

Glastonbury Neighbourhood Structure Plan

Office Consolidation January 2007

Prepared by:

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

Bylaw 11750, as amended, was adopted by Council in May 1998. In January 2007, this document was consolidated by virtue of the incorporation of the following bylaws:

- Bylaw 11750* Approved May 25, 1998 (to adopt the Glastonbury Neighbourhood Structure Plan)
- Bylaw 12870* Approved September 5, 2001 (to define the associated land use changes surrounding the re-alignment of 199 Street)
- Bylaw 13625* Approved March 16, 2004 (to re-designate 1.1 ha of land from urban service to medium density residential use, in the area east of 199 Street and north of 69A Avenue)
- Bylaw 13929* Approved April 11, 2005 (to re-designate the south portion of Lot B, Block 1, Plan 04 3769, from low density residential to medium density residential to ultimately be developed as ground oriented medium density housing)
- Bylaw 14405* Approved January 9, 2007 (to re-designate 1.6 hectares of land from commercial to residential use)

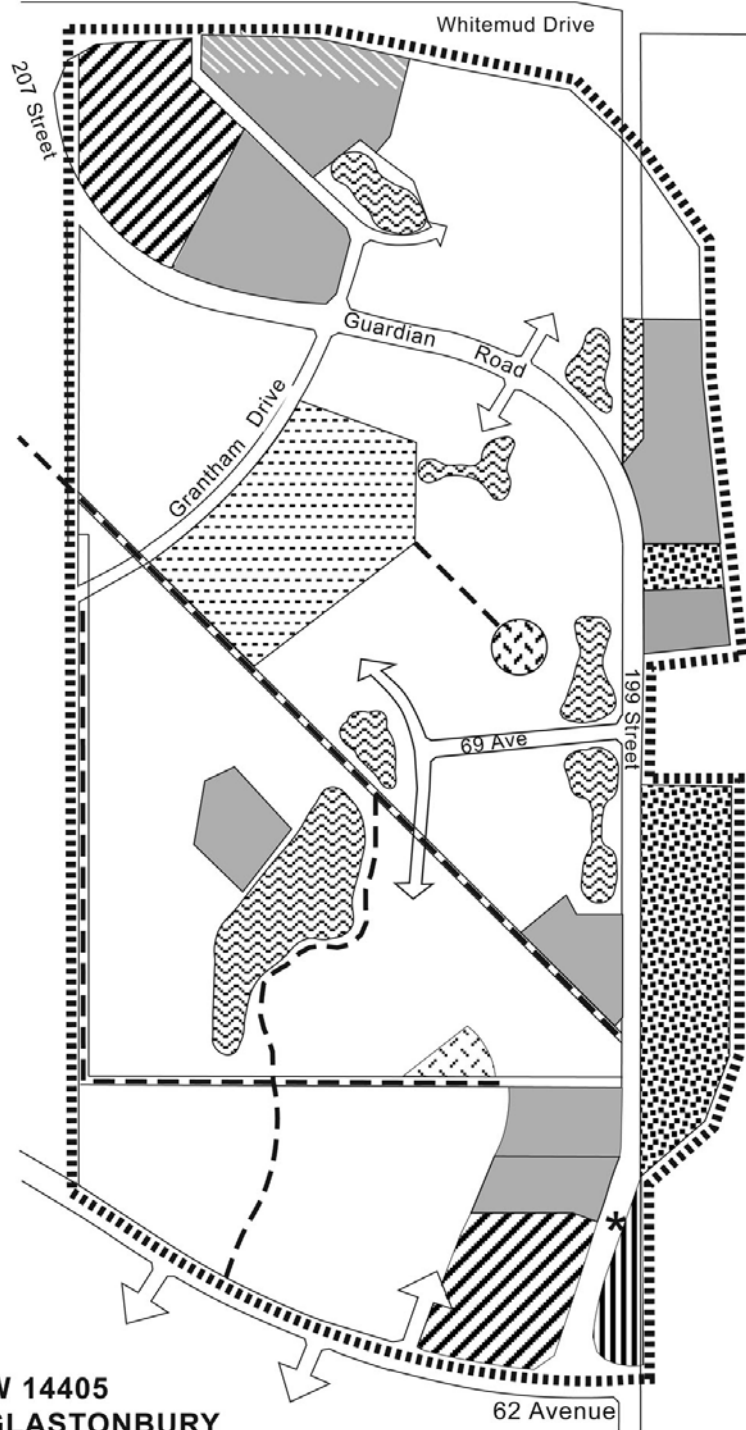
Editor's Note:

This is an office consolidation edition of the Glastonbury Neighbourhood Structure Plan, Bylaw, as approved by City Council on May 25, 1998. This Plan is an amendment to The Grange Area Structure Plan, Bylaw 11749 as approved by City Council on May 25, 1998. This edition contains all amendments and additions to Bylaw 11750.







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 owners' 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



BYLAW 14405
APPROVED GLASTONBURY
 Neighbourhood Structure Plan
 (as amended)

-  Low Density Residential
-  Medium Density Residential
-  Pedestrian Linkage
-  Commercial
-  Neighbourhood Commercial
-  Restriction on Medium Density Residential as described in Bylaw report

-  All Directional Access
-  School/Park
-  Park
-  Stormwater Facility
-  Urban Services
-  N.S.P. Boundary

SCHEDULE "B"

GLASTONBURY NEIGHBOURHOOD STRUCTURE PLAN LAND USE AND POPULATION STATISTICS BYLAW 14405

	AREA (ha)
GROSS AREA	178.76
Arterial Roadways	
Whitemud Drive	6.92
207/199 Street	8.86
62 Avenue	<u>1.78</u>
	17.56
Resource Pipelines and Facilities	
<i>Private Corporation</i>	2.39
<i>Private Corporation</i>	2.16
<i>Private Corporation</i>	<u>0.27</u>
	4.82
GROSS DEVELOPABLE AREA	156.38
Stormwater Management Facilities	12.05
Municipal Reserve	
K-8 Public School and Neighbourhood Park	7.90
Dispersed Parks	<u>0.80</u>
	8.70
Non-Residential Land Uses	
Commercial - Shopping Centre	9.80
Neighbourhood Commercial	1.50
Urban Services	<u>7.55</u>
	18.85
Circulation (Collector and Local Roads, and Walkways)	24.59
Sub-Total	<u>64.19</u>
NET RESIDENTIAL AREA	92.19

RESIDENTIAL LAND USE ANALYSIS

Land Use	Area (ha)	Units/ha	Units	Pop/Unit	Population	LDR/MDR RATIO
Low Density Res.	72.71	20	1,454	3.46	5,031	60.5%/39.5%
Medium Density Res.	4.87	40	195	2.98	581	Persons per Gross
Medium Density Res.	13.51	50	676	2.98	2,014	Developable Hectare
Medium Density Res.	<u>1.1</u>	<u>70</u>	<u>77</u>	<u>2.0</u>	<u>154</u>	49.75
TOTAL	92.19		2,402		7,780	

STUDENT GENERATION STATISTICS

LEVEL	Public	Separate	Total
Grades K-8	417	351	768
Grades 9-12	207	136	343
TOTAL	624	487	1,111

Glastonbury Neighbourhood Structure Plan

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(As Amended by Bylaw 12870, September 5, 2001)

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1.0 Introduction

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1.0 Introduction

1.1 PURPOSE

The purpose of this Neighbourhood Structure Plan (NSP) is to describe the land use pattern and development objectives for the Glastonbury Neighbourhood, a 180 hectare parcel of land and one of three neighbourhood units within The Grange Area Structure Plan (see Figure 1.0 - Location Plan). The Grange is a 582 hectare area of land immediately south of 79 Avenue (Whitemud Drive) and west of the Transportation and Utilities Corridor within The City of Edmonton.

The NSP will implement the land use framework and development objectives set out in The Grange Area Structure Plan (ASP) by identifying the type, size and location of various land uses, density of development, location of arterial and collector roadways, conceptual servicing designs and the sequence of development.

The Glastonbury NSP has been prepared on behalf of *two private corporations*, owners of the vast majority of lands within the neighbourhood.

Amended by
Editor

1.2 BACKGROUND

The original Area Structure Plan for The Grange was approved by City Council on 8 May 1990 under Bylaw No. 9294. The original Glastonbury NSP was approved by City Council on 26 March 1991 under Bylaw No. 9748 and subsequently amended on 20 September 1993 under Bylaw No. 10470.

No residential development has occurred in the Glastonbury Neighbourhood or anywhere in The Grange since the preparation of the original ASP and NSP.

However a number of planning and development factors have changed including market conditions and planning philosophies, legislation and policies. The net effect of these changes is the need for wholesale revisions to the Glastonbury Neighbourhood Structure Plan.

1.3 DEFINITION OF PLAN AREA

The Glastonbury NSP includes all of the NE and SE 19-52-25-W4, and generally the north half of the NE 18-52-25-W4 plus approximately 14 hectares of land along the eastern boundary of 199 Street. The total area for the NSP is 178.76 hectares.

As shown on Figure 2.0 - Context Plan, The Glastonbury NSP is defined by the following general boundaries:

- **Northern Boundary** - Whitemud Drive.
- **Eastern Boundary** - Western edge of the Transportation and Utilities Corridor generally following the existing 199 Street.
- **Western Boundary** - The centre line of Section 19-52-25-W4 (also the western edge of Northwestern Utilities Limited's gas line right-of-way).
- **Southern Boundary** - The centre line of 62 Avenue, the east-west arterial extension of Callingwood Road through The Grange ASP to 215 Street.

The Glastonbury NSP constitutes a logical planning unit with respect to identifiable plan boundaries, land ownership and servicing considerations.

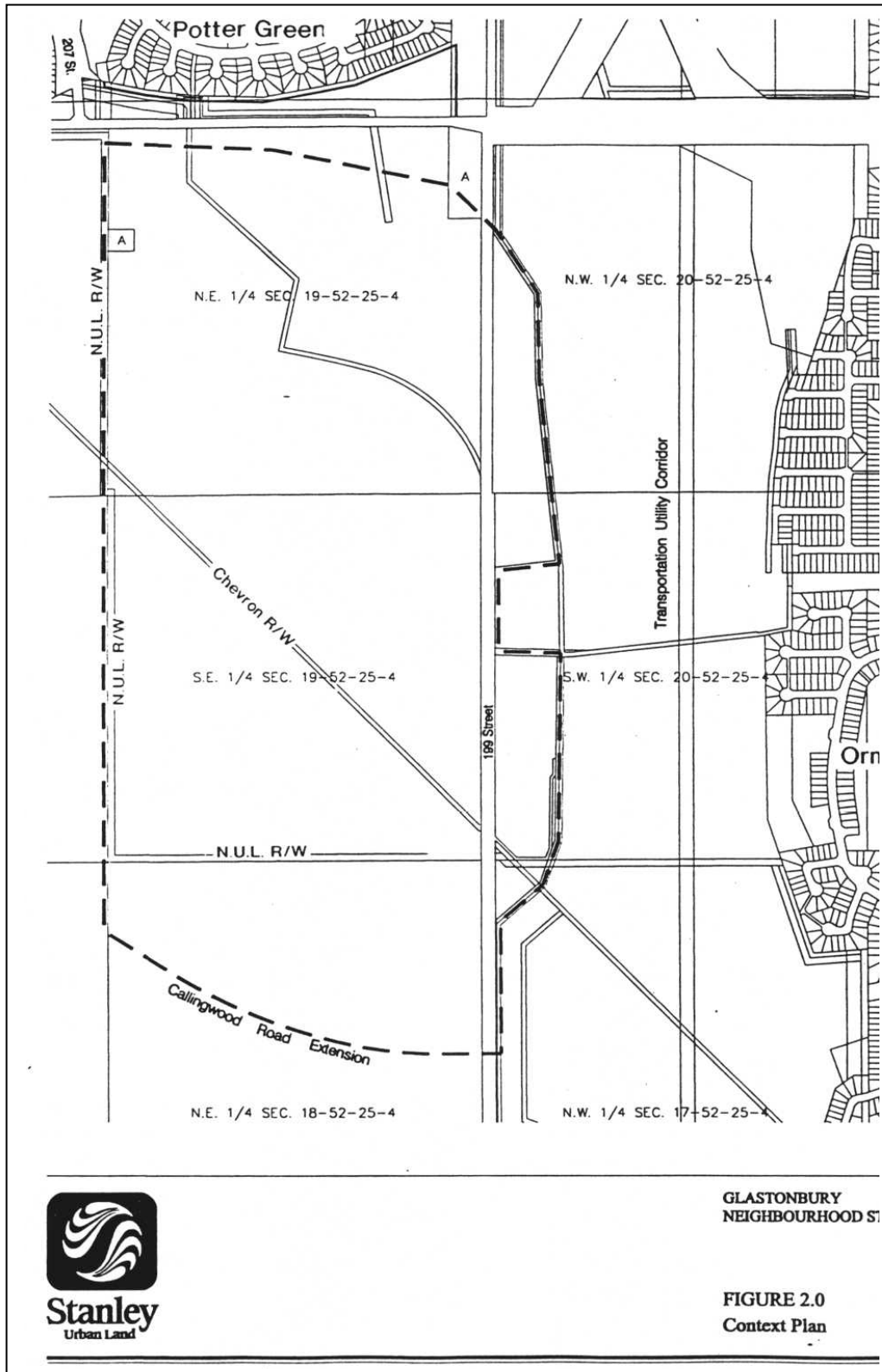
1.4 LAND OWNERSHIP

The vast majority of land within the Glastonbury NSP is owned by *two private corporations*. There are a few other minority landowners within the NSP.

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Editor

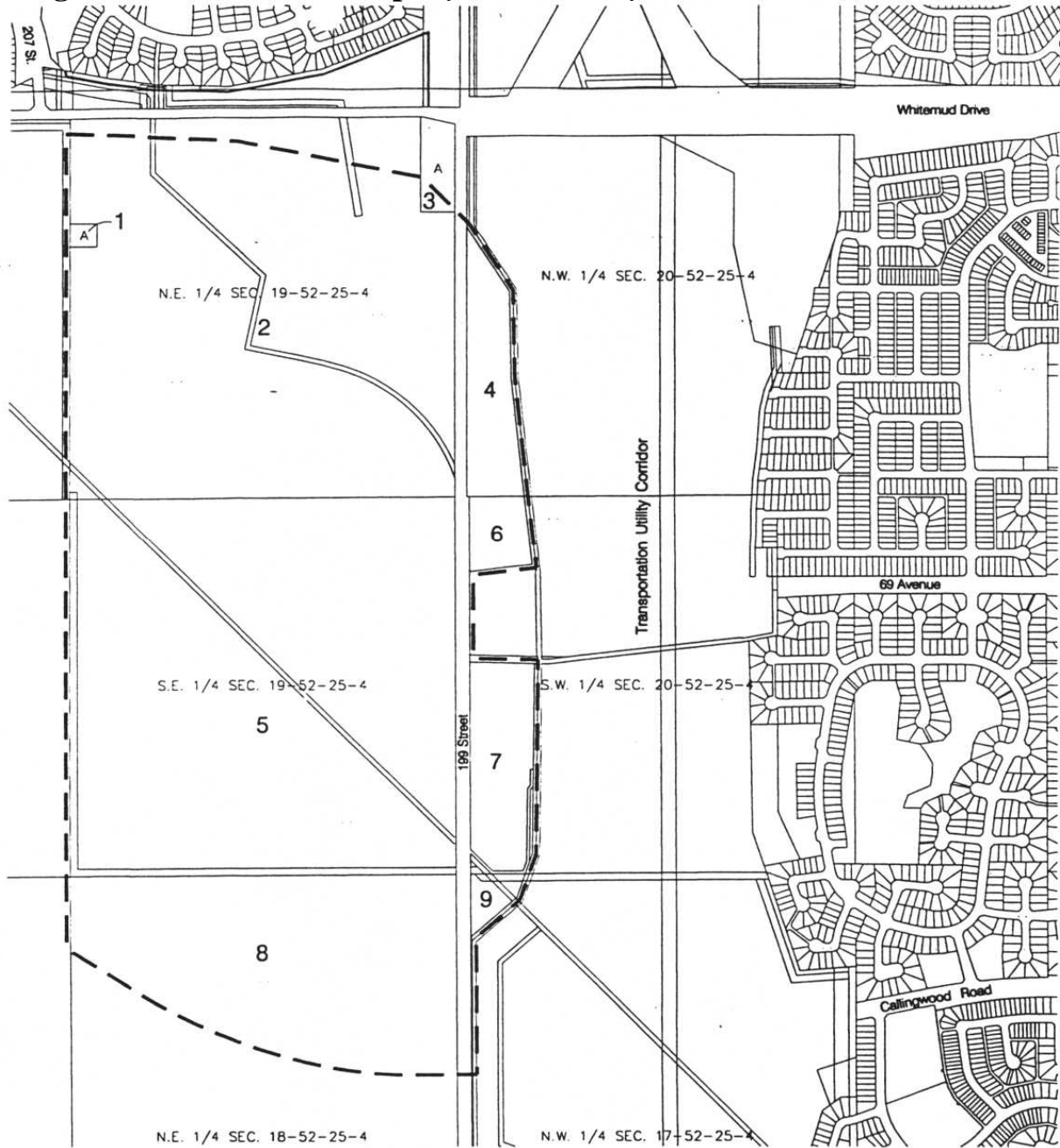
Current land ownership is shown on Figure 3.0 - Land Ownership and a more detailed listing is shown on Table 1 - Land Ownership.

Figure 2.0 Context Plan* (Bylaw 11750, May 25, 1998)



*Amended by Editor – Private Corporations’ names removed

Figure 3.0 Land Ownership (Bylaw 11750, May 25, 1998)



GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 3.0
Land Ownership

TABLE 1 - LAND OWNERSHIP (Amended by Editor)**GLASTONBURY NEIGHBOURHOOD**

	Titled Owner	Legal Description	Area (ha)
1.	<i>Private Corporation</i>	Part of NE 1/4 19-52-25-4	0.269
2.	<i>Private Corporation</i>	Part of NE 1/4 19-52-25-4	62.686
3.	Her Majesty the Queen	Part of NE 1/4 19-52-25-4	1.39
4.	Her Majesty the Queen	Part of NW 1/4 20-52-25-4	4.92
5.	<i>Private Corporation</i>	SE 1/4 19-52-25-4	64.29
6.	<i>Private Institution</i>	Part of SW 20-52-25-4	1.91
7.	<i>Private Institution</i>	part of SW 20-52-25-4	5.83
8.	<i>Private Corporation</i>	NE 1/4 18-52-25-4	portion
9.	<i>Private Institution</i>	Part of NW 1/4 17-52-25-4	0.91

2.0 Statutory Plan & Policy Context

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2.0 Statutory Plan & Policy Context

2.1 EDMONTON MUNICIPAL DEVELOPMENT PLAN

As a neighbourhood unit of The Grange ASP, land within the Glastonbury NSP is designated in the City of Edmonton Municipal Development Plan (MDP) as a Suburban Development area. The Glastonbury NSP is consistent with the relevant Suburban Areas policies and objectives of the MDP specifically:

Managing Suburban Growth - To accommodate growth, serviced in an orderly and economic fashion, in all suburban areas of the city.

Policy 2.A.1 Encourage new development to be contiguous with existing development.

The Glastonbury NSP lies immediately south of the developing neighbourhoods within the Lewis Farms ASP and west of the almost fully developed West Jasper Place area. It can be logically and efficiently serviced to accommodate residential development.

Policy 2.A.2 Allow the location of new suburban residential development to be guided by the demands of the housing market for choices in housing types and location and the availability of services.

Policy 2.A.4 Allow market forces to determine the timing, location and extent of servicing in newly developing areas, but require a developer to pay for all on-site services, and where appropriate, specific off-site services.

Given that the West Jasper Place area is approaching full development, neighbourhoods within The Grange such as Glastonbury represent the growth areas for a full range of future residential development opportunities in west Edmonton. Permanent services can be extended across the TUC in a cost effective manner (see Section 6.0).

Policy 2.A. 6 Ensure the use and protection of natural topography and unique elements of the natural environment in the design and servicing of new suburban development.

The Glastonbury NSP contains a few low lying wetland areas which will be enhanced as a result of their incorporation into the stormwater management system. Portions of adjacent tree stands will be incorporated, where economical and practicable, into the development concept.

Ensuring Adequate Neighbourhood Services - Encourage flexibility in creating attractive and functional neighbourhoods.

Policy 2.B.4 Promote linkages between communities through the design and location of open spaces, community facilities and activity centres.

The Glastonbury NSP incorporates linkages throughout the plan via the stormwater management system of lakes and dry ponds, planned walkways and parks sites.

Maintaining a Balanced Mix and Density of Dwellings

Policy 2.C.1 Encourage heterogeneous communities by planning for a variety of housing types, including multi family, in each residential neighbourhood.

The Glastonbury NSP provides for a mix of low and medium density residential housing forms consistent with City policies.

2.2 SUBURBAN INVESTMENT STRATEGY

The City of Edmonton's Suburban Investment Strategy (SIS) evaluates the principles and actions associated with facilitating suburban growth. The SIS deals with approvals and states that new neighbourhood approvals should be considered if:

- new neighbourhoods are contiguous with adjacent, completed development;
- new neighbourhoods are necessary in order to meet servicing forecasts within the appropriate sector;
- funding is in place to provide required infrastructure or that the developers are responsible for all costs associated with the required infrastructure.

These principles are similar in nature to those found in the MDP and development within the Glastonbury Neighbourhood is consistent these principles.

Contiguous Development - The Glastonbury NSP is contiguous with neighbourhoods within the Lewis Farms ASP and west of the fully developed neighbourhood of Lymburn and the almost completed neighbourhood of Ormsby Place.

Meet Servicing Forecasts - As indicated in the City of Edmonton's Suburban Residential Land Servicing Forecasts (1997-2002), the currently undeveloped portions of the West Jasper Place ASP including the Donsdale, Jamieson Place, Wedgewood Heights, Dechene and Ormsby Place neighbourhoods should be virtually complete in the next few years. The Grange and Lewis Farms ASPs are the residential development areas for west Edmonton.

Between 1992 and 1996, west Edmonton accounted for an average of approximately 200 lots per year or 12-13% of the total number lots serviced in the City annually. The City of Edmonton forecast estimates that figure rising to nearly 20% (or approximately 350 lots annually) by 2002 in conjunction with an overall increase in lot servicing. After that time, the West Jasper Place ASP will most certainly be fully developed and The Grange, particularly the initial stages of Glastonbury and The Hamptons to the south will play a critical role in meeting the residential demands of the west Edmonton housing market.

Funded Infrastructure - Cost sharing arrangements for the extension of storm sewer and sanitary sewer services and the upgrading and extension of various roadways will be described in more detail in the engineering services reports accompanying the NSP.

Cost sharing arrangements such as the Arterial Roadway Assessment may be employed within the Glastonbury NSP to finance the construction of arterial roadways. A more detailed description of the Assessment is provided in Section 7.4.

2.3 THE GRANGE AREA STRUCTURE PLAN

The Grange Area Structure Plan provides general guidelines to facilitate the orderly development of the plan area in terms of proposed land uses, density of development, location of major roads and facilities and sequence of development. The Glastonbury NSP is a more detailed extension of the land use framework described in the ASP and is consistent with development objectives described in that document, namely:

- to provide a framework to deliver a high quality, comprehensively planned residential area by defining the basic roadway network, pattern and composition of land uses, location of school/park sites and servicing designs.

The Glastonbury NSP provides a more detailed description of the proposed land uses and how they tie into the collector and arterial roadway system as well as describing the servicing methods to be employed.

- To integrate natural features of the area into the plan where feasible and economically viable.

Natural 16 low areas and wetlands within the Glastonbury Neighbourhood have been incorporated into the stormwater management systems and portions of an adjacent tree stand are planned to be retained where possible.

- To allow implementation of the plan on an orderly, staged basis with flexibility to adapt to changing market conditions.

A detailed staging plan for development within the Glastonbury NSP is provided in Section 8.0 - Implementation. Development in Glastonbury and The Hamptons is expected to begin concurrently and will proceed based primarily on market conditions.

2.4 SUBURBAN NEIGHBOURHOOD DESIGN PRINCIPLES

The Suburban Neighbourhood Design Principles report describes 16 design principles intended to guide development in future Edmonton suburbs.

While the Glastonbury NSP generally reflects most of the design principles to some degree, the following principles, in particular, are embodied within the design concept for Glastonbury:

Design Principle 3 - *Design the arterial and central collector roads along a grid pattern, peripheral to the neighbourhoods. Use local roadways to distribute neighbourhood traffic from/to these arterial and collector roadways.*

The Glastonbury NSP is bound on all sides by arterial roadways and a pipeline right-of-way. A looping collector roadway provides access off of the arterial roadways and brings access to the local roadway network.

Design Principle 7 - *At the area and neighbourhood planning stage, plan the location of the school/park facilities relative to neighbourhood staging such that they can be consolidated, serviced and available early in the development of a neighbourhood or catchment area.*

The school/park site within the Glastonbury NSP has been planned in consultation with the School Boards and the Community Services Department and is generally located within the first or second stages of development.

Furthermore, given the limited number of landowners, the pre-dedication of this school/park site becomes a more achievable objective.

Design Principle 9 - *Explore opportunities to provide smaller, dispersed open space and parks in a neighbourhood to provide for localized needs while meeting the recreational needs of residents of the catchment area.*

A number of dispersed park sites have been created from municipal reserves throughout the Glastonbury NSP.

Design Principle 10 - *Optimize the use of land and capital requirements for facilities such as churches, schools, community leagues and storm water management.*

Site areas for school/park sites/community league building envelopes have been identified within the 10% municipal reserves available for the entire Grange ASP.

Design Principle 11 - *Create a linked open space system through open spaces created by storm water management facilities, some utility rights-of-way, preservation of appropriate natural areas and drainage courses, and school and park open spaces.*

An extensive open space system is available within and adjacent to Glastonbury through the connection of the stormwater management facilities, the two pipeline rights-of-way, the dispersed and school/park sites and various other walkway systems through public utility lots.

Design Principle 15 - *Provide opportunity through the residential districts of the Land Use Bylaw for the intensification of housing forms and for alternative site design and building siting.*

It is intended that a range of low and medium density residential housing forms will be developed within Glastonbury. Opportunities for innovative site design and building siting can be pursued through the redistricting and subdivision processes.

Design Principle 16 - *Use current population and student generation formulas when planning facilities for a neighbourhood. Take into account the life cycle of the neighbourhood*

The population and student generation ratios provided in the Suburban Neighbourhood Design Principles report were used to develop demographic projections in the Glastonbury NSP.

3.0 Site Context & Development Considerations

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3.0 Site Context & Development Considerations

3.1 TOPOGRAPHY & VEGETATION

Topography in the Glastonbury NSP is generally flat with a gentle roll from southwest to northeast. As shown on Figure 4.0 - Site Contours, elevations within the NSP range from approximately 698m in the west to 692 m towards the far northeastern edge. Surface drainage follows the natural contours of the land and generally flows towards 199 Street between the southeast and northeast quarters of Section 19-52-25-W4.

As shown on Figure 5.0 - Site Features, most of the land within the Glastonbury NSP has been cleared for agricultural purposes. A few low lying, seasonal wetland natural areas are located in the southeast quarter of Section 19 and adjacent to Whitemud Drive in the northern portion of the plan area.

3.2 SOILS

A number of geotechnical evaluations have been completed on lands in The Grange over the past ten years. The studies have identified that the soil stratigraphy typically consists of a layer of clay over a silt/till layer.

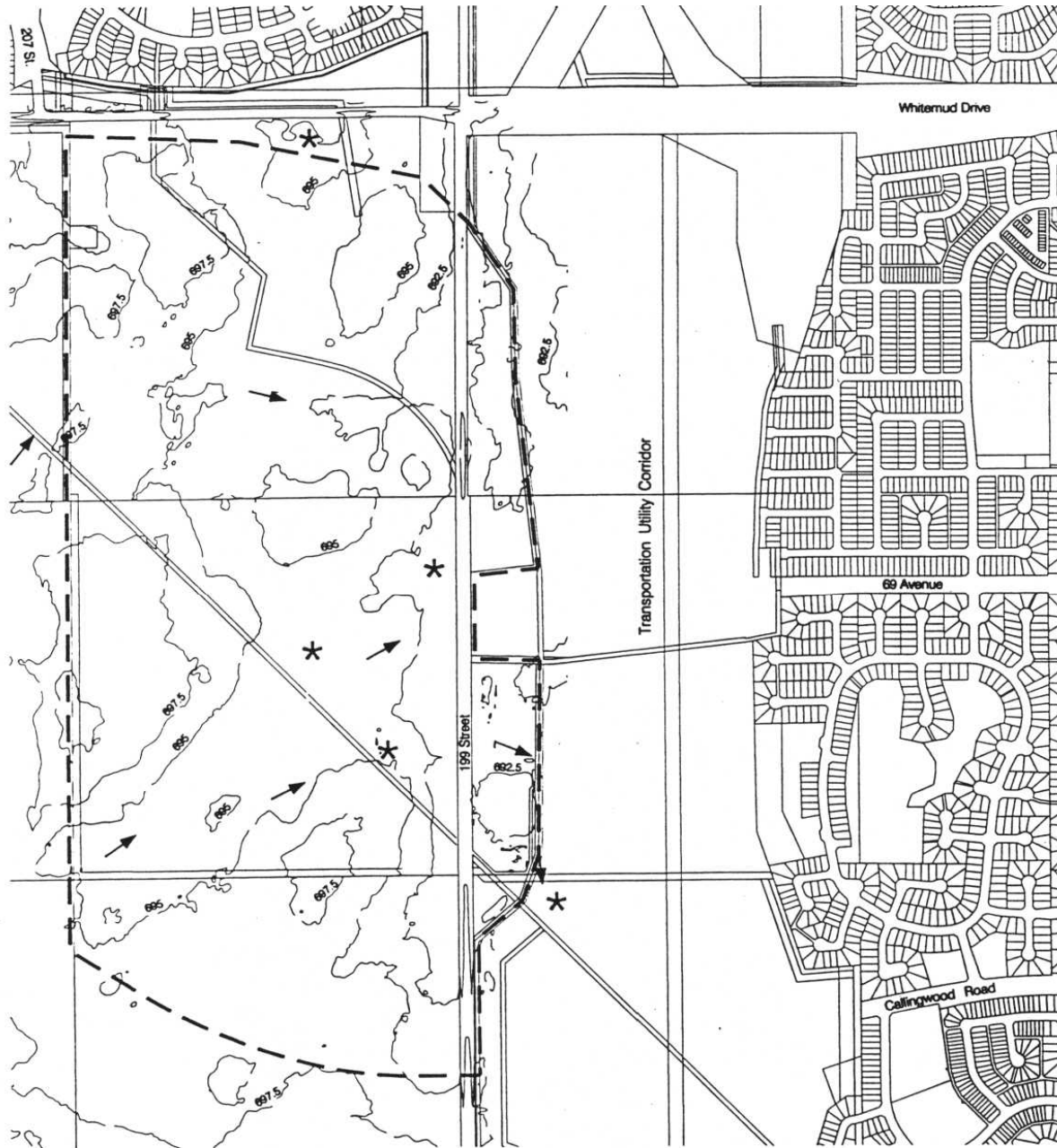
This silt/till layer resulted in the previous ASP and NSP approvals for The Grange requiring the application of Infrastructure Performance Criteria (IPC) instead of the usual City of Edmonton Servicing Standards.

3.3 EXISTING LAND USES

As noted, the majority of land within the Glastonbury NSP has been used for agricultural purposes and is free of related structures with the exception of one older farmhouse. This structure does not possess any historical significance and will be removed at the time of development.

A church has been built recently along 199 Street at 69 Avenue on surplus TUC lands (see Figure 5.0) within the boundaries of the Glastonbury Neighbourhood. This facility can be integrated alongside the future land uses proposed within The Grange ASP without posing any development constraints to either the church or the other landowners.

Figure 4.0 Site Contours (Bylaw 11750, May 25, 1998)

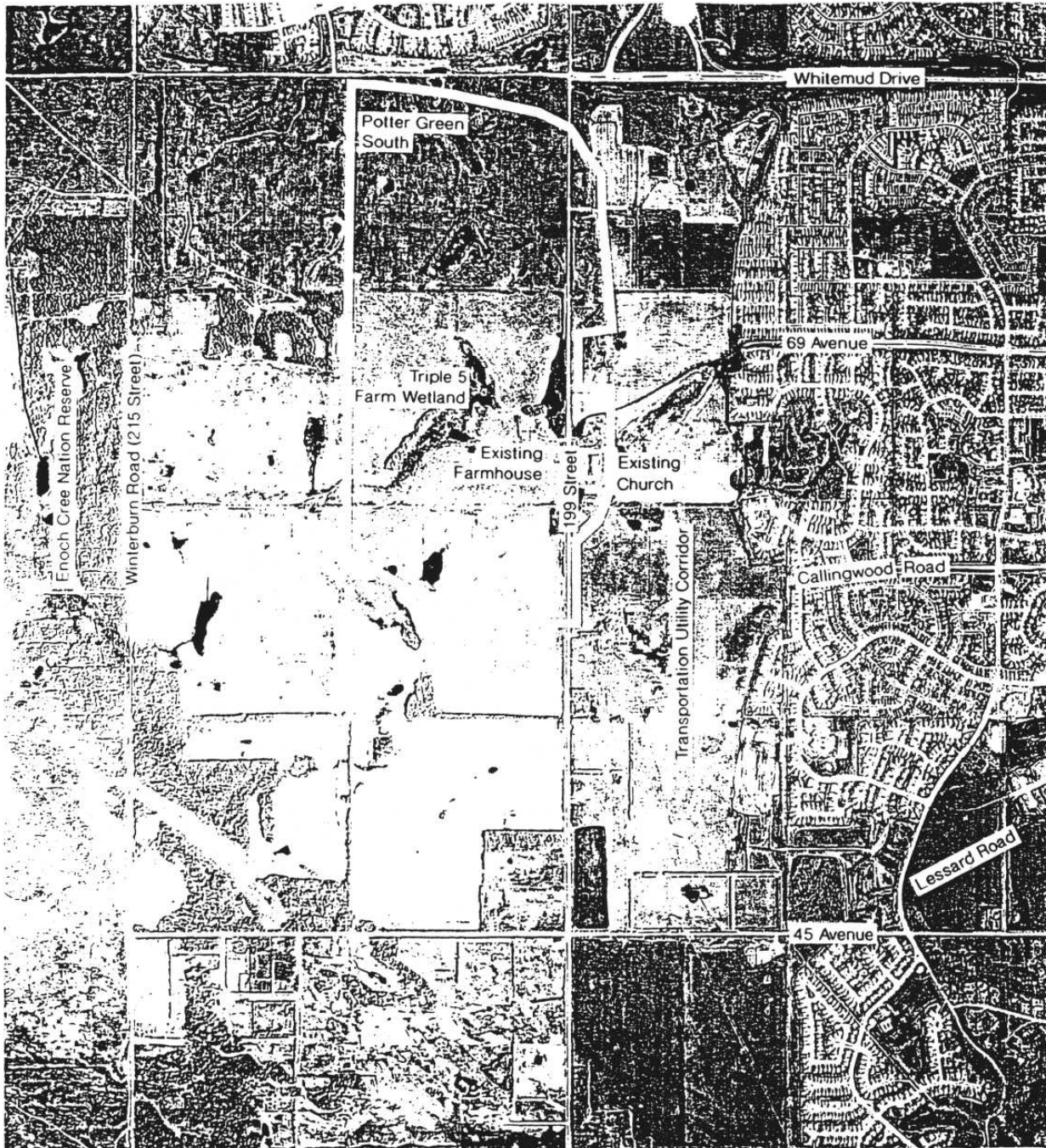


- Legend
- ★ Low Area
 - Direction of Natural Drainage Flow

GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 4.0
Site Contours

Figure 5.0 Site Features – 1996 Air Photo (Bylaw 11750, May 25, 1998)



GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 5.0
Site Features - 1996 Air Photo

Portions of land in the E 1/2 Section 19-52-25-W4M within the Glastonbury Neighbourhood are currently districted Single Detached Residential (RFI) District, Public Utility (PU) District, Public Parks (AP) District, Urban Reserve (AGU) District with the remainder districted as Agricultural (AG) District. The portion of Glastonbury within the NE ¼ Section 18-52-24-W4M is also districted AG.

As a result of the proposed revisions to the NSP, redistrictings will be necessary to make the land use consistent with the plans. This is discussed in more detail in Section 8.0 - Implementation.

3.4 SURROUNDING LAND USES

In addition to the TUC (described below in Section 3.5) to the east, The Hamptons NSP to the south and Neighbourhood Three to the west, the Glastonbury NSP is bordered to the north by the following land uses:

North - Development is underway within the first two neighbourhoods (Potter Greens and Breckenridge Greens) of the Lewis Farms ASP on the north side of Whitemud Drive. Existing low density residential development backs on to Whitemud Drive along the entire shared boundary with The Grange ASP. Access into Lewis Estates is currently gained from *Guardian Road* (207 Street) off of Whitemud Drive.

Amended by
Editor

3.5 TRANSPORTATION AND UTILITIES CORRIDOR

The Transportation and Utilities Corridor (TUC) forms the eastern boundary of the Glastonbury NSP and was established to provide a corridor for the proposed Ring Road, power lines, energy pipelines, and other utilities. A number of parcels of land along the eastern edge of 199 Street were declared surplus to the TUC and subsequently incorporated into the Glastonbury NSP and The Grange ASP when they were initially prepared. Access across the TUC into the Glastonbury NSP is planned at 69 Avenue and 62 Avenue.

3.6 PHASE I ENVIRONMENTAL SITE ASSESSMENT

A Phase I Environmental Site Assessment (ESA) was undertaken by AGRA Earth & Environmental Limited in July 1997 on lands within Section 18-52-25-4

and the East 1 /2 Section 19-52-25-4. The Phase I ESA identified no concerns that would warrant a Phase II ESA. However, the following items on lands within the Glastonbury NSP were flagged for future reference:

Suspected hydrocarbon staining was identified in the northeast corner of Section 19-52-25-4. The contaminated zone had an area of approximately 2m by 5m and appeared to be superficial. These soils should be disposed of in accordance with all applicable laws and regulations. As well, if at the time of excavation it is noticed that contamination extends into the subsurface, then additional investigation may be warranted.

- a) Hydrocarbon staining was noted at each of the two active wells in Section 19-52-25-4. The staining was restricted to the fenced area within the well leases.
- b) In the northeast corner of Section 19-52-25-4, approximately ten piles of sand and gravel were placed in an organized fashion around the limit of the forested area east of the abandoned houses. These deposits did not appear to have been the product of a local excavation and no visual signs of contamination were noted. The origin of these deposits is unknown.
- c) Waste debris was noted throughout the site. This included materials that have specific disposal requirements as per Alberta environmental legislation. It is recommended that waste materials be identified to determine the appropriate disposal methods, specifically:
 - i. potential asbestos-containing insulation wrap around the hot water heaters;
 - ii. the composition of the material in the garbage bags; and
 - iii. suspected hydrocarbon stained soils in the northeast corner of Section 19-52-25-4.

Upon reviewing the results of the Phase I ESA, the Environmental Planning Group of the Planning & Development Department recommended that the hydrocarbon staining noted in point b) further investigated prior to redistricting and that the sand/gravel piles noted in point c) be flagged and tested prior to being used on development lands.

The Phase I ESA also noted that a number of government departments and resource agencies including Alberta Transportation & Utilities (Dangerous Goods Control), Environmental Law Centre, Petroleum Tank Management Association of Alberta, City of Edmonton Emergency Response Department and *a private corporation (pipeline)* were contacted regarding environmental incidents, underground storage tanks and dangerous goods incidents on the property. No concerns were raised.

Amended by
Editor

3.6.1 Non-Participating Land Owners

To the best of our knowledge, no other Phase I Environmental Site Assessments have been undertaken on the remaining lands within the Glastonbury NSP.

In light of this, the Environmental Planning Group of the Planning & Development Department has recommended that ESAs or disclosure statements be provided by the minority land owners at the redistricting stage.

3.7 ENVIRONMENTAL RESOURCES

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas identified two sites within the Glastonbury NSP. The location of the two sites is shown on Figure 5.0.

3.7.1 Triple 5 Farm Wetland

The Inventory identifies the 8.90 ha Triple 5 Farm Wetland as a locally significant environmentally sensitive area. The report notes that the Wetland appears to have extensively developed areas of emergent aquatic vegetation and waterfowl habitat. The presence of this wetland presents an opportunity to incorporate this area into the stormwater management system to both meet the drainage requirements of urban development and to preserve this natural area for future residents.

An existing tree stand along the northwest edge of the Wetland has been identified for retention as a natural (and naturalized) area through the creation of the stormwater management facilities. Due to technical considerations, the remainder of the wetland will be excavated and developed to City of Edmonton standards. Careful attention to the integrity of the tree stand will be necessary during adjacent excavation and construction.

See Section 6.0 for a discussion on proposed stormwater management facilities in the Glastonbury NSP.

3.7.2 Potter Green South Natural Area

The Inventory identifies the 4.34 ha Potter Greens South Natural Area as a locally significant environmentally sensitive area. Notwithstanding its identification, the site's proximity to Whitemud Drive and proposed widenings preclude any opportunity to preserve it.

3.8 HISTORICAL RESOURCES

An archival search for the entire Grange ASP was undertaken by the Archeological Surveys Branch of Alberta Culture both during the preparation of the original Grange ASP in 1998 and original Glastonbury NSP in 1990.

Due to the absence of historical data and distance from the North Saskatchewan River, the Archeological Surveys Branch arrived at the conclusion that lands within The Grange are of little or no historical or cultural value and no further study is required.

3.9 OIL & GAS FACILITIES

The entire Grange lands are located upon the Acheson East Field Blairmore Pool with estimated remaining oil reserves of $300.0 \times 10^3 \text{m}^3$ (78% drained) and remaining gas reserves of $152.0 \times 10^6 \text{m}^3$ (55% drained) based on 1991 statistics.

There are a number of pipeline facilities and operating, suspended and abandoned well sites throughout The Grange. The remaining production life of the operational wells is estimated to be in the range of 15-20 years.

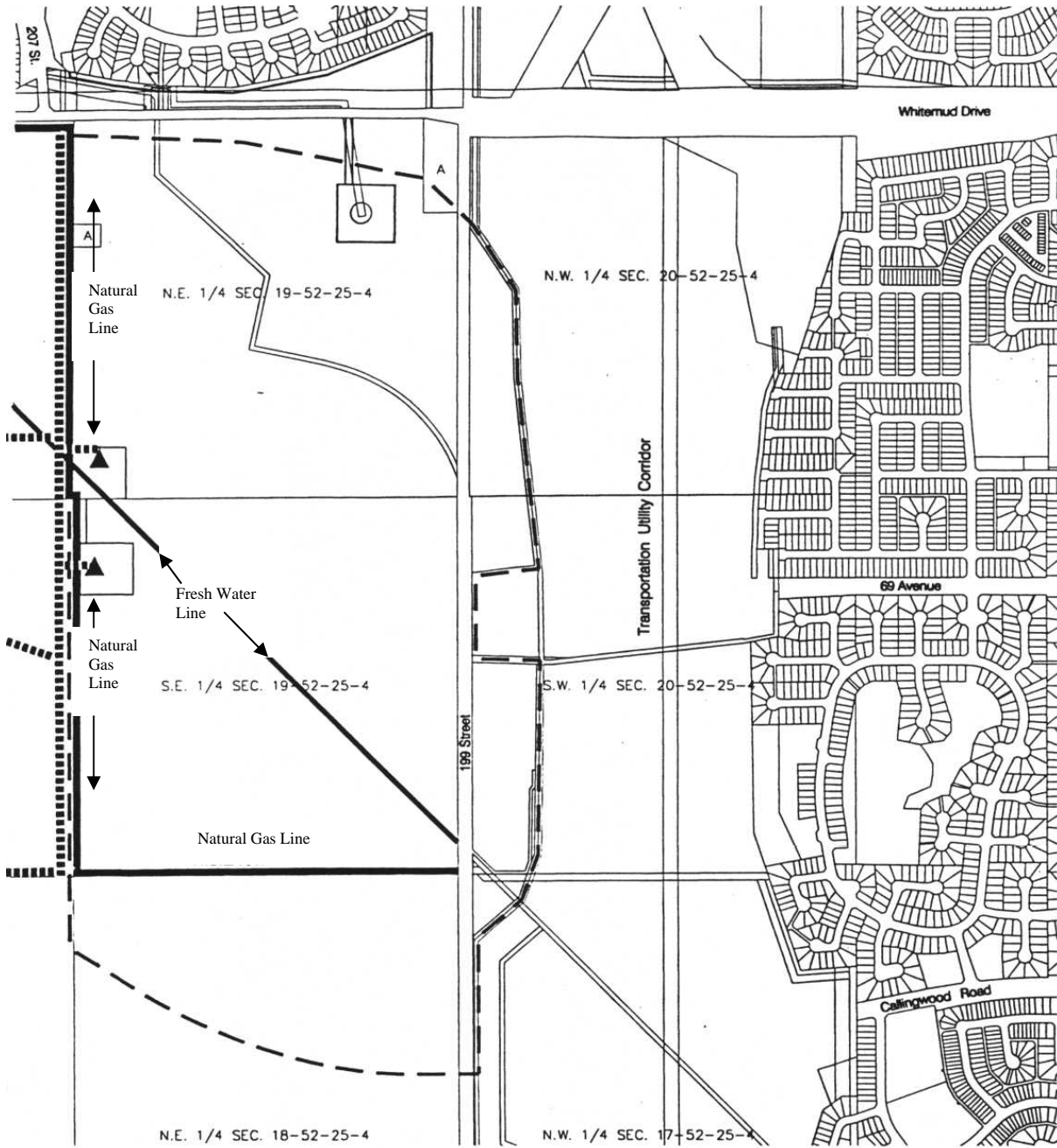
Improvements in resource extraction technology can both increase the speed and efficiency of oil and gas removal as well as limit the impacts on adjacent urban development.

3.9.1 Existing Pipeline Facilities

The Alberta Energy and Utilities Board Pipeline License Register identifies four pipeline transmission licenses within the Glastonbury NSP (as shown on the following table), all of which are in the northeast and southeast quarters of Section 19 and shown on Figure 6.0 - Resource Operations and Facilities.

TABLE 2				
(Amended by Editor)				
THE GRANGE ASP - EXISTING PIPELINE TRANSMISSION FACILITIES				
Company	Substance	H₂S Content (mol/kmol)¹	Max. Operating Pressure (kPa)²	Max. Outside Diameter (Mm)
<i>1. Private Corporation</i>	Fresh Water	0.00	4,140	323.9
<i>2. Private Corporation</i>	Natural Gas	0.00	9,940	323.9
<i>3. Private Corporation</i>	Natural Gas	0.00	2,070	60.3
<i>4. Private Corporation</i>	Oil-Well Effluent	1.70	3,500	88.9
¹ sour natural gas occurs when the H ₂ S content is greater than 10.0 mol/kmol ² a high pressure line has a maximum operating pressure greater than or equal to 3,475 kPa				

Figure 5.0 Resource Operations and Facilities* (Bylaw 11750, May 25, 1998)



- Legend**
- ▲ Operating Well
 - Suspended Well
 - △ Abandoned Well
 - Flow Lines

**GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN**

**FIGURE 6.0
Resource Operations and Facilities**

*Amended by Editor – Private Corporations’ names removed

The *first* (refer to Table 2) license is a high pressure water line located in a 10 metre easement which runs diagonally through Section 19 from southeast to northwest. It carries water from the North Saskatchewan River to oil wells northwest of The Grange for injection/extraction purposes.

Amended by
Editor

The *second* (refer to Table 2) license is for a large diameter, high pressure natural gas pipeline which runs east to west along the southern boundary of the southeast quarter of Section 19 and then north between the centre of the section within a 15 metre easement.

Amended by
Editor

The *final* two licenses (3 and 4 in Table 2) are for one low pressure and one high pressure small diameter pipelines. One (# 3) is licensed for carrying natural gas and connects to a suspended gas well in the northeast quarter of Section 19. The other (# 4) is licensed for carrying oil-well effluent and connects to two of the *private corporations'* crude oil well pumps in the E1/2 Section 19-52-25-4. This line is licensed for the presence of small amounts of hydrogen sulfide with a concentration well below what is considered to be sour gas.

Amended by
Editor

3.9.2 Operating Extraction Facilities

As shown on Figure 6.0, there are two operating surface wells in the Glastonbury Neighbourhood owned by a *private corporation* and used for crude oil extraction.

Amended by
Editor

All production equipment was removed from the area many years ago, so the well sites contain only a well head, pumping unit, control panel and flow line connections. As oil is pumped to the surface, it is transported through flow lines to central battery sites located outside The Grange ASP.

The *private corporation* estimates that the remaining operating life of these two oil wells is approximately 15-20 years.

Amended by
Editor

The lease areas for these sites have been substantially reduced since their original surface lease applications and are now generally less than 0.40 hectares (60 m x 60 m)

3.9.3 Suspended Extraction Facilities

There is one suspended surface well in the Glastonbury Neighbourhood. It is a well site used to extract natural gas and is also owned by a *private corporation*.

Amended by
Editor

The well was suspended due to the negative effect that the removal of gas from this reserve had on the ability of the operating oil wells in The Grange and Lewis Farms to raise oil to the surface. As these operating oil wells continue to remove oil from this field, the downhole pressure at this gas well site will decrease and it will likely not be placed on production until most of the oil has been removed from this area.

The private corporation has indicated that this well is an essential part of their resource extraction operations in west Edmonton and that they do intend to extract the available gas when the oil has been removed from the bulk of the remaining oil reserves are drained. The lease area for this site has been substantially reduced since its original application and is now approximately 0.4 hectares (60 m x 60 m).

Amended by
Editor

4.0 Development Objectives & Principles

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4.0 DEVELOPMENT OBJECTIVES & PRINCIPLES

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4.0 Development Objectives & Principles

4.1 DEVELOPMENT OBJECTIVES

The Glastonbury NSP has been prepared as a comprehensively planned residential neighbourhood taking advantage of both the natural features and the locational attributes of the area. The main objectives of the Glastonbury NSP are:

- to develop a plan consistent with the general intent and purpose of The Grange Area Structure Plan.
- to provide a framework to deliver a high quality, comprehensively planned residential area by defining the collector and arterial roadway network, the type, size and location of land uses, linkages, location of school/park sites, servicing designs and development staging.
- to integrate natural features of the area into the plan where feasible and economically viable.
- to allow implementation of the plan on an orderly, staged basis.

4.2 DEVELOPMENT PRINCIPLES

Development of the various land uses within the Glastonbury NSP is defined through the following general principles:

4.2.1 Residential

- Provide for a variety of low and medium density housing forms in the Glastonbury NSP consistent with consumer preferences and in conformance with municipal standards and policies.
- Employ applicable design principles from the Suburban Neighbourhood Design Principles report within the residential areas.
- Establish sufficient overall residential densities within the Glastonbury NSP to support the efficient provision of educational facilities, recreational facilities and municipal services such as public transit both within the neighbourhood and as part of The Grange ASP.
- Establish the single family to multi-family dwelling unit ratio to

conform with City Council's housing mix guidelines.

- Locate residential development so as to take advantage of natural and man-made features such as stormwater management facilities, utility corridors, walkways and park space.
- Orient medium density residential land uses toward the collector and/or arterial road system to provide easy access and, where appropriate, to provide a transitional land use between adjacent single family development and major roads and commercial uses.

4.2.2 Commercial

- Provide for shopping centre commercial development opportunities within the Glastonbury NSP to serve area residents.
- Ensure that the impact of commercial development on adjacent land uses is minimized through the use of transitional land uses, orientation of land uses and the application of setbacks/buffering available through the Land Use Bylaw.
- Locate shopping centre commercial sites along collector and arterial roadways to ensure high visibility and to provide easy access.

4.2.3 Transportation

- Provide a logical, safe and efficient hierarchy of transportation systems within the plan area to address the pedestrian, bicycle, public transit and automobile transportation needs of residents and businesses moving to, from and within the Glastonbury Neighbourhood.
- Employ applicable design principles from the Suburban Neighbourhood Design Principles report to the design of the transportation and circulation network.

4.2.4 Educational Facilities

- Provide a site for educational facilities through the dedication of municipal reserves.
- Locate and size this site to address the student populations generated within designated catchment areas through consultation with the Public and Separate School Boards and the City.

4.2.5 Parks & Open Space

- Provide sites for open space and parks for active and passive recreation through the dedication of municipal reserves.
- Introduce a number of smaller, dispersed "pocket parks" within the plan to provide residents with an alternative open space to the larger neighbourhood park sites.
- Locate parks and open space to provide both easy access for residents and to facilitate timely assembly and development of sites.

4.2.6 Environmental

- Preserve, enhance and integrate natural areas such as the Triple 5 Farm Wetland into the plan area where sustainable and economically viable through incorporation with stormwater management facilities.

4.2.7 Resource Operations

- Accommodate the safe and nuisance-free operation of existing resource extraction facilities prior to and, in some cases, concurrent with development in the plan area so that the oil and gas reserves may be removed.

5.0 Development Concept

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5.0 Development Concept

The development concept for the Glastonbury Neighbourhood has been prepared in response to current and anticipated residential market trends in the Edmonton Region.

The amended NSP retains some characteristics of the original plan such as the focus on low density residential development, the incorporation of a liner stormwater management facility design and extensive walkway system. At the same time, it revises the location and type of various land uses and the pattern of the collector and local roadway system. The following sections outline the development concept for the Glastonbury NSP in response to the development objectives and principles outlined in the previous section and contained within The Grange ASP.

5.1 NEIGHBOURHOOD UNIT

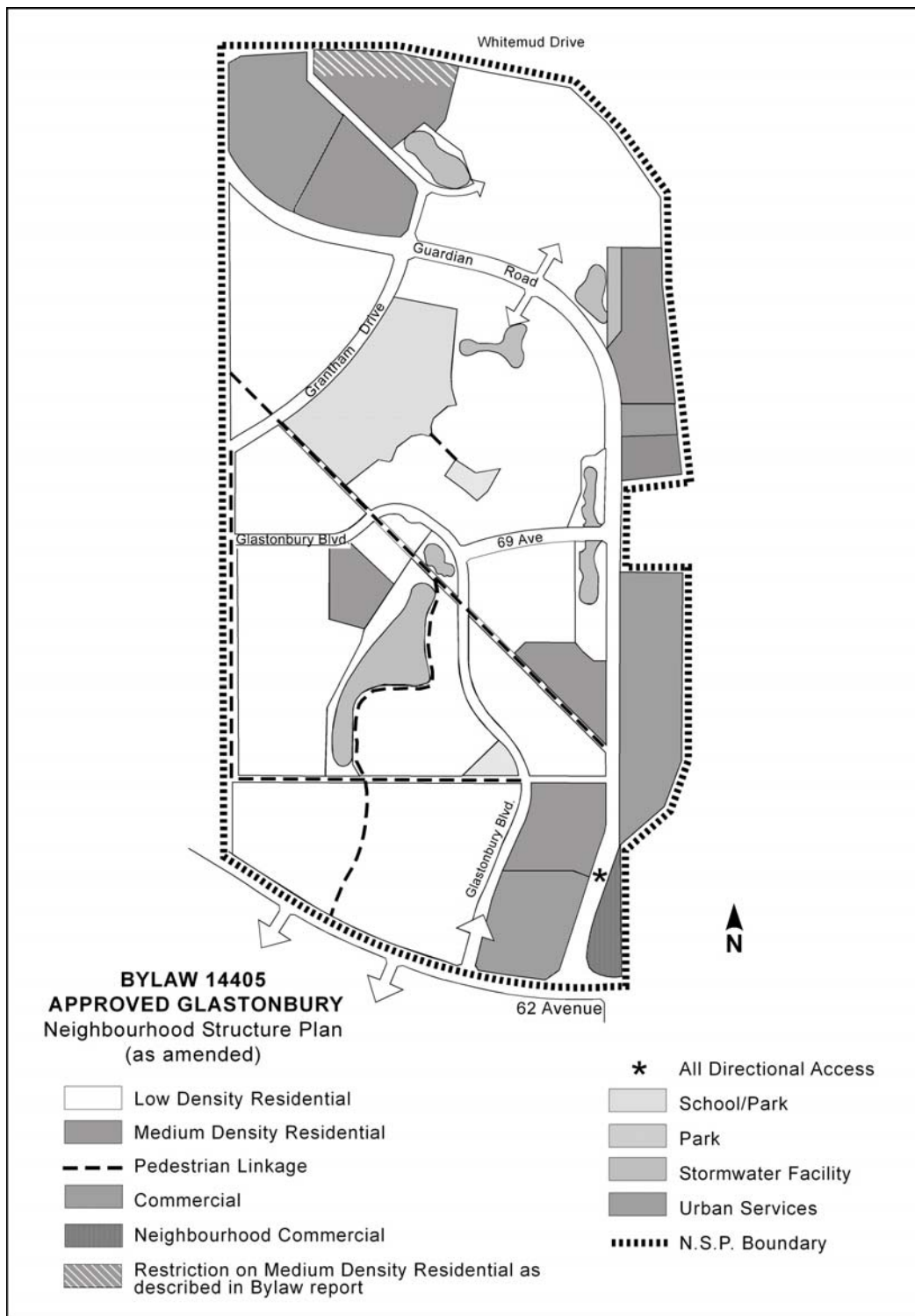
The Glastonbury NSP is comprised of 178.76 hectares and is bound on all sides by either a utility corridor or arterial roadway/freeway to create a logical planning unit as shown on Figure 7.0 - Development Concept.

5.2 RESIDENTIAL

The majority of land within the Glastonbury Neighbourhood is intended for residential development as shown on Figure 7.0. A mix of low and medium density residential dwelling units is described and will be implemented based on market conditions and consumer preferences at the time of development.

5.2.1 Low Density Residential

As shown on Figure 7.0, low density residential development has been located to take advantage of the amenity offered by the stormwater management facilities, walkways through utility corridors and the neighbourhood park site. Within the low density residential area identified in the plan, a range of housing forms will be possible within the RPL, RSL, RF1 and RF4 land use districts.



Low density residential development will be planned in clusters/cells to provide a greater sense of identity to the various residential sub-areas and to help create a safe pedestrian environment. Architectural guidelines will be employed within the residential areas to ensure esthetically pleasing residential streetscapes.

The area, number of dwelling units and population attributed to low density residential development is shown in the Appendix.

5.2.2 Medium Density Residential

Opportunities exist within the Glastonbury NSP for a variety of medium density housing forms and densities from townhouses (RF5 and RF6) to low rise apartment buildings (RA7). Future market demands will determine the type of medium density residential development pursued.

As shown on Figure 7.0, medium density residential sites have been chosen for their proximity to the collector and arterial roadways and in most cases will not result in substantial through traffic past low density residential areas. Locations adjacent to the natural and man-made amenities help ensure exposure to these features to many residents. Medium density development also serves as a transitional land use in select portions of the plan between commercial and low density residential development.

In order to lessen the potential visual aspects of the medium density residential on the existing low density residential development north of Whitemud Drive in Lewis Estates, a transition zone has been identified. Only housing developed under the RF5 land use district will be permitted within 75 metres of the northern boundary of the Glastonbury Neighbourhood (Whitemud Drive) within the area designated for medium density residential development.

The area, number of dwelling units and population attributed to medium density residential development is shown in the Appendix.

Site Specific Planning Guidelines for medium density development have been identified through the consultation process with neighbourhood residents to address the layout and exterior treatment of any row housing that may be developed in future in proposed medium density residential area. The proposed area is a 6.21ha parcel of land located to the east and north west of Guardian Road (207 Street), north of 69 Avenue, south of Whitemud Drive, and west of Anthony Henday Drive within the TUC (Lot B, Block 1, Plan 042 3769). It is intended that any future row housing development of the subject parcel complies with the intent of these guidelines in order to achieve a compatible land use interface between existing low density uses on adjacent land, and the future medium density residential development of the parcel. The proposed Site Specific Planning Guidelines are as follows:

Bylaw 13929
April 11, 2005
Amended by
Editor

1. *The medium density site area shall be zoned RF5 (Row Housing Zone) to accommodate a variety of ground oriented housing forms.*
2. *There shall only be one access to the RF5 site from Guardian Road (207 Street). Development of the site shall not include a vehicular connection to the low density site area to the north, except an emergency access connection.*
3. *A variety of building material, color and design of housing units shall be allowed within the RF5 residential site development, however, the use of material and color shall be complementary to ensure compatibility and harmony of the overall design on site.*
4. *There shall be outdoor amenity areas provided at various locations within the RF5 site to serve the needs of residents living on site.*
5. *The layout of buildings on site shall be designed to reduce the effects of massing and to provide convenient access to parking and outdoor amenity areas.*
6. *Parking areas on site will be interspersed with building areas and landscaped areas on site to minimize the extent of unbroken areas of paved surface on the site.*
7. *If the site is subdivided prior to development, no individual parcel will be 1.4 ha or less in area.*
8. *The pedestrian access, which is separate from vehicular access, be provided through the site to connect to the residential area to the north and to the storm water pond.*
9. *At subdivision stage Garnet Way will be extended as a public road right of way to provide access to the Transportation and Utility Corridor and the Native Burial Site.*

5.3 COMMERCIAL

5.3.1 Shopping Centre Commercial

As shown on Figure 7.0, two community level shopping centre sites have been located in the Glastonbury Neighbourhood, one at the future *Guardian Road*

Amended by
Editor

(207 Street) and Whitemud Drive and the other along the southern boundary of the NSP at 62 Avenue and 199 Street. The proposed sites were selected for their location along major arterials which both enhances their marketability to shopping centre developers as well as providing convenient access for customers.

The sites are of sufficient size to support a wide range of retail, business, medical and professional office uses to serve residents of Glastonbury and The Grange.

5.3.2 Neighbourhood Commercial

The re-alignment of 199 Street resulted in a remnant, triangular, piece of land between the re-aligned 199 Street and the Transportation and Utilities Corridor (TUC). The 1.5 ha property is designated neighbourhood commercial. The easterly portion of this parcel is comprised of the closed portion of the current 199 Street GRA. Access to this site will be via the re aligned 199 Street and will be subject to the approval of the Manager of the Transportation and Streets Department.

Bylaw 12870
September 5, 2001

5.4 EDUCATIONAL FACILITIES

A number of sites for public and separate school facilities have been identified in The Grange in consultation with the two School Boards and the City of Edmonton. As shown in Figure 7.0, one Public K-8 School is required in the Glastonbury Neighbourhood.

Edmonton Public Schools has planned for their facilities in The Grange using a two-tier school system (i.e. Grades K-8 & 9-12 rather than the more traditional K-6, 7-9 & 10-12 system) in order to economize on school facilities and field space.

The proposed school/park site in Glastonbury is located along the looping collector roadway that runs through The Grange and provides convenient access for pedestrian, bicycle, automobile or public transit. A student drop-off bay will be provided to ensure student safety and to relieve traffic congestion around the site during busy periods.

The location of the site adjacent to the *fresh water pipeline* right-of-way provides an excellent link in the proposed walkway system allowing students and residents safe and easy access to the site from within the neighbourhood.

Amended by
Editor

The area of the school/neighbourhood park site in Glastonbury is shown in the Appendix.

5.5 PARKS & OPEN SPACE

In addition to the school/neighbourhood park site, two dispersed park sites are proposed for the Glastonbury Neighbourhood as shown on Figure 7.0. The purpose of these dispersed parks is to distribute small pockets of open space within the neighbourhood to enhance the esthetic quality of the residential subdivisions and to provide accessible green space to the residents.

A walkway system will serve to link these dispersed park nodes with adjacent residential areas and other amenities such as the stormwater management facilities, school/park facilities and commercial sites. The dispersed parks have been provided for within the 10% municipal reserve dedication and the area designated for these sites is shown in the Appendix.

Further open space will be provided around the stormwater management facilities as part of the public utility lot (PUL). The extent of public open space (and private land) around the facilities will depend on City policies at the time of development. Natural vegetation around the Triple 5 Farm Wetland will be retained and integrated within the PUL where appropriate and sustainable.

5.6 URBAN SERVICES

Two parcels on the east side of 199 Street have been identified in the NSP for Urban Services. The sites are currently owned by two different church groups and a private institution (*church*) has developed a church on the southern parcel with the intention of developing special purpose/church related, residential uses on the property. An earlier amendment to the original Glastonbury NSP redesignated this site for these particular uses.

Amended by
Editor

These sites are well suited for urban services given their relative isolation from the rest of the plan area and ease of access/egress for the traffic volumes they will generate at particular times of the day and week. The development of these sites across a major arterial roadway will add little visual or noise impact on the low density residential development to the west of 199 Street.

5.7 CIRCULATION SYSTEM

5.7.1 Roadway Network

The Glastonbury Neighbourhood is well served by a number of proposed and existing arterial and collector roadways. With access into the Neighbourhood from Whitemud Drive at 207/199 Street as well as 69 Avenue and 62 Avenue, there are several options available for movement to and from the plan area. Access to individual residences will generally be from local roads although opportunities exist for residential development with direct access off of the collector roadway system.

The looping collector road within Glastonbury provides an opportunity for transit service to access within a reasonable walking distance of all residential areas in the neighbourhood.

A more detailed description of the existing and proposed transportation and circulation system is provided in Section 7.0.

5.7.2 Walkway Network

An extensive walkway system is proposed for the Glastonbury Neighbourhood as shown on Figure 7.0. The walkways provide a pleasant amenity and convenient link between the residential areas and the school/park site, the dispersed park sites, stormwater management facilities and commercial areas.

The *fresh water and natural gas pipeline* utility corridors provide an excellent opportunity for development, as open space corridors for pedestrians and bicyclists. These corridors enhance movement within the Glastonbury Neighbourhood and also provide a link with Neighbourhoods Three to the west.

Amended by
Editor

Physical improvements to the utility corridors will be done in consultation with the City of Edmonton and the respective utility companies.

5.8 RESOURCE OPERATIONS

Given the presence of two operating oil well sites and one suspended gas well site in the Glastonbury Neighbourhood, future urban development will need to plan accordingly to accommodate these facilities. A detailed description of the

applicable policies and legislation can be found in The Grange ASP.

The following sections provide a description of the appropriate planning and design measures needed to incorporate resource operations within the NSP.

5.8.1 Operating & Suspended Well Site Setbacks

Two private corporations' oil well sites in Glastonbury are both adjacent to the natural gas pipeline right-of-way, providing a natural border for the sites on the west. As shown in Figure 7.0, the land surrounding the well sites is designated as residential and requires an appropriate setback from the well head to any residential building, school or public roadway as per the City of Edmonton's Policy Guidelines for the Integration of Resource Operations and Urban Development (1985).

Amended by
Editor

The Alberta Energy and Utilities Board must provide written approval for subdivisions where a setback of less than 100m is proposed from a well head to the proposed building. The City of Edmonton *Policy Guidelines* allow for a setback as little as 50m from the well head to the edge of the nearest developable parcel when appropriate nuisance reduction measures such as landscaping and fencing are used. A standard 100m x 100m lease area is generally sufficient to accommodate the necessary minimum setback. Details regarding suitable nuisance reduction measures are described in more detail in the *Policy Guidelines*.

Given that it may become operable in the future, setbacks for development adjacent to the suspended gas well will be dealt with in the same fashion as the operating wells.

Further discussions with *the private corporation*, the AEUB and the City of Edmonton are necessary to agree upon appropriate setbacks and nuisance reduction measures for development adjacent to the operating and suspended well sites. Reconfiguration and reduction of lease areas may also be appropriate.

Amended by
Editor

5.8.2 Transmission Line Setbacks

Pipeline transmission lines to the two operating oil well sites are contained within the lease areas abutting the *natural gas* right-of-way and will not affect future adjacent urban development. Appropriate setbacks from the flow line

Amended by
Editor

right-of-way connecting to the suspended gas well will be applied as per City standards at the time of development.

Setbacks from residential buildings to the edge of the 15.0m right-of-way for the *gas transmission line* will be implemented at the subdivision approval stage in accordance with City policy.

5.8.3 Lease Area Access

Although access to lease areas is intended in the Policy Guidelines to be from arterial or collector roadways, there may be instances where convenient access to the well sites will be via the local roadway system. Designing an entire roadway network to accommodate small well site operations that will not exist in the long term is not logical. All assurances will be made to *the private corporation* that convenient and safe access will be retained to their sites until no longer necessary.

Amended by
Editor

Access to the two operating well sites in Glastonbury adjacent to the *natural gas* corridor is currently gained from a road within the SW 1/4 Section 19-52-25-4 in Neighbourhood Three. Based on the assumption that development is not anticipated within Neighbourhood Three until substantial development has taken place in Glastonbury and The Hamptons, this road should provide suitable access in the near and medium term. Access to the suspended gas well in NE 1/4 Section 19-52-25-4 is currently gained from an access road off of 79 Avenue/Whitemud Drive. If and when the gas well is placed back into operation (upon depletion of oil reserves within the Acheson East Field Blairmore Pool), *Guardian Road* (207 Street) will likely have been built providing arterial roadway access near the site. Actual access to the well site will likely be gained through the local roadway system. It should also be noted that at time of extraction of the gas reserves, technological advances may have been made which allow the reserves to be tapped at a location further away from development.

Amended by
Editor

The Policy Guidelines describe restrictions on the hours permitted for truck access and construction activities within the lease areas. With the exception of routine maintenance visits, these well sites do not typically generate a great deal of traffic.

5.8.4 Future Urban Uses

The Policy Guidelines require the designation of the future urban uses of the resource lease areas. Given that the land adjacent to the two operating well sites is low density residential, the lease areas have been designed to be converted to the same use. The suspended gas well site is surrounded by land designated for medium and low density residential development and the lease area is also designed for conversion into these land uses.

As subdivision within the Glastonbury Neighbourhood approaches the well sites, the reconfiguration of the lease areas may be necessary to ensure optimum subdivision design while maintaining an adequate separation distance and access.

6.0 Engineering Services

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6.0 Engineering Services

The following section describes the engineering service design concepts proposed for the Glastonbury Neighbourhood Structure Plan. A more detailed discussion can be found in the Glastonbury Neighbourhood Designs Report submitted under separate cover.

6.1 STORMWATER DRAINAGE

The stormwater drainage concept for the Glastonbury NSP is outlined on Figure 8.0 - Storm Drainage. As shown, Glastonbury will drain in an easterly direction and will use a major and minor storm sewer system to convey flows to a series of interconnected stormwater management facilities located throughout the basin.

These facilities will in turn drain to a dedicated outlet sewer spanning east across the TUC and ultimately connecting to an existing receiving sewer located on Callingwood Road.

Storm Discharge

The storm system proposed for the Glastonbury NSP will use a design based on post-event discharge to ensure availability of existing capacity in the downstream system.

Using this method, the stormwater management facilities within the Glastonbury NSP will have no discharge during storm events. However, using real time control technology, the stormwater management facilities will be drained into the downstream receiving system after the storm event has passed and the downstream system has capacity to accept the flows.

The most suitable location for the lift station and storage facility is within the southeast corner of the basin. However, this would place the facility within the existing *private institution's (church)* property. There have been preliminary discussions with representatives of *the private institution*, however no details as to the specific size and location of the facility has been determined to date. Prior to detailed design approval of the facility, these issues will have to be resolved.

Amended by
Editor

Detailed information regarding the proposed storm drainage system may be obtained from the Glastonbury Neighbourhood Designs Report submitted for approval under separate cover.

6.2 SANITARY DRAINAGE

The proposed sanitary system for the Glastonbury NSP is detailed on Figure 9.0 - Sanitary Sewerage and will follow approximately the same design rationale as the storm drainage system.

The Glastonbury NSP is part of the north sanitary drainage basin in The Grange which will drain across the TUC to existing receiving systems at 62 Avenue/187 St.

A major factor in the sanitary servicing of Glastonbury and The Grange as a whole is the proposal to implement the West Edmonton Sanitary Servicing (WESS) System in the area. The result of this is that all neighbourhoods in The Grange will require on-site sanitary storage to capture flows and a pumping station to release these flows during off-peak hours. This translates into approximately 3,500 m³ of required sanitary storage throughout the neighbourhood.

Detailed information regarding both the sanitary drainage system and the required storage and pumping capacities is provided in the Neighbourhood Designs Report.

6.3 WATER DISTRIBUTION

Water servicing will be designed to provide peak hour flows and fire flows for single family, multi-family, schools, churches and commercial uses. Water looping will be provided in accordance with the requirements of Aqualta. Prior to detailed design, a Water Network Analysis will be submitted to Aqualta for review and approval.

6.4 SHALLOW UTILITIES

Gas and telephone utility services will be extended west across the TUC from the existing development by the respective utility companies. This work will be done concurrently, with the construction of the first stages of the Glastonbury NSP. Ultimately, power will be connected to a main feeder on 79 Avenue.

Figure 8.0 Storm Drainage (Bylaw 11750, May 25, 1998)



- Legend**
- Basin Boundary
 - ➔ Point of Servicing
 - Siphon Location

GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 8.0
Storm Drainage

Figure 9.0 Sanitary Sewerage (Bylaw 11750, May 25, 1998)



- Legend
- Basin Boundary
 - Point of Servicing
 - Lift Station

GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 9.0
Sanitary Sewerage

7.0 Transportation

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7.0 Transportation

The transportation network for the Glastonbury Neighbourhood consists of a full range of facilities to accommodate the movement of automobiles, pedestrians, bicycles and public transit. The following sections describe the proposed systems.

7.1 ROAD NETWORK

The proposed roadway network is shown in Figure 10.0 - Circulation System. The transportation system adjacent to the Glastonbury Neighbourhood consists of a number of arterial roadways and proposed freeways which include:

- Whitemud Drive
- 69 Avenue
- 62 Avenue
- 199/ *Guardian Road* (207 Street)
- Anthony Henday Drive

Amended by
Editor

These roadways will accommodate the majority of the traffic in and around Glastonbury. In addition to the freeways and arterials, the internal roadway network will be made up of a looping collectors, which distributes traffic in the neighbourhoods, and local roads, which provide access to individual residences.

The Transportation and Streets Department required that 199 Street be realigned so that the intersection of 199 Street and 62 Avenue would occur further to the west of Anthony Henday, thereby providing more space between the intersections to allow safe stopping and turning movements.

Bylaw 12870
September 5, 2001

7.2 ROADWAY CLASSIFICATION

Figure 10.0 illustrates the proposed roadway classification for the Glastonbury NSP. The freeways and arterials in the area have the following existing and proposed cross-sections:

Whitemud Drive The Grange is bordered by Whitemud Drive to the north. Whitemud Drive is currently a two lane rural roadway between Anthony Henday Drive and Winterburn Road. Ultimately, Whitemud Drive will be a four lane freeway between Winterburn Road and Anthony Henday Drive. There will be no at grade intersections on Whitemud Drive in the ultimate configuration. Interchanges will be located at Winterburn Road (215 Street), Lewis Estates Boulevard / *Guardian Road* [207 Street (eastbound only)], and Anthony Henday Drive.

Amended by
Editor

69 Avenue 69 Avenue currently terminates in West Jasper Place at approximately 190 Street. 69 Avenue will ultimately fly over Anthony Henday Drive as a four lane arterial, terminating in Glastonbury just west of 199 Street.

62 Avenue 62 Avenue will ultimately connect with Callingwood Road east of Anthony Henday Drive. In the future, 62 Avenue will be a four lane divided arterial. East of 199 Street it will need to be widened to six lanes to accommodate projected traffic volumes. Ultimately, there will be an interchange at 62 Avenue and Anthony Henday Drive.

**199 Street/
Guardian Road
(207 Street)** 199 Street is currently a 2 lane rural roadway. Ultimately the north end of 199 Street will be closed and realigned to the west to intersected Whitemud Drive and *Guardian Road* (207 Street). The majority of 199 Street will be a four lane divided arterial. The realigned portion of 199 Street will be widened to six lanes.

Amended by
Editor

Anthony Henday Drive Although Anthony Henday Drive does not currently exist south of Whitemud Drive, right of way has been reserved for its future development. Ultimately Anthony Henday Drive will be an eight lane freeway with interchange access at Lessard Road, 62 Avenue, and Whitemud Drive. 69 Avenue will fly over Anthony Henday Drive and thus have no access to the freeway.

The remainder of the internal roadway network is made up of major and minor collectors, and local roads.

7.3 STAGING OF ROADWAY IMPROVEMENTS

It has been determined that at a certain development threshold (subdivision approval of 150 lots) in The Grange, the intersection of 199 Street and Whitemud Drive will no longer be able operate at an acceptable level of service during peak hours. At a minimum, installation of signals and some minor intersection improvements at the intersection of 199 Street and Whitemud Drive will be required to accommodate further increases in traffic from The Grange. A number of other options other than improving 199 Street exist as follows:

1. Construct the 207 Street (*Guardian Road*) extension of 199 Street. The property required for the roadway right-of-way may not be available in the short-term.
2. Close the 199 Street south of Whitemud Drive and reroute traffic to other sections of the existing roadway network. This would improve traffic operations on Whitemud Drive west of Anthony Henday Drive. However, the traffic that previously used 199 Street would be rerouted to Winterburn Road, Lessard Road, 62 Avenue, or 69 Avenue. This would cause increased capacity problems on 170 and 178 Streets near Whitemud Drive. In fact, the existing traffic on 199 Street, if diverted to 170 and 178 Streets, is likely to cause the intersections on the Whitemud Dr. ramps to experience congestion problems.
3. Construct the initial two lanes of Anthony Henday Drive from Whitemud Drive to a temporary at grade intersection at 69 Avenue. Since ultimately 69 Avenue will not have access to Anthony Henday Drive it will be necessary to notify the public, through informational signing at the intersection, of the temporary nature of this connection.

Amended by
Editor

Given the unknown status of construction of Anthony Henday Drive and property required to accommodate *Guardian Road* (207 Street), it is recommended that these four options (or other options meeting the satisfaction of the Transportation & Streets and Planning & Development Departments) be reviewed in more detail as the 150 lot subdivision approval limit is being reached.

Amended by
Editor

7.4 ARTERIAL ROAD CONSTRUCTION & COST SHARING

An Arterial Roadway Assessment for The Grange will be established prior to the approval of the first subdivision in Glastonbury or The Hamptons. These moneys may be used towards the construction of permanent arterial roadways in and adjacent to The Grange, and other permanent major roadways to access The Grange, as may be mutually agreed. These moneys may not be used for any interim access roadways that may be provided.

The Arterial Roadway Assessment will ensure that all assessable lands within The Grange are contributing equitably to the cost of the arterial roadway system. With respect to the Glastonbury NSP, the assessment will pay for the following improvements:

- Upgrading of the existing two lanes of 199 Street from the realignment point where it becomes *Guardian Road* (207 Street) south to the southern boundary of the ASP.
- Construction of two lanes of the realigned portion of 199 Street/*Guardian Road* (207 Street) from the realignment point north to Whitemud Drive
- Construction of two lanes of 69 Avenue from its existing termination point east of the TUC to 199 Street.
- Construction of two lanes of 62 Avenue from its existing termination point east of the TUC to 215 Street.

Amended by
Editor

The cost will include land acquisition, grading, drainage and all required curb, gutter, walk (if necessary) and lighting. This total cost divided by the assessable area of the Glastonbury NSP will create the Arterial Roadway Assessment for the plan area.

7.5 TRANSIT SERVICE

Public transit will be provided on the collector and arterial roadways in the Glastonbury Neighbourhood. Approximately 99% of the residential areas will be within an acceptable walking distance of potential transit routes. The extensive walkway system proposed for Glastonbury will aid in achieving an acceptable walking distance for individuals using the transit system.

During the initial development stages of the area, it may be necessary to provide school bus service until construction of the schools occurs. Similar to the public transit system, the collector road system would be used by the school buses to access the majority of the area.

7.6 BICYCLE ROUTES & WALKWAYS

All arterial roadways in and adjacent to Glastonbury will have 2.5 metre wide sidewalks on one side, designated for bicycle use. Collector and local roadways will only be signed as bicycle routes where they form a logical component of a functional bicycle route.

Extensive walkways will be provided throughout the area. The majority of these will follow utility right-of-ways and the stormwater management system that generally runs through the centre of the Glastonbury NSP. Additional walkways will connect this core route to schools and neighbourhood parks. The walkways are intended to provide both access to recreation areas and reduce walking distances to public transit.

8.0 Implementation

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8.0 Implementation

Based on the proposed staging plan in The Grange ASP, development is expected to begin concurrently in the Glastonbury NSP and in The Hamptons to the south.

8.1 DEVELOPMENT STAGING

As shown on Figure 11.0 - Staging Concept, development with the Glastonbury NSP is anticipated to begin on the west side of 199 Street both north and south side of 69 Avenue and proceeding in a westerly manner filling in to the north and south concurrently.

The pace of development will depend on many factors including market conditions and availability of infrastructure.

8.2 REDISTRICTING AND SUBDIVISION

As noted earlier, a substantial portion of the East 1/2 Section 19-52-25-4 is currently districted to accommodate the development of single family housing, stormwater management facilities and park space. Revised redistricting plans for the areas under development will be submitted to the Planning & Development Department to reflect the revised development concept.

It is recommended that the redistricting be handled in large, contiguous blocks to accommodate wholesale revisions to the currently districted parcels. This will eliminate the possibility of isolating any small, remnant parcels of land under the existing districts.

Concurrent with the approval process of The Grange ASP and the Glastonbury NSP, applications for tentative plans of subdivision for the initial stages of development will be submitted. Servicing is expected to commence in Glastonbury in the fall of 1998.

Figure 11.0 Staging Concept (Bylaw 11750, May 25, 1998)



GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN

FIGURE 11.0
Staging Concept

Appendix

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APPENDIX

1.0 Glastonbury Neighbourhood
Land Use And Demographic Profile

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**THE GRANGE AREA STRUCTURE PLAN NEIGHBOURHOOD ONE GLASTONBURY
NEIGHBOURHOOD STRUCTURE PLAN LAND USE AND DEMOGRAPHIC PROFILE**

As amended by Bylaw 14405

	AREA (ha)
GROSS AREA	178.76
Arterial Roadways	
Whitemud Drive	6.92
207/199 Street	8.86
62 Avenue	<u>1.78</u>
	17.56
Resource Pipelines and Facilities	
<i>Private Corporation</i>	2.39
<i>Private Corporation</i>	2.16
<i>Private Corporation</i>	<u>0.27</u>
	<u>4.82</u>
GROSS DEVELOPABLE AREA	156.38
Stormwater Management Facilities	12.05
Municipal Reserve	
K-8 Public School and Neighbourhood Park	7.90
Dispersed Parks	<u>0.80</u>
	8.70
Non-Residential Land Uses	
Commercial - Shopping Centre	9.80
Neighbourhood Commercial	1.50
Urban Services	<u>7.55</u>
	18.85
Circulation (Collector and Local Roads, and Walkways)	24.59
Sub-Total	<u>64.19</u>
NET RESIDENTIAL AREA	92.19

RESIDENTIAL LAND USE ANALYSIS

Land Use	Area (ha)	Units/ha	Units	Pop/Unit	Population	LDR/MDR RATIO
Low Density Res.	72.71	20	1,454	3.46	5,031	60.5%/39.5%
Medium Density Res.	4.87	40	195	2.98	581	Persons per Gross Developable Hectare
Medium Density Res.	13.51	50	676	2.98	2,014	
Medium Density Res.	<u>1.1</u>	<u>70</u>	<u>77</u>	<u>2.0</u>	<u>154</u>	
TOTAL	92.19		2,402		7,780	

STUDENT GENERATION STATISTICS

LEVEL	Public	Separate	Total
Grades K-8	417	351	768
Grades 9-12	207	136	343
TOTAL	624	487	1,111