

Potter Greens Neighbourhood Structure Plan

Bylaw 9390 March 14, 1990

Office Consolidation February 2008

Prepared by:

*Planning and Policy Services Branch
Planning and Development Department
City of Edmonton*

Bylaw 9390 (as amended) was adopted by Council in March 1990. In February 2008, this document was consolidated by virtue of the incorporation of the following bylaws, which were amendments to the original Bylaw 9390. This Plan is an amendment to the Lewis Farms Area Structure Plan, Bylaw 8733, as approved by Council in June 1988.

Bylaw 9390	Approved March 14, 1990 (To adopt the Potter Greens Neighbourhood Structure Plan)
Bylaw 10724	Approved May 16, 1994 (Change land use designation in northwest portion of neighbourhood)
Bylaw 12616	Approved September 5, 2001 (Change land use designation in north and west sectors and add land to the northern part of neighbourhood as a result of Lewis Farms Area Structure Plan amendment)
Bylaw 14580	Approved June 27, 2007 (Change land use designation in northeast portion of neighbourhood)

Editor's Note:

This is an office consolidation edition for the Potter Greens Neighbourhood Structure Plan, as approved by City Council on March 14, 1990. This edition contains all amendments and additions to Bylaw 9390. For the sake of clarity, new maps and a standardized format were utilized in this Plan. 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 Bylaws. All text changes are noted in the right margin and are italicized where applicable.

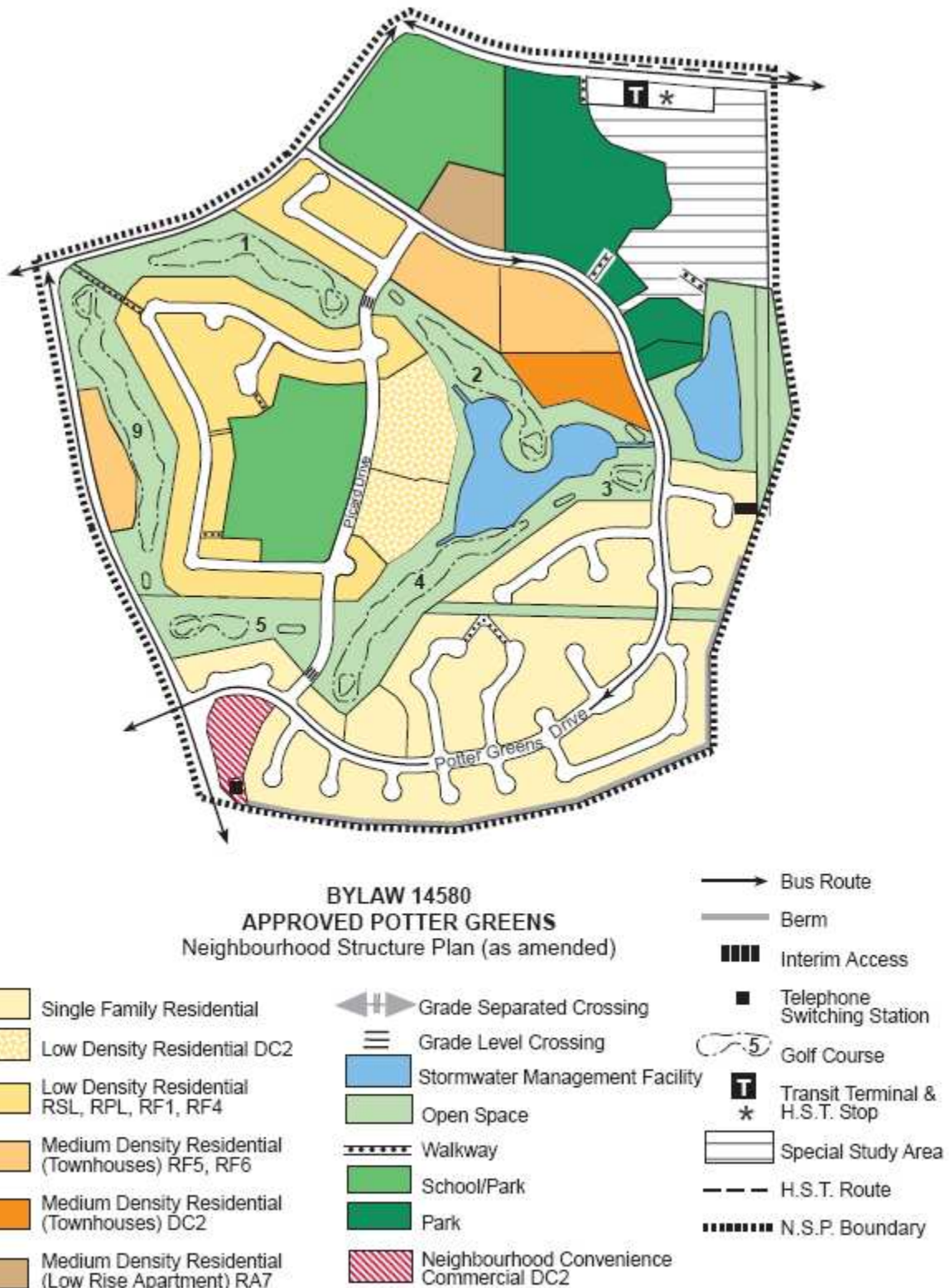
This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original Bylaws, available at the office of the City Clerk.

City of Edmonton
Planning and Development Department

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Schedule "A" Potter Greens Neighbourhood Structure Plan



FOREWORD

In order to encourage a continuation of development within the City of Edmonton while at the same time ensuring that citizens of the City of Edmonton enjoy a high standard of development with quality services for the lands covered by this Neighbourhood Structure Plan, the Council of the City of Edmonton has made the policy decision to approve this Neighbourhood Structure Plan recognizing the following limitations and acknowledgements.

(a) that final approval of residential servicing agreements remains subject to a determination by the City of servicing performance standards necessitated by soil conditions as outlined in detail in the body of the Plan and that the City, by approval of the Neighbourhood Structure Plan, does not warrant approval of any residential servicing agreement or future redistricting;

(b) that the City will determine what additional servicing performance standards specific to the lands are required as covered by the Neighbourhood Structure Plan in order to provide the quality services expected by the citizens of the City of Edmonton;

(c) that all development expenses and other costs, of every nature and kind, are expended at the developer's sole risk and that any additional expenses incurred by the developer as a result of any modifications resulting from the aforesaid servicing performance standards are for the sole account of the developer; and

(d) that notwithstanding Neighbourhood Structure Plan approval, redistricting approval or subdivision approval, the developer will not apply for development permits or commence construction of buildings, surface and underground improvements until the aforesaid servicing performance standards have been adopted by the City and servicing agreements encompassing those standards have been executed and delivered, it being understood that this provision does not apply to site preparation work already completed or in progress for which a development permit or other approval has already been issued by the City.

Chapter 1: Introduction

1.1 Purpose of Document

This document is the Potter Greens Neighbourhood Structure Plan for Neighbourhood 1 as defined by the Lewis Farms Area Structure Plan. It has been prepared in accordance with terms of reference for Neighbourhood Structure Plans established by the City of Edmonton Planning and Development Department, and special provisions for Neighbourhood Structure Plan approval pertaining to the integration of resource operations and urban development as required by City Council in the Lewis Farms Area Structure Plan.

This Neighbourhood Structure Plan is intended to implement the Lewis Farms Area Structure Plan by establishing a framework according to which future subdivision and development of land can take place within Neighbourhood 1 on an orderly and comprehensive basis.

1.2 Background

The Lewis Farms Area Structure Plan (ASP) is an area structure plan as contemplated by Section 64 (1) of the Planning Act (R.S.A. 1980) which defines a general pattern of future development for a 10 square kilometer (four square mile) area of land in the City of Edmonton. The ASP plan area is located in west Edmonton immediately west of the Restricted Development Area (RDA) and immediately south of Stony Plain Road (Highway 16). The Lewis Farms ASP was approved by Bylaw by the Municipal Council of the City of Edmonton on June 14, 1988 (Bylaw 8733).

The Lewis Farms ASP establishes a general land use pattern and transportation structure for the future development of the Lewis Farms area, and identifies large areas for residential and business/industrial use. Within the area identified for residential use, the ASP defines eight future residential neighbourhoods. The ASP also specifies that a Neighbourhood Structure Plan (NSP) be prepared for each defined neighbourhood unit and that each NSP should be approved by City Council prior to any subdivision being permitted within that neighbourhood area.

1.3 Plan Area

The area to which this document applies (hereinafter referred to as the Plan Area) is the area identified on Figure 1 as Neighbourhood 1. This area corresponds to the area defined as Neighbourhood 1 in the Lewis Farms ASP.

1.4 Terms of Reference and Land Ownership

The original Potter Greens Neighbourhood Structure Plan document was prepared by Mackenzie Associates Consulting Group Limited, Professional Planners. Municipal engineering information and advice was provided by I.D. Engineering Company Limited, Professional Engineers. Geotechnical engineering information and advice was provided by Hardy BBT Limited.

Amended by Editor

A private developer is planning a large tract of land within the Lewis Farms ASP Plan Area. The registered owners of the 323.7 hectare (800 acre) tract of land *are a private corporation* (100% interest).

Amended by Editor

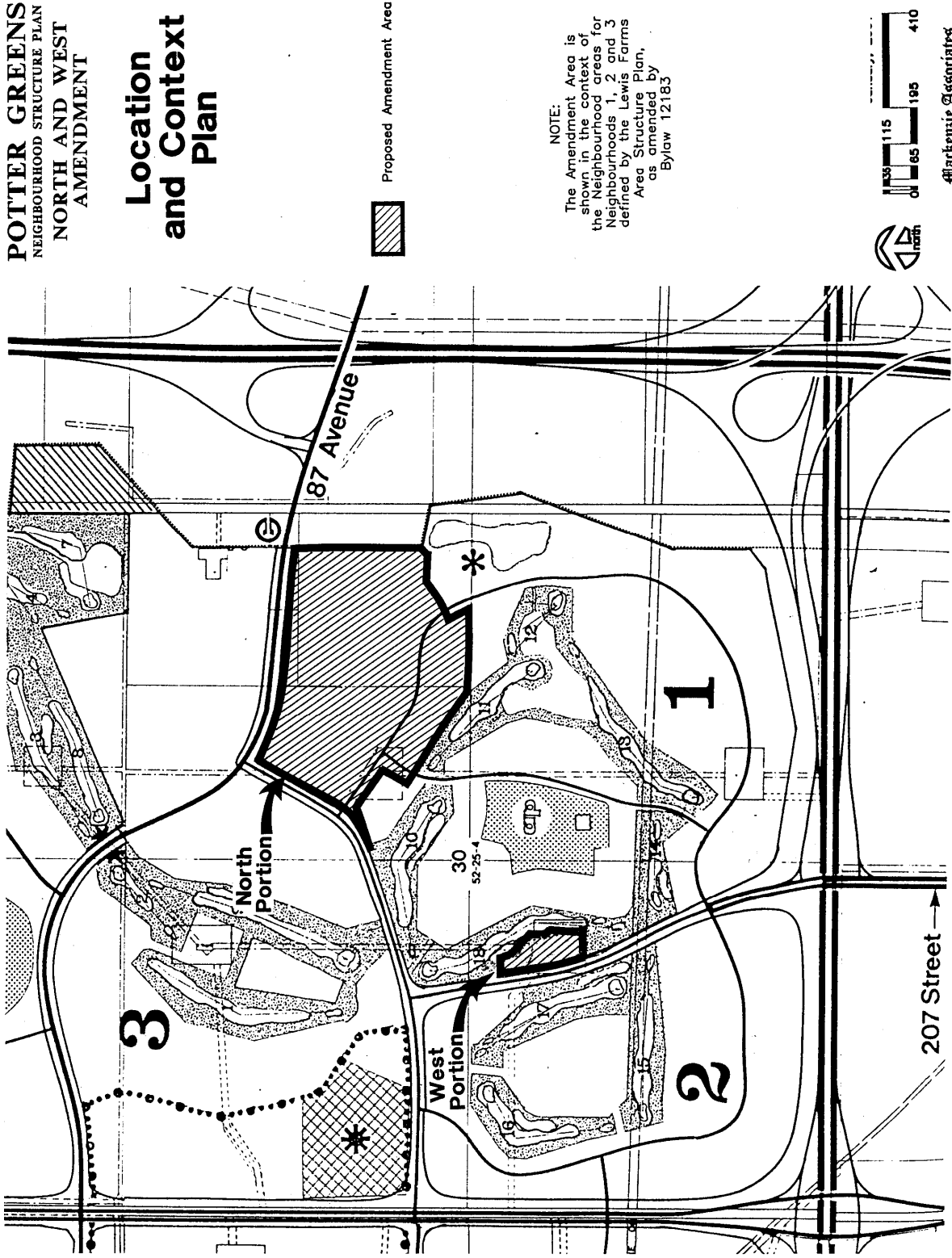
Within the Neighbourhood 1(*Potter Greens*) Plan Area, the portion of the 800 acre tract of land being developed by *a private developer* encompasses approximately 81 hectares (200 acres). The only other private party owning land within the Neighbourhood 1 Plan Area is *a private land owner* who owns approximately 12.1 hectares (30 acres) in the northeast portion of the Plan Area. The location of the respective holdings of *the private developer* and *the private landowner* are identified on Figure 2.

Amended by Editor

Figure 1: Location and Context (As Amended by Bylaw 12616 September 5, 2001)

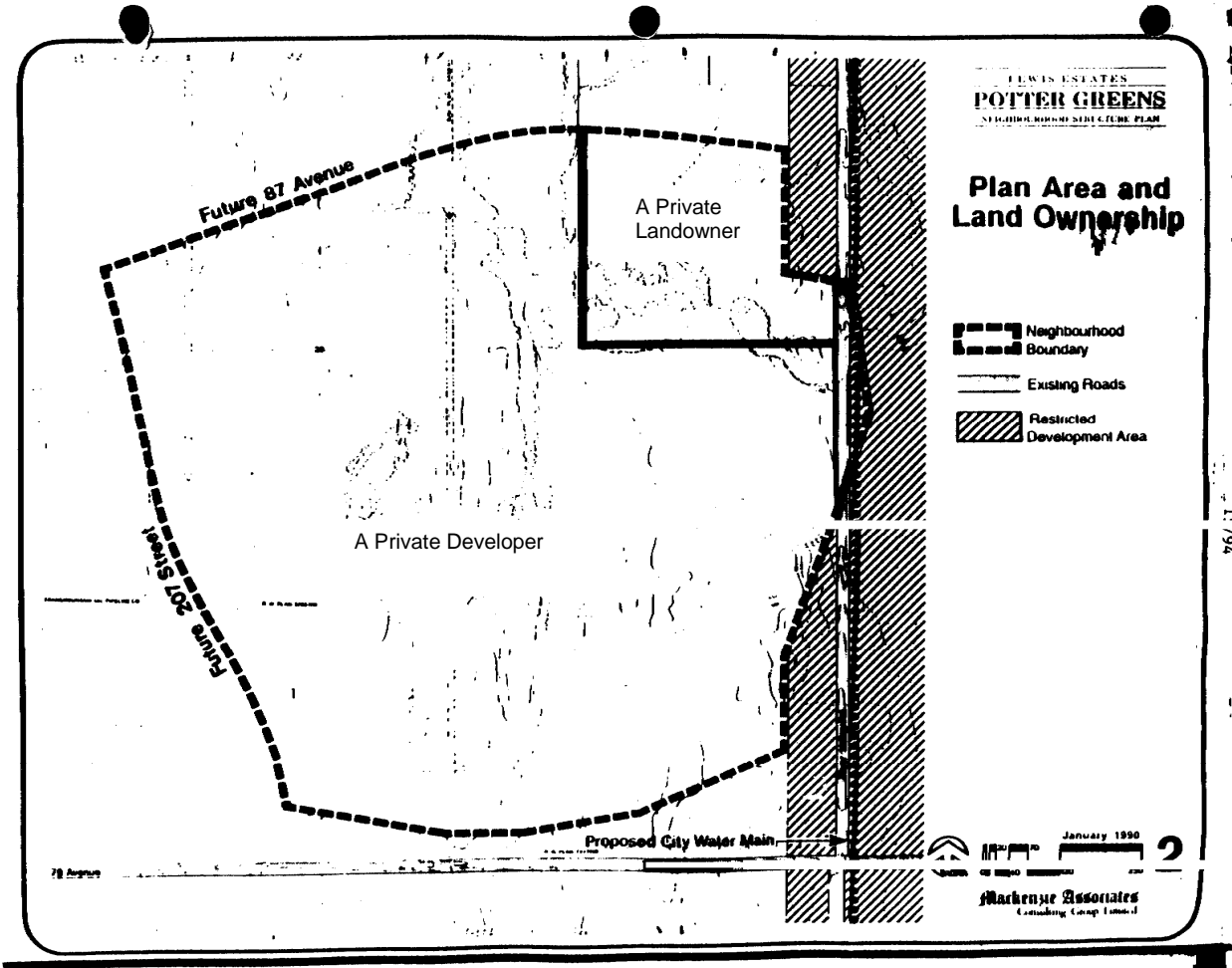
POTTER GREENS
NEIGHBOURHOOD STRUCTURE PLAN
NORTH AND WEST
AMENDMENT

**Location
and
Context
Plan**



Editor's note: this map is historical, describing previous amendments. Please refer to Schedule "A" for the approved development concept

Figure 2: Plan Area and Land Ownership (As Amended by Editor)



Chapter 2: Planning Context & Development Factors

2.1 Location and Setting

The general location of the Neighbourhood 1 Plan Area which is illustrated on Figure 1 is identified in more detail on Figure 2. Generally, the Plan Area lies immediately west of River Valley Road (*199 Street*) and immediately north of 79 Avenue (*Whitemud Drive*). Both River Valley Road and 79 Avenue are existing two-lane section roads, developed to rural standards, which form part of the established roadway grid in West Edmonton.

Amended by Editor

The precise boundaries of the Neighbourhood 1 Plan Area will be defined by the following features:

- a) the south boundary of the Plan Area will be defined by the north edge of 79 Avenue;
- b) the east boundary is defined by, and is coterminous with, the western edge of the Edmonton Restricted Development Area, as amended February 16, 1989 by Alberta Regulation 44/89; *the TUC*;
- c) the north boundary will be defined by the future alignment of 87 Avenue (*Suder Greens Drive*) extended westward from its existing alignment through West Jasper Place; and
- d) the west boundary will be defined by the proposed alignment of 207 Street (*Lewis Estates Boulevard*), a planned arterial roadway which is planned to extend southward into The Grange ASP area.

The Edmonton Restricted Development Area is an area within which development is regulated to prevent most types of development. It is administered by the Government of Alberta and is intended to define and preserve a corridor around the built-up area of Edmonton within which a planned Transportation and Utility Corridor (TUC) will be developed on a long term basis. The RDA Order contains regulations which create a specific area known as the Restricted Development Area (RDA) and the location of the RDA (as modified February 16, 1989) is indicated on Figure 2. Within the redefined

RDA several facilities which were planned as components of the TUC have been developed or are proposed for imminent construction. These include: a major power transmission line constructed several years ago; a portion of the outer ring road which is currently under construction; and, a segment of a planned ring water main. Each of these facilities is located within the RDA immediately east of Neighbourhood 1 (*Potter Greens*), and the actual alignment of the proposed City of Edmonton ring water main is identified on Figure 2.

Amended by Editor

2.2 Physical Features

2.2.1 Topography

The topography of the Plan Area consists of attractively rolling terrain. The Area slopes from a high point, located in the extreme northwest corner (approximate elevation 699 metres), downward toward the east edge of the Plan Area. The central and eastern portions of the Plan Area are relatively low (lowest elevation is approximately 688 metres adjacent to River Valley Road). A distinct, low lying drainage course is evident within the areas of lower elevation in the Plan Area. Within the southeast corner of the Plan Area there is a distinct rise above the lower areas to an elevation of approximately 695 metres.

In comparison with other land developed in West Edmonton, this high point of elevation is approximately 15 metres higher than land situated directly east of the Plan Area in Aldergrove, a neighbourhood in West Jasper Place. Major topographic features of the Plan Area are highlighted on Figure 3.

2.2.2 Soils

A variety of surficial soil conditions exist within the Plan Area. Most of the Area, with the exception of the two topographically prominent high areas, features organic soils with relatively little value for agricultural use. The organic soils will require removal for development purposes, but may be used in association with certain recreational uses such as golf course fairway features. The relatively high areas in the northwest and southeast corners of the Plan Area feature good quality agricultural soils which would be very suitable for development purposes.

The general soil stratigraphy is one of low-to-high plastic clays overlying silt and sand; and a high groundwater table in the lower lying areas of the Neighbourhood. Similar conditions have been encountered in some presently-developed areas of West Edmonton,

where special construction techniques have been developed and have been used to successfully install sewers in similar conditions.

A substantial amount of geotechnical and hydrogeological testing has been carried out in the Plan Area by the landowners and the City Environmental Services Department. The types of soils, and areas and depths of peat, in the Plan Area have been documented thoroughly. In 1984 Hardy BBT Limited undertook a geotechnical investigation and report to determine the overall soil conditions and to delineate the areas of peat deposits. Eighteen boreholes were drilled and as additional one hundred peat probes were conducted. This work led to the planning of the residential and golf course areas in the Lewis Farms Area Structure Plan. In 1988, a very thorough soils investigation was conducted by Hardy BBT Limited for the purpose of detailed land use planning and engineering design (including sewer depths and alignments) within the Plan Area. An additional twenty boreholes were drilled and related lab work was conducted. In 1989, six more boreholes were drilled by Hardy BBT Limited around the proposed stormwater lakes, and related labwork was completed to determine the detailed design and construction methods for the lakes.

On the basis of the completed soils testing, it is recognized that special construction techniques which are technically feasible to implement will be required for portions of the Plan Area. Special construction techniques which can be utilized as necessary to install deep utilities in the subsurface layer of saturated silt are as follows:

- a) Dewatering along the trench alignment using well points.
- b) Use of special pipe bedding of washed rock wrapped in filter cloth.
- c) Shallow trench sides.
- d) Special pipe materials and joints to minimize infiltration.
- e) Construction of sewers well in advance of surface work.

These procedures will only be required at locations where deep utilities penetrate into the subsurface layer of saturated silt. The need for each of the measures noted above will be assessed on the basis of severity of the conditions encountered at each particular location.

In order to ensure the effectiveness of the special construction techniques which will be needed in parts of Neighbourhood 1, performance evaluation criteria will be established for each aspect of construction. These performance evaluation criteria are currently being developed by the City to address difficult soils conditions. The performance

evaluation criteria, once approved by City Council, will be used by the developer in conjunction with the present standards for design and construction of servicing infrastructure.

In the northeast corner of the Plan Area peat deposits up to 3 metres in depth will require removal for residential development purposes, and in other portions of the Plan Area where a subsurface soil layer of saturated silt or sand exists the installation of deep utilities will require special construction techniques.

Engineering estimates of development servicing costs have been prepared for the Plan Area and include any additional costs likely to be associated with the required special construction techniques. These costs are considered to be well within an acceptable cost range to result in an economically viable development.

The land use concept proposed for the Plan Area has been planned to mitigate the effects of any underlying, poorer soils and has been refined as more detailed soils information has become available. The golf course and stormwater lakes have been located in areas of deeper peat deposits, and in areas where the saturated silt and sand are expected to be near the surface. The main residential areas have been located on higher lands and the more desirable soils. Trunk sewers will be installed on alignments which minimize penetration into any underlying, poorer soils. Notwithstanding these land use planning efforts to mitigate the effects of the underlying, poorer soils in portions of the Plan Area, it is recognized that special construction techniques will be required to be implemented by the developer in the servicing and development of the area, in accordance with the latest revisions to the City's performance standards. Further details on the developer's approach to servicing development in the Plan Area are provided in Chapter 5 of this document.

2.2.3 Drainage

The pattern of natural drainage in the Plan Area corresponds with the topography of the area. The general directions of natural drainage are illustrated on Figure 3 and indicate that the Plan Area drains naturally from west to east with drainage focussing on the low area, located immediately west of River Valley Road (*199 Street*), in the central portion of the Area. From this low point, the direction of natural drainage is southeastward through the City of Edmonton storm drainage system which, in turn, ultimately drains into the North Saskatchewan River.

Amended by Editor

2.2.4 Vegetation

There is relatively little natural tree cover in the Plan Area, and that which does exist consists of relatively low scrub brush which occurs in areas of organic soils. Most of the natural vegetation will require removal in the course of development of the Plan Area. One small isolated stand of trees is situated on the proposed school/park site. This tree stand has been assessed by the *Asset Management and Public Works* Department as to its potential value for retention. Based on the composition, age and condition of the tree stand the *Asset Management and Public Works* Department determined that this tree stand was not of sufficient value as to warrant its retention. The tree stand will be cleared in conjunction with park site development activities. Other small pockets of natural vegetative cover which appear to be in good condition and capable of survival will be retained as part of the developed landscape to the extent that it is feasible. No formal plantings such as shelter belts exist within the Plan Area.

Amended by Editor

2.2.5 Existing Roadways

River Valley Road is a government road allowance and will be closed to through traffic when the City's construction of the Outer Ring Road, 207 Street, 95 Avenue and 87 Avenue is completed. In the long term it is planned that River Valley Road be phased out of existence when the major arterial roadway grid in west Edmonton is in place. Upon completion of the planned major arterial roadway grid and legal closure of River Valley Road, the area encompassed by the roadway could be used as future open space. In the short term, however, consideration will have to be given to retaining River Valley Road to provide local access to existing residences which are now served by that road, and the City with access to existing and planned City utilities. River Valley Road will also serve as an interim access route to the early stages of development within Neighbourhood 1 until access at the future permanent access location (207 Street and 79 Avenue) is available.

The City Transportation Department and City Planning and Development Department have reviewed the proposed interim access to Neighbourhood 1 from River Valley Road and will permit the access with the following advisements:

- a) The access must be a paved rural standard, at least 9 metres wide.
- b) Residential development must not abut the north side of the alignment of the access

between 199 Street and the collector until the access is converted to a temporary emergency access. Residential development may proceed upon implementation of the emergency access.

- c) Residential development may not proceed on the south side of the access, except showhomes on those lots with frontage onto the bulbed portion of the access, until the access is converted to a temporary emergency access.
- d) The access may serve development of approximately 270 residential lots, in addition to the multiple family site, prior to construction of the permanent access at 207 Street and 79 Avenue (*Whitemud Drive*). *Amended by Editor*
- e) The access may be converted to a temporary emergency access when permanent access is provided to 79 Avenue via the neighbourhood loop collector and 207 Street.
- f) The emergency access must remain in place until the neighbourhood loop collector becomes continuous between 87 Avenue and 207 Street, including the portion through land owned by *a private landowner*. *Amended by Editor*

The City Transportation, and Planning and Development Departments' conditions by which interim access from River Valley Road may be provided to Neighbourhood 1 are acceptable to the developer. In addition the developer will accept responsibility for the maintenance of River Valley Road between 79 Avenue and the Neighbourhood 1 interim access, to the satisfaction of the General Manager of Transportation, until the access is converted to a temporary emergency access only.

79 Avenue is planned to be replaced, in the long term by a major, freeway-standard roadway that would be an extension of Whitemud Drive. In the short to medium term future, however, 79 Avenue will continue to provide access to residential development in the southern neighbourhoods of the Lewis Farms area.

2.3 Existing Uses

2.3.1 Existing Land Uses

At the time of the original Potter Greens NSP approval those portions of the Plan Area featuring useable soils *had* been cleared and used for agricultural purposes. Lower portions of the Plan Area featuring predominantly organic soils *had* not been cleared for

Amended by Editor

agricultural use and *were* vacant in a predominantly natural state. There *were* no existing buildings or structures relating to existing or previous agricultural use which possess any significance as development constraints.

The most significant man made features of the Plan Area are several oil and gas facilities which have been developed in the course of extracting oil and gas resources from beneath the Area, and other facilities for the transportation of oil and gas products through gathering and transmission networks. These facilities are discussed in detail in the following section.

2.4 Oil and Gas Facilities

Existing oil and gas facilities in the Plan Area include two resource leases with three operating oil wells a major oil transmission pipeline and several minor flowlines connecting the existing oil wells, to other facilities in and beyond the Plan Area. The location of these existing facilities within the Plan Area is indicated on Figure 3. *Although the operating oil wells have been abandoned since the Potter Greens NSP was passed in 1990, the pipelines and flowlines remain.*

Amended by Editor

2.4.1 Resource Extraction Facilities

The *one* facility is an oil well which will continue to operate until the oil resource is depleted. The *other* facility is comprised of two existing oil wells, and a satellite battery facility that will also be phased out of existence once the resources are depleted and the satellite battery is no longer required. Drilling of the second oil well was completed in July 1989.

Amended by Editor

Resource equipment upgrades of the Facilities on each of these sites have been undertaken in accordance with the requirements of the Energy Resources Conservation Board (ERCB) and City Council as stated in the approved Lewis Farms ASP. The approved ASP specifically requires that all resource operations within Neighbourhood 1 and within 500 metres of the boundary of Neighbourhood 1 shall have in place appropriate contractual commitments between the developer and resource operators as a requirement of NSP approval, and that the West Edmonton Liaison Committee shall review the nature and extent of the proposed equipment upgrades to ensure total compliance with the recommendations of the West Edmonton Inquiry Report.

Copies of the contractual commitments negotiated between the developer and resource

operators regarding resource equipment upgrades were submitted as part of this NSP application to the City Planning and Development Department on June 7, 1989. The major equipment upgrading (eg. *Oil facility* battery relocation) outlined in the contracts was completed before May 1989, and all other required equipment upgrades relative to Neighbourhood 1 were substantially complete by the end of June 1989. A letter from the West Edmonton Liaison Committee to the City Planning and Development Department will confirm the Committee's concurrence with the nature and extent of the proposed equipment upgrades and specific approval with regard to the completed upgrades on resource sites in Neighbourhood 1.

Amended by Editor

In addition to the resource equipment upgrade requirements, the approved ASP also required that detailed landscaping plans for each resource site in Neighbourhood 1 be submitted in conjunction with the NSP application; that construction of approved landscaping be an express condition of NSP approval; and that the developer provide an irrevocable letter of credit or performance bond in the amount of 100% of the established landscaping cost, to be held under the standard conditions of security.

Landscape plans illustrating the screening and landscape concepts for *oil facilities'* resource sites in Neighbourhood 1 have been prepared by Butler Krebes Lewis Associates Ltd., a qualified Landscape Architectural firm, and were submitted on June 7, 1989 with the NSP application to the City Planning and Development Department. The City *Asset Management and Public Works* Department have reviewed the Landscape plans for conformance with Parks Department standards, and guidelines for the landscaping of resource sites provided in a City Council approved (September 24, 1985) report entitled "Policy Guidelines For the Integration of Resource Operations and Urban Development" (the Guidelines). A memo to the City Planning and Development Department from the *Asset Management and Public Works* Department on August 2, 1989 confirmed the Parks Department's approval of the Landscape plans for the two resource sites in Neighbourhood 1. Installation of the approved landscaping at the *oil facilities* resource sites was substantially complete by September 30, 1989. In accordance with approved ASP requirements for landscaping of resource sites, the developer has posted a Letter of Credit in the amount of 100% of the established landscaping cost with the City of Edmonton.

Amended by Editor

Amended by Editor

Amended by Editor

Another requirement of the approved ASP relates directly to Council's desire for Neighbourhood 1 to provide a demonstration of the effectiveness of integration measures prior to the granting of final approvals for development. Specifically the demonstration required that an air quality monitoring station be installed in the Lewis Farms Plan Area

to record the levels of ambient H₂S concentrations in the Lewis Farms Plan Area for a period before and not less than six months after resource equipment upgrades have been completed. In addition the approved ASP required that air quality reports be forwarded to the City Planning and Development Department on a monthly basis for their review.

The developer retained Western Research, a member of the BOVAR Group, to install an air quality monitoring station in the Lewis Farms Plan Area and to prepare the required monthly air quality reports for the City of Edmonton Planning and Development Department. The air quality monitoring station has been in operation since July 1988. Its monitoring activities concluded in mid-January 1990. A summary report on ambient H₂S concentrations in the Lewis Farms Plan Area from July 1988 to the end of September 1989 was prepared by Western Research in December 1989. The developer has submitted a copy of this summary report to the City Planning and Development Department in support of this NSP application. The summary report contains these findings:

- i) Hourly average H₂S concentrations were recorded about ten percent of the time and exceeded values of 0.003 ppm less than one percent of the time.
- ii) Observed concentrations in excess of the Alberta standard of 0.0100 ppm occurred on only three occasions, which represents 0.03 percent of the time.
- iii) All exceedences of the 0.0100 ppm value occurred in December and January when atmospheric temperatures were very low.
- iv) The exceedences were caused by temporary instrumentation problems at nearby oil and gas facilities brought on by cold weather, and before resource equipment upgrades were undertaken.

The summary report concludes that the levels of ambient H₂S observed in the Lewis Farms Plan Area meet Alberta Clean Air Regulation standards, and that nuisance level odours have not been evident since the resource equipment upgrades have been completed.

The design of residential development cells within the vicinity of the resource extraction facilities in Neighbourhood 1 conform with the "Policy Guidelines for the Integration of Resource Operations and Urban Development" (the "Guidelines") approved by the City of Edmonton September 24, 1985. These Guidelines require that any residential

properties be set back a distance of at least 50 metres from operating oil or gas wells and that substantial screening and landscaping of the operating wells be undertaken.

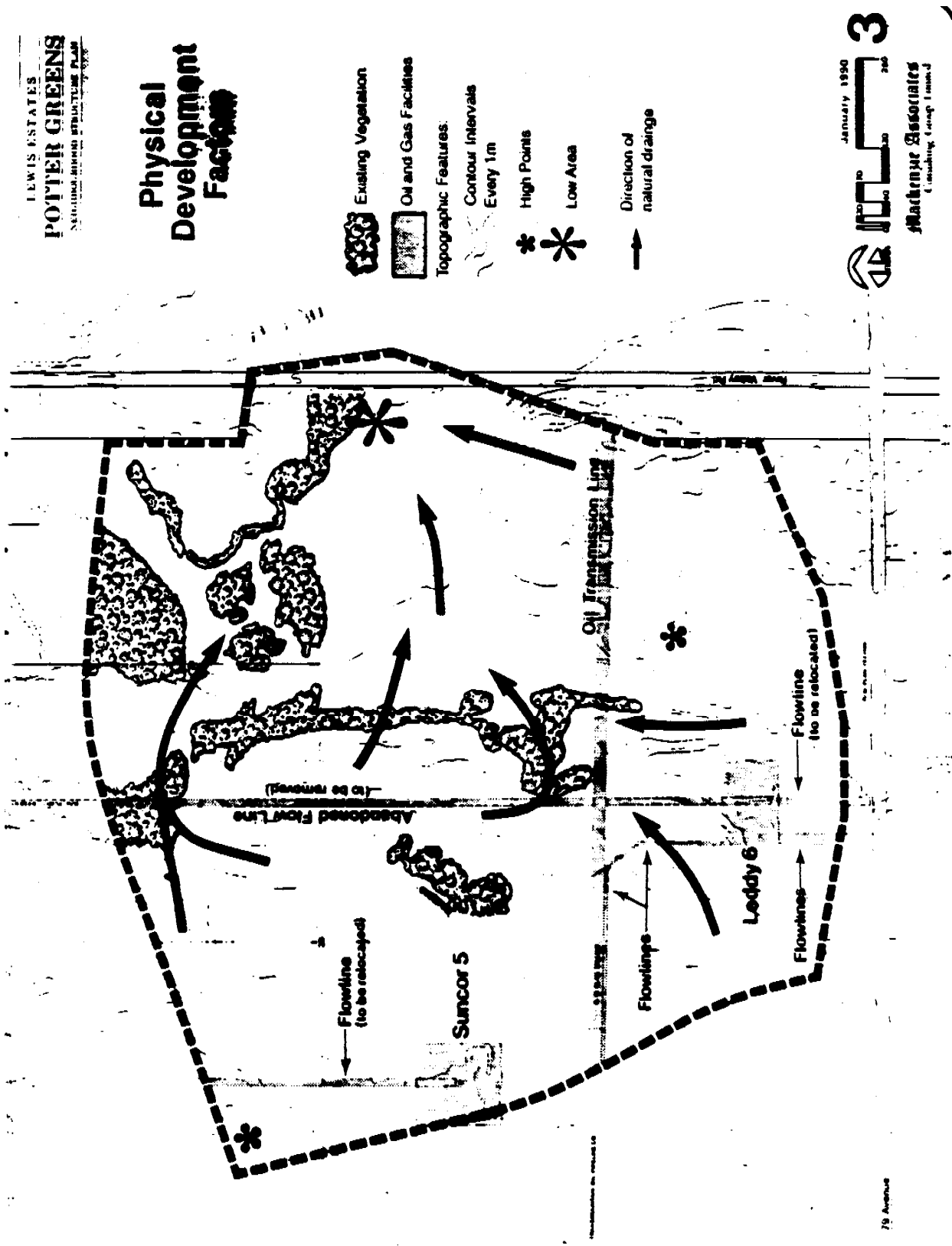
2.4.2 Pipeline Facilities

The *transmission pipeline*, which traverses the Plan Area in an east-west alignment, occupies an easement 18.3 metres (60 feet) in width as illustrated in Figure 3. This pipeline is a federally licensed facility with approval to transport oil and a full range of petroleum products from refineries in the Edmonton area to markets in the lower mainland of British Columbia. The actual pipeline is located 6.1 metres (20 feet) south of the north edge of the easement. The easement area must be kept free of permanent structures and roadway crossings of the pipeline will require special construction techniques to be undertaken in collaboration with the pipeline operator. The number of roadway crossings of the pipeline should be minimized. Portions of the easement not required for roadway purposes can be used as open space in conjunction with adjacent uses, and residential buildings should be separated from the easement boundary by a distance of 15 metres (49.2 feet) in accordance with the Municipal Planning Commission Interim Guidelines for pipeline corridors.

Amended by Editor

The existing flowline which traverses the Plan Area in a north-south alignment was abandoned in July 1989 and will be removed where required as part of the subdivision servicing process. Other existing flowlines and natural gas service lines will be relocated as part of the subdivision servicing process or incorporated into easements along the boundaries of future parcels to be created in the planned pattern of subdivision.

Figure 3: Physical Development Factors



Chapter 3: Development Objectives

The primary objective of the Development Concept proposed for Neighbourhood 1 is to provide a framework for the subsequent subdivision and development of the Plan Area. Specific objectives of the Development Concept are:

- i) to ensure that the planned pattern of development conforms to the Lewis Farms ASP as approved by City Council;
- ii) to define a comprehensive pattern of development that will permit the Area to be developed in an orderly and economical manner;
- iii) to ensure that the planned development pattern respects and takes advantage of the existing natural features of the Area, such as the areas of higher elevation which afford an opportunity for views, and the geophysical configuration of low lying areas (including the distinct drainage course) which provides an excellent opportunity for golf course development; and
- iv) to ensure that the planned pattern of development achieves an attractive and functional integration of the existing natural features and oil and gas facilities in the Area with future residential and recreational land uses.

These objectives form the basic design philosophy according to which the Development Concept for Neighbourhood 1 was formulated. The Development Concept is described in Chapter 4.

Chapter 4: The Development Concept

4.1 Descriptions of the Development Concept

The Development Concept proposed for Neighbourhood 1 is illustrated on Figure 4. It consists of a proposed land use pattern and circulation pattern which, in combination, are intended to define the basic structure of future land use planning and development within the Plan Area.

The general urban design concept is based upon the objective of integrating a planned golf course (six fairways of the 18 fairway golf course which is planned for portions of four separate neighbourhoods in the Lewis Farms area) with high quality residential development.

The topography of the Area exerts a significant influence on the urban design which is expressed in the Development Concept through the following features:

- a) the creation of a pair of stormwater management lakes (West Lake and East Lake) within the natural low area in the east central portion of the Plan Area;
- b) the location of portions of golf course fairways in areas of relatively low lying land; and
- c) the creation of larger cells or clusters of residential development on topographically prominent rises of land.

Portions of the proposed golf course are also located adjacent to the two existing oil wells, from which they provide landscaped separation and visual screening, and on portions of the *transmission pipeline* easement.

Amended by Editor

Residential land uses, predominantly low density single family development, are proposed in four general clusters which are defined by the golf course fairways: a southeast cluster; a southwest cluster; a west cluster; and a northeast cluster.

Other proposed uses within the Area include:

- a) *five* parcels of multi-family residential use located adjacent to the golf course and in the *west and the* northeast residential cluster. *Bylaw 12616
September 5, 2001
Amended by Editor*
- b) a neighbourhood commercial site in the southwest corner of the Area;
- c) *deleted* *Bylaw 12616
September 5, 2001*
- d) a public elementary school site and neighbourhood park, located in the centre of the west residential cluster.
- e) *a Natural Area, Transit Terminal and Special Study Area in the northeast corner of the Area.* *Bylaw 14580
June 27, 2007*

A quantitative summary of the land uses proposed within the Neighbourhood is presented on Table 1. The following sections describe each land use and the circulation component of the plan. With full development of the land use components which comprise the plan, Neighbourhood 1 in the Lewis Farms Plan Area will become a distinct and identifiable new community within the western part of City of Edmonton.

4.2 Residential

Residential development in the Plan Area is proposed in four general clusters, and the northeast cluster comprises a blend of *low density residential uses with multiple family density residential and a Special Study Area adjacent to the Transit Terminal, to be further defined through the Special Study Area process.* Attempts have been made through the design of the neighbourhood to provide some separation of *low density residential and* single family uses from the arterials which form the boundaries of the neighbourhood. Some fairways of the golf course have been located parallel to these arterials to provide a transition zone to reduce the effects of noise generated by vehicle traffic on these roadways. Where *low density residential and* single family uses back on to the arterial roadways normal screen fencing (1.8 metres in height) will be constructed to visually separate the two land uses. The City Transportation Department has indicated that treatment to minimize the potential noise intrusion into the plan Area from 79 Avenue (*Whitemud Drive*) and the Outer Ring Road (*Anthony Henday Drive*) will involve a 1.5 metre high berm centred on rear lot properly lines, with normal screen

*Bylaw 14580
June 27, 2007*

*Bylaw 10724
May 16, 1994*

*Bylaw 10724
May 16, 1994*

Amended by Editor

Fencing 1.8 metres in height on top.

The City's requirements for noise attenuation will be addressed at the subdivision stage to the satisfaction of the General Manager of Transportation. Lots have been sized to accommodate the berm requirement by incorporating extra depth into the single family residential lots backing on to 79 Avenue and the Outer Ring Road. The identified noise attenuation measures will be constructed by the developer in conjunction with the development subdivision stage. A protective covenant will be placed on the residential lots affected to protect the integrity of the berm.

The proposed *medium density* residential sites are intended to provide an alternative housing type within the Plan Area and will be designed as an integral part of the neighbourhood on relatively small blocks of land. The *Community Services* Department of the City of Edmonton has indicated that, due to the upper income orientation of this neighbourhood and questions of land affordability, specific sites for social housing will not be identified in this neighbourhood.

*Bylaw 10724
May 16, 1994*

Amended by Editor

There are four parcels proposed for medium density residential use are generally located in the northeast portion of the Neighbourhood adjacent the bus route on the neighbourhood loop collector. Although these parcels do not represent a large concentration of multiple family use relative to the proportion of single family residential use in the Plan Area, these parcels will be implemented through DC5 districting. Three of the four parcels are intended for townhouse development at a medium density.

*Bylaw 10724
May 16, 1994
and
Amended by Editor*

The *fifth* parcel proposed for multiple-family residential use lying south of 87 Avenue (*Suder Greens Drive*) is intended for *townhouse* development at a medium density.

*Bylaw 12616
September 5, 2001
and
Amended by Editor*

Proposed single family development *and low density residential* adjacent these parcels has a backing-on relationship which allows for greater flexibility in design and the use of special landscaping and screening measures to achieve a compatible transition between the different residential housing forms.

Amended by Editor

Areas designated as low density residential land use areas are intended to accommodate a range of low density residential land use types that could include houses forms permitted under the RSL, RPL, RF1, and RF4 districts of the Zoning Bylaw. In addition, the low density residential land use category is intended to permit development in a Direct Control district, under the provisions of the Zoning Bylaw, if the Direct Control district is designed to accommodate residential housing forms and residential levels

*Bylaw 10724
May 16, 1994
and
Amended by Editor*

similar to those which are permitted under the RSL, RPL, RF1, or RF4 districts of the Zoning Bylaw.

To ensure that special consideration is given to achieving a compatible relationship between the multiple family residential areas and single family *or low density residential* areas in the Neighbourhood, sensitive site development control regulations will be established through the *direct control provision* of the multiple family residential parcels on a site specific basis. These regulations shall address matters such as the maximum site density and coverage, building height, siting of buildings and parking areas, architectural guidelines and compatible building treatments, site landscaping, fencing and access.

*Bylaw 10724
May 16, 1994*

*Bylaw 12616
September 5, 2001*

Amended by editor

4.3 Commercial

The commercial uses envisioned for the commercial site are intended to meet the local convenience retail shopping requirements of local residents. The general types of commercial facilities likely to be developed will serve day to day shopping needs. Development of the commercial site will be implemented through a *direct control provision*. The development control regulations established for the commercial site through the *direct control provision* will ensure that special consideration is given to appropriate transition between the commercial and adjacent single family uses, and that a compatible land use relationship is achieved. The *direct control* regulations will contain site specific controls with regard to the siting of buildings and parking areas, architectural guidelines, landscaping and access requirements. An all directional access on the north side of the commercial site will be provided from the loop collector.

*Bylaw 12616
September 5, 2001*

4.4 Community Services and Facilities

4.4.1 School/Park Sites

The public elementary school proposed within the west residential cluster is a planned element in the planned system of school facilities which is defined by the Lewis Farms ASP. It is intended primarily to accommodate public elementary school students residing within the Neighbourhood. Many factors went into selection of a school site within the development. In addition to considering subsurface conditions relative to foundation design and construction, hydrogeological information was considered relative to surface drainage and site grading requirements. The Edmonton Public School Board has indicated that, based on the Hardy BBT Limited geotechnical report, the public elementary school site in Neighbourhood 1 is acceptable.

The neighbourhood park planned as part of the public elementary school site is intended to serve neighbourhood recreational requirements and provide a focus for community activities. The *Asset Management and Public Works* Department has indicated that the proposed location of the school/park site in Neighbourhood 1 is acceptable.

Amended by Editor

The developer will grade the school/neighbourhood park site to ensure interim drainage and will provide utility services to the site to the satisfaction of the *Asset Management and Public Works* Department and the Edmonton Public School Board.

Amended by Editor

The small decorative park proposed in conjunction with the east stormwater management lake will be provided in accordance with *Asset Management and Public Works* Department policy on this matter, and provisions for same stated in the approved Lewis farms Area Structure Plan.

Amended by Editor

The original Potter Greens NSP identified sites for religious assembly use. However under the current Zoning Bylaw, religious assembly uses can be developed in the majority of land use districts normally included in residential neighbourhoods and it is therefore not necessary to designate religious assembly locations.

*Bylaw 12616
September 5, 2001
And
Amended by Editor*

4.4.2 Natural Area

*Bylaw 14580
June 27, 2007*

A portion of the McDonagh Peatland (NW7009) originally identified in the City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas (Geowest 1993) is identified as Natural Area.

A Natural Area Management Plan (NAMP) has been prepared outlining the current understanding of how this peatland functions, what elements and relationships are not understood, and the establishment of a long-term management and preservation strategy. The NAMP identifies that multiple pathways of vegetative succession are possible as a consequence of area development, and that without actively managing the local hydrological regime changes to the Natural Area are inevitable. It also notes that the direction of this change is difficult to accurately predict (i.e. wetter or drier). The NAMP, from its baseline analysis of the Natural Area, outlines a series of Management Objectives that may be summarised as:

- *maintenance of water quality and hydrology of the area, to the extent possible;*
- *promotion of habitat to support birds, small mammals, bats, and amphibian communities;*

- *maintenance of existing vegetation communities; and,*
- *provision and management of a public trail system for the facilitation of educational opportunities to raise awareness of the importance of wetland communities.*

The NAMP also provides more detailed strategies in support of each identified management objective and supplements these with recommended actions. As changes to the natural area are difficult to predict, monitoring of the area is important, and various construction measures are recommended to provide flexibility in managing the long term hydrology of the area.

4.4.3 Transit Terminal

The identified transit terminal has direct access to the Webber Greens Drive arterial roadway and provides a terminus and transfer site for the Lewis Estates to Downtown and South Campus High Speed Transit corridors. This terminal will allow for transfer from local buses and park-and-ride to High Speed Transit which will take the form of either Bus Rapid Transit or Light Rail Transit depending on the outcome of more detailed transit planning studies. The terminal serves local west end transit users and the growing population of west Edmonton by supporting the existing transit terminal at West Edmonton Mall which is approaching its capacity for accommodating additional transit routes.

*Bylaw 14580
June 27, 2007*

As located, the transit terminal achieves compatibility with area low-density residential development by the separation provided to the north by Webber Greens Drive and to the south by parkland, golf course, medium-density residential, and the Special Study Area. This transit terminal is to be served by park-and-ride facilities that will be defined within the Special Study Area.

The transit terminal is located at the neighbourhood's east entrance and as such requires the use of high standards in architecture, site design, and landscaping to ensure an aesthetically pleasing result is achieved respective of its prominent location. As a pedestrian destination, the facility's design must also incorporate safe and convenient pedestrian linkages with the greater neighbourhood.

4.4.4 Special Study Area

The northeast corner of the NSP has been designated as a Special Study Area. This area is intended to accommodate a park-and-ride facility and transit-oriented development (TOD).

*Bylaw 14580
June 27, 2007*

A park-and-ride facility is an integral component of the area's ultimate transit development, and it should accommodate approximately 800 vehicles. The land available within the Special Study Area is sufficient to accommodate these parking spaces as either a landscaped surface lot or as a multi-layer parking structure. A surface lot is less expensive, but a parking structure is more supportive of transit-oriented development which emphasises compact development, mix of uses, and pedestrian focus all in proximity to transit facilities. The Special Study Area's southern area can easily support medium-density residential uses, and higher-density residential and mixed-uses may be possible closer to Webber Greens Drive and the transit terminal.

The definition and functioning of this TOD area should consider matters including the following:

- *the location and type of park-and-ride facility (i.e. surface lot or parking structure);*
- *how much higher-density residential may be accommodated under existing area servicing plans;*
- *the type and amount of higher-density residential and commercial uses are appropriate in the area considering the surrounding neighbourhood and the ASP's Community Centre;*
- *how to best implement development to maintain the integrity of the Natural Area to the greatest extent possible;*
- *how to create a functional and beneficial relationship with the undeveloped areas north of Webber Greens Drive (87 Avenue); and,*
- *how to design and implement a safe and vibrant activity node creating an attractive living environment while being cost and land efficient respecting both the parking facilities and other TOD uses.*

The study of these matters will allow time to create a vision, review market potential, and develop a considered design and implementation plan. Community consultation in the visioning and design of the area's future development pattern is considered very important to its success, and as such this study must include processes ensuring appropriate neighbourhood participation.

4.5 Circulation System

4.5.1 The Road Network

The circulation system proposed to serve the land use pattern of the Plan Area is shown in Figure 5. The circulation system consists of a well defined hierarchy of roadways which include:

- a) the peripheral arterial roadways which form part of the planned arterial

roadway grid of the Lewis Farms area including 207 Street to the west, 87 Avenue to the north, the Edmonton Ring Road to the east, and 79 Avenue - Whitemud Drive to the south;

(According to information provided by the *Transportation* Department 207 Street is planned as a 4 lane urban arterial divided roadway; 87 Avenue will be an urban arterial divided roadway with 4 lanes; the Outer Ring Road will be developed as a 6 lane urban freeway divided roadway; and 79 Avenue (Whitemud Drive) will become a 6 lane urban freeway divided roadway. In addition the *Transportation* Department has indicated that treatment for noise attenuation will be required for 79 Avenue and the Outer Ring Road) and will involve a combination of berming and fencing on top of the berm.)

Amended by Editor

- b) a system of collector roadways (accessing 87 Avenue from the north, and 207 Street from the west) to provide a well defined internal collector roadway system for the Neighbourhood; and
- c) local residential roads, comprising mainly loops or cul-de-sacs, which create relatively small enclaves of residential development which will not be exposed to through traffic.

All road islands, boulevards and medians associated with the proposed Neighbourhood collector and local roadways will be developed as maintenance free by the developer and to the satisfaction of the *Asset Management and Public Works* Department at the subsequent subdivisions stage.

Amended by Editor

The *Transportation* Department has identified that public transit to the area will be accommodated on the loop collector roadway within the Neighbourhood.

Amended by Editor

4.5.2 Golf Course Crossings of Roads

The golf course will extend over arterial roadways between Neighbourhoods 1 (*Potter Greens*), 2 (*Breckenridge Greens*), 3 (*Suder Greens*) and 4 (*Webber Greens*) in the Lewis Farms Plan Area. At locations where the golf course is required to connect across arterial roads (on 87 Avenue south of the clubhouse and on 207 street between Neighbourhoods 1 and 2) grade-separated crossings will be constructed to convey traffic beneath the arterial roadways. The locations of these underground connections for golf course traffic are identified on the Development Concept - Figure 4 and, will avoid conflict between vehicle traffic on arterial roadways.

Amended by Editor

Within Neighbourhood 1 two grade-level crossings of a neighbourhood collector roadway are planned for golf course traffic. These crossings are identified on the Development Concept - Figure 4. The golf course crossings are not proposed on the loop collector roadway which will serve as the bus route. Signage will be posted by the developer at the proposed crossing locations in accordance with requirements of the Off-Highway Vehicles Act.

The *Transportation* Department has reviewed the proposed grade-separated and grade level crossings and concurs with the crossing locations and placement of the required signage.

4.5.3 Pedestrian Circulation

Pedestrian circulation in Neighbourhood 1 will be accommodated primarily on a sidewalk system developed in conjunction with the internal roadway network.

A secondary system of pedestrian circulation will be provided by pathways planned for Neighbourhood 1 to provide continuity to the primary pedestrian circulation where required. These pathways will connect neighbouring single family *and low density* residential clusters to one another and single family *and low density* clusters to the Public Elementary School, the neighbourhood park, and an open space area adjacent the east stormwater management lake, and will provide a connection across the golf course in the northwest corner of the Plan Area between the 9th green and 1st tee. The purpose of this connection would be to provide a northerly east-west pedestrian connection between Neighbourhood 1 and Neighbourhood 2 in the Lewis Farms *ASP* area for school students. It is intended that pedestrians from Neighbourhood 1), upon reaching the public sidewalk on the south side of 87 Avenue, would proceed westward along the Avenue to the controlled intersection crossing of 207 Street, and then southwesterly, on another designated walkway, into Neighbourhood 2. To ensure that public safety and golf course security are protected in the design of this pedestrian walkway across the golf course it is proposed that golf course vehicle movements and public pedestrian traffic be grade-separated. It is intended that these two types of traffic would function independently. The Edmonton Public School Board and the *Asset Management and Public Works* Department have reviewed this pedestrian walkway proposal and support it. No other provisions for formal pedestrian access onto the golf course are accommodated in the Plan. The developer will fence the perimeter of the golf course area to discourage unauthorized public access and shortcutting, and to ensure the integrity of the golf course

*Bylaw 12616
September 5, 2001
and
Amended by Editor*

Amended by Editor

Amended by Editor

is protected.

The portion of the *transmission pipeline* right-of-way in the southeast residential cluster of the Neighbourhood will function as a lineal open space area for the passive recreational use of residents. One formal pedestrian connection (1.5 m wide concrete walk) will be constructed across this utility right-of-way to connect residential nodes on the north and south sides of the right-of-way. The *Asset Management and Public Works* Department, City Transportation, and City Planning and Development Department concur with this walkway proposal. The *Transportation* Department has specifically indicated that it would not support construction of an east-west walk within the utility right-of-way because it would encourage pedestrian circulation into the RDA which has been planned for non-recreation (roadway and utility) purposes. Alberta Environment has confirmed that insufficient area exists in the RDA to accommodate future development of any public recreation use. The Neighbourhood Plan will accommodate informal pedestrian access to the RDA from an open space area planned adjacent to the East Stormwater Lake and east boundary of the Neighbourhood. No formal access development has been required by the *Asset Management and Public Works* Department in this area.

Amended by Editor

Amended by Editor

A north-south pedestrian linkage is provided through the amendment area connecting Potter Greens Drive to Webber Greens Drive. The walkway passes through the natural area and provides convenient access to the transit terminal and on towards the residential and commercial areas north of Webber Greens Drive. This pedestrian link crosses Webber Greens Drive at the transit terminal entrance forming an important pedestrian link to the north and it should be designed to give pedestrians an enhanced level of safety as they cross this wide arterial roadway. Enhancements may include a centre median to shorten road crossing distances, enhanced crosswalk lights with possible pedestrian priority, or similar improvements that may ease the crossing of pedestrians and boost the ability of community residents to use the transit terminal

*Bylaw 14580
June 27, 2007*

Other requirements the *Asset Management and Public Works* Department has for grading, seeding and landscaping the pipeline right-of-way will be undertaken by the developer to the satisfaction of the pipeline operator, and the *Asset Management and Public Works* Department.

Pedestrian linkages described for locations other than the golf course and the *transmission pipeline* right-of-way in the Plan Area will be developed in accordance with the City of Edmonton *Asset Management and Public Works* Department standards. Such

Amended by Editor

development will include with a 1.5 m wide concrete walk and landscaping.

4.6 Social and Demographic Profile

The estimated number of housing units, future population and school generation within the Neighbourhood is summarized on *Table 2B*. The estimated future population of the Neighbourhood is 3428 persons and the overall density of planned development is 31.4 persons/gross ha.

*Bylaw 12616
September 5, 2001*

**TABLE 1B
POTTER GREENS NEIGHBOURHOOD STRUCTURE PLAN
LAND USE ALLOCATION
BYLAW 14580**

	Area (ha)
Total Gross Area	112.0
Golf Course Lands	18.5
Public Utility Lot (T.O.P.C)	0.8
	19.3
Gross Developable Area	92.7
Residential	
Single Family	20.4
Low Density Residential	11.5
Multiple Family (Direct Control)	1.6
Multiple Family (RF5, RF6)	4.9
Multiple Family (RA7)	1.2
	39.6
Commercial	1.1
Institutional and Recreation	
School/Park	10.0
Park (East Lake)	1.2
East Lake Open Space	1.4
Natural Area	6.3
Transit Terminal	1.0
	19.9
Special Study Area (TOD)	6.4
Utility	
Stormwater Management Lakes	4.7
Public Utility Lots	0.2
	4.9
Circulation	
Local Roads	8.6
Collector Roads	6.3
Arterial Roads *	4.5
Walkways	0.1
	19.3
Miscellaneous **	1.3

* one half of required right-of-way for 207 Street and 87 Avenue

** portion of Government Road Allowance River Valley Road and fractional parcel adjacent to RDA

**TABLE 2B
POTTER GREENS NEIGHBOURHOOD STRUCTURE PLAN
DEMOGRAPHIC INFORMATION
BYLAW 14580**

Land Use	Area	Units/ Hectare	Total Units	Persons/ Unit	Population
Single Family	20.4	16	326	3.46	1,129
Low Density Residential	11.5	16	184	3.46	637
Multiple Family (Direct Control)	1.6	42	67	2.98	200
Multiple Family (RF5, RF6)	4.9	42	206	2.98	613
Multiple Family (RA7)	1.2	125	150	1.82	273
Special Study Area (RA7)*	2.9	125	363	1.82	660
Total Neighbourhood	42.5		1,296		3,512

Density of Neighbourhood Development

Total Gross Area of Neighbourhood:	112.0 Ha
Total Population:	3,512
Neighbourhood Density:	31.4 people/gross hectare

Student Generation

	Elementary	Junior High	Senior High
Public:	445	163	154
Separate:	216	95	54

* A total of 2.9 hectares in the Special Study Area are accounted for as Multiple Family (RA7), which is an estimate of future TOD residential areas.

POTTER GREENS
NEIGHBOURHOOD STRUCTURE PLAN
NORTH AND WEST
AMENDMENT

**Development
Concept
(Revised)**

- Single Family Residential (RF1)
- Low Density Residential (DC5)
- Low Density Residential (RSL, RPL, RF1, RF4)
- Medium Density Residential (Townhouses) (RFS)
- Medium Density Residential (DC5)
- Medium Density Residential (Low Rise Apartment) (RA7)
- School/Park
- Storm Water Management Lake
- Neighbourhood Convenience Commercial (DC5)
- Golf Course
- Open Space
- Walkway
- Grade Separated Crossing
- Grade Level Crossing
- Bus Route

Figure 4

January, 2001



Markham Associates
Consulting Group Limited



Editor's note: this map is historical, describing previous amendments. Please refer to Schedule "A" for the approved development concept.

Chapter 5: Plan Implementation

5.1 Provision of Municipal Utility Services

The general location of major municipal utility infrastructure facilities required to serve development of the Plan Area are summarized on Figures 6, 7, 8, 9, and 10.

5.1.1 Stormwater Drainage

The pattern of the major and minor storm sewer systems proposed for Neighbourhood 1 (*Potter Greens*) by I.D. Engineering Company Ltd. are shown on Figures 6 and 7 respectively. More precise details of the storm sewer systems are given in the *Area Master Plan (AMP)* which they prepared for the drainage area which includes the Plan Area.

Amended by Editor

Amended by Editor

As required by current City standards both a minor and major storm sewer system will be provided. The minor system will be comprised of piped storm sewers with a capacity to accommodate a 1 in 5 year storm event with no surcharging in the pipes. The major system will provide surface drainage routes to accommodate storm flows in a storm which exceeds the 1 in 5 year event. The major system will be designed such that depths of flooding in an extreme storm event do not exceed the levels and depths specified in the latest revisions to the City's design standards. At some locations the golf course which is on private land will be utilized as part of the major overland drainage system. The use of the golf course to provide major overland drainage routes will alleviate the flooding of adjacent roadways in a major storm event.

Two stormwater management lakes, identified on Figures 6 and 7 as the East and West lakes will form part of the overall stormwater drainage system for the Plan Area. Local drainage is intended to be directed by surface flow to the two lakes. An agreement between the developer and the *Asset Management and Public Works* Department will be required to the satisfaction of the *Asset Management and Public Works* Department to address lake ownership and operation of the West stormwater lake Facility which is located on private land in the golf course; and overland drainage flows across the golf course. The *AMP* provides specific details on the use of water from the West lake for irrigation purposes relating to the golf course use.

The controlled outfall from the east lake is intended to discharge through a 1050 mm pipe to an existing 1050 mm storm sewer on the north side of 79 Avenue, and the west side of

the Future Ring Road. The *Area Master Plan* indicates that the sewers on 79 Avenue east of 187 Street, which were installed in 1979 and 1980, have sufficient capacity to accommodate a controlled rate of storm run-off from all of the south half of Lewis Farms. It also indicates that a portion of that outfall line installed in 1987, west of 187 Street will have to be twinned once residential development in Lewis Estates reaches a level of 65 hectares, with a new 1050 mm diameter outfall sewer along 79 Avenue to connect to existing trunks east of the Restricted Development Area. The size of the new outfall includes an allowance for potential groundwater discharge.

The *Area Master Plan* indicates that lakes in Neighbourhood 1 will be sized to provide ultimate storage for the most severe recorded storm event. In accordance with the City's latest design criteria the lakes will be designed to discharge off-peak; i.e. their outflow will be reduced to zero during peak periods when the downstream sewers are overloaded.

The *Area Master Plan* also indicates that the sewer system up-stream of the lakes will be sized to accommodate a 5-year storm event, and will be designed to meet the latest revision to the City's design standards. The major or surface drainage system will be designed to accommodate a 100-year storm event.

5.1.2 Sanitary Sewerage

The general pattern of the sanitary sewerage system for Neighbourhood 1 is shown on Figure 8. More precise details are outlined in the *Area Master Plan* prepared by I. D. Engineering Company Ltd.

The onsite sanitary sewers will be a gravity system draining to the east side of Neighbourhood 1. Generally the sewers will flow from west to east with slopes roughly matching the general fall of the surface terrain. There will be no requirement for lift stations within Neighbourhood 1, or across any of the south half of Lewis Farms.

The *AMP* indicates that the sanitary sewers will be designed to meet the latest revisions to the City's design standards and performance evaluation criteria currently being prepared by the City. As elsewhere in the City, sump pumps will be required to handle discharge from weeping tiles. The sanitary sewer pipes will be sized using a design which includes an allowance and safety factor for potential infiltration (ie. water tight) and incorrect connections to the sanitary system. However all practical steps possible will be taken in order to minimize both of these situations.

The *AMP* indicates that the sanitary sewer system will discharge through a 675 mm pipe

to an existing 675 mm outfall line on 79 Avenue (*Whitemud Drive*) which has sufficient capacity to accommodate all of the south half of Lewis Farms using current design standards.

5.1.3 Water Supply

The general pattern of the proposed system of water supply mains for Neighbourhood 1 is shown on Figure 9, as derived from the Water Network Analysis completed for the entire Lewis Farms Area by I.D. Engineering Company Ltd.

The analysis indicates a booster station will be required at the point of connection to the 1350 mm transmission main located in the RDA on the east side of the neighbourhood. This booster station would remain in operation until construction of a major water reservoir at Winterburn Road and 95 Avenue (*Webber Greens Drive*). The requirement for a future water reservoir and its future location are established in the approved Lewis Farms Area Structure Plan. On the basis of the Water Network Analysis completed for the entire Lewis Farms Area it is not anticipated that the water reservoir will be required until after Neighbourhoods 1, 2 and 3 of the approved Lewis Farms Plan are completely developed. It is intended that the booster station will be constructed as part of the first stage of development. It will be located above ground on an appropriate site adjacent to the point of connection to the proposed 1350 mm Transmission main, or an alternative location to the satisfaction of the General Managers of *Asset Management and Public Works*, and Planning and Development Departments. Initial vehicular access to the booster station will be from River Valley Road. When the road allowance is closed access to the booster station will be available through the 9 metre wide PUL from the cul-de-sac on the south side of the East lake.

Amended by Editor

Generally Neighbourhood 1 is intended to be serviced by 300 mm looped watermains along the main collector roadways. A 750 mm connection to the Grange to the south is intended to be installed on 207 Street. Figure 9 shows a single 600 mm line connecting from the booster station to the 300 mm looped main within the Neighbourhood. A second line will be installed from the booster station running parallel with the 600 mm line to provide an alternative source of water into the neighbourhood.

Depending on detailed staging of development an additional 300 mm watermain connection may, be required across golf course fairway no. 4, north of the *pipeline* right-of-way. If necessary an easement or public utility lot will be provided to accommodate this line.

Amended by Editor

Design and construction of the proposed water facilities which comprise the water supply system for Neighbourhood 1 will meet the latest revisions to the City's design standards.

Public Utility lots required for the Plan Area will be identified at the subsequent subdivision stage. The 300 mm watermain crossing the proposed golf course, and water mains which interconnect adjacent cul-de-sacs for looping purposes will be protected by appropriate legal easements to the City of Edmonton.

5.1.4 Shallow Utilities

Natural gas, telephone, electric power, and cable T.V. systems are proposed to be extended to serve the initial stages of development within the Neighbourhood from existing systems.

.1 Natural Gas

Gas supply to Neighbourhood 1 is proposed to originate from an existing Northwestern Utilities Limited (NUL) high pressure main on the south side of 79 Avenue. This main is located within the *Grange ASP area*, and extends along the north property boundary of that Plan Area from a point west of Winterburn Road to a point approximately 800 metres west of 199 Street. It is logical that permanent gas supply to Neighbourhood 1 would emanate from a major gate station facility which could be constructed south of 79 Avenue near the high pressure gas main within a planned business park area of the Grange. In this location the Gate Station, as a major utility use of land, would be most compatible with, and allow for effective integration with, business park and uses. In addition this location would ensure that the gate station facility would be sufficiently separate from proposed residential development in Neighbourhood 1 of the Lewis Farms ASP, and The Grange ASP so as to not detract from the residential living environment of future residents. The City Planning and Development Department concur that the major Gate Station facility be located south of 79 Avenue in the proposed Grange business park area. The developer has discussed this proposed location for the Gate Station facility with the major landowners in The Grange ASP and pipeline facility personnel. The Grange Area Structure Plan proponents have indicated that the Gate Station facility will be accommodated in the Grange business area south of 79 Avenue, and east of 207 Street.

Amended by Editor

Amended by Editor

NUL personnel have indicated to the developer that interim gas service could be

extended to the first stages of development (approximately 270 residential lots) in Neighbourhood 1 in advance of construction of a major gate station facility which would serve the entire Grange ASP and Lewis Farms. According to NUL, the manner in which gas service would be provided is by installing a gas regulating station on the existing high pressure gas main south of 79 Avenue, and extending gas service from this point northward across 79 Avenue and parallel to an existing flowline easement serving *an oil facility's* resource site, and then eastward within the loop collector road to provide individual lot service. The gas regulating station would be located at the same location as that identified for the major Gate Station facility; the gas regulating station would be designed to accommodate all lots in the first stages of development; and interim gas service lines in the Neighbourhood would form part of the permanent gas service system.

Amended by Editor

Amended by Editor

.2 Telephones

The existing Edmonton Telephones network will service approximately 50 units in Neighbourhood 1, with some modification, after which a permanent network plan will be required to be implemented. In recognition of this requirement, agreement has been reached between the developer and Edmonton Telephones on an appropriate location for a new telephone switching centre in Neighbourhood 1 adjacent to the neighbourhood commercial site at 207 Street and 79 Avenue. Figure 4 entitled "Development Concept" shows the approximate location selected for the telephone switching station. This early agreement on the telephone switching centre site will ensure sufficient time is available to construct and equip the centre to accommodate the permanent service needs of residents in Neighbourhood 1.

The agreement in place between the developer and Edmonton Telephones will provide the required site to Telephones by way of a registered easement to facilitate construction of the telephones switching centre in 1990. At such time as development advances westward in the Neighbourhood, the Telephones site will be incorporated as a legal lot in a subsequent plan of subdivision for the area.

To ensure that the telephones switching centre constructed is compatible with adjacent single family residential uses to the east, and presents an attractive appearance to the entrance roadway to Neighbourhood 1, Edmonton Telephones shall develop the site and its building in accordance with design provisions

established by the City of Edmonton Planning and Development Department for this site at the redistricting or development permit stage. The design provisions to be addressed shall include, but not be limited to, the following: building design, exterior finishing treatment of the building, siting of the building and parking area, and landscaping. In addition to the City of Edmonton provisions for the site development, Edmonton Telephones shall have regard for its commitments to the developer on these matters as set out in the agreement between the two parties.

Interim service to the first stages of development will be provided via River Valley Road from 79 Avenue north, entering the Plan Area along the interim roadway access.

.3 Power

Adequate electrical capacity exists to provide service to the first stages of development. Edmonton Power has advised that a new power substation to be located on a site north of the Lewis Farms ASP and Highway 16, and West of the RDA is scheduled for construction in 1992. The new substation will provide full capacity for Neighbourhood 1 and subsequent Neighbourhoods in the Lewis Farms ASP.

Amended by Editor

5.2 Staging of Development

The general staging sequence according to which development is expected to occur within the Neighbourhood is outlined schematically on Figure 10. This sequence envisions four stages of development over a three year construction period to achieve complete development of Neighbourhood 1. The first stage of development will consist of the southeast residential cluster; the second stage will be the southwest residential cluster; the third stage of development will be the west residential cluster; and the fourth stage of development will be the northeast residential cluster.

The first stage of development *was* scheduled for 1990 construction and for lots to be marketed in 1990. Within the area designated as the first stage, initial development is expected to occur immediately west of River Valley Road, south of the stormwater management lakes and east of the resource lease. Interim access to this first stage of development would be provided from River Valley Road until access at the future permanent access location (207 Street and 79 Avenue) is available. The second and third stages of development are scheduled for construction in 1991. The permanent access to

Amended by Editor

the Neighbourhood will be constructed by the developer as part of the second stage construction. The fourth stage of development is planned for 1992 construction.

5.3 Subdivision and Redistricting

Development within the Neighbourhood will take place through successive applications to subdivide and redistrict portions of the proposed development area on an orderly, incremental basis. Submission requirements, and approval requirements, for subdivision applications and redistricting applications will be processed in accordance with the adjusted plan approval process described in Appendix B of the approved Lewis Farms ASP document. A redistricting application for the first stage of development (see Figure 10) in the Neighbourhood may be advanced to City Council, in advance of Council's adoption of the performance evaluation criteria. Development servicing proposals submitted in conjunction with subdivision applications in the Neighbourhood will be in accordance with the latest revisions to the City's design standards, and performance evaluation criteria when available.

5.4 Municipal Reserves

Land will be dedicated as Municipal Reserves to be used for schools and parks in accordance with The Planning Act. The Lewis Farms Area Structure Plan assumed that, in calculating the developable area from which 10% would be dedicated for Municipal Reserves, the area proposed for golf course use would be included as land which would be subject to reserves.

This plan amends Lewis Estates ASP with regard to the method of calculating Municipal Reserves. Because the proposed golf course will be constructed in part on lands possessing marginal development potential, and because the golf course will serve as a recreational facility for residents of the area, the land area used by the golf course will not be required to dedicate Municipal Reserves. Notwithstanding the exclusion of golf course lands, the Municipal Reserves that will be dedicated from non-golf course lands within the neighbourhood, estimated to be 7.87 ha, will exceed the actual requirements of the neighbourhood which are 5.5 ha. In addition it appears likely that with a logical sequence of development, dictated by servicing, the Municipal Reserves that will be dedicated from non-golf course lands within the context of the entire Lewis Farms ASP, Neighbourhoods 1 through 8, will exceed actual Plan Area requirements.

Amended by Editor

Figure 5: Circulation System

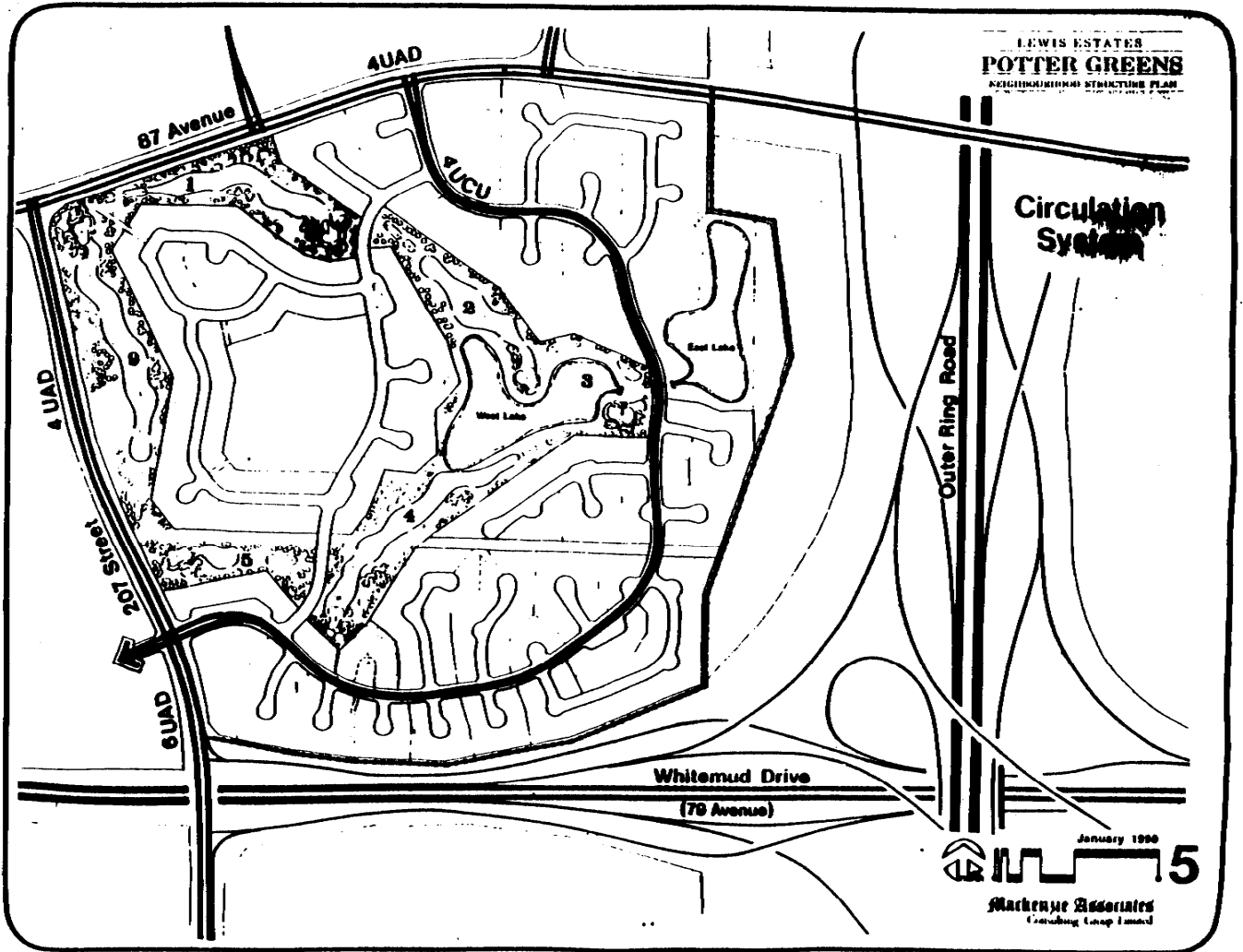


Figure 6: Major Storm Sewer System

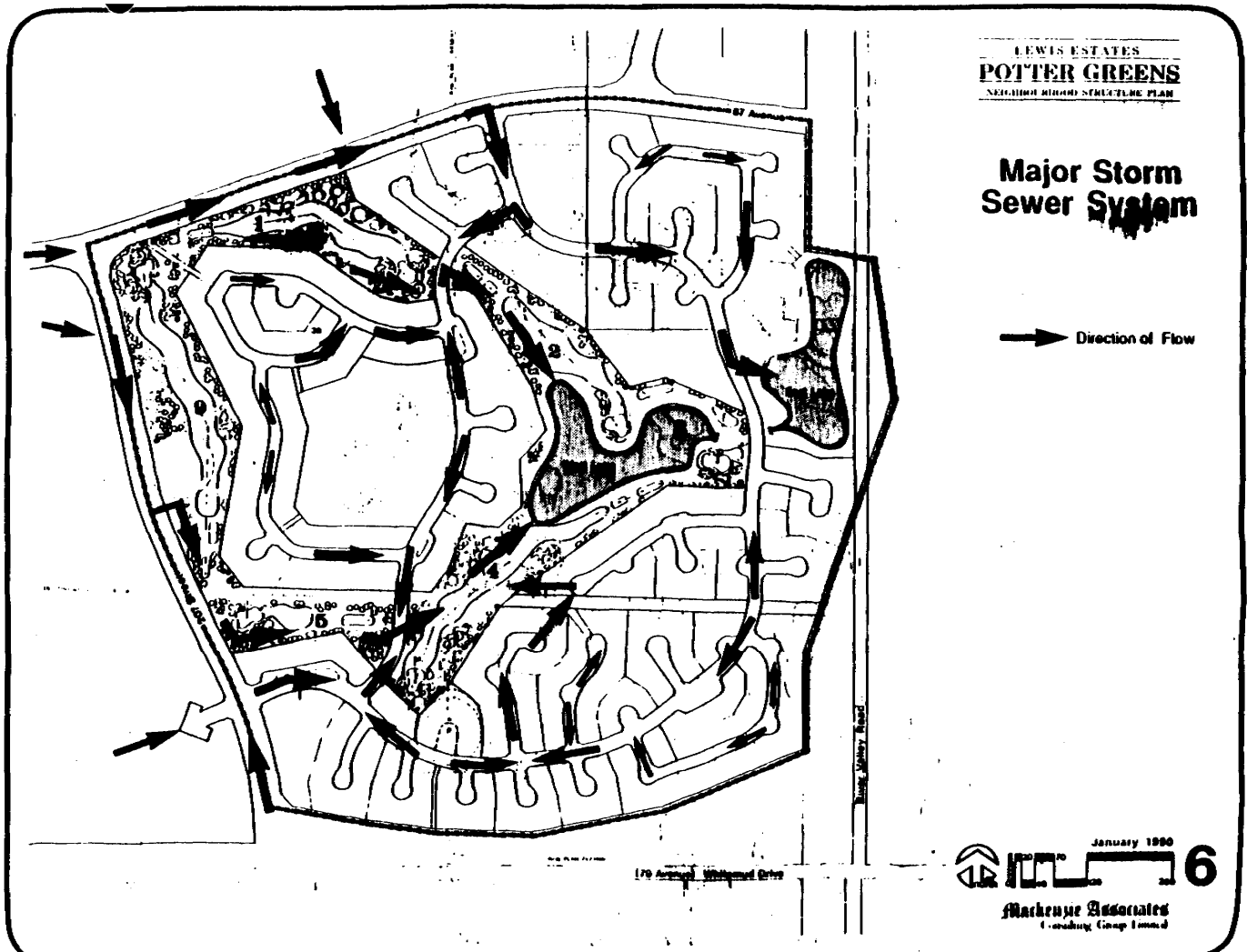


Figure 7: Minor Storm Sewer System

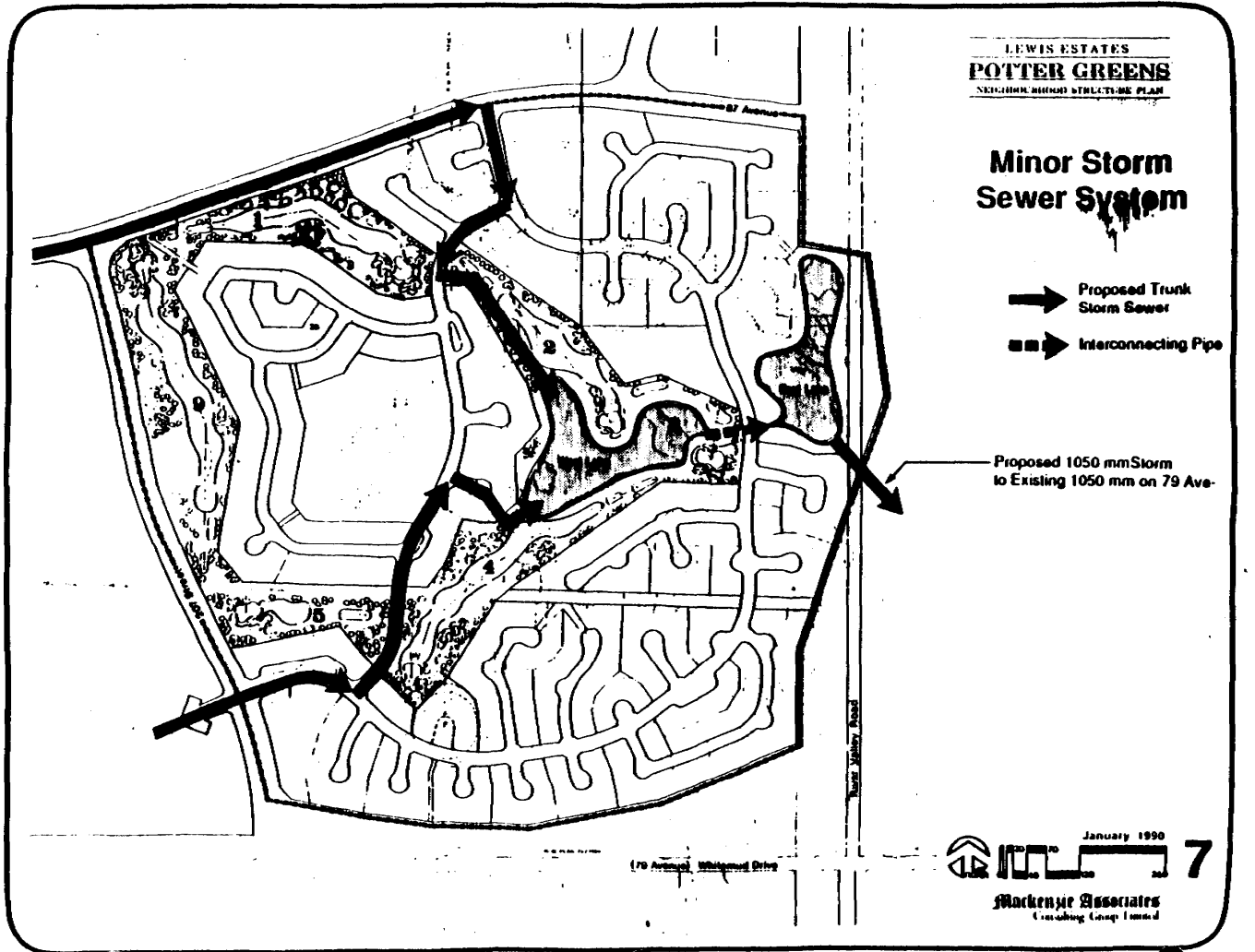


Figure 8: Sanitary Sewerage

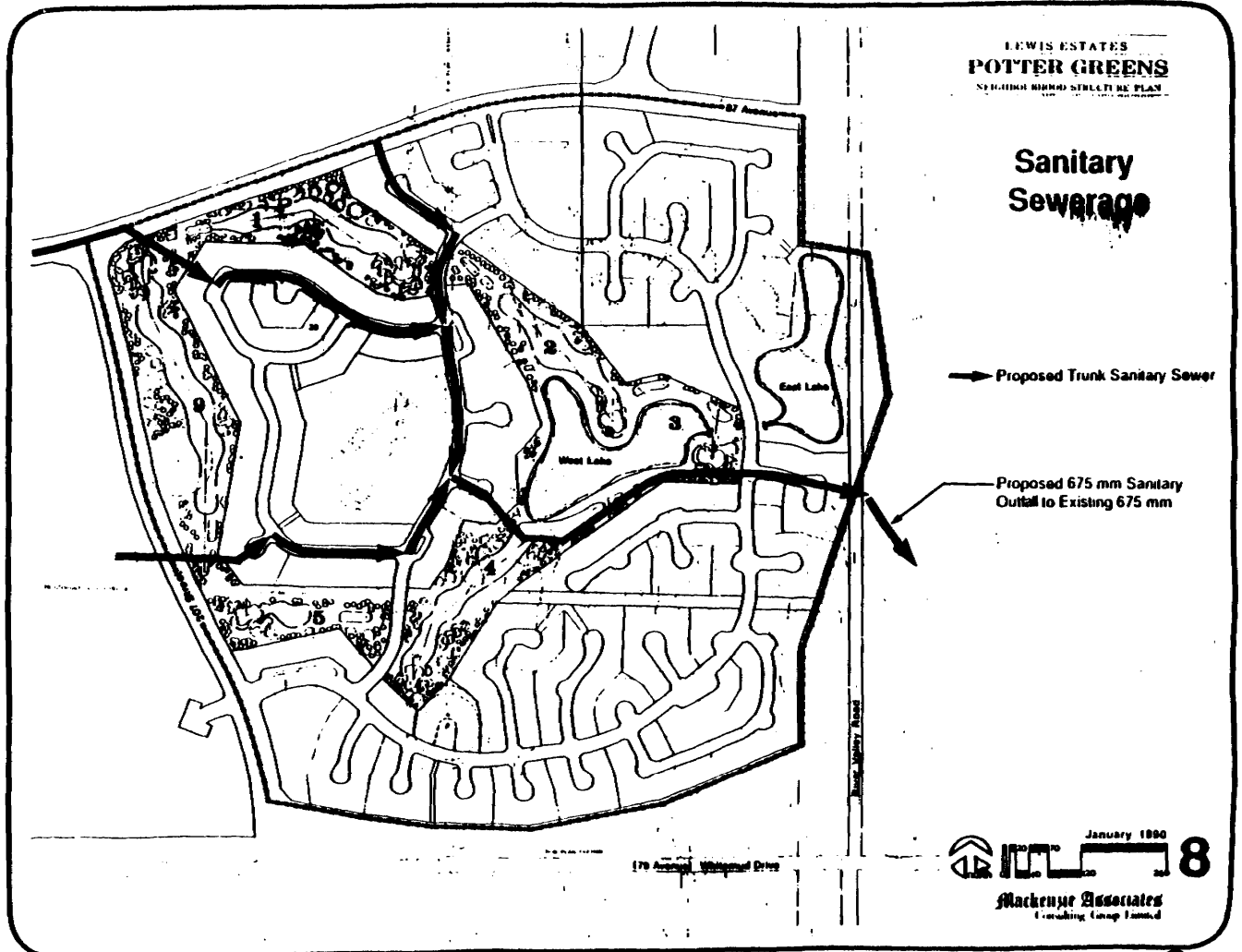


Figure 9: Watermains

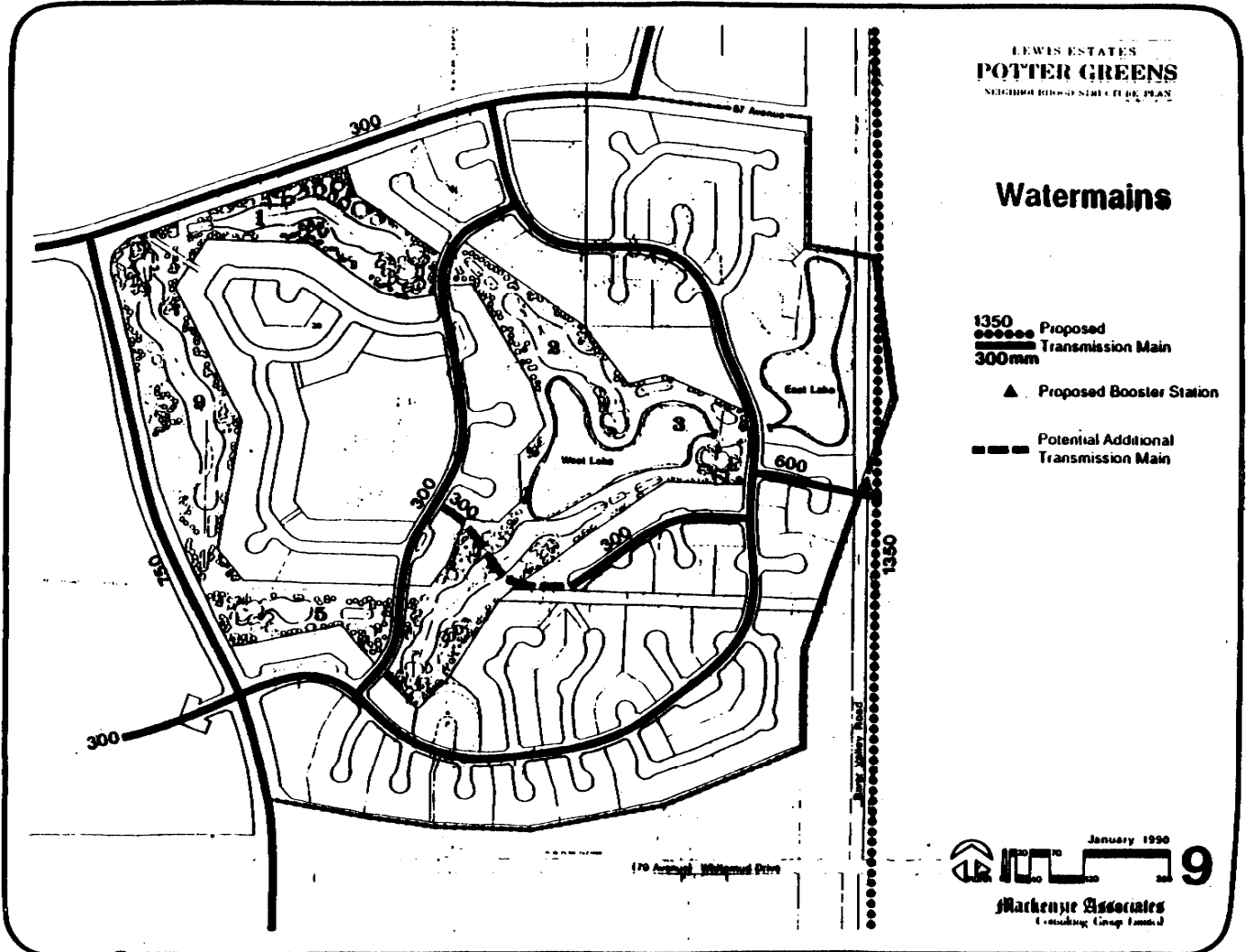
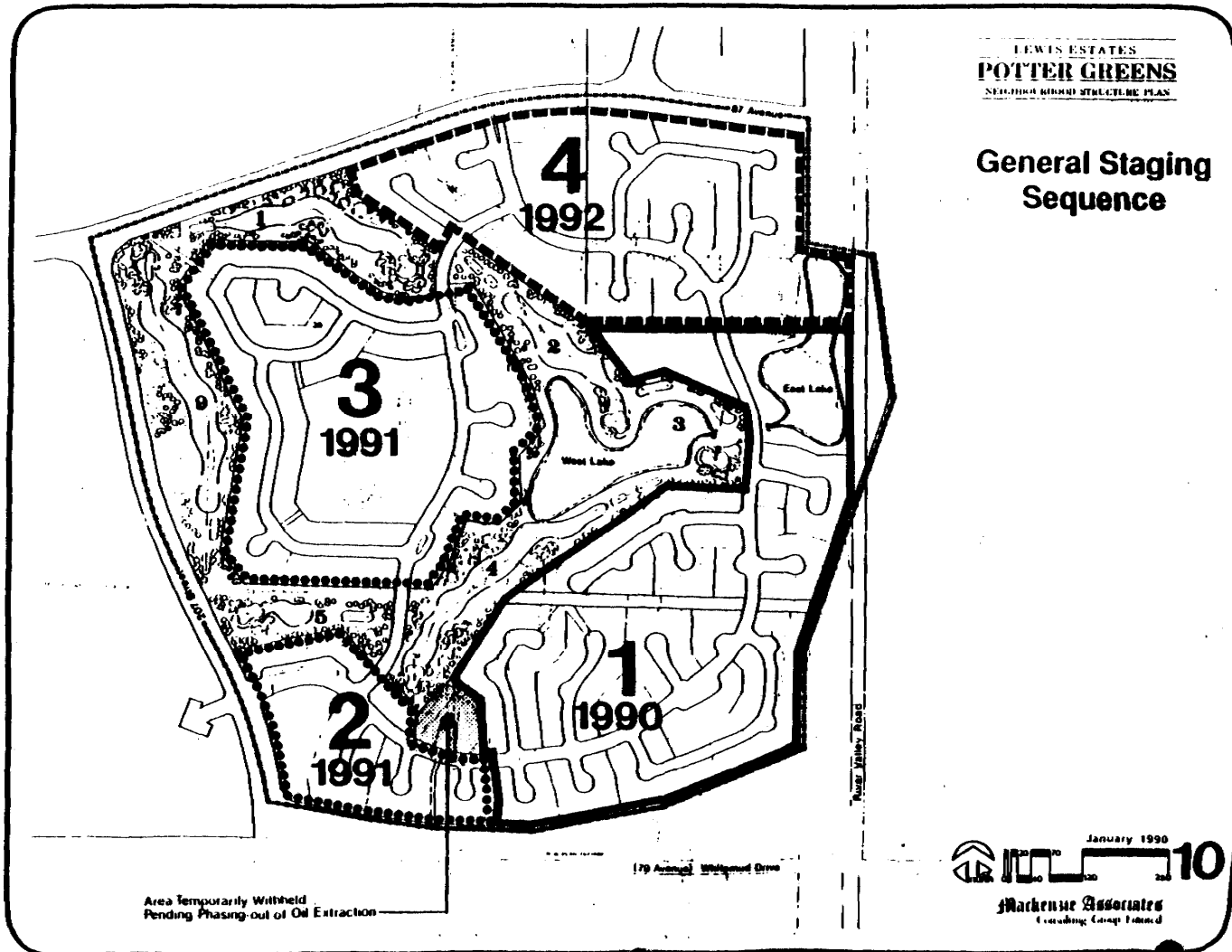


Figure 10: General Staging Sequence



Appendix A : Land Ownership Profile *(As Amended by Editor)*

Table 3

Land Ownership

Section 30-52-25-W4M

N E	<i>Private Non-Corporate</i>	1.4 ha
	<i>Private Non-Corporate</i>	16.2 ha
	<i>Private Non-Corporate</i> <i>(Private Non-Corporate et al)</i>	14.8 ha
	<i>Private Corporate</i>	32.4 ha
SE	<i>Private Corporate</i>	64.0 ha
S W	<i>Private Corporate</i>	63.7 ha
N W	<i>Private Corporate</i>	64.8 ha

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