offers significant potential for the footpath and open space system. Amended by Editor

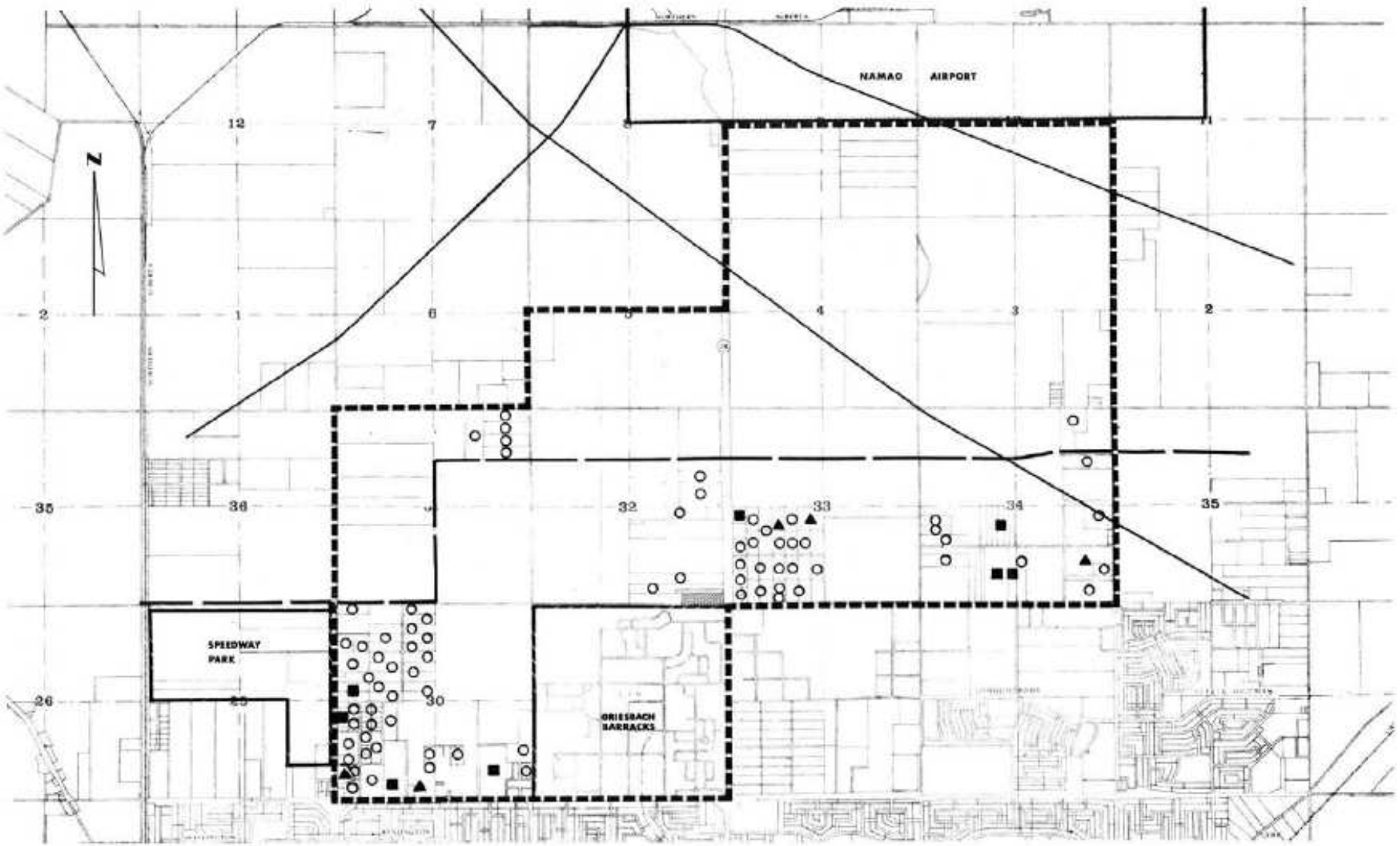
A second utility right of way east of Highway 28 traverses the area from southeast to northwest. This has a 50 feet (*4.7 metre*) right of way which offers similar opportunities to the power line right of way. It amounts to 6 acres (*2.4 hectares*) per mile, or a total of 14 acres (*5.7 hectares*) within the development area.

f) Land Ownership

There are 199 registered owners in the area; with 110 in Stage I. Maps 7, 8 and 9 show the parcels.

g) Existing Roads

The only roads within the development area other than private roads are the section roads between Sections 5 and 6, 5 and 32, 6 and 31, 29 and 30, 29 and 32, and 31 and 32. These are two lane gravel roads on a 66 feet (*20.1 metre*) road allowance (see Map 7). Amended by Editor



AN OUTLINE PLAN FOR NORTH EDMONTON

EXISTING LAND USE

LEGEND

ANNEXATION BOUNDARY
SMALL HOLDINGS
STORAGE USE
TRAILER COURT
INTENSIVE AGRICULTURE & RECREATION
PIPE LINES
POWER LINE

100 ACRES

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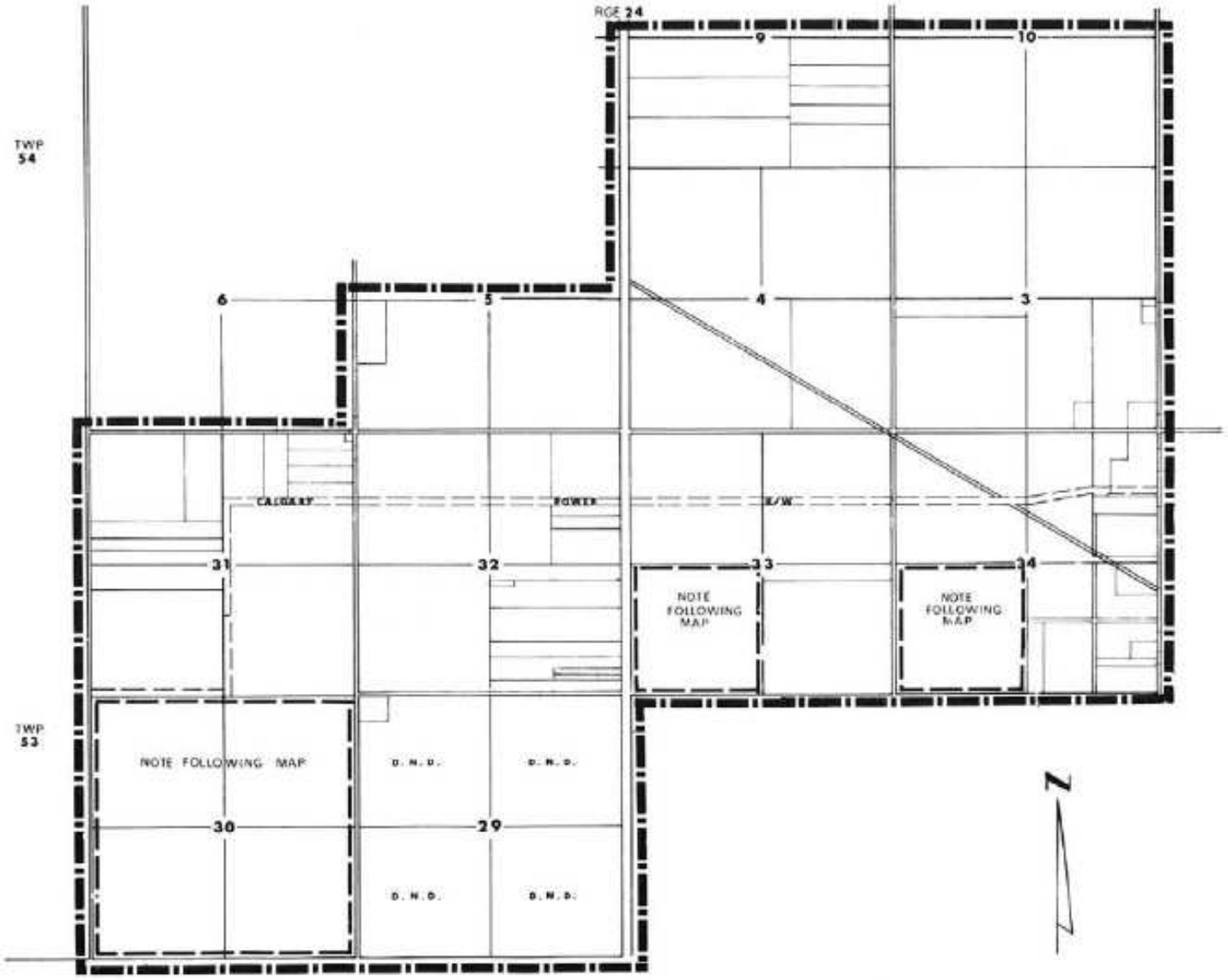
6



AN OUTLINE PLAN FOR NORTH EDMONTON

LAND OWNERSHIP · OVERALL AREA

40 ACRES

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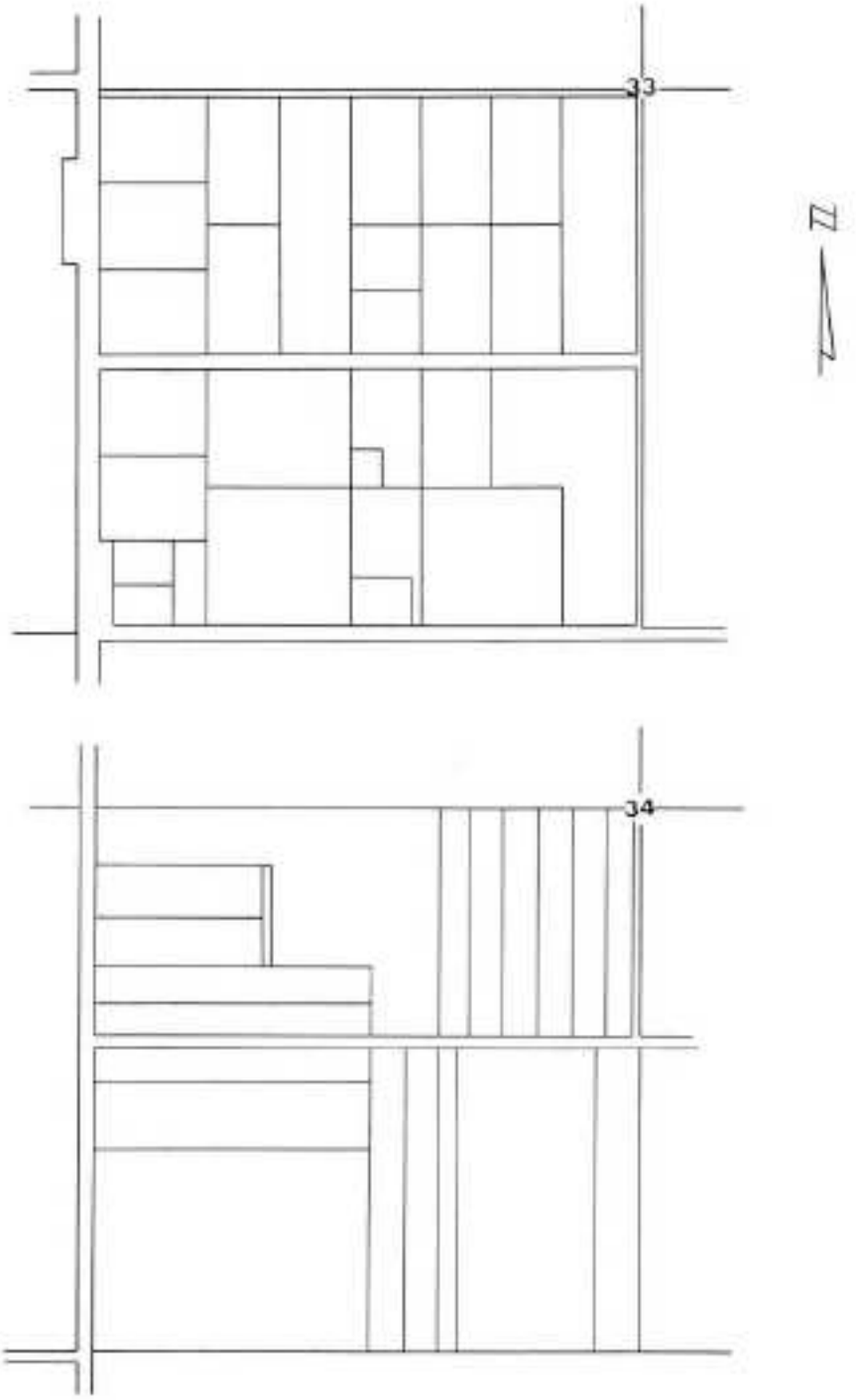

AN OUTLINE PLAN FOR NORTH EDMONTON

LAND OWNERSHIP · PART OF SECTIONS 33 & 34

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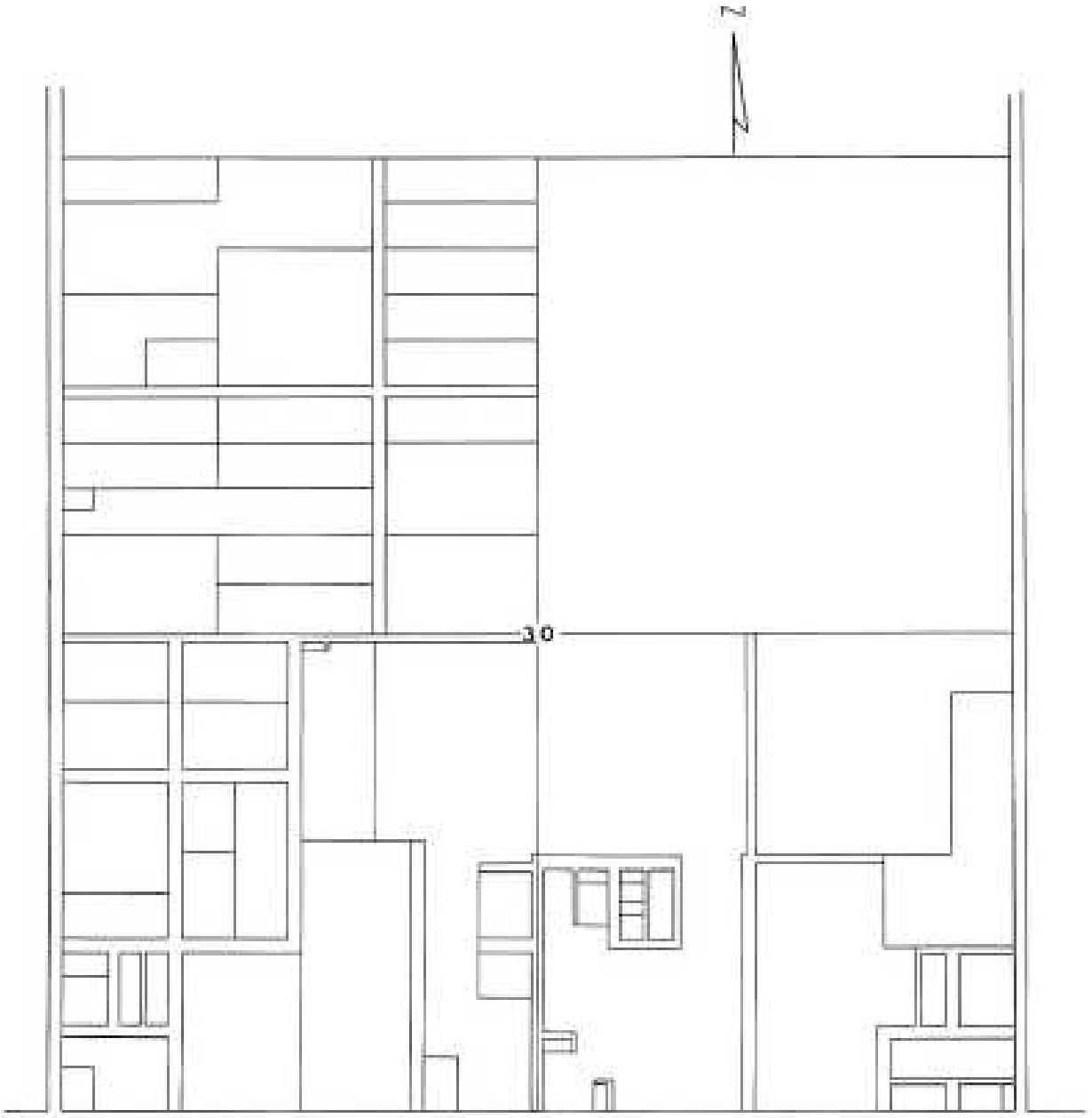

AN OUTLINE PLAN FOR NORTH EDMONTON

LAND OWNERSHIP · SECTION 30

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5. REQUIREMENTS OF THE PLAN (Stage I)

a) General

The Plan must be based on an estimate of the future population of the area, the variety of housing accommodation required, social, educational and commercial facilities needed, and the provision of an efficient and economical transportation and utility system.

The prime objective of the Plan is, therefore, to meet human needs in a manner which considers both economy and quality of development, and which takes into account both the metropolitan setting of the development and the particular potential of the site.

The Plan is a framework and policy document, and in such matters as major footpaths or collector roads does not indicate the precise location or configuration, which will be determined at the detailed design stage.

b) Guidelines and Objectives

Community Centre

In order to provide a sense of community; a gathering place and a focal point must be provided in the community centre. Beyond the traditional shopping centre, this should concentrate commercial, institutional, social and year round recreational facilities. An urban quality can be obtained by high density development surrounding this area. The question of ease of access to the community centre is paramount, whether by car, by bus, or by pedestrian access. Within current design practice there is the problem of the separation of this area from the residential development by a vast expanse of parking area. The devices to overcome this difficulty are discussed later in this report.

Housing

The Plan should provide in varying degrees for the whole spectrum of housing need both in terms of types of accommodation and income levels.

The alternative, which is the creation of income ghettos, is not a desirable alternative.

For this reason, massive concentrations of subsidized housing should be avoided. The provision of land by *the developer* for this purpose, should ensure the planning necessary to accomplish this dispersal. Amended by Editor

A number of factors related to the development indicate the possibility of providing lots for single family dwellings at below the current metropolitan price level . This is an objective which should be pursued and given consideration in planning decisions, since to date the metropolitan housing supply has not adequately met this demand.

Beyond this consideration, the Plan should establish a system whereby land for single family and multiple family dwellings can be allocated rationally.

In locating multiple family dwelling areas, such criteria should be used as: proximity to the community centre, to parks and open space, to collector roads, to bus service and to the major pedestrian system.

Schools

Land for school needs at the elementary, junior high and senior high school level should be provided at locations reasonably central to the school catchment area. For functional and economic reasons the school and open space planning should be integrated, so that there may be a joint use of facilities where appropriate. Land requirements for schools should be based on analysis of building and playground requirements, since excessive provision will only be at the expense of other elements of the plan, and the home owner. A system of school location which permits flexibility is desirable.

Parks and open space

A park and open space system should be provided to meet regional, community and neighborhood needs. It should be considered in conjunction with school and higher density housing locations. It should fully utilize the existing landscape advantages of the site and special features (e.g. the lake, major wooded areas) The open space system should be connected by means of a major footpath system.

Footpath System

The Plan should provide access to the school, park and central area facilities by means of a major footpath system. Where the major footpath is in the vicinity of the major power line, it will be located independent of the power-line right-of-way, except where crossings are required or where some agreement has been reached with Calgary Power.

c) Area of Development - Density and Population

Within the Outline Plan area there are some 1875 acres available for residential and related development. This area excludes the land needed for the proposed freeways and the area within the influences of the airport flight path. (This accounts for 380 acres (*154 hectares*); of this, 95 acres (*38 hectares*) are available for service commercial, between the proposed Northwest Freeway and 127 Street). Amended by Editor

d) Population and Density

The assumptions on density have been based on the structure of housing demand, consideration of the segment of the housing market intended to be served in this area, current densities in perimeter development in Edmonton, particular site potential (e.g. the lake, which would justify higher densities in its vicinity), and transportation and utility capacities.

An initial upper limit of 24 persons per gross acre (*59.3 persons per gross hectare*) was established, which is within the limits of current Edmonton standards. The working density arrived at for the Plan is 21 persons per acre (*51.9 persons per hectare*), the resulting population being approximately 40,000 persons. Amended by Editor

e) Land Use Requirements (Amendments)

Within this framework of density and population, the Plan is based on the following general land use allocations. (The detailed calculations are given in: - Appendix II).

Amended by Editor

- Housing

Single Family (RI & R2)	1,105.5 Acres / *447.4 hectares* (1)
Town House and Apartment Buildings (R-2A & R-3)	258 Acres / *104.4 hectares* (1)
High Rise (R6)	29 Acres / *11.7 hectares* (1)
	1,392.5 Acres / *563.5 hectares* (1)

(1) excluding land in major arterial roads

(Amendment)

- Schools

(See following four School Service Area Maps and refer also to Appendix II C)

3 Public Elementary @ 9	27 acres	*11 hectares*
3 Public Elementary/J.H. @ 17	51 acres	*21 hectares*
1 Public Senior High	30 acres	*12 hectare*
4 Separate Elementary @ 6	24 acres	*10 hectares*
2 Separate Elementary/J.H. @ 9	18 acres	*7 hectares*
1 Separate Senior High	15 acres	*6 hectares*
	165 acres	*67 hectares*

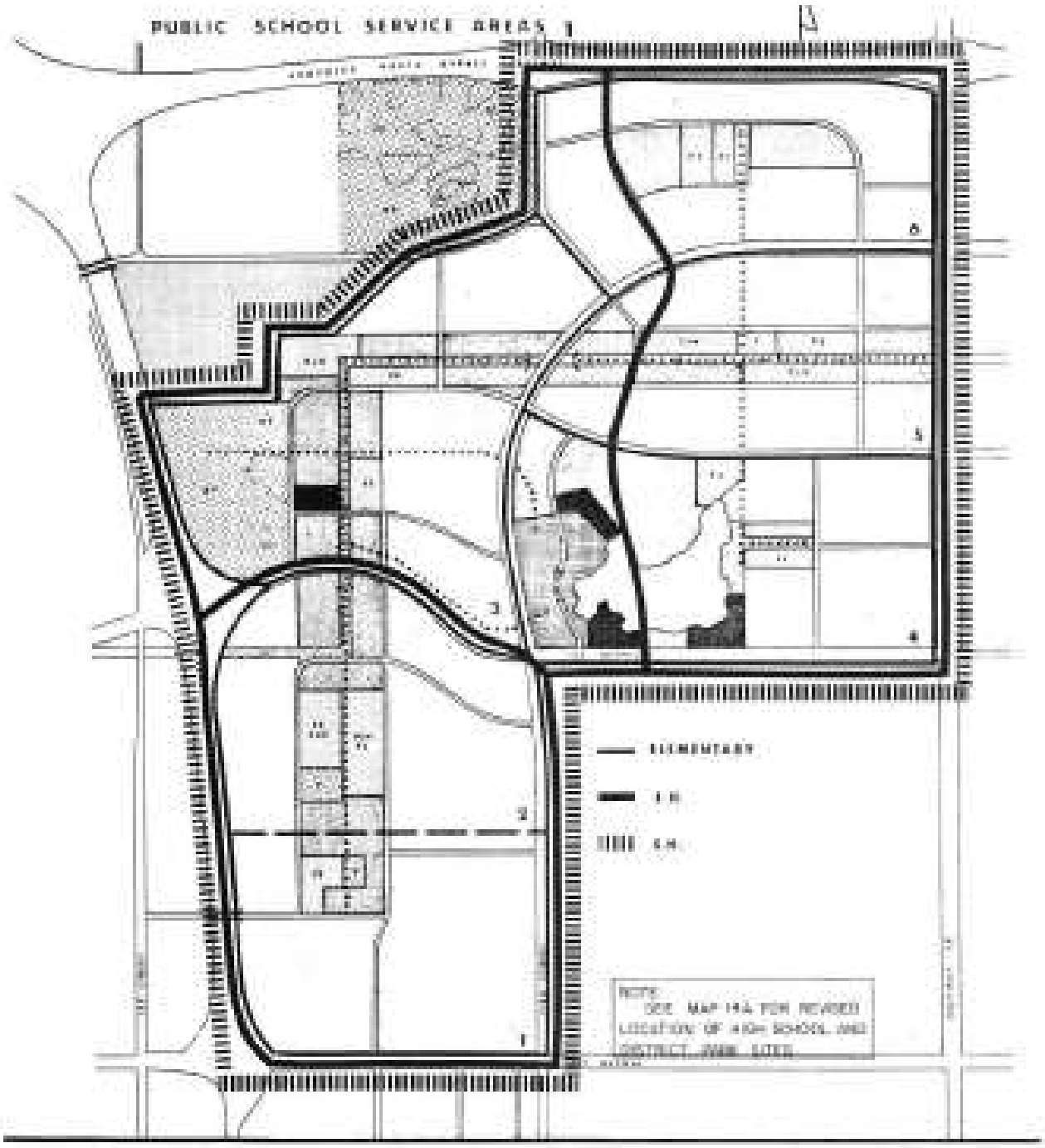
- Parks

1 District Park	20 acres	*8 hectares*
1 Athletic Field	20 acres	*8 hectares*
1 Lakeside Park	21 acres	*9 hectares*
5 Neighborhoods @ 7.5	37.5 acres	*15 hectares*
1 Neighborhood @ 5	5 acres	*2 hectares*
	103.5 acres	*42 hectares*

- Other Uses

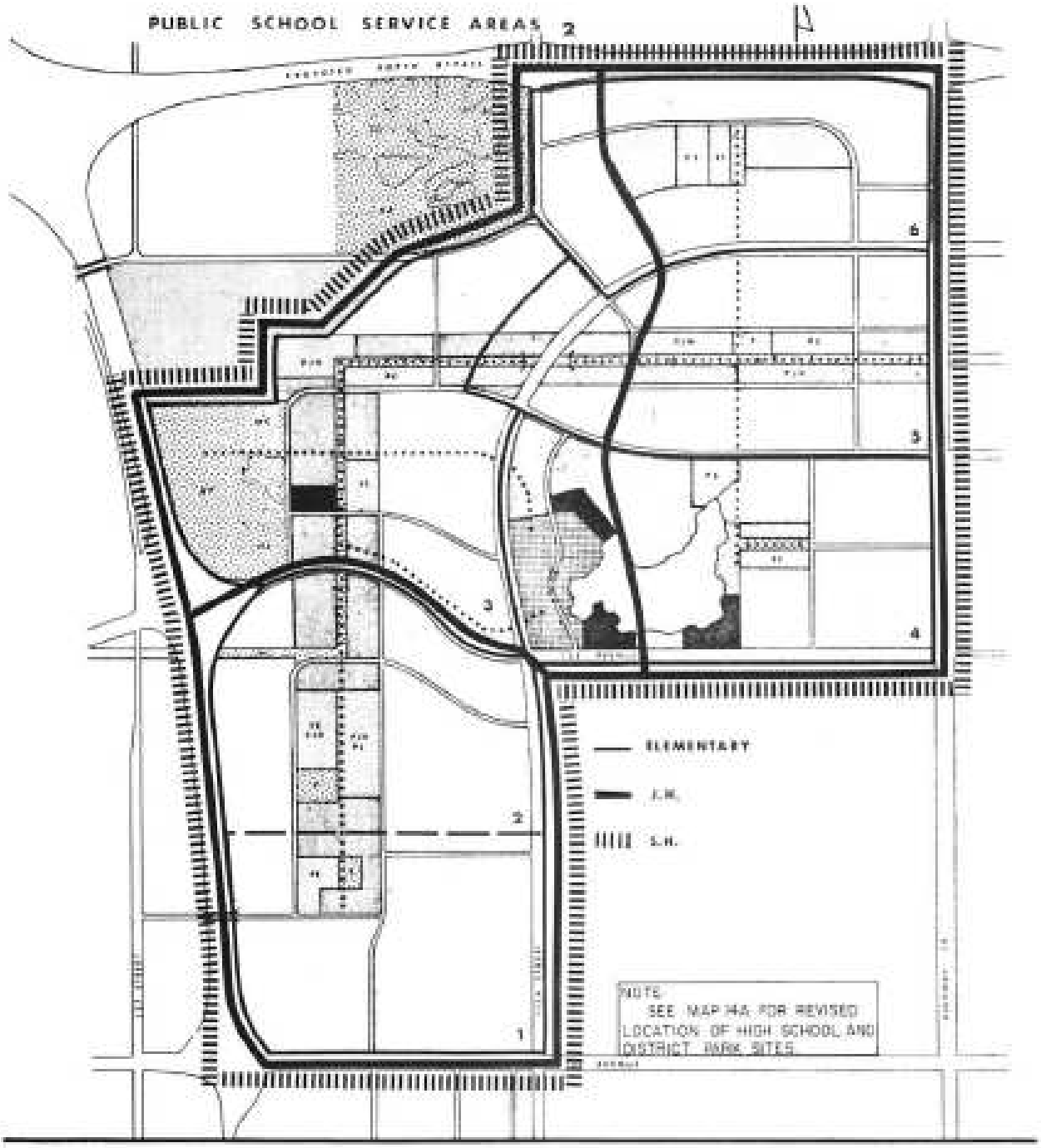
Town Centre	40 acres [(1)]	*16 hectares*
Neighborhood Commercial and Churches	17 acres	*7 hectares*
Lake and side slopes	47 acres	*19 hectares*
Total Gross Developable Area (excluding lake and side slopes)	1,804 acres	*730 hectares*

[(1)] subject to detailed design and market study.



AN OUTLINE PLAN FOR NORTH EDMONTON

THE PLAN



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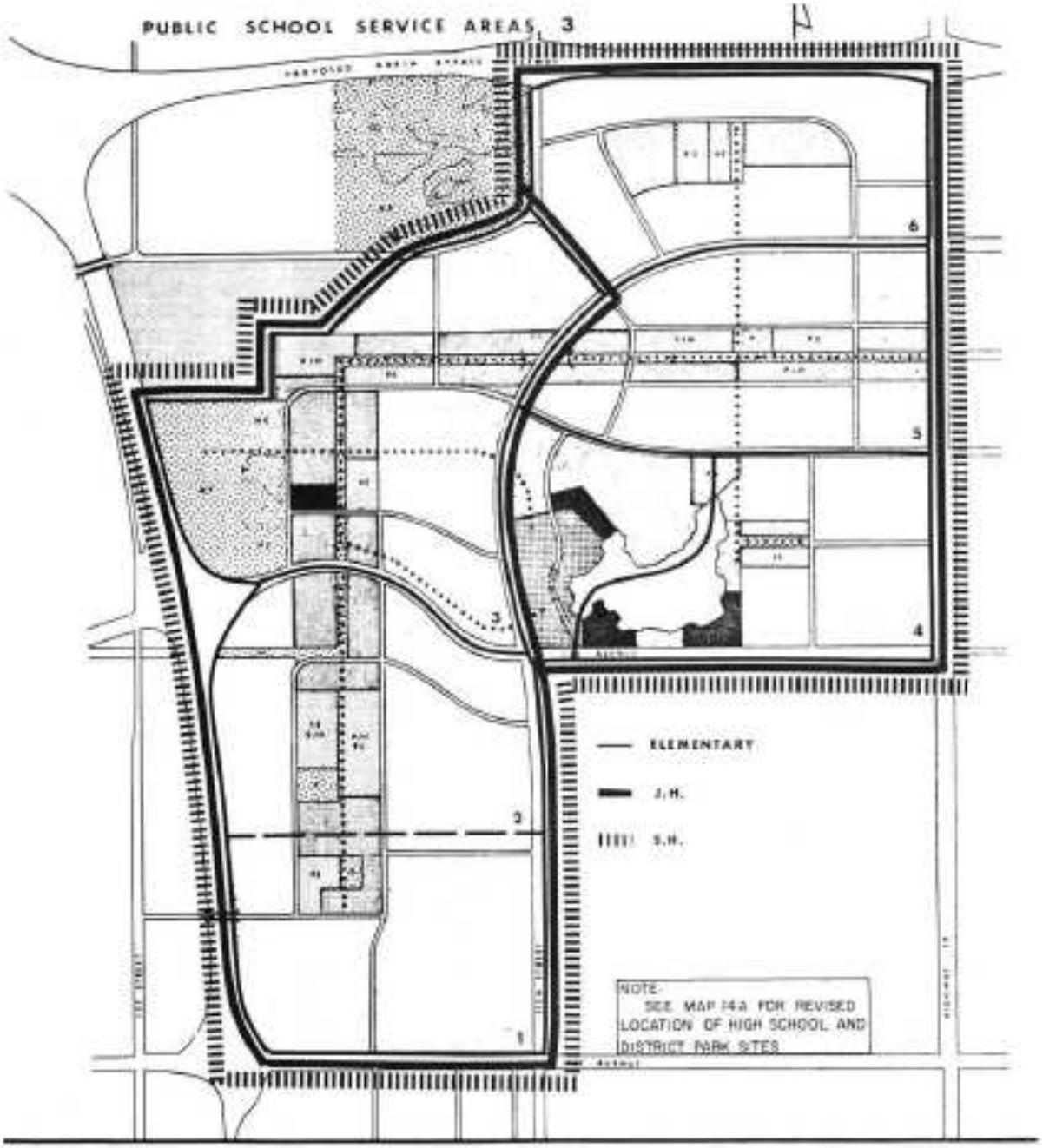
PUBLIC SCHOOL SERVICE AREAS 3
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ELEMENTARY
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S.H.
NOTE:
SEE MAP 14A FOR REVISED LOCATION OF HIGH SCHOOL AND DISTRICT PARK SITES
AN OUTLINE PLAN FOR NORTH EDMONTON
THE PLAN
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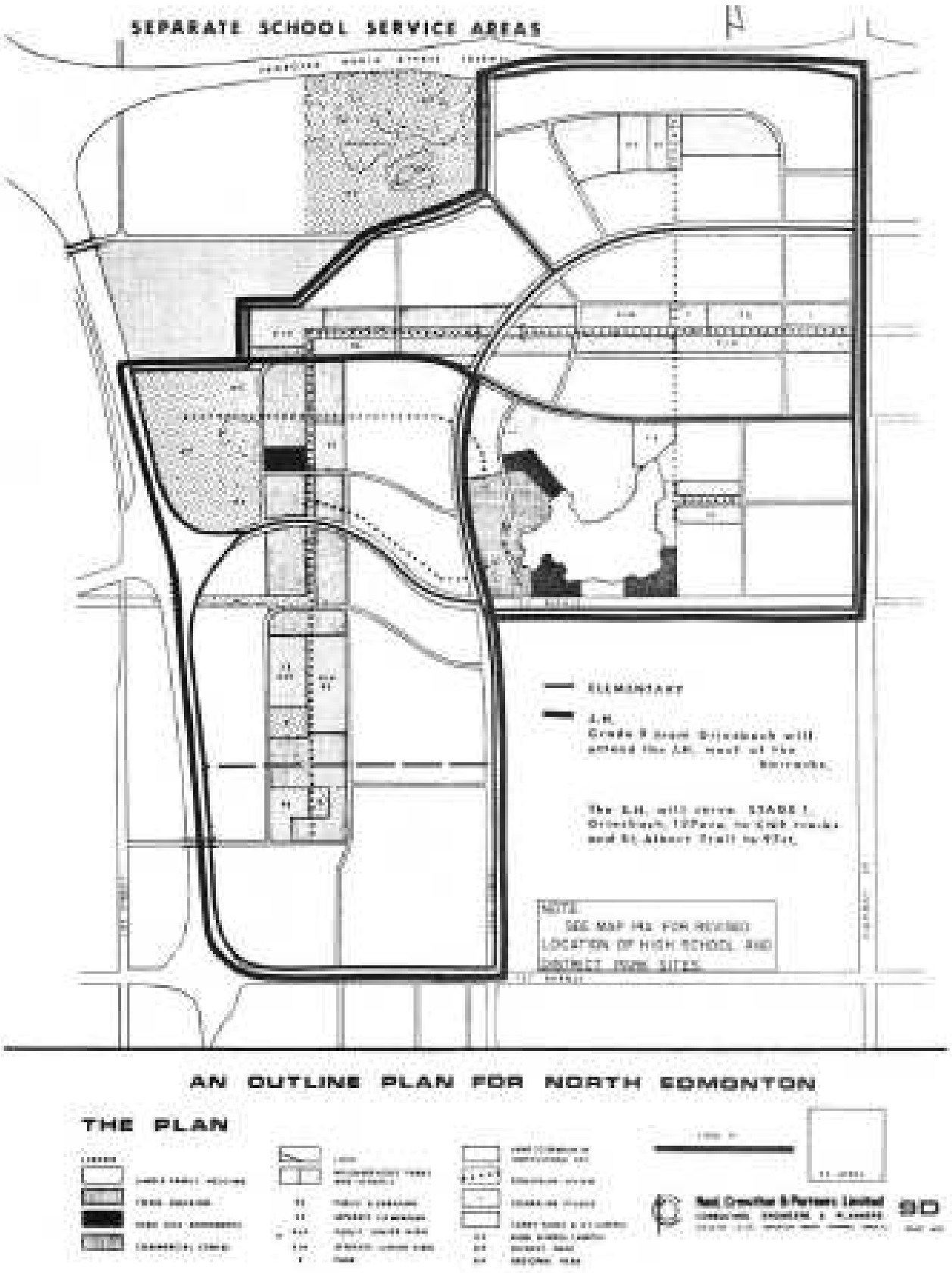

SEPARATE SCHOOL SERVICE AREAS
ELEMENTARY
J.H.
NOTE
SEE MAP No. FOR REVISED
LOCATION OF HIGH SCHOOL AND
DISTRICT PARK SITES
AN OUTLINE PLAN FOR NORTH EDMONTON
THE PLAN

(Amendment)

- Other Public or Institutional

Library [1]

Health Clinic

Fire Station

Police Station [1]

The small difference between total developable area and area required in this tabulation is due to some recreational uses occurring in the area of influence of the south west flight path.

- Transportation Requirements

A traffic study was carried out in conjunction with the preparation of the Outline Plan to determine transportation requirements. A brief outline of the method of the study and graphic representations of the results are contained in Appendix III.

The ability of the transportation system to fulfill efficiently its function of distributing goods and people depends on a number of key relationships between roads and traffic patterns.

One of the peculiarities of the expected traffic patterns for Stage I is that while the main emphasis of traffic will initially be to the east towards 97 Street, once the Northwest Freeway is built the emphasis shifts to the west. Thus the roads and intersections must be designed so that they work equally well with both traffic patterns. In addition, the position of the Northwest Freeway at the west of the Stage I development means that some of the Stage II development will filter through Stage I during the peak hour. The roads have to work under this condition as well.

City traffic engineering staff have indicated a requirement for two east west and one north south through routes within Stage I. The traffic assignments show that though these roads are a necessity, not all necessarily need to be direct routes providing that the Bypass Freeway is built soon after the beginning of Stage II.

Interchange spacings on the two freeways are dictated by City and Department of Highways and Transport standards of one mile (*1.6 kilometer*) minimum between interchanges. On this basis, Stage I has four inter-changes. These are at 137 Avenue and 153 Avenue on the Northwest, and at 97 Street and 113A Street on the North Bypass Freeway. Traffic assignments show that all four will be required, and that the one at 153 Avenue will require careful design to adequately handle all the turning movements.

[1] possible, but final decision not yet established by City Departments

The expected volume of peak hour left turns from 97 Street into the Stage I development before the Northwest Freeway is built requires at least five intersections on 97 Street if a reasonable standard of flow is to be maintained. Alternatively, a grade separated interchange at 153 Avenue might be substituted for two of the inter-sections. Once the Northwest Freeway is opened, left turning volumes from 97 Street will be reduced substantially.

Traffic calculations for the community centre indicate that traffic flows require its location next to major arterials with access to the parking areas from four sides. To further ease turning movements, all exists from the parking areas to major roads should be T-junctions.

Requirements of bus routings as conforming with accepted practice or obtained from Edmonton Transit are that the commercial centre and high schools should be served directly and that bus routes generally should pass through or along high density residential areas. In addition, no residential area should be more than 1/4 mile (*0.4 kilometer*) from a bus route. Further requirements are that these bus routes must work whether as express routes to the city or as feeder routes to a rapid transit station either east or west of Stage I.

Amended by Editor

In addition to the requirements of traffic listed above, it is desirable to follow accepted practice for new development in separating local from through traffic by means of a hierarchy of roads. Local roads should feed collectors which intersect with arterials. There should be no road arrangements where through traffic finds it desirable to utilize collectors or local streets rather than arterials.

f) Utility Requirements

- Water Supply

Edmonton Water has indicated that an initial connection to serve the northwest Edmonton area will be to the existing 12 inch (*30.5 centimetres*) diameter water main on 137 Avenue at 119 Street. This will provide capacity for approximately 3500 persons, which will be adequate for the first phase of development.

Amended by Editor

It is indicated that approximately 50% of the population proposed for Stage I can be serviced with the construction of a secondary pumping station at the Rosslyn reservoir and a 24 inch (*46 centimetres*) diameter trunk water main from the Rosslyn reservoir to the development area. A connection to the existing 18 inch (*45.7 centimetres*) trunk main in Londonderry will be required to provide water supply to the balance of Stage I.

Edmonton Water has indicated that their current plan to service the area east of 97 Street will be to extend the large trunk water main to be constructed from the proposed new water treatment plant in west Edmonton, through West Jasper Place and the northwest industrial area to a water storage reservoir located near the west boundary of the development. Additionally, it will be necessary to construct a secondary pumping station and supply line to the area east of 97 Street. Planning of the area west of 97 Street should allow for location of this supply line.

It is anticipated that a suitable reservoir site can be obtained within the area covered by the south west Namao flight path, hence utilizing some of the flight path area for non residential use.

- Sanitary Sewers

Stage I of the Outline Plan area will be serviced by extending the two 21 inch (*53 centimetres*) diameter trunk sanitary sewer mains northerly from 137 Avenue. Amended by Editor

The trunk sewer at 122 Street and 137 Avenue will be extended northerly to service the westerly portions of sections 30 and 31.

The existing 115 Street trunk sanitary sewer will be extended northerly to the first phase. This sewer will collect sewage from the easterly portion of sections 30 and 31 and the westerly portions of sections 32 and 5.

The easterly portions of sections 32 and 5 cannot now be serviced by gravity by the 115 Street trunk. There are, however, a number of possibilities available for facilitating the servicing of this area which include, constructing a lift station, or utilizing the apparently available capacity in the trunk sanitary sewer from the Namao Canadian Armed Forces Base.

- Storm Sewers

As the existing trunk storm sewer does not have the necessary capacity to service all of Stage I if reserves are left for lands west of 127th Street, it is proposed to construct a storm water reservoir, or lake, having a storage capacity of approximately 300 acre feet (*37 hectare metres*). The normal depth of the lake would be 15 feet (*4.6 metres*) with provision for an additional 10 feet (*3 metres*). Storage requirements will vary from storm to storm and it has been estimated that the full additional 10 feet (*3 metres*) of storage would be required approximately only once in 50 years. Amended by Editor

The lake is proposed for the southwest 1/4 of section 32 and will receive the runoff from portions of sections 31, 32 and the south 1/2 of section 5. The runoff will be collected by a storm sewer system similar to other areas of the city and discharged into the lake at periods of high runoff. Water from the lake will be discharged into the present trunk sewer system at times when capacity is available.

It is proposed to service section 30 and a portion of section 31 directly from the extended storm sewer trunk. Therefore, the first phase of construction will require the extension of the storm sewer trunk from 101 Street west along 137 Avenue. A trunk main will be constructed northerly from 137 Avenue to the south boundary of the first phase of development.

- Construction Staging of Phase I

The first phase of development will consist of the northeast 1 /4 of section 30 as this area is under one ownership.

To supply water to Phase I it will be necessary to construct a main from 137 Avenue to the south boundary of Phase I.

The existing sanitary trunk sewer on 137 Avenue and 115 Street and the trunk storm sewer on 137 Avenue will likewise be extended to this south boundary. The storm main will later serve as the connection discharge from the proposed lake.

6. SITE ANALYSIS FOR THE PLAN (See Map 10)

- Boundaries of Residential Development

The boundaries of residential development are established by the proposed Northwest Freeway in the west, the proposed Bypass Freeway in the north and a projection of the flight path influence in the northwest. The presence of Griesbach in the southeast creates a site with an eastwest and a northsouth arm. This is of significance in locating land uses requiring a central location.

- Fixed Elements

The position of the lake is established by its need to be at the low point in the area (see Map 5). I t will occupy some 50 acres (*20 hectares*) of land and has substantial recreation, open space, and design potential. The possibility of higher density uses in the adjoining area and of the commercial and community centre in proximity to the lake, presents attractive opportunities. Moreover, the lake is central to the inner boundary of the development and there are fine views towards the city centre. Amended by Editor

- District Park and High School Locations

NOTE: As a condition of approval the district park and high schools were moved east See approved *Outline Plan - Map 14A*

The objective of having the high schools reasonably central to the area, and if possible in proximity to the district park, seems to be best met in the west 1/2 of section 31. The district park can utilize a large wooded area located there, the schools would be central to the development, and servicing at a reasonably early stage would be possible. Higher densities near these open spaces would be appropriate.

- Neighborhood School, Parks and Footpath Systems

The 120 feet (*36.6 metre*) power line right of way would best be utilized by placing park, school and multi-family uses adjoining it. Since the alignment is eastward and southward from the site suitable for district park and high school, the major community footpath system is suggested along this alignment. A wooded area extending east-ward from the possible high school and park complex could provide a link to the lake area. Amended by Editor

- Units of Development

The fact that 153 Avenue is a fixed element (see Map 10) and 113A Street is fixed for the first mile (*1.6 kilometres*), and must be extended northward indicates a fairly clear demarcation of units of development. Amended by Editor

- Central Commercial Area and Community Centre

This area can meet the requirement of being central to the development by being located either west of 113A Street or adjoining the lake east of this street. General access conditions and pattern of arterial roads are a significant

factor in this decision. The topography in either location offers no difficulties.

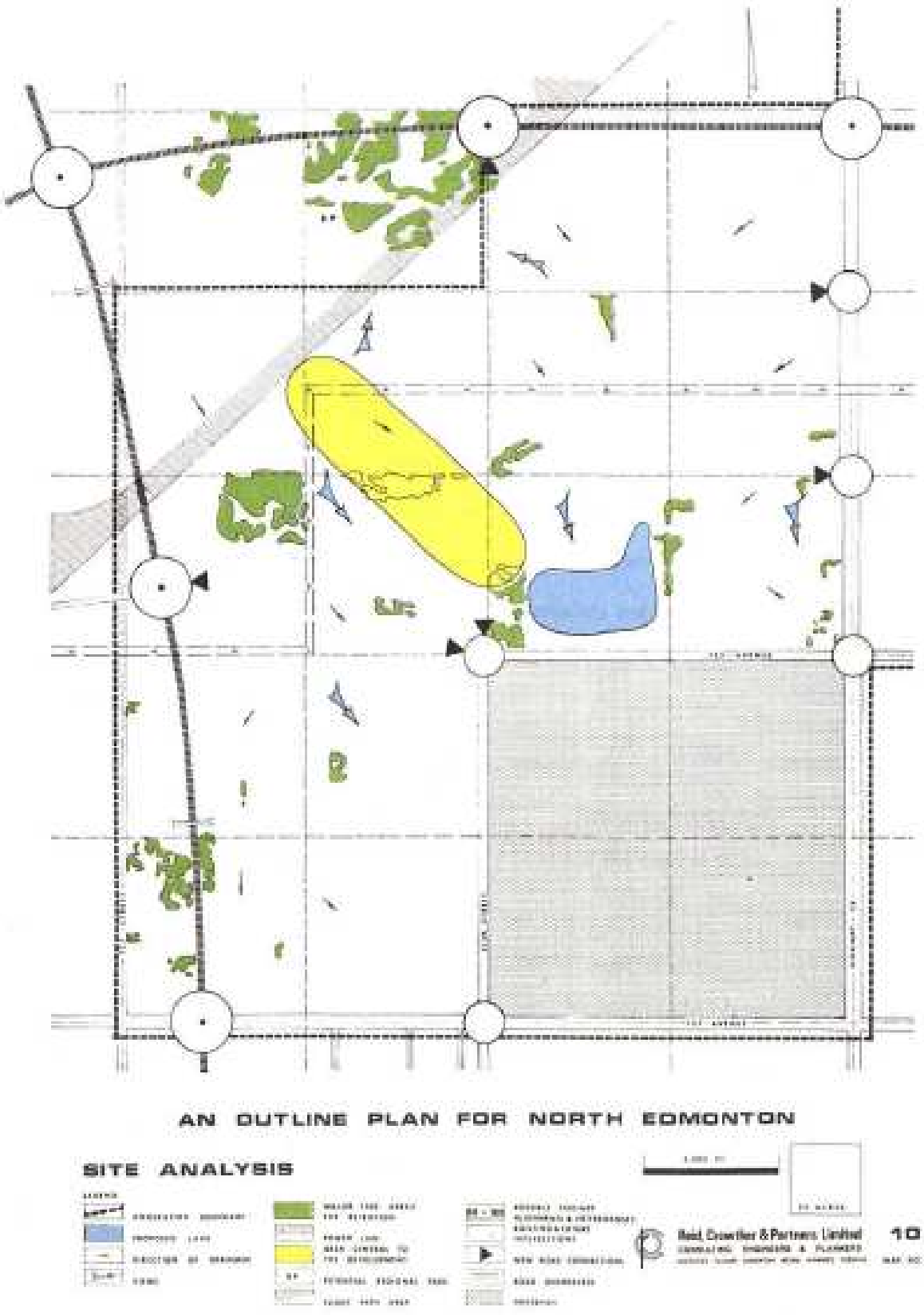
- Other Major Open Spaces

A large wooded area which should be utilized is located southwest of the intersection of 113A Street and the proposed Bypass Freeway. This is discussed in Mr. Sauze's tree cover evaluation. (See Appendix 1).

It consists of approximately a 100 acre (*40.5 hectares*) stand of trees in groupings which lend themselves admirably to a golf course or regional park. Since the area is within the proposed "green belt" zone between St. Albert and Edmonton, this use would be appropriate in terms of regional policy. It would provide an added attraction to the developed area to the south and east.

Amended by Editor

These factors discussed in this site analysis, together with external intersection requirements shown on Map 10, indicate the range of choice in arterial road systems and the preferable locations for certain major land uses and footpath systems.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SITE ANALYSIS
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7. CONCEPTS FOR DEVELOPMENT

The previous two sections have stated the land use requirements, have noted the site potential for certain land uses, have identified certain fixed elements and the range of transportation requirements and constraints.

Taking these factors into account, various concepts were examined to determine the optimum solution.

Map 11 illustrates four of the concepts examined. These contain variations in locations of the central area, the lake, neighborhood boundaries, pattern of major arterials and central area access.

The high schools and district park site is the same in all four concepts.

- Concept I - This concept would maximize east west and north-south arterial movements. However, since the Bypass Freeway bends to the southwest and southeast the arterial to the south has limited use in its extension. Flexibility for expansion of the centre is constrained by the loop road. Access to centre and lake by footpath would necessitate crossing two roads. The central area design would have limited site advantages and would be separated from the lake by a major arterial road.

- Concept II - This concept has a number of positive factors in terms of relationship of lake, community centre, district and possible regional park. On analysis of the possible location of the lake in this area, it was clearly determined that its elevation reduced its usefulness significantly.

- Concept Ill - This concept provides excellent access to the centre but the community centre is separated from the lake. The major disadvantage is the termination of 113A Street in a T junction, since the possibility must be left open that this street may at a future date be extended south to 125 Avenue. It would in that case become a major access road to the centre.

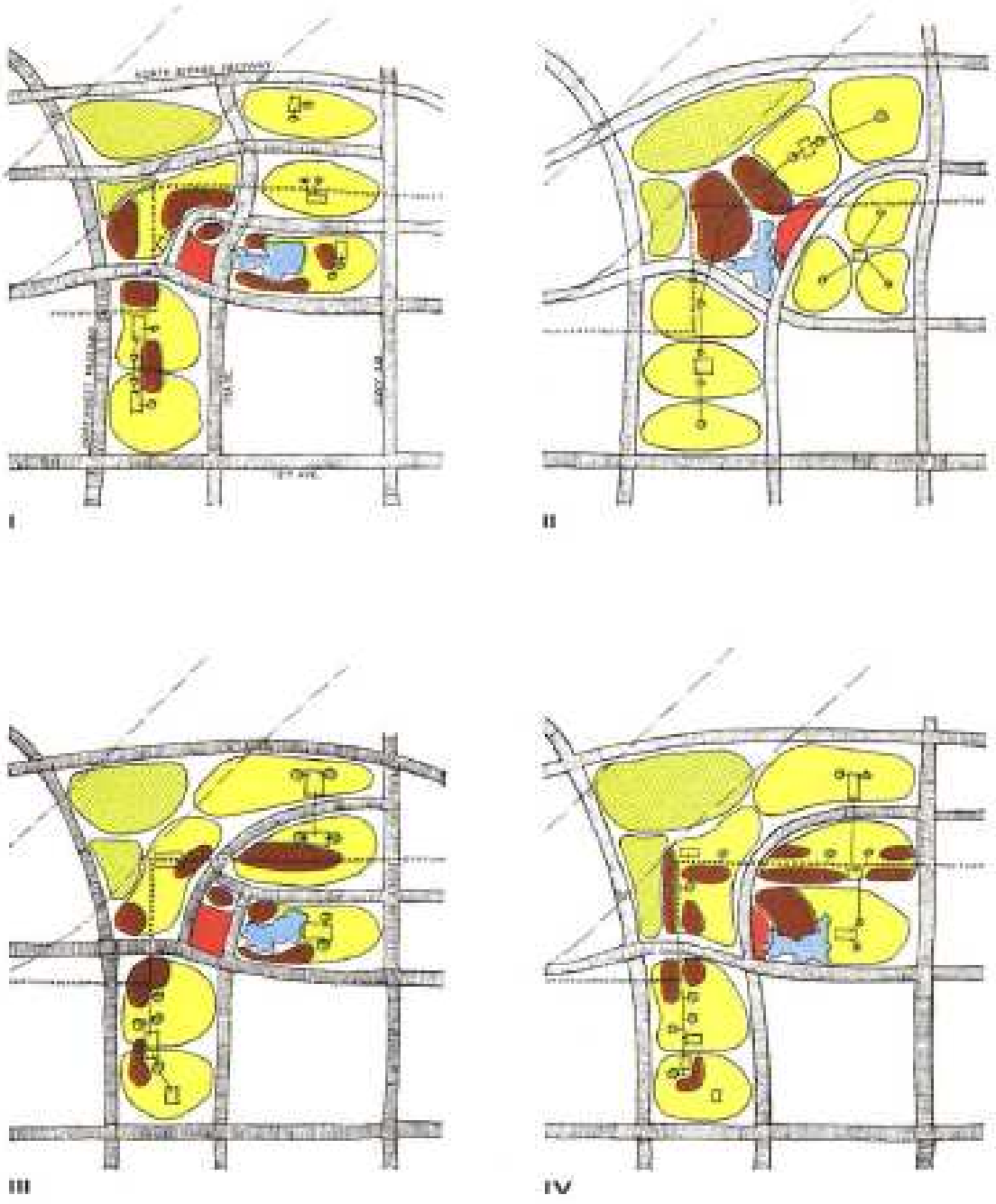
- Concept IV - This concept places the centre east of 113A Street and adjoining the lake. The major arterial 113A Street is arched in an easterly direction to intersect with 97 Street (Highway 28).

The location of the community centre adjoining the lake offers a great opportunity to design a centre with character and distinction.

The alignment of 113A Street more closely corresponds to the shape of the site and provides good access to the centre from both Stage I and Stage II of the development. The need to provide four sided access to the centre is discussed in section 8. Access north-ward to the freeway and westward to 127 Street can be provided by minor arterials, since the traffic projections indicate these volumes to be relatively minor (see Appendix III).

Our evaluation of these concepts is that Scheme IV best uses the potential of the site and would quite definitely achieve the maximum design advantage.

This concept has been used as the framework for the development of the Outline Plan.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AN OUTLINE PLAN FOR NORTH EDMONTON
GENERAL CONCEPTS
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8. THE OUTLINE PLAN

The Outline Plan was prepared on the basis of the information and analysis in the previous sections, together with a detailed consideration of the various components. The following maps and text contain the Plan proposals:

NOTE: Map 14A As the approved Outline Plan and differs somewhat from portions of other maps listed below, particularly with respect to the location of the high schools and district park. The regional park was deleted as a condition of approval.

Map 12 illustrates diagrammatically the major elements.

Map 13 shows the boundaries of the units of development together with an estimate of population and density.

Map 14A the Outline Plan - shows the structure of the Plan and the location of the various elements.

Maps 15 to 19 show possible methods of development of a neighborhood core area, the community centre and the lakeside areas.

In assessing the Plan, an understanding of its various elements is essential. These elements include: The lake and community centre; the high school and district park; the lineal neighborhood core and major footpath system; the single family housing areas; the proposed regional park and the transportation system.

a) The Lake and Community Centre Area

(See Maps 12,16,17 18 and 19)

The focus and centre of the community is the lake, and the commercial and community centre. It is central in terms of location and access, being northeast of the intersection of the two major roads, 153 Avenue and 113 A Street. It contains facilities serving the whole Outline Plan area, and contains the largest concentration of high density residential land.

Although the fundamental purpose of the lake is to retain rain water runoff due to the limited capacity of the City system in this area, a secondary but important feature is its potential as a park, recreation and scenic element in the design.

The lake will have an average depth of 15 feet (*4.6 metres*) of water at all time, with a depth of approximately 25 feet (*7.6 metres*) during periods of peak runoff (a once in 50 year likelihood). The water together with the reserve slopes could occupy approximately 47 acres (*19 hectares*). Amended by Editor

After considering a variety of concepts for the lake, it was decided that the optimum use would be to have it accessible to the whole community for recreation and scenic purposes the year round.

Secondly, it should be used as a focal point for central area development by locating the community and commercial development on its west shore. Thirdly, to utilize its open space characteristics, part of the surrounding area should be developed for high rise and town house development.

Maps 16, 17, 18 and 19 illustrate various possibilities for the development of the community centre and lakeside area. It should be noted that these are not intended as final design proposals but merely illustrative material to suggest various possibilities.

The commercial and community centre located on the west shore of the lake has great design potential; pedestrian terraces, restaurants overlooking the water, accommodation for winter uses for skating, the orientation of the mall to overlook the water are some of these possibilities.

In addition to its relationship to the lake, major factors in considering the community centre are access and parking.

Maps 16 and 17 illustrate systems by which four sided access to the centre can be achieved without major conflicts between automobile and pedestrian movements.

Parking for major shopping centres has been in the main inadequately handled in terms of visual design and in terms of pedestrian and vehicular movements. The average centre is separated from the community by large parking areas. (a three to one ratio of parking to building area). Visually, this is unsatisfactory. The alternatives are costly; underground parking, high rise parking, or site modulation to provide for connections to the community, for free pedestrian and vehicular movement and for visually interesting spaces.

Because of the excavation required to construct the lake, large quantities of earth (1-1/2 million cubic yards / *approximately 1.1 million cubic metres*) will be available economically in this area. The prospects for using earth molding techniques to provide for grade separated pedestrian crossings and to provide for landscaped views for the surrounding community are encouraging.

Amended by Editor

The extent to which underground or elevated parking is feasible will be determined at a more detailed stage of the design. Map 18 shows the community centre with all parking at grade and Map 19 with one third of the parking under the shops.

Due to reasons discussed elsewhere in this report, the possibility exists of the commercial centre being either community or regional in its nature. The Plan provides for a wide range of flexibility in this regard so that it will not place constraints when the detailed design of the commercial centre proceeds.

Besides the lake and the commercial centre, this area is designated for higher density residential development. Around the lake, due to the character of the site and due to the views over-looking the city, it is proposed that select locations be used for high rise development with major open spaces intervening. The areas designated R-6 in the Plan designate the specific areas where High Rise development is most effective in terms of view, keeping the lake approaches relatively free of structure, and from the point of-view of

Central Area visual design. The City may feel that R-3A is a more correct designation for this high-rise development outside the central area.

North of the lake, an open pattern of subdivision for town house clusters would permit the maximum access to the lake for these higher-density uses.

It is a recommendation of the Plan that every effort be made to locate in the Town Centre, a comprehensive range of services and facilities both public and private; these should include retail commercial, cultural, recreational, entertainment, professional services, offices, health facilities, etc.

The location of the Town Centre in relation to the Lake increases the possibilities of attracting to the centre a number of activities which might not otherwise consider a decentralized location.

b) The Senior High School and District Park Centre

NOTE: As a condition of approval, the senior high school and the district park were moved east See approved Outline Plan Map 14A.

The second major element of the design is the Public and Separate senior high schools and district park centre. The park can utilize portions of an existing 40 acre (*16 hectares*) wooded area. This centre of 85 acres (*34 hectares*) is central to the development from the east and south, has good access from 153 Avenue, and will be at the intersection of the major footpath system (see Map 12). Amended by Editor

c) The Lineal Neighborhood Core and Major Footpath System

The lineal neighborhood core shown in Maps 12, 14 (Map 14 replaced by Map 14A as a condition of approval) and schematic detail Map 15, contains the elementary and junior high schools, the neighborhood parks, the churches and local shopping and multiple dwellings.

The concept results from an analysis of the opportunities and constraints of the site. The factors are that a 120 feet (*36.6 metres*) utility right of way crosses the area in an east-west and north-south direction (see Maps 12 and 6). School, park, and multi-family dwellings are appropriate adjoining uses. This form also provides an excellent footpath system for the Plan since it has a focal point in the high school complex and can be extended to link with the central area. It also permits an orderly allocation of land for single family and multiple housing, and local commercial development. Amended by Editor

The proposal has several advantages: multiple dwellings; parks and schools lend themselves easier to an interesting footpath system than do single family dwellings; multiple dwellings are appropriately located near the schools and parks; costly and unproductive road and utility systems around school and parks can be reduced. It enables a clear definition and separation of areas for multiple and single family dwellings.

The lineal system has flexibility in adjusting school requirements to changing needs. This could be of some significance in a period of possible change in education policy.

The surrounding collectors roads and bus routes provide the necessary mass transportation required particularly for the above uses.

The relationship of churches to park and school and bus routes enables their use for day care nurseries at times when they are not used for their primary purpose. This may provide one solution to a problem at present inadequately solved in the Edmonton area.

Whatever its applicability to other areas, the lineal core has much to recommend it for this development.

d) Single Family Housing Areas

As shown on Map 14 (Map 14A supercedes Map 14) the single family dwelling areas encircle the lineal core and have ready access to its social, commercial and institutional services. Walks along the local streets would provide access to the major footpath system. There is a clear definition of single family and multiple dwellings.

Quality can be added to the design by fully utilizing existing tree cover, (see Appendix I) and site advantage.

Since one objective of the Plan is to meet the single family housing demand of the lower and medium income levels, this will influence decisions on parcel size. It will also involve a comparative study of the various types of subdivision systems in terms of this objective.

e) The Proposed Regional Park

NOTE: *A4 a condition of approval, the proposed regional park was deleted. See approved Outline Plan Map 14A*

The proposed regional park or major recreation area is shown on Maps 12 and 13. This area has topographic and tree cover characteristics which lend themselves admirably to such a use. Access from the developed area will be excellent from 113A street. The use would also be consistent with the "Green Belt" separation between St. Albert and the City of Edmonton.

f) Internal Traffic Circulation

The proposed road system for this Outline Plan is shown in Map 14A. Forming the basic framework of the system are two major arterials crossing near the proposed community centre and high density land use around the lake. The major east-west arterial is 153 Avenue which deviates from a straight line in the west in order to avoid the Calgary Power transmission towers and to interchange with the Northwest Freeway. 113A Street has been extended as the major northsouth arterial. However, because of the proposed development being restrained from future expansion northwards by the Bypass Freeway and airport flight path, this arterial curves eastward and becomes another east west arterial east of 97 Street in Stage II.

Besides serving future internal traffic demands, this north-south arterial has been designed to provide a major route to the city in the event that 113A Street is chosen by the City as the location for a new crossing of the *railway*

Amended by Editor

tracks. Though no planning has been done for such a crossing, discussions with the City indicate that the possibility exists that it may be considered as a means of access until such time as the Northwest Freeway is built.

In addition to these two internal major arterials, the proposed development is bounded on three sides by major arterials. Leading to the city are 127 Street on the west and 97 Street on the east while 137 Avenue bounds on the south. These are connected to the internal road network at a number of points so that no intersection will have to handle an unusually high volume.

The arterial system as shown will function well in distributing internal and medium distance traffic. However, it is anticipated that at some stage in the development those roads leading into the city will not have sufficient capacity to handle the peak hour traffic demand. This demand will then be met by the construction of one or both of the two freeways shown. These freeways are not considered part of the Plan itself since they were both being considered in some form before this development was anticipated. However, in the process of preparing the Plan their locations were carefully studied and tentatively finalized by all the interested parties. They provide the Plan with long term easy accessibility to the city and to other major areas on its fringe.

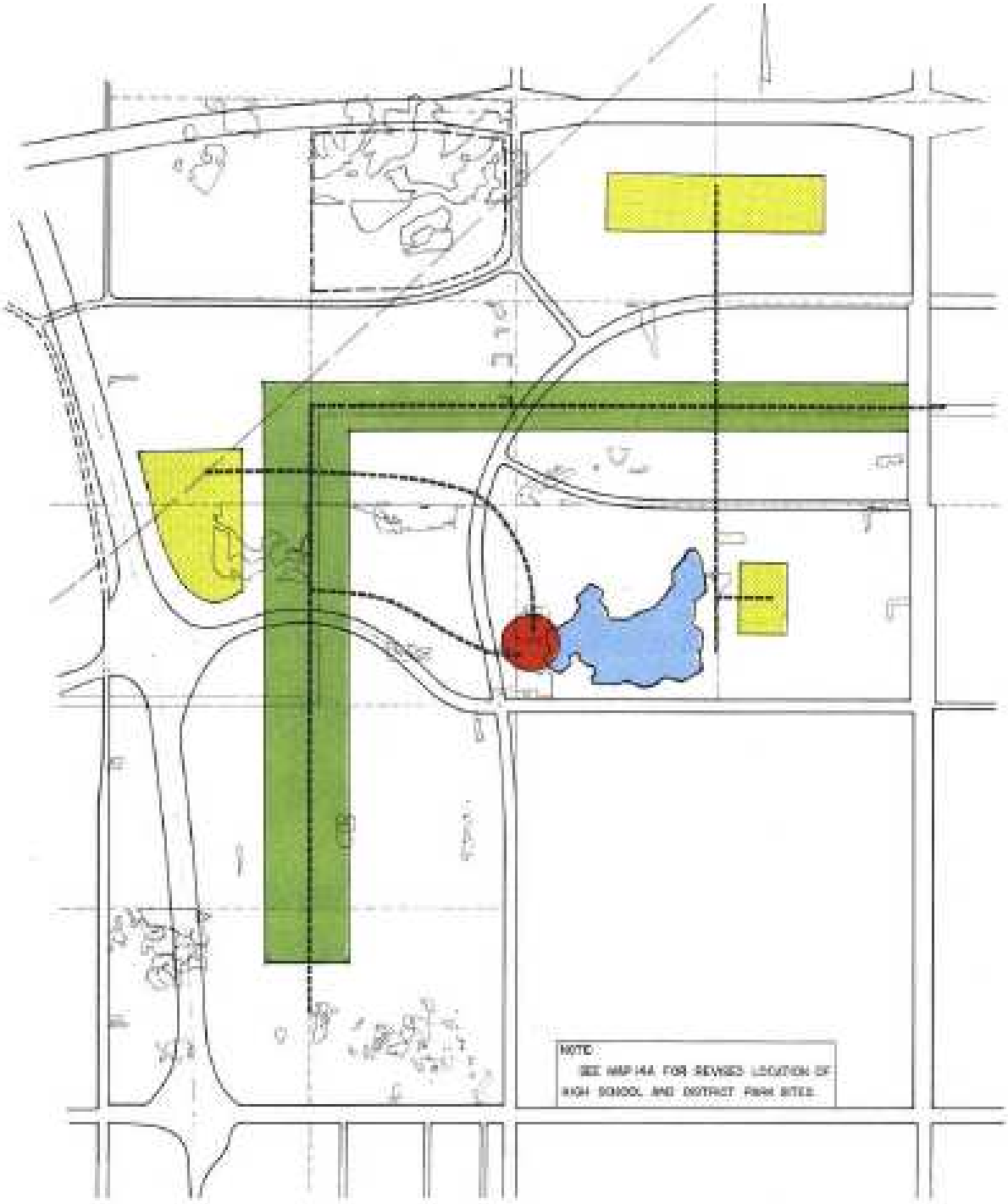
An alternate location for the intersection of the Bypass Freeway with Highway 28 has been considered and remains a possibility. This would place the intersection approximately 1000 feet (*305 metres*) north of the quarter section line. Amended by Editor

Access to the City's proposed Northwest Freeway is from 153 and 137 Avenues. Access to the Department of Highways and Transport's proposed Bypass Freeway k from 97 Street and from a minor arterial at mid point in the development.

The remainder of the roads are arranged in a manner consistent with accepted practice with the local roads being separated as much as possible from through, collector and distributor roads. Collector roads have been spaced so that traffic will seldom need to travel more than 1000 feet (*305 metres*) on a local road to reach a collector. The higher density core can be served easily by bus routes on collector roads adjacent to it. Amended by Editor

The roads have been designed so that the proposed community and commercial centre has access from high capacity roads with no exit handling an unbalanced proportion of the overall traffic.

The manner in which the Plan provides for connection to long term mass transportation proposals is discussed in Appendix III.


NOTE
SEE MAP 14A FOR REVISED LOCATION OF
HIGH SCHOOL AND DISTRICT PARK SITES
AN OUTLINE PLAN FOR NORTH EDMONTON
MAJOR ELEMENTS OF THE PLAN
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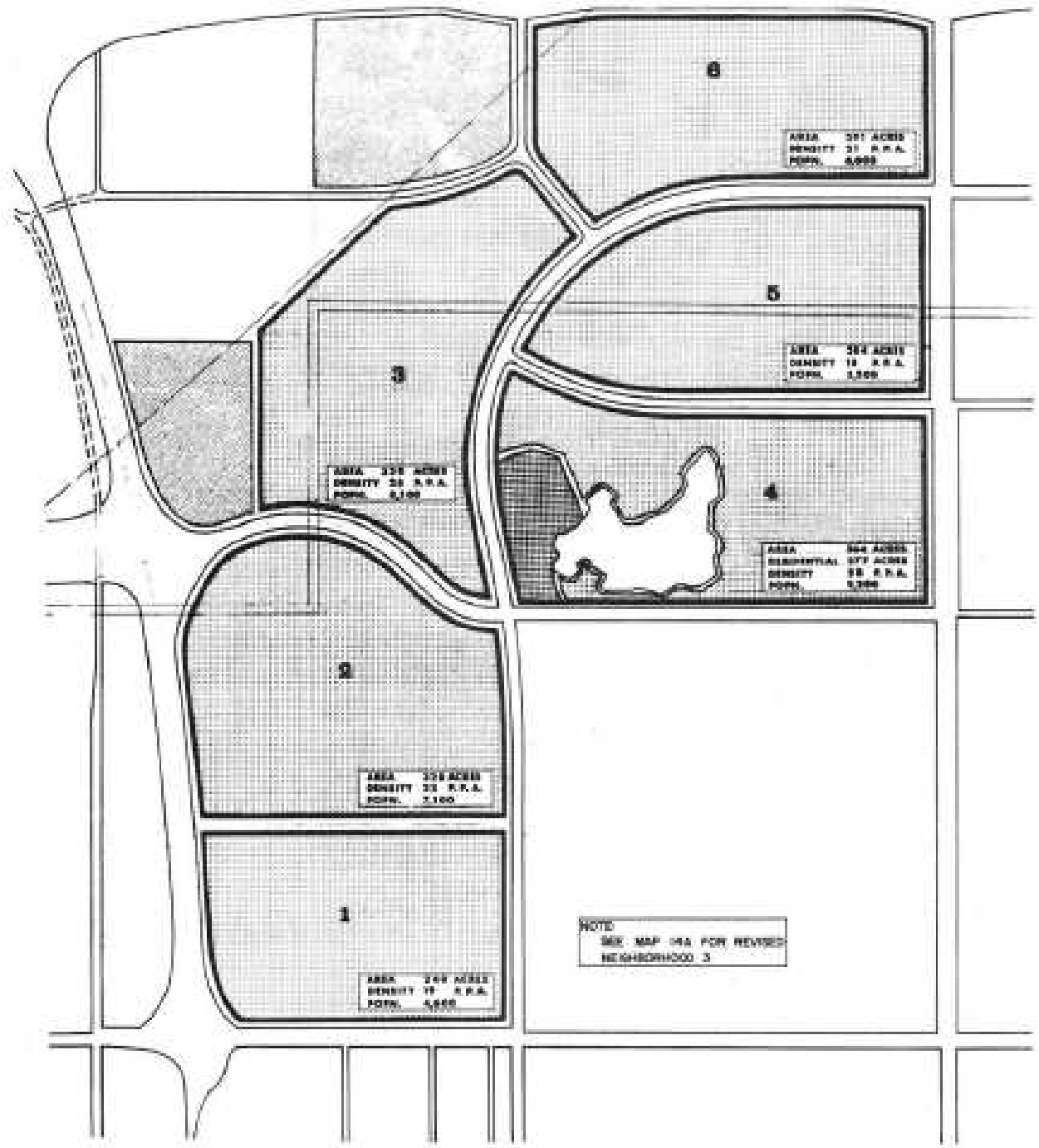
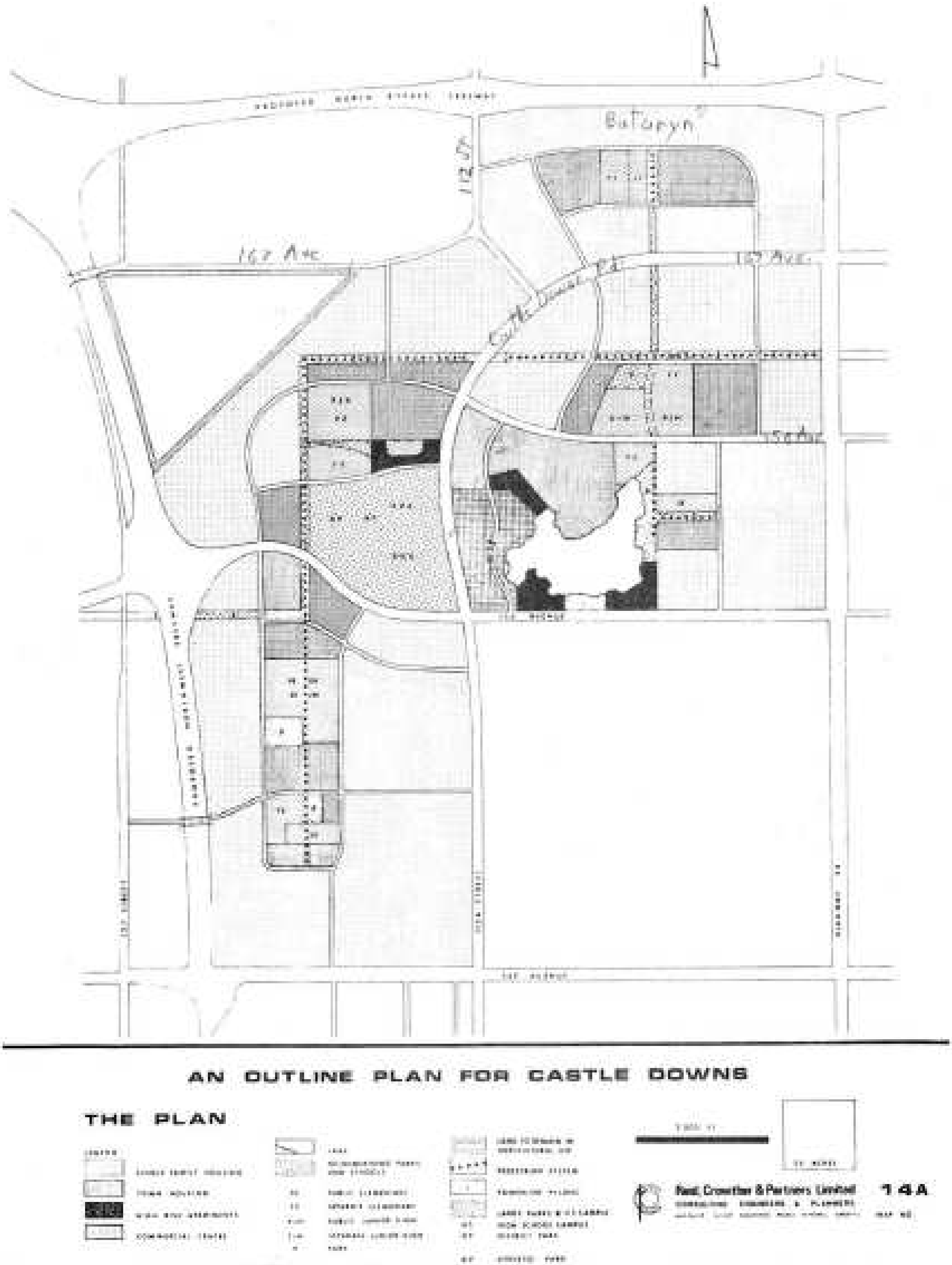


AN OUTLINE PLAN FOR NORTH EDMONTON

POPULATION DENSITY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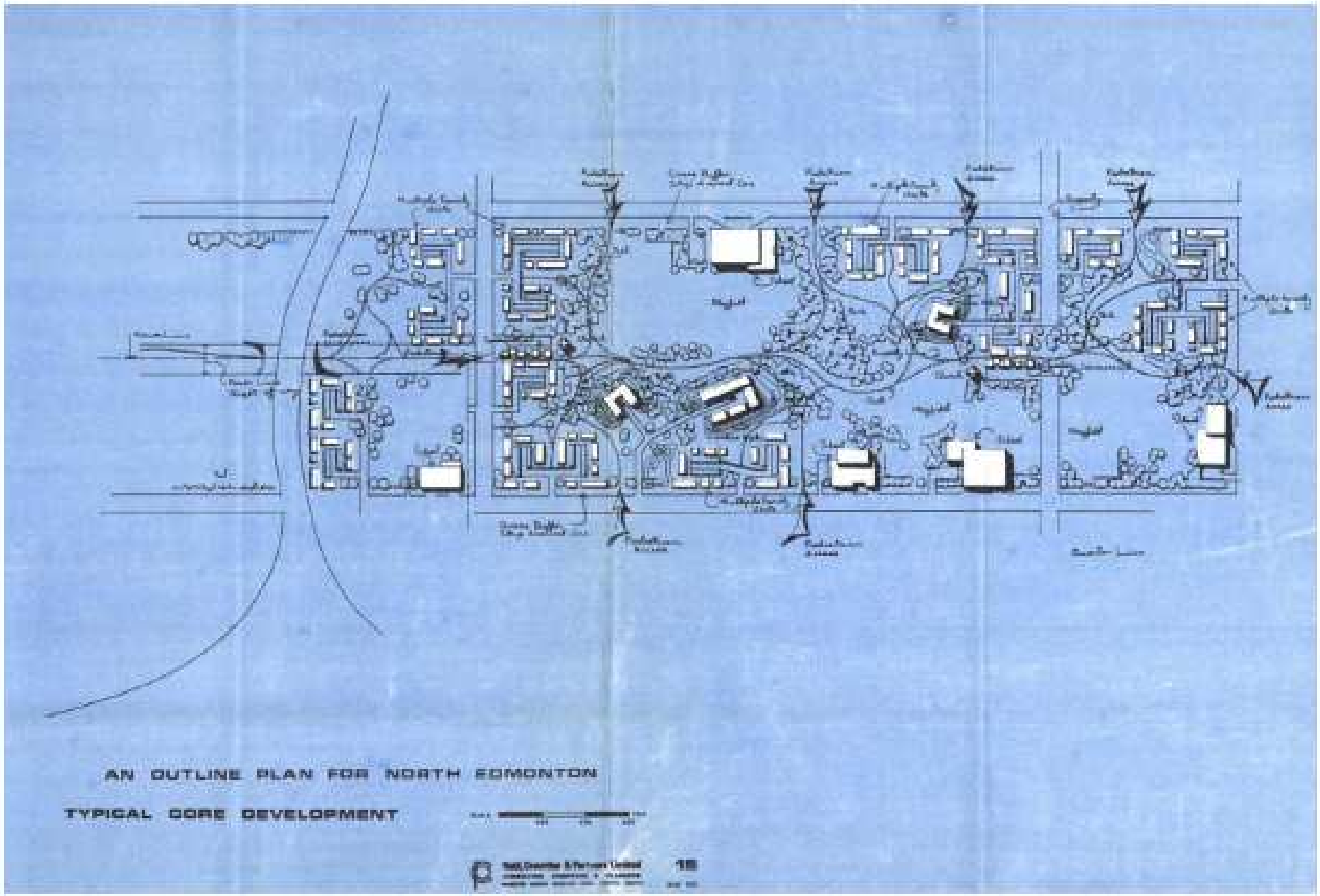
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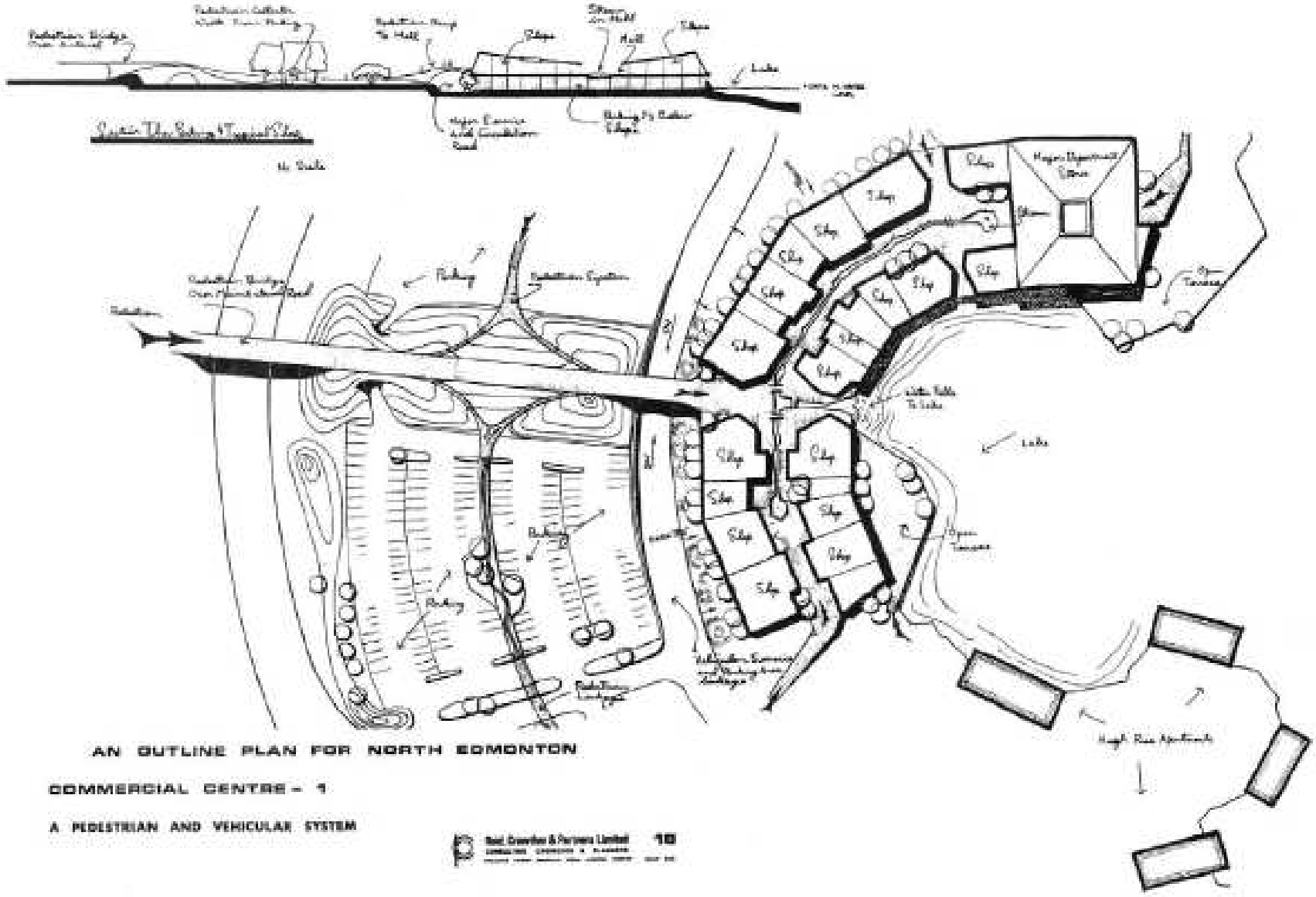
TYPICAL CORE DEVELOPMENT


AN OUTLINE PLAN FOR NORTH EDMONTON
COMMERCIAL CENTRE – 1
A PEDESTRIAN AND VEHICULAR SYSTEM
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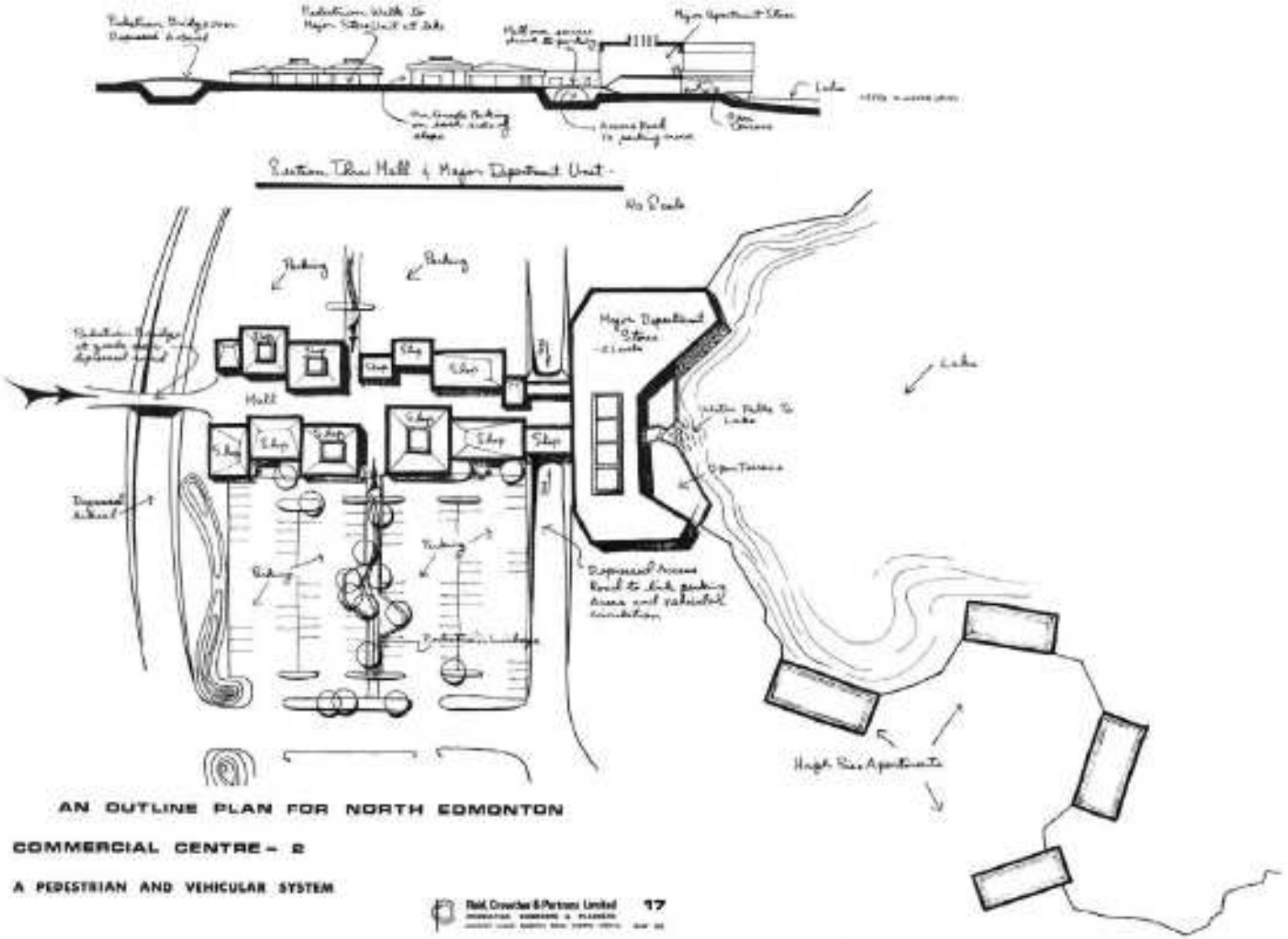

AN OUTLINE PLAN FOR NORTH EDMONTON

COMMERCIAL CENTRE – 2

A PEDESTRIAN AND VEHICULAR SYSTEM

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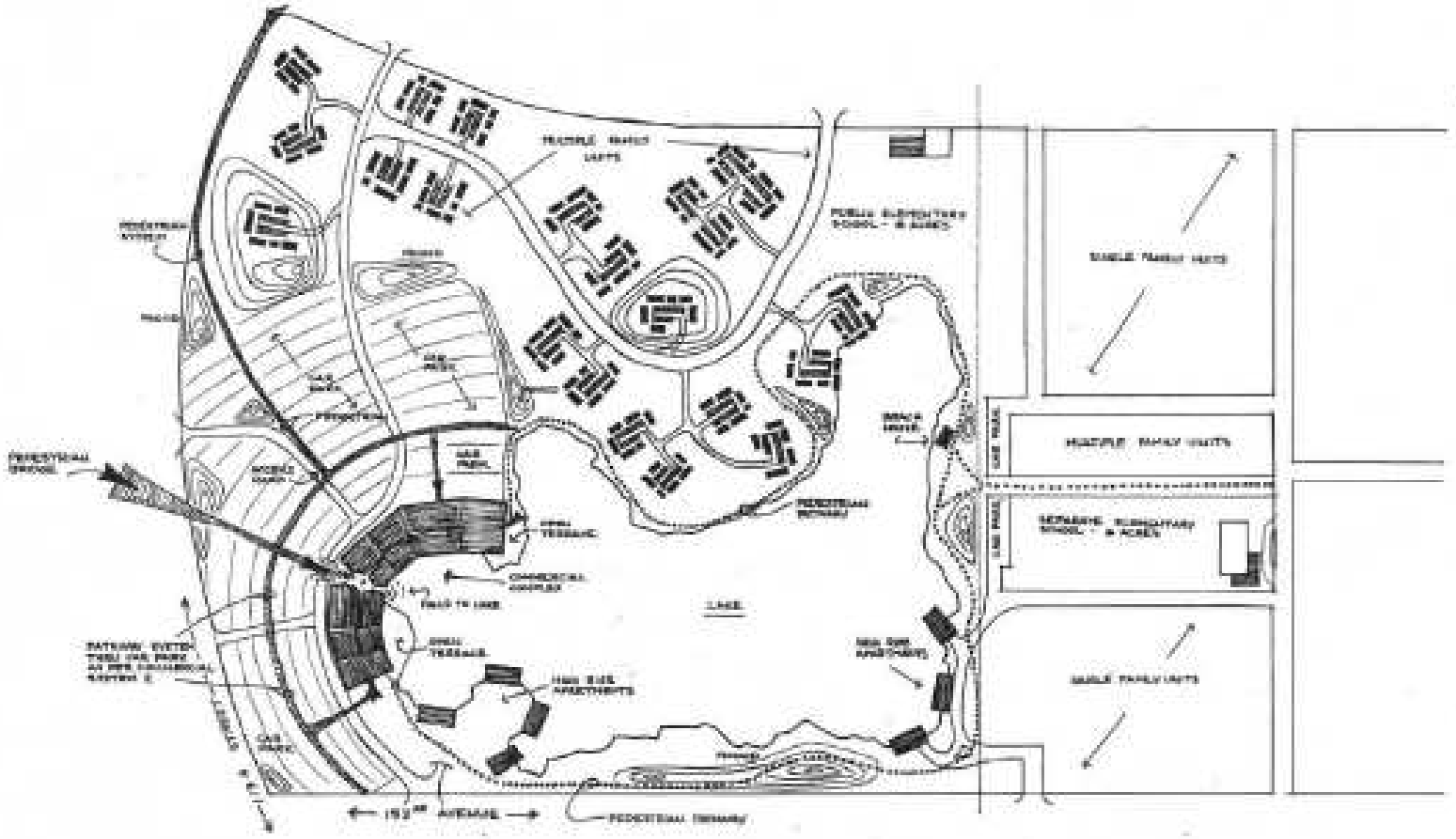
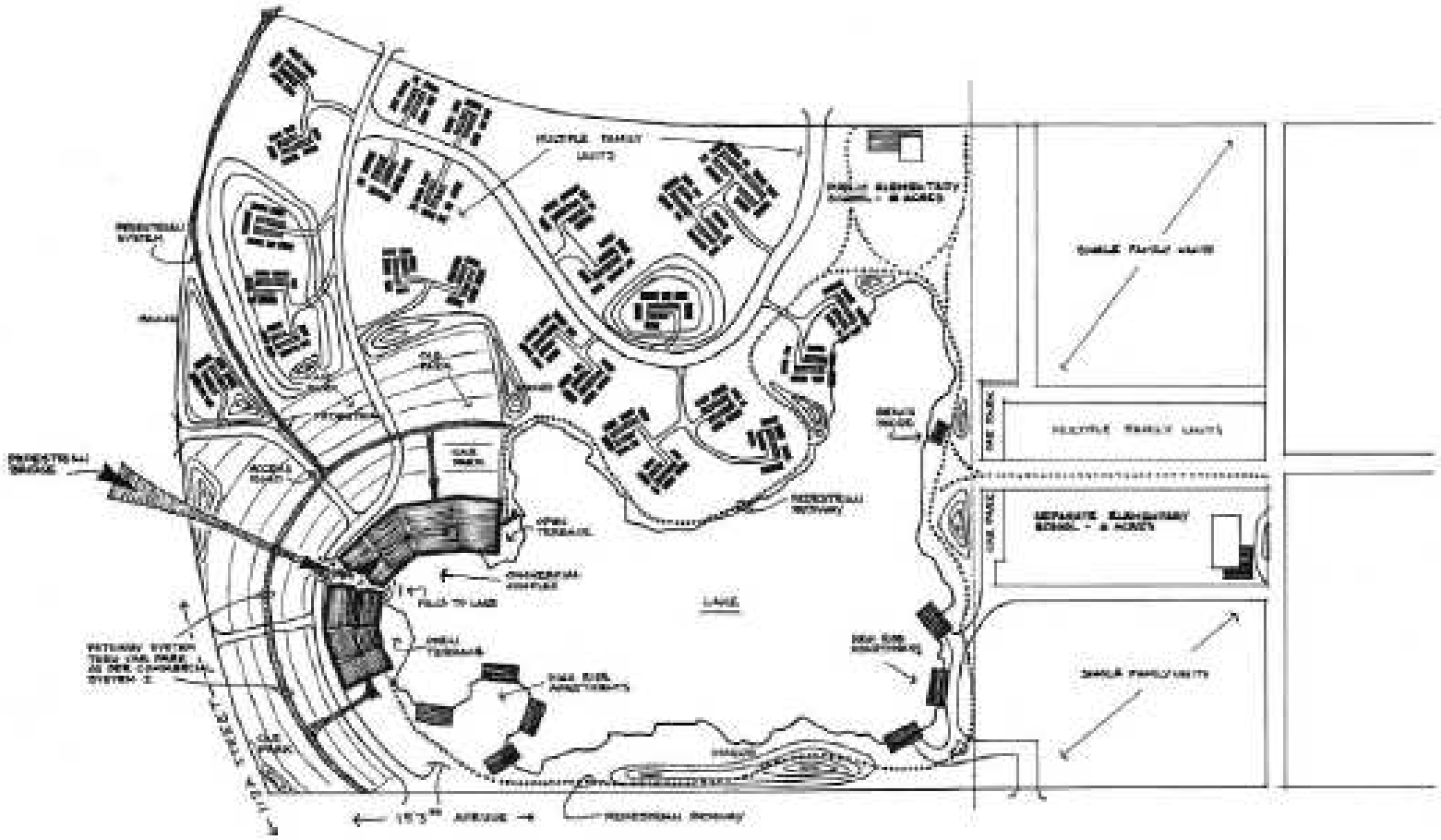


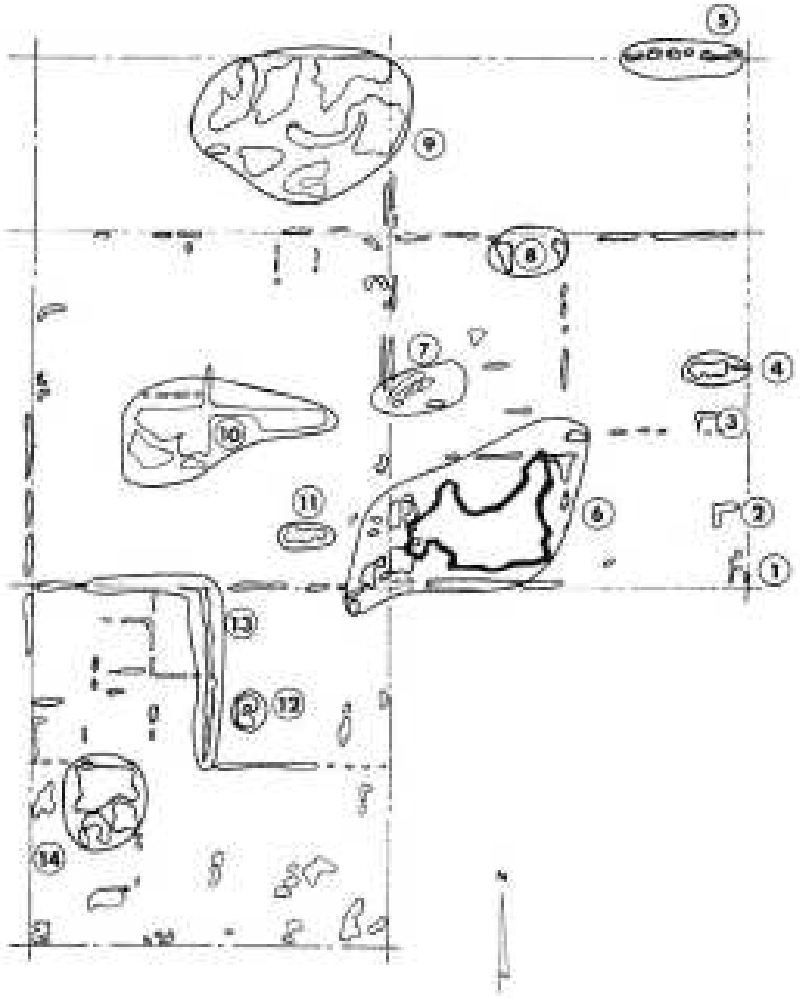
AN OUTLINE PLAN FOR NORTH EDMONTON

LAKE AND ENVIRONS - 1



AN OUTLINE PLAN FOR NORTH EDMONTON

LAKE AND ENVIRONS – 2



AN OUTLINE PLAN FOR NORTH EDMONTON

TREE COVER EVALUATION

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9. PHASING OF DEVELOPMENT

Map 2 shows the first phase of development of the Plan. This consists of the north east 1 /4 of section 30 plus the additional land south of 153 Avenue. The first phase will contain single family and multiple dwellings, school, park, shopping and institutional uses.

The area is under one ownership (*a private* corporation). Services will be provided by the developer in accordance with a development agreement with the City. Utilities can reach the first phase via 113A Street.

Amended by Editor

Subsequent phases of development can move northward and eastward within the same ownership or westward and southward as replot schemes are agreed to by the land owners.

10. IMPLEMENTATION

The commencement of development requires:

a) The recommendation for approval of the Plan by the Municipal Planning Commission and the approval by the Council of the City of Edmonton.

b) The rezoning of the area by the Edmonton Regional Planning Commission from "low density agricultural" to "general urban", and the approval of this amendment by the Provincial Planning Board. (An application for rezoning of section 30 to "general urban" has been tabled by the commission pending completion of the Outline Plan).

c) The approval of the subdivision for the first phase by the Municipal Planning Commission and the detailed rezoning of the first phase by the Council of the City of Edmonton.

APPENDIX I

A GENERAL INVENTORY AND EVALUATION OF TREE COVER IN
THE NORTH EDMONTON DEVELOPMENT AREA

INTRODUCTION

The area under study is presently predominantly agricultural . The tree cover can be broken down into three types:

1. The original parkland tree growth. This consists of older Trembling Aspen, Balsam Poplar, very scattered White Birch, with an undergrowth-Willow, Alder, Ribes and Rose bushes.

2. Tree and shrub growth which has established itself recently by natural means. The species are the same as above.

3. Trees planted by the local inhabitants. These include more Conifers and Exotic trees.

Quality and size of this tree cover varies widely according to soil conditions, aspect, and human action.

The area is flat, with a homogeneous soil type, dotted with local moist depressions. Drainage and soil humidity seem to vary widely, as reflected in the tree cover.

This report describes the present tree cover, and evaluates this tree cover for urban development, and as the basis of further improvement and expansion. It should be used together with the comments listed on the 1" = 400' Maps of the area.

DESCRIPTION OF THE PRESENT TREE COVER

The original parkland remains in the groves of Trembling Aspen and Balsam Poplar spared when the land was turned into fields. These groves vary in size, density and type of underbrush. The trees are older but very similar in size and quality to the more recent stands.

Trembling Aspen, Alder and Willow have established themselves by natural means along roadsides and at the edge of fields, as well as in and around the groves of original tree growth, thus expanding them in size and often rejuvenating them.

Age of Trembling Aspen and Black Poplar, the two main species, varies from 10-year olds to 45 years. However, the majority of the trees are in the 20 to 30 year range.

This is middle-aged for Aspen in open, dry conditions, such as are found here. This tree will reach a maximum of 200 years on good, deep, moist, well-drained sites. However 60 - 70 years is the usual life span. On poor, dry sites, rot will set in at 30 - 40 years, and the tree will die at 50 - 60 years. Balsam Poplar may outlive Aspen by 20 - 30 years.

Size of Aspen and Poplar found here varies from 1" to 14" in diameter, and 5' to 60' in height.

The main factors affecting size are micro-climate and soil moisture.

Poplar grows well on moist well drained soils and exposures. Here, it will show a clean, healthy, tall, slim stem. Growth is rapid, averaging up to 2 feet per year.

In drier soils, or where drainage is poor, and in hot exposures, Poplar will have a "scrubby" appearance. It is crooked, forked, scarred, with a flattened, wide crown. The tree has difficulty reaching over 30 feet in height.

Within the same grove, such as those in Area 13, (see Map 21) one can see variations in the tree stands, as described above. The trees on the south edges and on the higher ground are usually of the poorer type, while trees on the north edges or on lower ground are healthier.

A conclusion from this is that the moist lower spots should not be drained, and that present Aspen and Poplar growth should be kept concentrated around these spots, while it is gradually replaced in the other locations.

The fact that Aspen is relatively short lived, as well as the poor state of many Aspen groves here, lead me to recommend the following: In those locations where it is worth keeping at all, Aspen should be gradually replaced by longer lived, better-growing and more ornamental species.

Aspen provides an admirable protective cover, or "nurse-crop" for several shade-loving species. These species should be planted under the protection of this cover. This will grow well up to the age of 40 - 50 years,

and then will overtake the Aspen and establish their dominance in the stand in a very natural way, taking over just as Aspen dies.

Species such as White Spruce, Norway Spruce, Balsam Fir, which will live up to 90 - 200 years, should be planted under the Aspen tree cover.

These groves, which are to be retained, should also be expanded in size by planting around them of trees and shrubs.

Species such as Pine, White Birch, Green Ash, Manitoba Maple (Box-elder), as well as a multitude of shrubs, will do well under these conditions.

One simple way to improve a poor Aspen stand by rejuvenation is to cut the bigger trees down. This will cause new stems to spring up by suckering around the stump. These new sterns can then be thinned and closely tended.

The map shows the general description of the trees presently in each clump, as well as recommendations as to how to treat each clump.

The "Improve", "Replace", "Expand", recommendations shown on the map, mean that the tree cover should be retained, but that the composition of the clump should either be improved or replaced by underplanting of longer-lived species, or expanded by planting of trees and shrubs around it, or both.

I should stress that those clumps where the comments "Fair" and "Good" show, still have 20 - 30 years of life and usefulness in their present stage.

Some clumps are in just too poor a shape to offer much use, and should be abandoned. These consist mainly of bushy Willow growth with very scattered Aspen trees in them.

The underbrush in most of the groves throughout the area consists of Alder Aspen suckers, Willow, Ribes shrubs and Rose bush. This varies from very sparce to very dense. I t should be disturbed as little as possible, because it protects against excessive trampling around the trees and it closely imitates nature. Finally it provides food and nesting for bird life.

Trees Planted by Local Inhabitants: These include:

Trembling Aspen

Balsam Poplar

Manitoba Maple (Boxelder) White and Norway Spruce Pine

Green Ash

Tamarack

These plantations are the result of efforts by local inhabitants to beautify or provide windbreaks and shade for their farmstead and rural residence. They are usually in rows varying in length from 20 to 200 feet. The trees vary in height from 2 to 60 feet.

These trees are nearly all well established and should be preserved by all means.

They are in more or less good shape depending on the care given ;o them, and their present ornamental effect leaves somewhat to be desired because of their short size and monotonous arrangement in rows. However, their potential is invaluable. They are long-lived trees, which will provide great benefits in shade, windbreak and ornament with age, both individually and as "cores" for development of groves by planting.

SOIL

The soil throughout the area is of a type which will favour growth of most native species and of well-established exotic species of trees and shrubs.

The area is generally flat, with very small depressions which are only a few feet below the higher ground. However as explained above, very slight differences in elevation have a visible influence on the vegetation here. Advantage should be taken of these moist depressions to turn them into centres of recreation, and grow selected, moisture-loving vegetation close to them.

RECOMMENDATIONS CONCERNING SPECIFIC TREE COVER AREAS Along Highway 28

There are four clumps (Areas 1 to 4 on Map 21) of planted trees which should be expanded in size along this major thoroughfare.

There is an excellent cluster of trees in Area 5. This has the best planted vegetation in the whole study area and should be maintained by all means.

The vegetation around the proposed lake in Area 6 is of varied quality, as shown on the map. This vegetation should be improved and expanded.

The vegetation along 153rd Avenue, on the south side of Area 6 is poor. I suggest that it be used as a "nurse - crop" for planting of tall and long-lived trees which will provide a screen.

The vegetation in Areas 6, 7 and 8 is of varied quality and should also serve as "nurse - crop" for the planting of better trees.

Area 8 offers several possibilities as indicated on the map. The present tree cover is only fair, however it provides a good base from which recreational development can be made.

Area 9 is not presently in the development area. However, its present combination of tree cover and grassy openings offers an excellent possibility for a Golf Course and Winter Park. The Aspen cover is generally good and offers an excellent base from which to improve and expand by underplanting and out-planting of trees and shrubs. A high proportion of the openings is moist and low, and should provide good lawn material. The slightly rolling terrain provides additional interest.

I suggest that the northern route of the proposed freeway be followed so as not to interfere with this area.

Area 10 is a good base for a District Park. The present tree cover of Trembling Aspen and Balsam Poplar varies from very poor to good. I t will easily be improved by underplanting, thinning and other treatment. The low and damp openings should be turned into lawns which, in winter, would provide a skating area.

Areas 11 and 12 lend themselves well to the location of small playground: and small local parks, with only slight improvement required.

The tree cover along the proposed footpath in area 13 will require much improvement and expansion by planting. This area is presently being used as a bridle trail by local saddle clubs.

The Power Line Right of Way

This is 50 feet wide approximately, under the wires. In order to hide the power line, trees growing to a maximum height of 30 feet could be planted along either side of the right of way. These trees will have to be planted 30 feet away from the wires. This means that a total width of 110 feet - 120 feet will be taken up by the zone.

The area in between these trees, closer to the wires could be seeded to lawn, and planted with shrubs and smaller trees growing to a 20 foot height.

Area 14 is a combination of good, young Aspen tree cover and low, wet openings with shrubby Willow cover of poor quality. The Aspen shows rapid growth but also signs of heart rot, due probably to excessive rate of growth. This, in turn, is due to the high moisture level in the soil. The rot in the Aspen is not serious, as it will only result in natural thinning of the stand which is presently too dense. However, improvement of the tree cover through planting of slower-growing and longer-lived trees will have to be conducted. This area could serve as Campground.

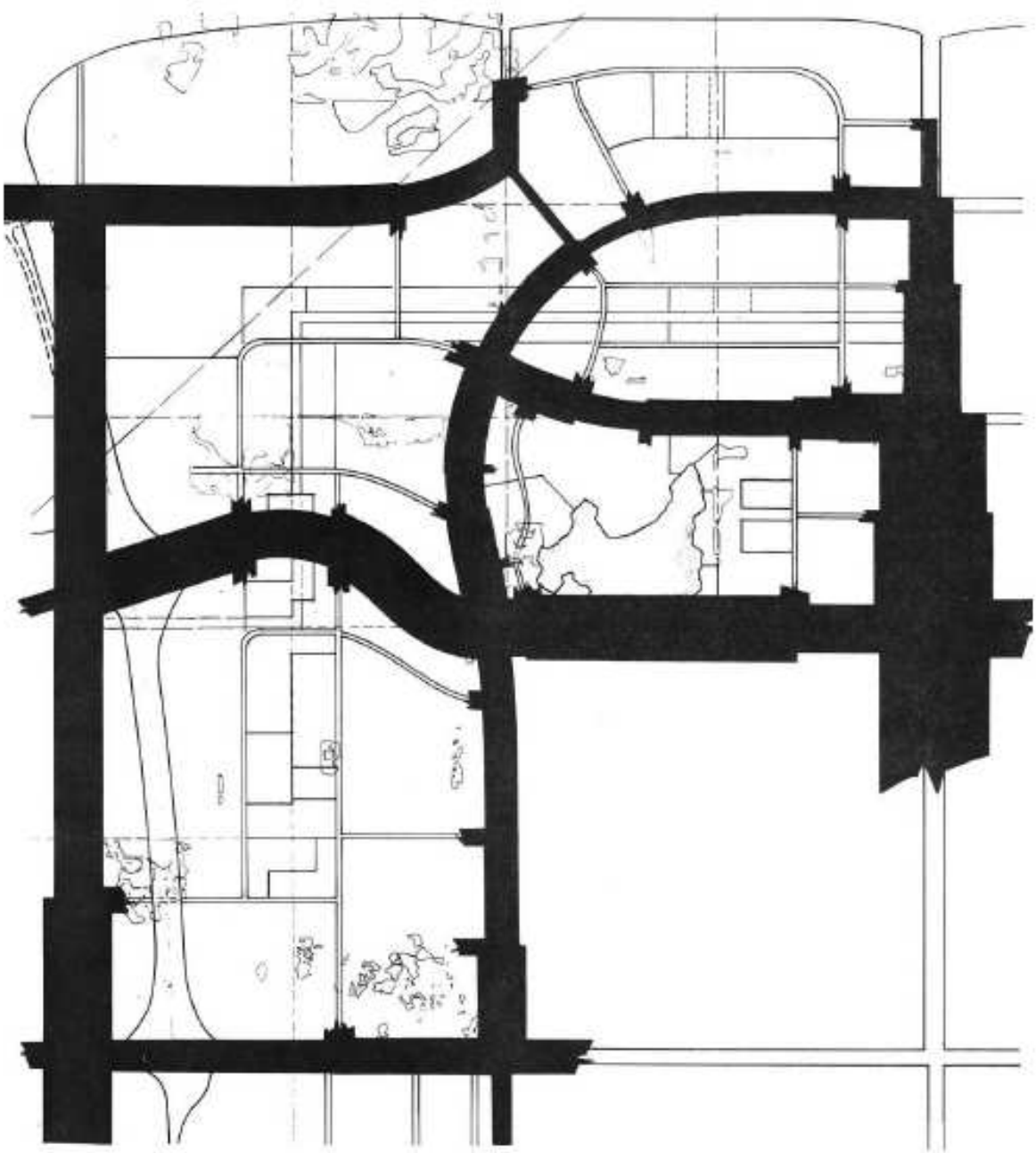
The Nursery north of Area 14 contains may young ornamental trees for transplanting. These trees could be used in the planting programs outlined above.

CONCLUSION

This evaluation shows that the majority of the present tree cover in the North Edmonton Development area is of only fair general quality. However, due to the scarcity of tree cover in this area, it should be retained as much as possible and used as a basis for further improvement and expansion by tree planting, thinning, and other artificial means.

Report prepared by,
Michael Sauze

SAUZE FORESTRY SERVICES LTD.



AN OUTLINE PLAN FOR NORTH EDMONTON

PEAK HOUR TRAFFIC VOLUMES ON MAJOR ROADS
STAGE 1 - WITHOUT FREEWAYS

Reid, Crowther & Partners Limited
CONSULTING ENGINEERS & PLANNERS

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APPENDIX II

PLANNING ASSUMPTIONS, STANDARDS AND LAND USE ALLOCATIONS

A. PLANNING ASSUMPTIONS (Amended by Editor)

Population [1]

1. Zoning	Dwelling Units per Net Acre / *Hectare**	Persons per Dwelling Unit
R1	6.5 / *16.1*	4.15
R2A	15.5 / *38.3*	4.10
R3	25 / *61.8*	2.74
R6	100 / *247*	1.80

[1] Source: City of Edmonton Planning Department

* Net Acre (a) For R1 and R2, comprises the lot area only, excluding all roads and lanes.

(b) For multi-family developments, comprises the total site excluding public roadways and therefore as well as the buildings and any patio areas, includes incidental open space, parking areas and private internal roads.

School Enrollment

Students Per Dwelling Unit [1]

2. Zoning	Public Elementary	Public J. H.	Public S.H.
R1	0.49	0.24	0.20
R2A	0.50	0.20	0.12
R3	0.20	0.09	0.04
R6	0.02	0.01	0.01

[1] Source: City of Edmonton Planning Department.

3. R1 Net Area R2A/R3 Net Area	Gross/ Net Areas - 70% of Gross (after first excluding major arterial roads) - generally 85% of Gross (Gross includes public roads and major pedestrian system) - but - 77-1/2% of Gross in the large area north of the lake which must be penetrated by roads more than in the R2A/R3 areas in the core
R6 (1) Net Area	- 100% of Gross south of the lake which can all be served from 153 Avenue
R6 (2) Net Area	- 85% of Gross north of the lake which must be penetrated by public roads. Also 85% of gross adjoining the district park.

B. LAND USE AND POPULATION SUMMARY (AMENDMENTS)

(Amended by Editor)

	Neighborhoods					
Acreages / *Hectares*	1& 2	3	4	5	6	Total
Total	551/*223*	397/*161*	364/*147*	284/*115*	291/*118*	1,887/*764*
Major Arterials	24/*10*	17/*7*	24	12	9/*4*	86/*35*
Power Line	7/*3*	15/*6*	--	14/*6*	--	36/*15*
Schools	41/*17*	23/*9*	15/*6*	26/*11*	15/*6*	120/*49*
Nbhd. Parks	15/*6*	7.5/*3*	5/*2*	7.5/*3*	7.5/*3*	42.5/*17*
Lake and Park	--	--	68/*27.5*	--	--	68/*27.5*
Commercial	3/*1.2*	3/*1.2*	40/*16*	3/*1.2*	3/*1.2*	52/*21*
Churches	1/*0.4*	1/*0.4*	1/*0.4*	1/*0.4*	1/*0.4*	5/*2*
R1 and R2	374.5/*152*	200/*81*	135/*55*	170.5/*69*	225.5/*91*	1,105.5/*447*
R2A	75.5/*30.5*	38.5/*16*	44/*18*	50/*20*	30/*12*	238/*96*
R3	10/*4*	--	10/*4*	--	--	20/*8*
R6	--	7/*3*	22/*9*	--	--	29/*12*
High School and Athletic. Field	--	65/*26*		--	--	65/*26*
District Park	--	20/*8*	--	--	--	20/*8*
Park and School Dedication (excludes lake but includes lake pork.)	10.3%	30.2%	1 1.3%	12.4%	7.7%	14.5%

LAND USE AND POPULATION SUMMARY (AMENDMENTS)

(Amended by Editor)

	Neighborhoods					
Population	1& 2	3	4	5	6	Total
Total	11,731	6,927	8,614	5,968	5,924	39,164
R1 and R2	7,071	3,777	2,548	3,266	4,304	20,966
R2A	4,078	2,079	2,169	2,702	1,620	12,648
R3	582	--	531	--	--	1,113
R6	--	1,071	3,366	--	--	4,437
Dwellings						
Total	2,912	2,012	3,207	1,446	1,432	11,009
R1 and R2	1,704	910	614	787	1,037	5,052
R2A	995	507	529	659	395	3,085
R3	213	--	194	--	--	407
R6	--	595	1,870	--	--	2,465
Public Elementary Classrooms	45.9	23.5	20.5	23.8	23.5	137.2
Gross Density (P.P.A./*P.P.Ha.*) (excluding power line)	21.6/*53.4*	18.2/45	23.7/*58.5*	22.1/*54.6*	20.4/*50.4*	21.2/*52.4*

C. Griesbach Armed Forces Base

NOTE: For updated information regarding Griesbach please refer to the Griesbac Neighbourhood Structure Plan

Amended by Editor

Griesbach Armed Forces Base provides educational facilities grades I to 8 on the base. Grade 9, Separate attend St. Cecilias and grades 10 to 12 attend O'Leary. Grade 9 Public attend Killarney Junior High and grades 10 to 12 attend Queen Elizabeth Senior High. Students attending Griesbach schools:

Kindergarten - 114

Grade I - 162	Grade 5 - 138
Grade 2 - 159	Grade 6 - 127
Grade 3 - 160	Grade 7 - 113
Grade 4 - 136	Grade 8 - 95

All students above are residents of Griesbach. Grade 9 and High School students attend City of Edmonton schools.

Grade 9 - 140; High School - 335. Namao Airport accounts for 1/3 of these Grade 9 to 12 pupils.

The social and cultural facilities of Griesbach include: library medical clinic, gymnasium, curling rink; a bowling alley and swimming pool are being built this year; hockey rink (outdoor), 2 soccer pitches, I football field, 12 baseball diamonds. Commercial facilities include: groceteria, hobby shop and gas station.

Under a joint agreement with the City, the hockey rink and baseball diamonds are shared with the City in return for the army using some of the City's facilities. Further joint use of recreational facilities is a matter for negotiation and agreement between D.N.D. and the City.

With regard to road connections from the Griesbach area to 113A Street or 153 Avenue, a simple extension and connection is possible at several points. These would provide more convenient access to the town centre and Separate High School, but are a matter for discussion between the City and the D.N.D.

D. Commercial Space Requirements

Town Centre

The estimate for commercial space requirements was based on a comparative analysis of the market area and commercial space of the existing shopping centres in the metro area, together with an examination of their relative spacing.

Two factors exist which make it advisable to maintain a flexible area for this function. These include, first, the timing of the development east of Highway 28 and secondly, the possible impact on the proposed centre of the university and related housing development to the north.

The trading area of a shopping centre is related to the distance from competing centres, and the floor space area and quality of its prime clients. The existing competing centres are:

(Amended by Editor)

		Straight Line Distance
St. Albert	61,000 sq. feet / *5667 square metres*	4.7 miles / *7.6 km*
Westmount	382,660 sq. feet / *35550 square metres*	3.9 miles / *6.3 km*
Northgate	273,000 sq. feet / *25362 square metre*	I.8 miles */ 2.9 km*
Proposed Centres Include		
Londonderry	560,000 sq. feet/ / *52025 square metres*	3.0 miles / *4.8 km*
North Edmonton Stage II		2.8 miles / *4.5 km*

Based on the assumption that the centre can attract a comparable list of retail outlets to Westmount, it could draw on a prime market area of some 65,000 to 70,000 people. The possibility exists and should be allowed for that a stronger group of prime outlets could be assembled which would expand the prime market area.

Based on the lower assumption of 380,000 G.F.A. this would require a site of approximately 34 acres (*13.8 hectares*) for retail commercial need. Other uses in Town Centre include: Library, clinics, theatre, offices, (est. 3 acres / *1.2 hectares*) Amended by Editor

Since the Town Centre in the North Edmonton Plan adjoins the lake, additional space for recreation and parking for lake oriented activities would be involved in the detail design of the Town Centre.

Our observation of Shopping Centre/Town Centre development in Edmonton and elsewhere is that as the centre matures additions are required in terms of commercial, recreational, civic and office function. (i.e. Westmount, Meadowlark and this will probably prove to be so for Southgate).

An area of from 25 - 40 acres / *10-16 hectares* is considered reasonable at this stage of the Plan. The Plan itself is flexible in this regard and can adjust to the smaller or larger figure, as well as to various parking system requirements which would affect the area required. Amended by Editor

A detailed market study will later be undertaken in conjunction with the development of the shopping centre.

Local Commercial

The Plan recommends that local commercial centres be provided for each neighborhood. These are to be located in the core area of each neighborhood, (which contains in addition, the schools, parks, churches and multiple dwellings).

In determining the specific location of the local commercial centre, the criteria used should include; access to road of adequate capacity, relationship to bus route and bus stop, accessibility from various parts of the neighborhood, and its design relationship to adjacent multiple dwellings.

An area of from 2 to 3 acres (*0.8-1.2 hectares*) per neighborhood has been specified in the plan. There may be some variation as the neighborhoods are closer or further from the town centre.

The first area of development may justify a slightly expanded neighborhood centre, since a considerable amount of housing will be constructed before the completion of the Town Centre Commercial.

APPENDIX III

FUTURE TRAFFIC PATTERNS

In conjunction with the development of the Outline Plan, a study of potential traffic from the area was conducted. This study had a number of objectives.

- to determine factors which could be used to give potential traffic generation from any area of the development;

- to determine factors which could be used to distribute traffic both to areas of the city and to zones within the development;

- to determine traffic volumes on alternate road systems being examined for the area;

- to obtain intersection spacing requirements;

- to determine the workability of the internal road system when the area east of 97 Street becomes developed;

- to provide a method comparing benefits to users of alternate road systems and of selecting the most desirable.

Broadly speaking, the methods used conform to well established methods of traffic study with the exception that the results are not based on data gathered specifically for this area but rather on available data from other Edmonton studies.

The basis for traffic generation and distribution parameters was the Metropolitan Edmonton Transportation Study data of 1961 supplemented and modified by more recent data obtained through the courtesy of the City Traffic Engineer.

Assignment to proposed arterial road systems was done manually using estimated "most likely" routes, thereby incorporating some degree of capacity restraint.

At an early stage in the study it was determined that it would not be necessary nor economical to do an assignment for every suggested road system. It was, therefore, necessary to set up the study so that results obtained from several assignments would be useful for a broad range of situations. This was achieved by using a generalized road and residential zone system. Nodes used in the assignment and links between them were chosen on the basis of their usefulness to provide the desired information and did not necessarily conform to any specific road pattern.

One of the road system design criteria was that although the roads must eventually fit an overall transportation plan including freeways and possible rapid transit, they must work in an interim period before freeways are built. Therefore two traffic models were tested. The first assumed full development of the land west of 97 Street but none on the east. It also assumed freeways would not have been built at this stage. The second included full development of both sides of 97 Street and assumed the completion of the two freeways. Map 23 is included to show the estimated volume and distribution of trips to various parts of the city. In this map the width of the band indicates the volume of trips by residents of the proposed development between the development and the city zones. These lines are diagrammatical and do not show the routes which this traffic would use.

The map does not show the estimated 14,000 daily person trips or 1,300 vehicle trips during the peak hour which remain within the development itself.

Map 22 shows expected peak hour traffic on the major roads with-in and surrounding the proposed development. Again,the width of the band indicates the volume of traffic in both directions on the street. These flows include traffic from outside having destinations within the development as well as all traffic originating in the development but do not show traffic passing through the area with neither origin nor destination within it. Though not shown on this map, the traffic assignments included all turning movements so that major intersections could be examined for problems.

Map 22 showing traffic flow on the major internal network and on roads leading away from the development can be summarized in the following manner:

- total volume of traffic originating within the development during peak hour is 5,900 vehicles ;

- volume of traffic originating within the development and having a destination outside the development during the peak hour is 4600 vehicles;

- ratio of traffic leaving development to traffic entering development during the peak hour was assumed to be 80:20

EXTERNAL CIRCULATION

The traffic study carried out in conjunction with the Outline Plan served to indicate the pattern that the internal circulation system should take. The internal road system as designed will work not only in the initial stages but also in the ultimate development with traffic from east of 97 Street using the system.

At the same time, the traffic study showed the volume of traffic which might be expected on the city's existing arterials leading south from the proposed development. In the initial stages before the freeways are built, the available north/south routes crossing the CNR tracks into the city from the proposed development are, 66 Street, 82 Street, 97 Street, 127 Street and the St. Albert Trail. It is expected that the majority of the traffic will prefer to use 82 Street, 97 Street and 127 Street. The St. Albert Trail and 66 Street will be used to a lesser extent.

A detailed study of the available capacities on these streets was not undertaken. However, it would appear that there will be no easy way to accommodate all the traffic demand on the city's existing street system. This situation could be expected from a new development equal to almost a tenth of the population of Edmonton no matter where the development took place within the city.

There are several possible solutions which may be used to relieve the demand on the existing city arterial system caused by this proposed development and also by the proposed university. These are suggested as possibilities only, since their relative merits and problems have not been studied.

a. Early construction of one or both of the freeways would have the greatest effect.

b. As a more feasible early alternate, it may be possible to construct a

railway crossing into the city which cou'd be used by 113A Street traffic.

c. Widening of existing streets would provide a certain measure of temporary relief.

d. Extension of rapid transit into the area would take some of the peak hour traffic off the roads. This is discussed further in the next section.

PUBLIC TRANSIT

The road system within the development has been designed so that all areas can be covered within a 1 /4 mile (*0.4 kilometres*) of a bus route with considerable flexibility in routing. The commercial centre is also easily accessible to buses. However, typical of all perimeter development under present arrangements, the potential patronage of buses does not look too promising.

Amended by Editor

The area is presently outside the 40 minute contour for peak hour bus travel time to the central area. With the expected increasing congestion on the streets and the additional walking and waiting time, this could exceed one hour. Present experience indicates that patronage is very light, even to the central area, for such travel times.

The patronage of public transit could be increased, and consequently some traffic removed from the streets, if the total trip time could be reduced below the trip time by private automobile. This could be done by an efficient rapid transit system. There are three potential routes for rapid transit to the area as shown in Map 4. These are all considered as possibilities by Edmonton Transit System staff. Though detailed studies of these routes have not been carried out, the following rough comparisons based on discussions with Edmonton Transit System staff appear to be valid.

a. A line running north from the central area past NAI T and then north along 97 Street, similar to the North Central line pro-posed by the Bechtel study of 1963, would be the most useful to the development as it would serve the development on both sides of 97 Street. However, this line would also be the costliest to construct.

b. An extension of the first stage rapid transit to run along the NAR right of way along 142 Street west of the development would probably be the cheapest and easiest to construct. How-ever, it is less useful to the development since it would be three miles from the centre of the ultimate development at its closest point. This route is considered the most likely one since it would serve the new university at St. Albert directly.

c. An extension of the first stage rapid transit along the median of the proposed NW Freeway is considered a possibility but has problems associated with it .

None of these possibilities lends itself particularly well to the concept of a rapid transit station at the focal point of the development, i.e. the community centre, though there is a better chance of this with the first route than with the others. In any case, for the purpose of this Outline Plan it was assumed that any rapid transit terminal would have to be served by a feeder bus system.

A number of alternate feeder bus routes through the development were examined. In general, the proposed Outline Plan allows considerable flexibility in bus routing to rapid transit stations on either side of Stage I.

For the whole Outline Plan area the North Central transit route allows for much better coverage by feeder bus routes.

NORTH EDMONTON OUTLINE PLAN TRANSPORTATION POLICY

July 27, 1971

Secretary, Municipal Planning Commission
City of Edmonton
City Hall
Edmonton, Alberta

Attention: Mr. P. Ellwood

Dear Sir:

Re: Resolution Municipal Planning Commission June 17, 1971
Regarding Overall Transportation considerations as they relate to the North Edmonton Outline Plan

With regard to the above matter the following comments may serve to clarify some of the issues raised.

The transportation aspects of the plan may be considered under three headings.

1. The adequacy of the internal transportation system and its linkages with the outer system.

2. The manner in which the plan can accommodate the various alternate transportation proposals for North Edmonton.

3. The manner in which over the course of time the increased traffic volumes can be accommodated by the external system.

con't...

1. The Internal System: The major arterial system proposed in the plan is acceptable to all the various departments involved, and the proposed bus routing is also acceptable in terms of the access it provides to the town centre, the city centre and the campus.

2. Transportation Proposals for North Edmonton. The plan has been designed to provide a workable solution before rapid transit or freeway installation, and also is capable of accommodating the alternate transportation proposals for this area provided by City technical staff. Their alternate proposals include:

a. The By-Pass Freeway
b. The Northwest Freeway
c. The 113A street Rail overpass road
d. Rapid transit to Northgate Shopping Centre
e. Rapid Transit along the 142 street rail line
f. Rapid Transit as a northern extension of the loop west of the airport. (This is the most recent alternate proposed by the E.T.S.).

The various departments are aware of the manner in which any or all or variations of these alternates can be accommodated within the plan. Should there be a concern that the western boundary of development may alter with any change in the status of the northwest Freeway, this is not the case. The western boundary of residential development is determined by its relationship to Speedway Park and the need for adequate separation.

3. In terms of increased traffic volumes over the course of time, and the clear need to increase transportation capacities, the proposals given previously in various combinations could handle the traffic. The decision as to the final policy and staging is of course a City decision, since it is City wide in its implications. There is no doubt that it would be desirable if the decision were made soon.

In the preparation of the plan discussions were held at a provincial, regional and City level. Insofar as the Freeways are concerned the locations were agreed to at a provincial, regional and City technical level, and were given as one of the terms of reference of the study.

I trust that these observations are of use to you and for your information append some notes on the most recent rapid transit proposal.

We would be pleased to discuss any aspect of this matter with the Commission at its convenience.

Yours very truly,

REID, CROWTHER & PARTNERS LIMITED
(Signed) F.M.
F. Marlyn, Senior Planner

Encl:
FM:gm

COMMENTS ON AN E.T.S. PROPOSAL FOR RAPID TRANSIT SERVICE TO NORTH EDMONTON

This matter was discussed during the past week with Mr. D. MacDonald and members of his staff.

The proposal is to extend the proposed transit loop west of the Airport into the North Edmonton area, and perhaps in the long term to the University. It appeared to the E.T.S. staff that at this time this was a viable alternative to either the central Northgate alignment or the 142 Street rail line.

A desirable feature of the proposal is the extension of rapid transit into the North Edmonton Town Centre.

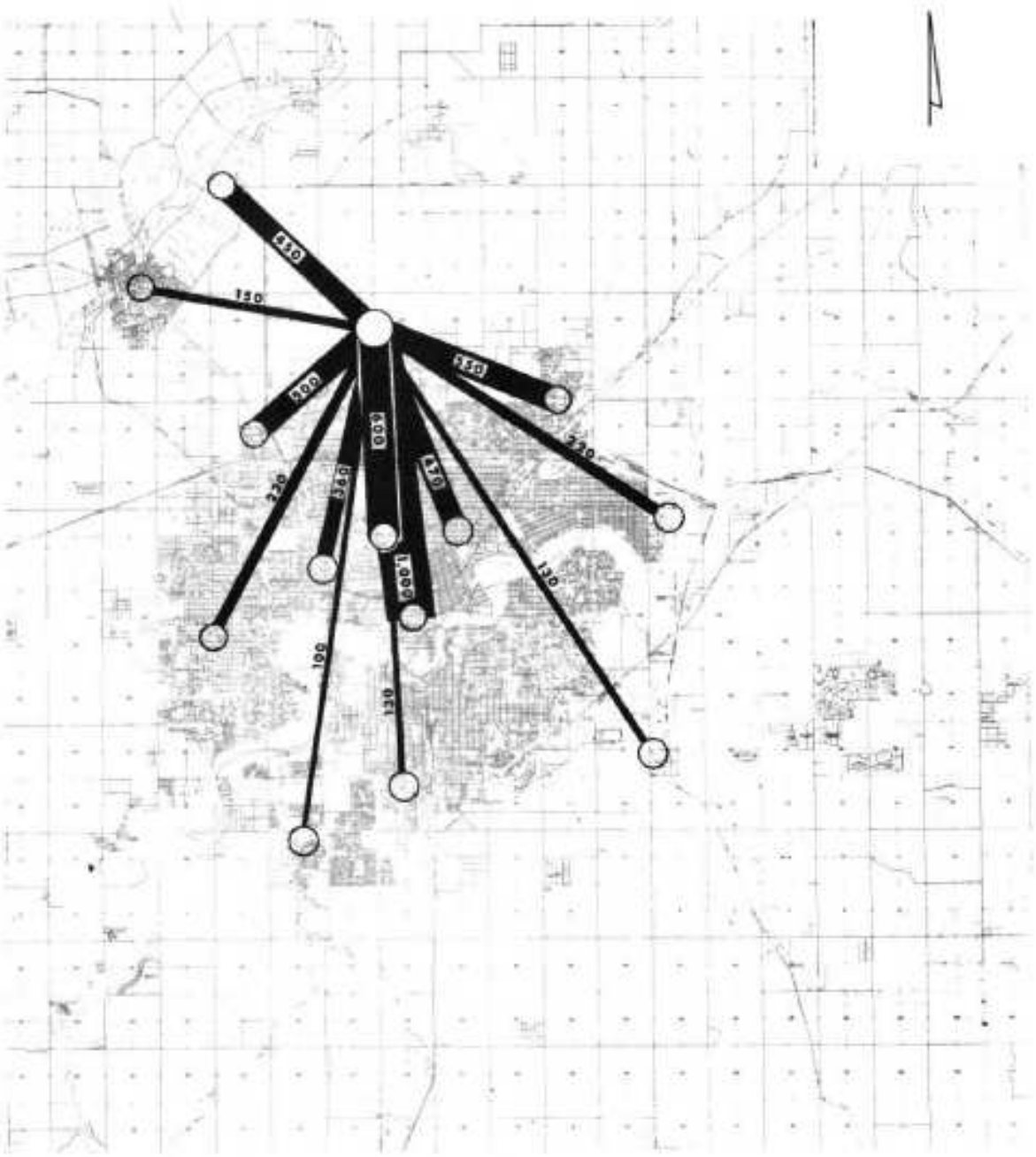
The manner in which this proposal of E.T.S. can be accommodated by the Outline Plan is as follows: The line would proceed from 137 Avenue to the Town Centre on the East boundary of 113A Street.

The initial link to the Town Centre, could be accommodated, I understand within the buffer provided in the East side of 113A Street.

F. Marlyn, Senior Planner

FM:gm

NOTE: See proposed Traffic Volumes, Travel Desire Lines, Bus Routes and General Road System Maps which follow.



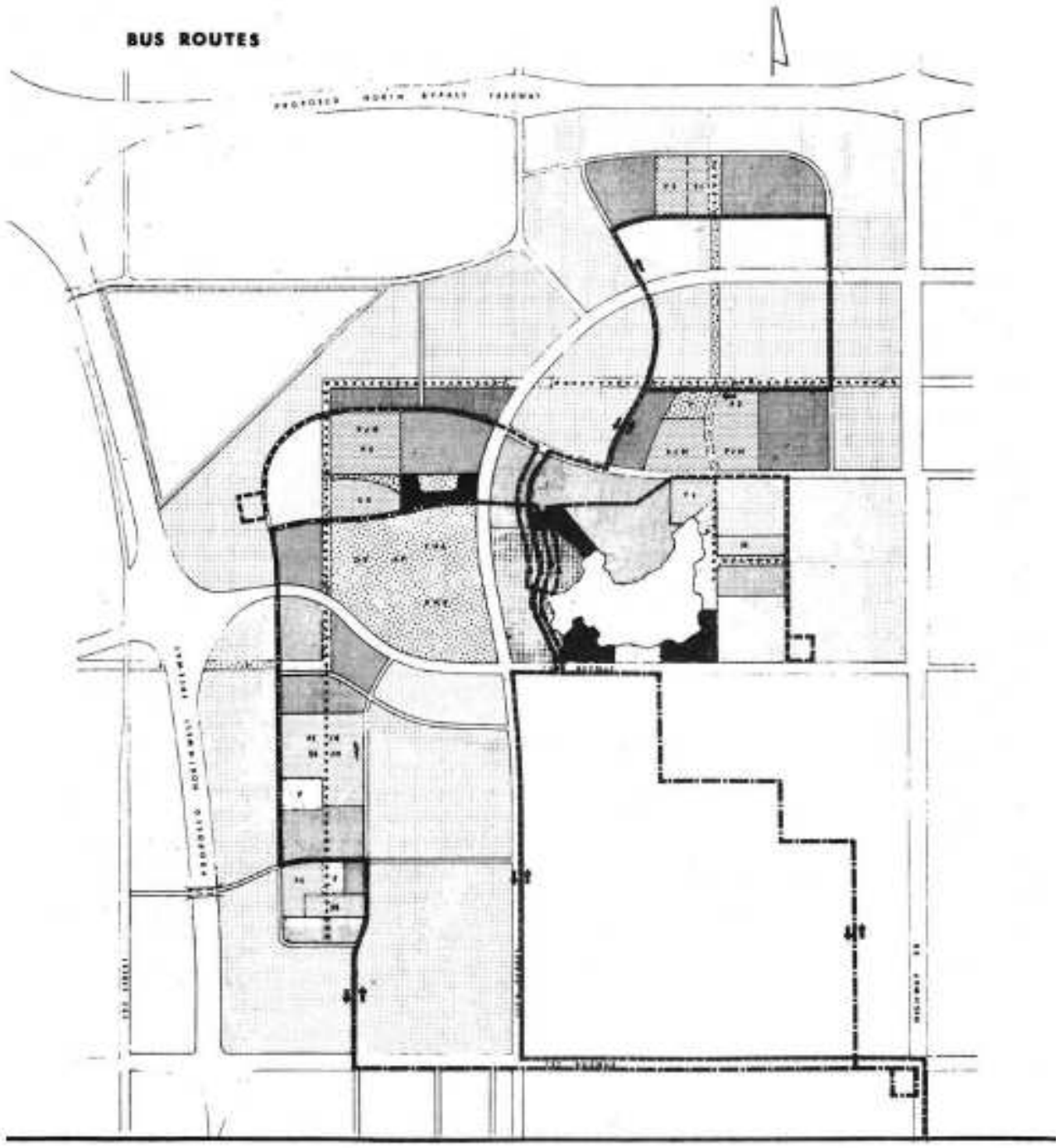
AN OUTLINE PLAN FOR NORTH EDMONTON

TRAVEL DESIRE LINES
ONE WAY PEAK HOUR TRAFFIC

SCALE 0 1 2 3 MILES

Reid, Crowther & Partners Limited
CONSULTING ENGINEERS & PLANNERS
CALGARY EDMONTON REGINA WINNIPEG TORONTO

23
MAP NO.


BUS ROUTES
AN OUTLINE PLAN FOR NORTH EDMONTON
THE PLAN
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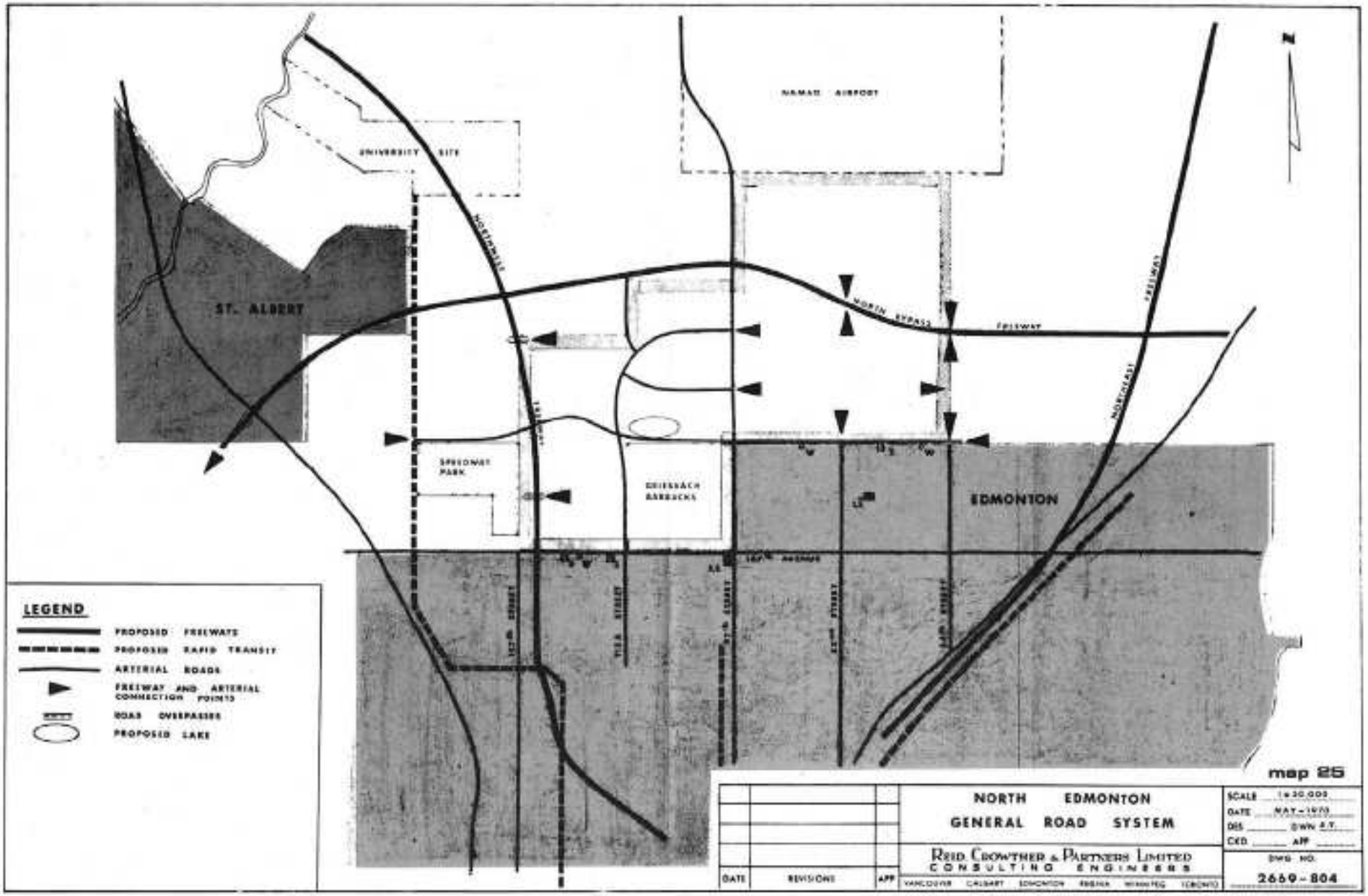
CONSULTING ENGINEERS & PLANNERS
24


NAMAO AIRPORT
UNIVERSITY SITE
ST. ALBERT
NORTH EXPRESS FREEWAY
SPEEDWAY PARK
GRIESBACH BARRACKS
EDMONTON
LEGEND
PROPOSED FREEWAYS
PROPOSED RAPID TRANSIT
ARTERIAL ROADS
FREEWAY AND ARTERIAL CONNECTION POINTS
ROAD OVERPASSES
PROPOSED LAKE
map 25
NORTH EDMONTON
GENERAL ROAD SYSTEM
REID CROWTHER & PARTNERS LIMITED
CONSULTING ENGINEERS
VANCOUVER CALGARY EDMONTON REGINA WINNIPEG TORONTO
DATE REVISIONS APP
SCALE 1:30,000
DATE MAY-1970
DES DWN A.T.
CKD APP
DWG NO.
2659-804

APPENDIX IV

EDMONTON CITY COUNCIL CONDITIONS OF APPROVAL

Castle Downs Outline Plan Phase One

Recommendation: that in light of the discussion at the Public Hearing and the subsequent evaluation of the private submissions made, the original motion of support of the Castle Downs Outline Plan be altered to read as set out below.

That the Castle Downs Outline Plan Phase one, as amended, be approved in principle, subject to the following conditions:

1. That the Castle Downs Outline Plan be amended to include the following policy statements:

   (a) Uses other than those specifically linked to the primarily residential nature of the plan in the vicinity of the major arterials bounding that area may be considered under the following conditions:

      i. that the magnitude and makeup of such uses be the subject of special studies by owners to determine their acceptability within the frame-work of the Outline Plan and surrounding area, with special emphasis on their implications on the environment, public facility provision, land use and circulation structure of adjacent neighborhoods;

      ii . owners to negotiate appropriate developer's agreements with the City prior to rezoning to General Urban in accordance with the Preliminary Regional Plan, Metropolitan Part, Part ii , Section 4.

   (b) In areas where lands are fragmented by different owner-ships, subdivision plans should be prepared on a neighborhood basis utilizing the replotting scheme method, and developer's agreements as outlined in (a) ii .

   (c) That mobile home developments may be considered in the Outline Plan provided that they are designed for integration into the comprehensive development of the plan.

2. A special study be undertaken of the Town Centre, such study to include:

   (a) retail and office space needs;

   (b) school campus and district park;

   (c) the artificial lake and related park area;

   (d) medium and high density residential uses;

   (e) transportation requirements;

   (f) relationship of these elements to and their implications on Neighborhoods 3 and 4.

   No development should take place in Neighborhoods 3 and 4 prior to completion of such a study.

3. That City Council be advised that the future acceptability of the North Edmonton Area, from a transportation point of view, is dependent on the implementation of improved transportation connections to downtown Edmonton.

4. It is recommended to the Commission Board that the Outline Plan be forwarded to City Council in conjunction with an agreement between the City and *a private corporation*, satisfactory to the Commission Board, and this entire report including attachments be submitted to City Council prior to their consideration of the plan.

Amended by Editor