

**Bylaw No. 913-2016**

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**A BYLAW OF THE CITY OF LEDUC IN THE PROVINCE OF ALBERTA, TO ADOPT THE AREA STRUCTURE PLAN FOR THE: NORTH EAST QUARTER OF 21-49-25-W4M**

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The *Municipal Government Act*, R.S.A. 2000, Chapter M-26, as amended (the "Act") grants a municipality the authority to adopt by Bylaw an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of an area of land in a municipality;

**AND:** the NE ¼ Section 21, Township 49, Range 25, West of the 4<sup>th</sup> Meridian Area Structure Plan addresses the requirements of an Area Structure Plan as outlined in the Act;

**AND:** notice of intention to pass this bylaw has been given and a public hearing has been held in accordance with the Act;

**THEREFORE:** the Council of the City of Leduc in the Province of Alberta duly assembled hereby enacts as follows:

**PART I: BYLAW TITLE**

1. **THAT:** this Bylaw is to be cited as the Brightwell Area Structure Plan Bylaw.

**PART I: APPLICATION**

2. **THAT:** the Brightwell Area Structure Plan, attached hereto as Schedule "A", is hereby adopted.


**PART II: ENACTMENT**

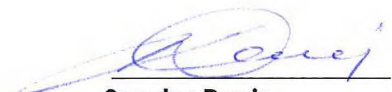
This Bylaw shall come into force and effect when it receives Third Reading and is duly signed.

READ A FIRST TIME IN COUNCIL THIS 22<sup>ND</sup> DAY OF FEBRUARY, 2016.

READ A SECOND TIME IN COUNCIL THIS 11<sup>TH</sup> DAY OF APRIL, 2016.

READ A THIRD TIME IN COUNCIL AND FINALLY PASSED THIS 11<sup>TH</sup> DAY OF APRIL, 2016.

  
\_\_\_\_\_  
**Greg Kruschke**  
**MAYOR**

  
\_\_\_\_\_  
**Sandra Davis**  
**CITY CLERK**

April 11/16  
Date Signed

BRIGHTWELL  
AREA STRUCTURE PLAN

1161103230



Prepared for:  
Blackmud Enterprises

Prepared by:  
Stantec Consulting Ltd.

January 7, 2016

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## 1.0 INTRODUCTION

### 1.1 PURPOSE

An Area Structure Plan (ASP) is a statutory plan which establishes a framework for future subdivision and development within a designated area. The authority for an ASP lies in the Municipal Government Act (MGA), Section 633.

The City of Leduc's Area Structure Plan & Outline Plan Guidelines specify that an ASP within municipal boundaries address the following:

- Reason for the type of development proposed;
- The location, configuration, and area of land uses including residential, commercial, parks and open spaces, and public utility land uses;
- Benefits for the City and the community;
- Legal land description and current land ownership;
- Land's relationship with surrounding areas/neighbourhoods;
- Manner in which directly affected stakeholders are able to participate in the plan process;
- The transportation network for the plan area;
- A conceptual servicing scheme showing utility services and infrastructure; and
- The implementation and phasing of development.

The Brightwell ASP meets the required policies and is in accordance with Section 633 of the Municipal Government Act and Capital Region Growth Plan.

### 1.2 LOCATION

The Brightwell ASP comprises two titled parcels totaling approximately 64 hectares of land. It is located immediately south of the Suntree Neighbourhood in the southwest section of the City of Leduc (**Figure 1- Location**).

The ASP is defined by the following boundaries:

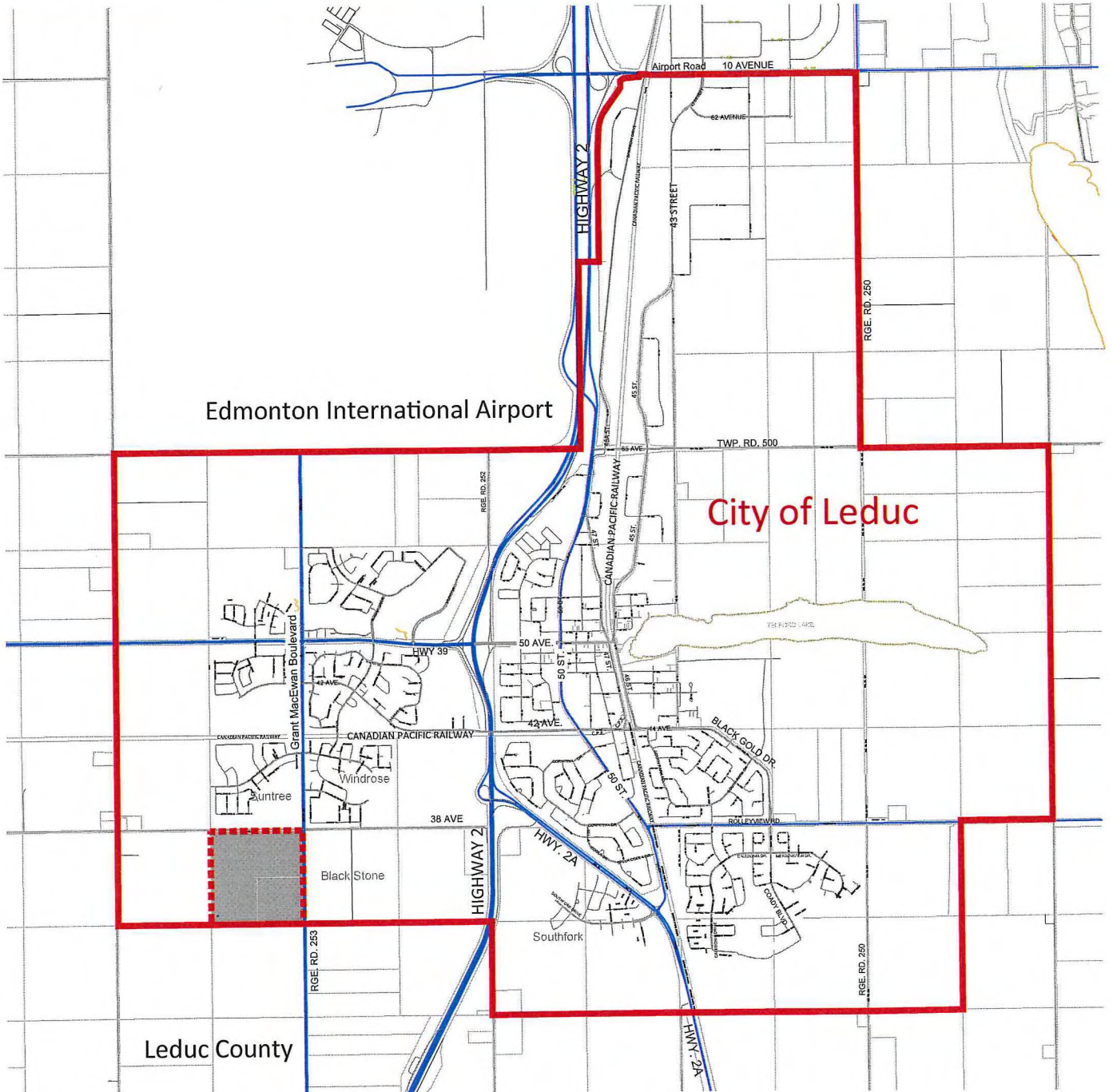
- North – 38 Avenue (Township Road 494)
- East - Grant MacEwan Boulevard
- West - Quarter section boundary (NE ¼ Section 21-49-25-W4)
- South - Future Highway 2A Bypass

The current use of the ASP lands to the west, south, and east is agriculture. There is an existing farmstead located to the south on SE & SW 21-49-25-W4. Suntree Neighbourhood is located immediately north and is currently developing.

### **1.3 BACKGROUND & CONTEXT**

In 2012, the City of Leduc announced its proposal to annex approximately 526 ha of land abutting its west and southwest boundary. In September 2013, the Province of Alberta approved the City of Leduc's proposed annexation plans, and on January 1, 2014 the plans became effective.

The Brightwell ASP lands are within the City of Leduc's approved annexation area. The ASP lands are well positioned to take advantage of the growing demand for residential uses within proximity to the future Highway 2A realignment, as well as existing and planned schools. The Brightwell ASP is intended to maximize the benefits of the new local and regional planning requirements by providing land uses that will support the concentrated growth proposed in the City of Leduc Municipal Development Plan and the Capital Region Growth Plan.



**Legend**  
     Brightwell ASP

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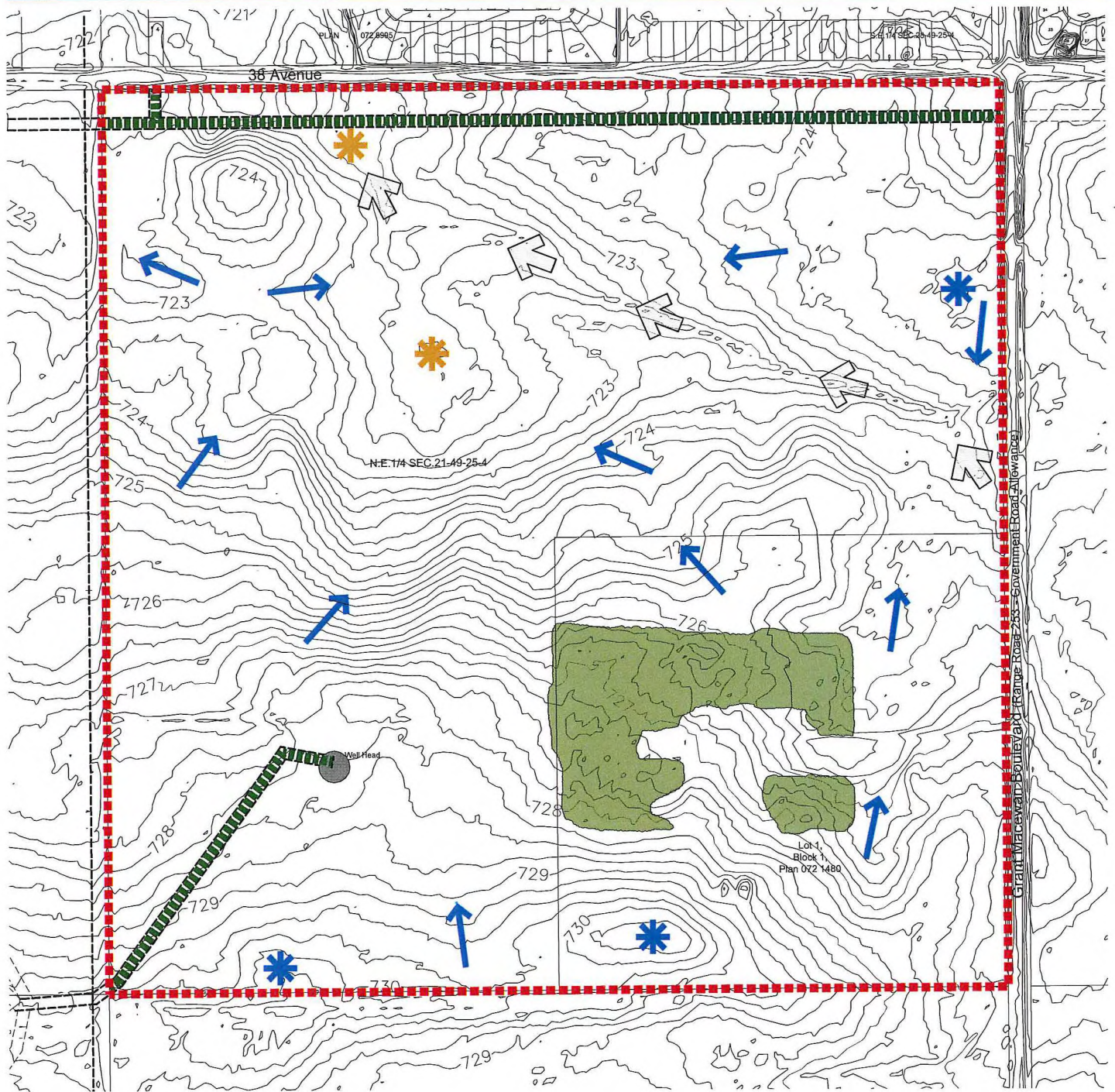


Legend  
 ■■■■ Brightwell ASP Boundary

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Legend

- ■ ■ ■ Brightwell ASP Boundary
- 0.25 m Contour Interval
- ★ High Point
- ★ Low Point
- Pipeline Right of Way
- Suspended Well
- Treed Area
- ← Existing Major Drainage
- Existing Drainage Course

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## 2.0 DEVELOPMENT AREA

### 2.1 LEGAL DESCRIPTION

The proposed ASP lands consist of two separately titled parcels of land. Current land ownership is summarized in **Table 1 – Land Ownership**.

**Table 1 - Land Ownership**

#	Legal Description	Owner	Certificate of Title	Area (ha)
1	NE ¼ Section 21-49-25-W4	Blackmud Enterprises Ltd.	142 038 626	48.50
2	Lot 1, Block 1, Plan 0721480	Barry & Alana Knie	072 106 407	16.20
<b>Total Area (ha)</b>				64.70

### 2.2 PIPELINES AND WELLHEADS

There is one pipeline within the ASP lands. It runs east-west along 38 Avenue (Township Road 494) to the north for the entire northern boundary of NE 21-49-25-W4. This pipeline contains natural gas and is licensed to AltaGas Utilities (**Table 2 – Pipelines within the Brightwell ASP**). It is intended that with development of the area this pipeline will be relocated to the area adjacent to 38 Avenue (Township Road 494) and accommodate a multiway within the corridor.

Pipelines containing natural gas, oil and other similar products are regulated by the Alberta Energy Regulator (AER). These regulations include minimum setback distances from high pressured pipelines.

**Table 2 - Pipeline within the Brightwell ASP**

License/Line #	Company	Substance	Status	Max. Pressure	H2S
LE - 233	AltaGas Utilities	Natural Gas	Operating		0

There is one suspended well site situated within the plan area. No development will be permitted within 100 m of the wellhead until such time as it has been abandoned. Once the wellhead is abandoned, a 5 m setback is required. No active oil or gas wells are identified in the plan area (**Table 3 – Wellheads within the Brightwell ASP**).

**Table 3 - Wellheads within the Brightwell ASP**

Ref #	License #	Company	Well Name	Status
1	0005105	Sino-Western Petroleum Inc.	SWPI 10-21-49-25	Suspended

## 2.3 LANDSCAPE, VEGETATION AND WILDLIFE

A Biophysical Assessment was completed in September 2014 to determine the ecological value of the natural areas located within the plan area. The assessment consisted of a desktop review of relevant literature and information databases, including a historical aerial photograph review, pre-mapping of all natural features, and a field program to assess natural features within the plan area.

In general, the plan area consisted of cultivated lands seeded with wheat, a farming compound, and various natural features including wetlands and two tree stands. Thirteen wetlands were confirmed, including seven Class I ephemeral wetlands and six Class III seasonal wetlands. Each wetland had previously been disturbed by cultivation/tillage activities with the exception of two Class III wetlands.

An ecological valuation analysis determined that the majority of ecological components within the plan area are of low to moderate ecological value. However, two tree stands were determined to be of higher ecological value. The larger of the two was determined to be appropriate for retention and integration into the neighbourhood development.

## 2.4 GEOLOGY, SOILS AND GROUNDWATER

A Geotechnical Report was prepared by Hoggan Engineering & Testing (1980) Ltd. in April 2013 to determine if the ASP lands were suitable for urban development. The contents of the report consist of an evaluation of the geological, soil, and water table characteristics of the site. The report is intended for preliminary use only, as it speaks generally to the ASP lands. At the subdivision or redistricting stages, further geotechnical investigation will be required. This report has been submitted under separate cover.

The surface geology found in the region of the Brightwell ASP is glacial draped moraine – till consisting of unsorted clay, silt, sand, and gravel with minor amounts of water sorted materials. The general bedrock geology in the region was identified as the Horseshoe Canyon Formation of the late Cretaceous age. This formation is generally composed of grey feldspathic clayey sandstone and bentonitic mudstone, with scattered coal and bentonite beds of various thicknesses.

From the test hole samples taken, the soil and groundwater conditions were determined to be suitable for residential development and similar to others encountered in the Leduc area. Of the soils encountered, clay type soils were the most prominent. The soil was found to be moist and

of a stiff to hard consistency and presented no major issues for subdivision design. The presence of plastic clay shale bedrock soils and a high groundwater table in one of the test holes suggests that some construction difficulties may occur due to shrinking and swelling.

## 2.5 ENVIRONMENTAL ASSESSMENT

A Phase I Environmental Site Assessment (ESA) was undertaken by Hoggan Engineering & Testing (1980) Ltd. in March 2013 for the lands located in the ASP. The purpose for undertaking the Phase I ESA was to assess if there was evidence of potential or actual environmental contamination as a result of current or past activities on the site or surrounding properties. This report has been submitted under separate cover.

The Phase I ESA consisted of a records review process, site reconnaissance, and interviews with personnel familiar with the site history. No observations of environmental concern were noted within the subject site at the time of the site reconnaissance and no environmental concerns were raised regarding the past and present use of the lands.

A suspended oil well was identified in the southwest corner of the plan area (**Figure 3 – Site Features**). No observations were made of staining or spills at the well location, but the report notes a risk of environmental impact limited to the immediate vicinity of the well. As such, no development is permitted within 100 m of the well until such time as it is abandoned. The report recommends further evaluation by an environmental engineering company.

Aside from the recommendation regarding the oil well, no further environmental investigations are considered necessary.

## 2.6 HISTORICAL RESOURCES

A Statement of Justification (SoJ) for the Historical Resources Act was prepared in July 2014 and submitted to Alberta Culture for review. Subject to Section 31 of the Resources Act, "a person who discovers a historical resource in the course of making an excavation for a purpose other than for the purpose of seeking historical resources shall forthwith notify the minister of the discovery." In the SoJ, it was determined that the site has low potential for the recovery of intact and significant sites and further archaeological work was not recommended. As the majority of the site had been previously cultivated, the potential for archaeological resources was considered low.

No Historical Resource Values for archaeology or paleontology are located within the site. Based on historical and the most recent available aerial imagery, a large barn-like structure and sheds were identified as potentially being of a historic nature. It is recommended that documentation and detailed site recording be undertaken of the historic structures prior to impact.

## 3.0 POLICY CONTEXT

### 3.1 GENERAL

The Brightwell ASP has been prepared in accordance with applicable legislation and is consistent with the regulations outlined in Sections 3.2, 3.3, and 3.4 of this plan. An ASP must be consistent with all higher-order plans, including the Municipal Government Act, the Provincial Land Use Policies, the Capital Region Growth Plan, and all City of Leduc statutory plans.

### 3.2 MUNICIPAL GOVERNMENT ACT

The Brightwell ASP has been prepared in accordance with the provisions of the MGA (Revised Statutes of Alberta, 2000, Chapter M26). Section 633(1), Part 16, of the MGA provides for a municipality to adopt an ASP as a statutory document for the purpose of providing a framework for future land use, subdivision, and development within the Plan area. Regarding the preparation of an ASP, the MGA states the following:

#### ***Area Structure Plan***

**633 (1)** For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may by bylaw adopt an area structure plan.

(2) An area structure plan

a) must describe:

- i. the sequence of development proposed for the area;
- ii. the land uses proposed for the area, either generally or with respect to specific parts of the area;
- iii. the density of population proposed for the area either generally or with respect to specific parts of the area; and
- iv. the general location of major transportation routes and public utilities; and

b) may contain any other matters the council considers necessary.

#### ***Statutory Plan Preparation***

**636 (1)** While preparing a statutory plan a municipality must:

- a) provide a means for any person who may be affected by it to make suggestions and representations;
- b) notify the public of the plan preparation process and of the means to make suggestions and representations referred to in clause (a);

- c) notify the school boards with jurisdiction in the area to which the plan preparation applies and provide opportunities to those authorities to make suggestions and representations; and
  - d) in the case of an area structure plan, where the land that is the subject of the plan is adjacent to another municipality, notify that municipality of the plan preparation and provide opportunities to that municipality to make suggestions and representations.
- (2) Subsection (1) does not apply to amendments to statutory plans.

### **Plans Consistency**

**638** All statutory plans adopted by a municipality must be consistent with each other.

## **3.3 PROVINCIAL LAND USE POLICIES & ALBERTA LAND STEWARDSHIP ACT**

Section 622(3), Part 17 of the Municipal Government Act stipulates that every statutory plan must be consistent with the Land Use Policies. There are eight sections contained within the Provincial Land Use Policies addressing plan implementation, general planning approaches, municipal interaction and specific planning issues. The Brightwell ASP meets the goals set out in the Land Use Policies.

It should be noted that Section 622 (4), Part 17 of the MGA indicates that the Land Use Policies will not apply to the Brightwell ASP once the North Saskatchewan Regional Plan is developed and enacted in accordance with the Alberta Land Stewardship Act (ALSA). ALSA is the enabling legislation that supports the Land Use Framework (LUF). Pursuant to 638(1), Part 17, of the MGA, all statutory plans must be in compliance with ALSA; regional plans enacted under ALSA will prevail over any statutory plan to the extent of any conflict or inconsistency.

The purpose of the LUF is to manage growth and sustain Alberta's economy, while providing a balance with the social and environmental goals of Albertans. Essentially, the framework provides a blueprint for land-use management and decision-making that will address the needs of Alberta. While the North Saskatchewan Regional Plan has yet to be developed and enacted, the Brightwell ASP has taken into account the desired outcomes of the LUF, which include:

1. A healthy economy supported by our land and natural resources
2. Healthy eco-system
3. People friendly communities with ample recreational and cultural opportunities

### **3.4 CAPITAL REGION BOARD REGULATION: CAPITAL REGION GROWTH PLAN**

The MGA, Capital Region Board Regulation (Alberta Regulation 17/2010, MGA) is the enabling legislation that establishes the Capital Region Board (CRB) and the Capital Region Growth Plan.

Pursuant to Section 11 of the Capital Region Board Regulation, the objectives of the Capital Region Growth Plan are:

- a) to promote an integrated and strategic approach to planning for future growth in the Capital Region;
- b) to identify the overall development pattern and key future infrastructure investments that would;
  - i. best complement existing infrastructure, services and land uses in the Capital Region;
  - ii. maximize the benefits to the Capital Region; and
- c) to co-ordinate decisions in the Capital Region to sustain economic growth and ensure strong communities and a healthy environment.

According to Sections 17(1) and 18 of the Capital Region Board Regulation, all statutory plans must meet the requirements of Capital Region Growth Plan. In the event of a conflict, the Growth Plan will prevail. This ASP has been developed to comply with the Capital Region Growth Plan.

The Brightwell ASP lands are within the Capital Region Board's Priority Growth Area E. The Area mandates 25-30 dwelling units per net residential hectare for residential development within the boundaries.

### **3.5 CITY OF LEDUC MUNICIPAL DEVELOPMENT PLAN**

The City of Leduc's Municipal Development Plan (MDP), approved in April 2012, sets out the guidelines for orderly growth and development until 2035. The MDP provides a comprehensive long term land use policy framework within which present and projected growth and development may take place.

The MDP determines where growth is most feasible based on such factors as infrastructure, sustainable growth principles, and economic development opportunities. It also addresses the environment, the economy and tourism, social wellness and safety, recreation and culture, governance, and the administration, monitoring, and implementation of the MDP policies.

### **3.6 CITY OF LEDUC – LEDUC COUNTY INTERMUNICIPAL DEVELOPMENT PLAN**

The City of Leduc – Leduc County Inter-municipal Development Plan (IDP) was approved in 2011 to address the two municipalities' mutual issues, interests, and concerns as they relate to physical, social, and economic development in the IDP area. The plan is based upon five pillars of sustainability, which include:

1. Smart Growth
2. Creating Vibrant Communities
3. Environmental Stewardship
4. Economic Development
5. Responsible Governance

The IDP also includes procedures for the implementation of the IDP policies, dispute resolution, and amending the IDP.



## 4.0 LAND USE CONCEPT

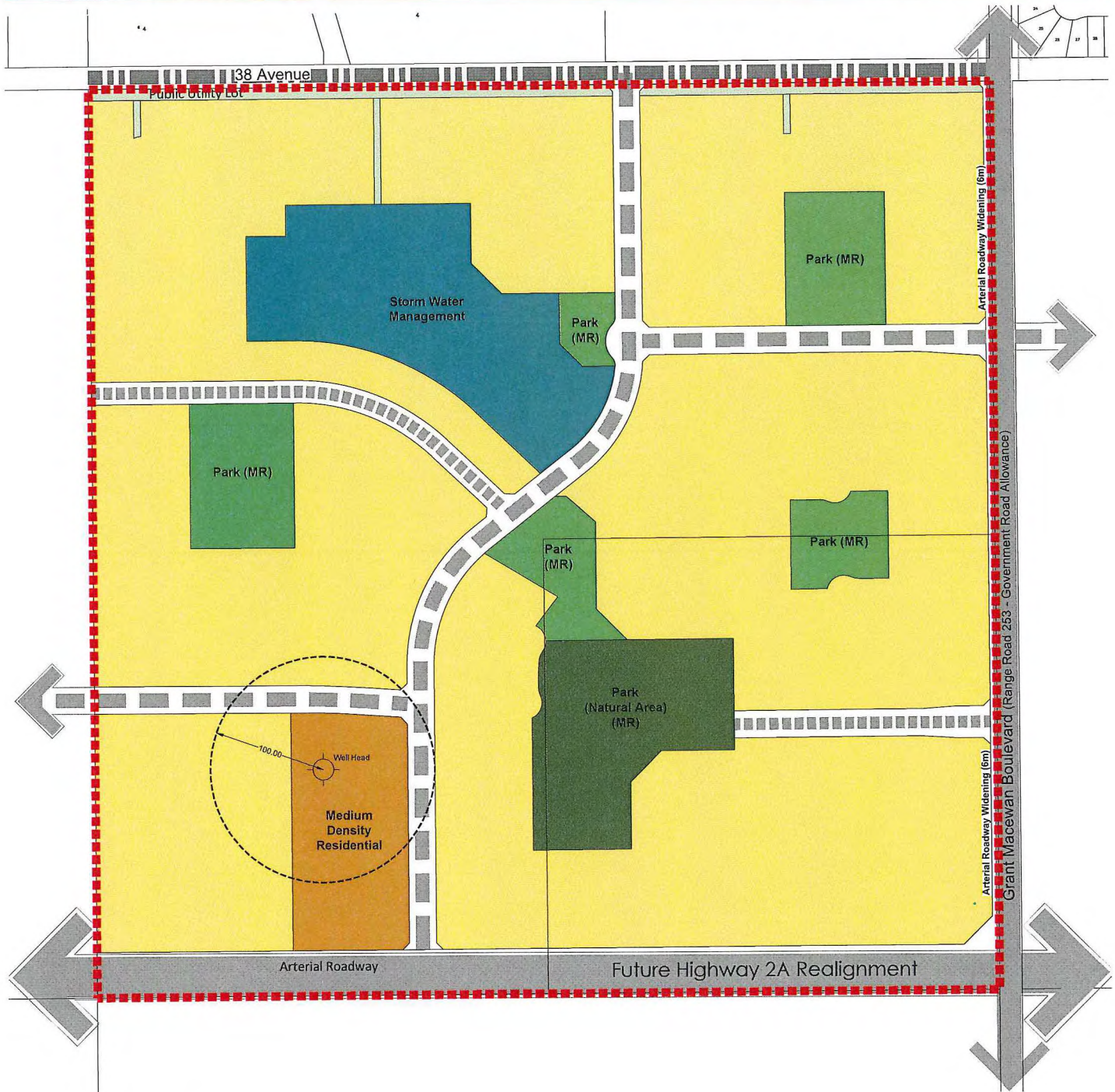
The Brightwell ASP Land Use Concept (**Figure 4 – Land Use Concept**) has been designed in accordance with the City of Leduc statutory plans and policies and servicing standards, the Capital Region Growth Plan, as well as all relevant Provincial and Federal statutes and regulations. Development staging and extension of infrastructure will be facilitated in a logical, efficient, and economical manner while having regard for potential environmental and ecological impacts.

### 4.1 LAND USE DISTRIBUTION

Brightwell will be developed as a residential neighbourhood with more than half of the gross area designated as Residential (Low Density Residential and Medium Density Residential). The development concept for the Brightwell ASP has been designed to support a mix of low and medium density residential uses as outlined in **Table 4 – Land Use and Population Statistics**. **Figure 4 – Land Use Concept** identifies the general distribution of land uses. Medium Density Residential is located in the southwest portion of the neighbourhood with direct access to the collector road network. A network of parks and open spaces is distributed across the neighbourhood within a short walk from all neighbourhood residences.

**Table 4 - Land Use and Population Statistics**

BRIGHTWELL AREA STRUCTURE PLAN LAND USE & POPULATION STATISTICS						
	Area (ha)		% of GDA			
Gross Developable Area	64.70					
Required Municipal Reserve Dedication	6.47		10.0%			
Arterial Road Right-of-Way	3.72		5.7%			
Public Utility Lot	0.77		1.2%			
Circulation	12.94		20.0%			
Municipal Reserve Dedication	6.47		10.0%			
Park	3.94					
Park (Natural Area)	2.53					
Storm Water Management	4.00		6.2%			
<b>Total Non-Residential Area</b>	<b>27.90</b>		<b>43.1%</b>			
<b>Net Residential Area (NRA)</b>	<b>36.80</b>		<b>56.9%</b>			
RESIDENTIAL LAND USE, DWELLING UNIT COUNT AND POPULATION						
Land Use	Area (ha)	Units/ha	Units	% of Units	People/Unit	Population
Low Density Residential	34.62		907	82.2%		2,539
Single Detached & Duplex	32.54	25	814	73.8%	2.80	2,279
Townhouse	2.08	45	93	8.4%	2.80	260
Medium Density Residential	2.18	90	196	17.8%	1.80	353
<b>Total</b>	<b>36.80</b>		<b>1,103</b>	<b>100%</b>		<b>2,892</b>
STUDENT GENERATION STATISTICS						
Level	Public	Separate	Total			
Grade K-9	341	184	525			
Grades 10-12	96	52	148			
<b>Total</b>	<b>437</b>	<b>236</b>	<b>673</b>			
NEIGHBOURHOOD DENSITY						
Population Per Net Residential Hectare (p/net ha)			78.6			
Dwelling Units Per Net Residential Hectare (du/net ha)			30.0			
Capital Region Board Density Target (du/net ha)			25.0 - 30.0			



**Legend**

- Brightwell ASP Boundary
- Low Density Residential
- Medium Density Residential
- Storm Water Management
- Park (MR)
- Park (Natural Area) (MR)
- Public Utility Lot
- Major Collector Roadway
- Major Collector Roadway (Modified Cross Section)
- Minor Collector Roadway
- Arterial Roadway
- Arterial Roadway Widening (6m)

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## 5.0 OBJECTIVES AND POLICIES

### 5.1 LAND USES

#### 5.1.1 Residential

The Brightwell ASP offers a variety of residential opportunities for neighbourhood residents. Providing a variety of housing sizes and types supports the development of a balanced neighbourhood that can accommodate a range of family types, sizes, and income groups throughout their life cycle. The land use concept anticipates a planned overall density of approximately 30 units per net residential hectare (du/net ha).

Brightwell provides for the following residential designations:

- **Low Density Residential** supports the development of single detached and duplex housing at a density of approximately 25 du/net ha, and townhouses at an approximate density of 45 du/net ha. Single detached and duplex housing allow the opportunity to develop low density housing within the neighbourhood with and without rear lanes. Townhouses allow for the development of multiple units primarily along collector roadways. Sites developed as townhouses will have vehicular access at the rear of the property via laneways, adding to the safety and visual appeal of the streetscape.
- **Medium Density Residential** supports the development of multi-unit residential developments including apartments up to four storeys at a density of approximately 90 du/net ha. The type of housing pursued will depend on market demands.

#### Objectives:

- To provide a variety of housing types that serve a range of age groups, income levels, and needs.
- To establish a residential density that achieves the target set out by the Capital Region Growth Plan.
- To promote higher-density residential development along major transportation corridors to provide efficient and convenient access.

#### Policies:

- 5.1.1.1 A variety of housing types shall be provided, including single detached, duplex, townhouses, and low-rise apartments.
- 5.1.1.2 Residential areas shall be developed in a manner compatible in scale and density to adjacent residential developments.

**5.1.1.3** Townhouses and medium density residential development shall be located adjacent to the collector roadway.

**5.1.1.4** Residential density shall be between 25 and 30 du/net ha in accordance with the Capital Region Growth Plan.

**5.1.1.5** No residential development shall be permitted within 100 m of the oil well (**Figure 3 – Site Features**) until such time as it is abandoned.

## **5.1.2 Parks, Multiways, and Open Space**

A combination of park spaces, multiways, a stormwater facility, and a natural area forms the open space network within the neighbourhood. There are five formal park sites within the Brightwell ASP lands that will be dedicated as Municipal Reserve. These sites range from approximately 0.5 ha to 1.2 ha. A large tree stand is also identified in the central area of the neighbourhood. An ecological valuation analysis determined that the majority of ecological components within the plan area are of low to moderate ecological value. However, two tree stands were determined to be of higher ecological value. The larger of the two was determined to be appropriate for retention and integration into the neighbourhood development. The park sites are distributed across the neighbourhood to be accessible within a short walking distance for all neighbourhood residents. The park sites are intended to accommodate both active (sports fields, sledding, playground, playground, etc.) and passive recreational activities while the natural area will provide a habitat for wildlife and accommodate passive recreational activities.

The lands surrounding the stormwater facility located adjacent to 38 Avenue (Township Road 494) provide additional open space for passive recreational activities. However, these lands are not included in the Municipal Reserve calculations.

A multiway network connects parks and open spaces across the neighbourhood and provides pedestrian connectivity and additional space for both passive and active recreation. The Public Utility Lot corridor running east-west along the north boundary of the neighbourhood will act as a key multiway corridor and enhance the connectivity between adjacent neighbourhoods. The Public Utility Lot corridor running east-west along 38 Avenue will accommodate a multiway and provide additional connectivity. A multiway along the west side of Grant MacEwan Boulevard will provide north-south pedestrian access. The multiway network will enhance the overall walkability of the neighbourhood and promote healthy lifestyles for neighbourhood residents.

The Municipal Government Act Section 666 requires the dedication of 10% of the gross developable area, cash in lieu, or a combination of the two for Municipal Reserve. The Gross Developable Area for the Brightwell ASP is approximately 64.7 ha which requires 6.47 ha for Municipal Reserve dedication. The land use concept identifies 6.47 ha (or approximately 10% of the gross developable area) of land for Municipal Reserve dedication within the plan area.

**Objectives:**

- To support the development of a connected open space network.
- To provide adequate access and appropriate open space amenity to meet the needs of the plan area.
- To provide pedestrian-friendly connectivity within the plan area and into adjacent communities.
- To accommodate low impact and naturalized stormwater drainage.

**Policies:**

- 5.1.3.1** Municipal Reserves shall be utilized to provide connective trails and park space.
- 5.1.3.2** Where possible, trails and park space should be located to provide logical connectivity between adjacent developments, thereby maximizing park size and trail length.
- 5.1.3.3** The stormwater management facility shall provide pedestrian connections as part of the multiway network and serve as an amenity space for neighbourhood residents. However, the stormwater management facility shall not be considered for Municipal Reserve dedication.
- 5.1.3.4** It is intended that with development of Brightwell the pipeline along the north boundary will be relocated to the area adjacent to 38 Avenue (Township Road 494) and accommodate a multiway within the corridor. Proponents shall work with the City of Leduc and the pipeline right-of-way owner to determine the location and construction standards for the multiway within the Public Utility Lot.
- 5.1.3.5** Low impact development should be incorporated into the overall stormwater management network for the plan area.
- 5.1.3.6** Site grading should ensure pre- and post-development flows are maintained to the natural area to ensure the health and sustainability of the tree stand.



### Legend

- Brightwell ASP Boundary
- Park (MR)
- Public Utility Lot
- Storm Water Management
- Park (Natural Area) (MR)
- Multiway



## 5.2 TRANSPORTATION

The Brightwell ASP maintains sufficient access to existing and planned arterial roadways. Grant MacEwan Boulevard is the primary access to the neighbourhood. The future Highway 2A bypass arterial will provide additional access to the neighbourhood. The Brightwell ASP is well positioned to take advantage of growing demand for single family and medium density housing located within proximity to the future Highway 2A realignment, existing schools, and employment nodes in the region.

Collector roadways for the ASP have been designed for efficient access for personal vehicles and active modes of transportation (**Figure 6 - Transportation**). In addition to the roadway infrastructure, the neighbourhood proposes a comprehensive multiway network that will improve pedestrian and bicycle access within the neighbourhood and into adjacent neighbourhoods. Multiways will be incorporated into the pedestrian network along the collector network and between neighbourhood focal points (**Figure 5 - Open Space and Connectivity**).

A noise attenuate study for Grant MacEwan Boulevard was prepared with the Black Stone ASP to ensure noise levels within Brightwell and Black Stone are below the City of Leduc's 55 dB limit. The concept provides a 6.0 m area along the entire length of Grant MacEwan Boulevard. It is intended that this area will accommodate future road widening as well as a noise attenuation fence.

The exact alignment, Right of Way, and noise attenuation measures for the future Highway 2A bypass will be determined through future planning work and technical studies, including a noise attenuation study.

### 5.2.1 Circulation

#### *Collector Roads*

Collector roadways, which provide internal/external access to neighbourhoods, are spaced at appropriate intervals to facilitate traffic progression and to ensure that sufficient distance is available to allow for both right and left turn-bay development. The collector roadway network provides efficient and convenient access to residential areas, creates a distinctive entryway into the neighbourhood, and establishes a pedestrian oriented streetspace through provision of separate sidewalks and multiways. Local public transportation will be provided on the collector roadways in the future.

Figure 6 – Transportation identifies 38 Avenue as “Major Collector (Modified Cross Section)” to accommodate circulation in the area prior to construction of Highway 2A. It is intended that this road will accommodate the traffic of a Major Collector within a modified cross section given that the accompanying pedestrian facility is located within a separate Public Utility Lot along the south side and both Brightwell and Suntree back onto the road, limiting the need for on-street parking. The exact cross section of 38 Avenue will be determined through consultation between City of Leduc and the developer.

### *Local Roads*

Local roads will allow direct access to lots within the plan area. The locations of these roads are flexible, and will be determined by how the land is subdivided and the nature of the individual sites at time of subdivision. Local roadways will be constructed to an urban standard with a curb and gutter along with a sidewalk. The sidewalk should be considered part of the pedestrian network and provide connections to the multiway system.



**Objectives:**

- To provide efficient and convenient access to the plan area and logical connectivity within it.
- To provide connections to the local and regional transportation network.
- To accommodate the development of a safe and efficient roadway system for multiple modes of transportation, including automobiles, cyclists, and pedestrians.

**Policies:**

**5.2.1.1** The local road network shall incorporate a network of streets that provide a high degree of connectivity and access to lots.

**5.2.1.2** Front drive access for residential units along collector roadways shall be minimized.

**5.2.1.3** A Transportation Impact Assessment (TIA) in support of the ASP, shall be required to be submitted prior to the first subdivision application in order to determine roadway hierarchy and signalization.

**5.2.1.4** The design of collector roadways shall accommodate multiple modes of transportation, including automobiles, cyclists, and pedestrians.

**5.2.2 Active Transportation**

Connective multiways have been incorporated into the land use concept to allow local residents to walk and cycle within the plan area between neighbourhood focal points and into existing and future neighbourhoods (**Figure 5 - Open Space and Connectivity**).

**Objective:**

- To promote efficient and accessible pedestrian and cycling circulation options in the plan area.
- To implement low impact development principles into the transportation concept.

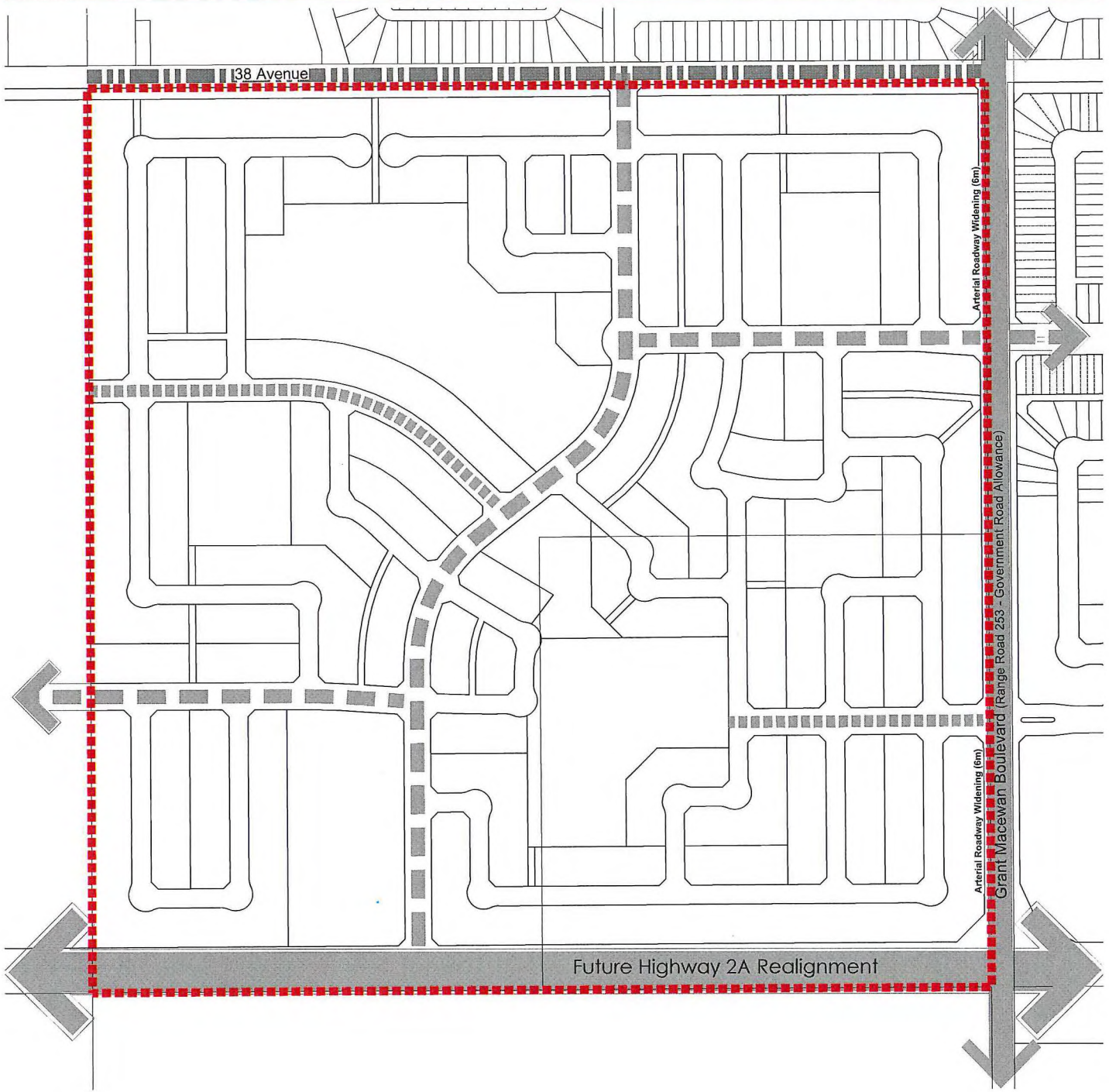
**Policies:**

**5.2.2.1** The transportation concept shall include a system of multiways to facilitate active transportation across the plan area.

**5.2.2.2** The design of collector roadways shall accommodate pedestrians and cyclists within a boulevard sidewalk.

**5.2.2.3** All multiways shall connect to the main pedestrian circulation network (**Figure 5 – Open Space and Connectivity**).

**5.2.2.4** The design of pedestrian connections between neighbourhood focal points shall consider low impact development strategies.



Legend

- Brightwell ASP Boundary
- Major Collector Roadway
- Major Collector (Modified Cross Section)
- Minor Collector Roadway
- Arterial Roadway

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## 5.3 SERVICING

The lands within the Brightwell ASP will be fully serviced with water, sanitary sewer, and stormwater management, along with utilities that include power, natural gas, phone, and cable. Extensions to municipal water and wastewater servicing are proposed below. The details of the proposed servicing scheme will be further defined through subsequent reports and detailed engineering design.

### 5.3.1 Stormwater Management

Stormwater servicing in Brightwell will be accommodated on-site with a stormwater management facility. The stormwater management facility is located in a natural low area of the neighbourhood in order to utilize the natural drainage course and minimize site grading (**Figure 7 – Stormwater Servicing**). The stormwater management facility will be a fully landscaped feature for the purposes of providing stormwater retention and primary treatment as well as opportunities for passive recreational activities.

Minor storm flows within the plan area will drain into the stormwater management facility. Discharge from the pond will be limited to a pre-development rate of runoff, with storage being provided for the most critical storm event. A stormwater management study will be reviewed and approved concurrently with the Brightwell ASP to ensure general consistency between the two. The approximate area of the stormwater management facility will be adjusted after the stormwater management study is reviewed by the City of Leduc.

#### Objectives:

- To provide a stormwater management system that safeguards stormwater runoff quality and quantity from exceeding predevelopment standards and flows

#### Policies:

- 5.3.1.1** Prior to finalizing the stormwater management concept, an optimum stormwater strategy shall be determined with effort to minimize site grading.
- 5.3.1.2** Landscaping of parks, open spaces, and stormwater management facilities shall incorporate native and naturalized plant species to minimize landscape irrigation.
- 5.3.1.3** Bioswales should be incorporated into the overall stormwater management network where determined suitable and agreed to by the City to convey overland drainage in appropriate areas and promote natural infiltration.

### 5.3.2 Water Servicing

Water service for the lands within the Brightwell ASP will be provided through the extension of the water main from the developing neighbourhoods of Black Stone and Suntree.

Water servicing within the neighbourhood will be designed to provide peak hour flows and fire flows for the various forms of development. Water looping will be provided in accordance with City of Leduc requirements, and is detailed in the Hydraulic Network Analysis submitted under separate cover. **Figure 8 - Water Servicing** illustrates the layout of the proposed water mains and the proposed size of the water mains. The actual size of the mains will be confirmed with the finalized Hydraulic Network Analysis.

**Objective:**

- To provide full services to meet the needs of the Brightwell ASP lands, while also considering the needs of future adjacent developments.

**Policies:**

**5.3.2.1** Water system infrastructure will be provided in accordance with the approved Hydraulic Network Analysis to the satisfaction of the City of Leduc.

### 5.3.3 Sanitary Sewer Servicing

The sanitary sewer network for the Brightwell ASP lands will be a gravity system sized to accommodate sanitary flows from the entire Brightwell area as well as Black Stone. It is anticipated that this system will connect to the future sanitary trunk system in the northwest portion of the neighbourhood at 38 Avenue. Development of Stage 1 may not proceed until a suitable connection to the sanitary trunk is available to the satisfaction of City of Leduc Engineering.

**Figure 9 - Sanitary Servicing** illustrates the direction of flow for the sanitary servicing and the proposed size of the sanitary trunk pipes. The actual size of the pipes will be confirmed with the finalized Sanitary Servicing Plan.

**Objectives:**

- To provide full services to meet the needs of the Brightwell ASP, while also considering the needs of future adjacent developments.

**Policies:**

**5.3.3.1** Sanitary system infrastructure will be provided in accordance with the approved Sanitary Servicing Plan to the satisfaction of the City of Leduc.

### 5.3.4 Shallow Utilities

Shallow utilities, including electricity, gas, telephone, and cable, are all available for extension into the plan area. These utilities will be provided within the road right-of-way and through easements on private lands.

*Electricity*

Electric power is supplied in the area by Fortis Alberta. According to the utility, adequate service is available in the area to supply the proposed ASP area.

#### Gas

AltaGas Ltd. is the local gas utility. According to the utility, adequate service is available in the area to supply the proposed ASP.

#### *Telephone and Cable*

Telephone and cable can be provided to all lots in the area via extension of services from adjacent lands. These services are proposed to be installed as shallow buried utilities along the shoulder or in easement along roadways in the service area.

#### **Objectives:**

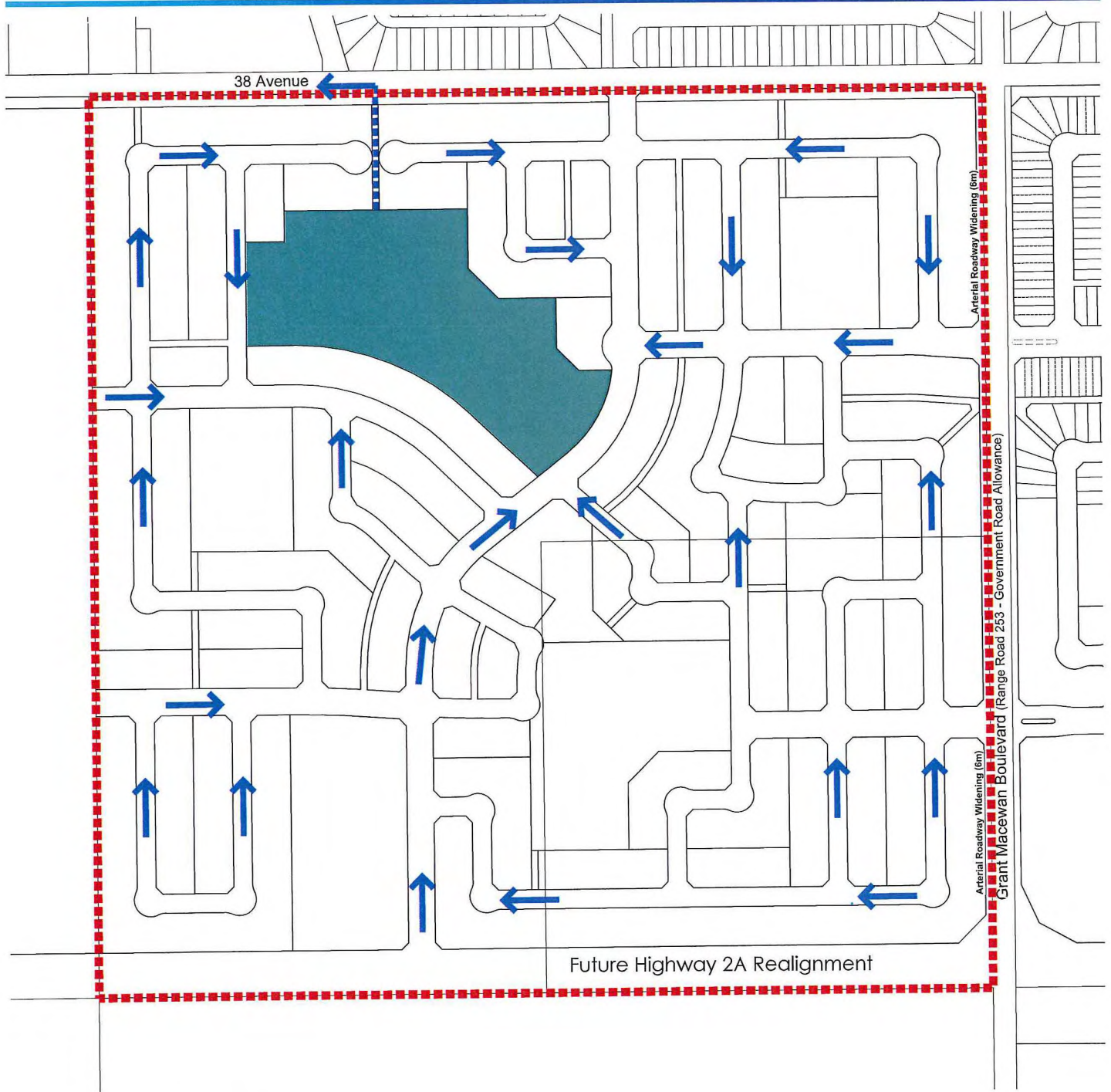
- To provide reliable municipal shallow utilities servicing to all users within the plan area.
- To provide opportunities for alternative energy options within the plan area.

#### **Policies:**




- 5.3.4.1** All shallow utility infrastructure required to provide service to development shall be located underground.

### **5.3.5 Emergency Response Services**

Local emergency services will be available to all future developments located in the ASP lands. Ambulance services are supplied by the City of Leduc contracted out to Alberta Health Services, with the closest hospital located in the City of Leduc. Police Services in the City of Leduc are provided by the Royal Canadian Mounted Police (RCMP), with a detachment located in the City of Leduc. Fire protective services have a new fire hall located on the west side, in addition to existing fire halls located in the City of Leduc.

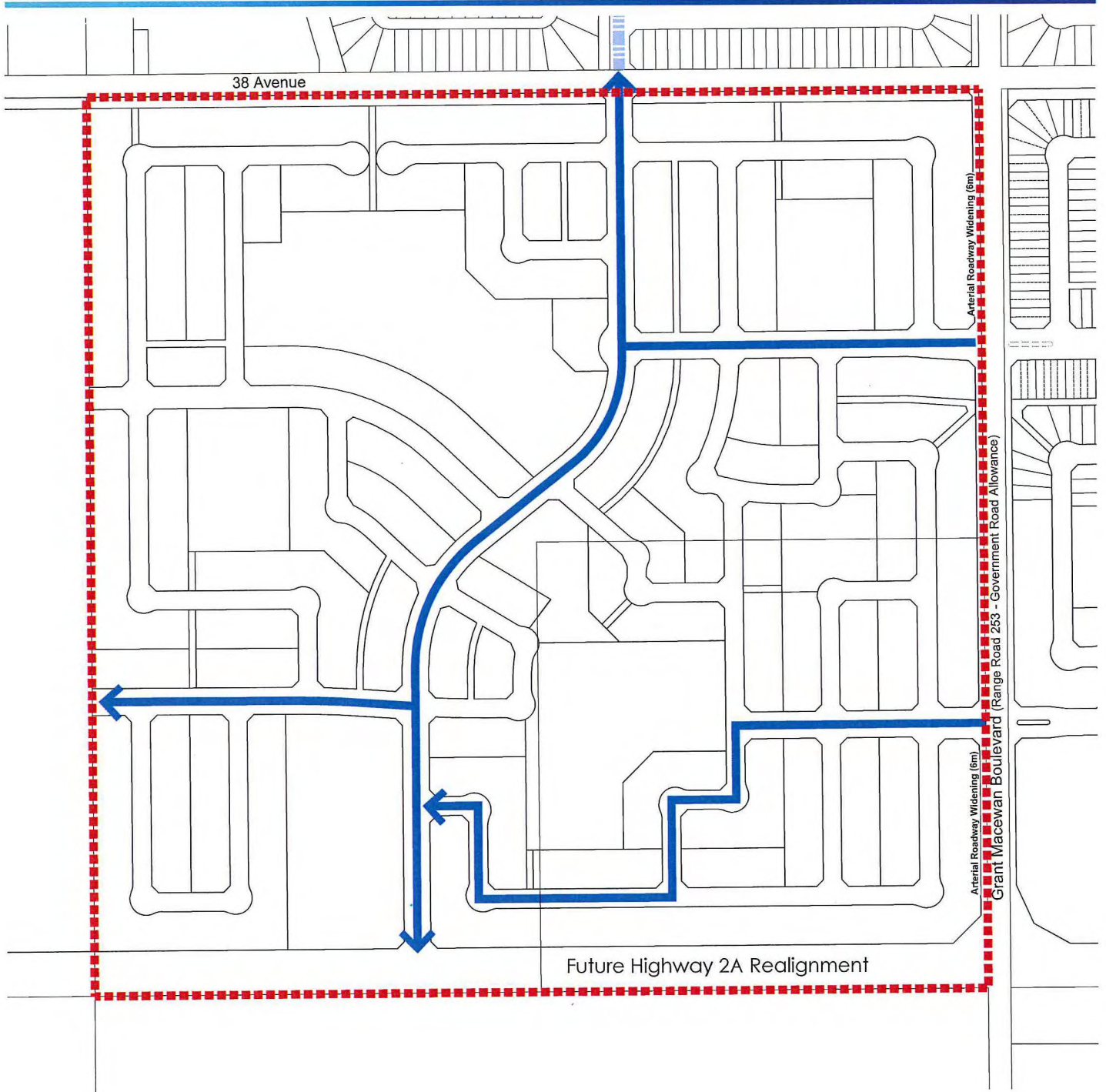


### Legend



-  Storm Water Management
-  General Direction of Flow
-  Storm Water Outlet

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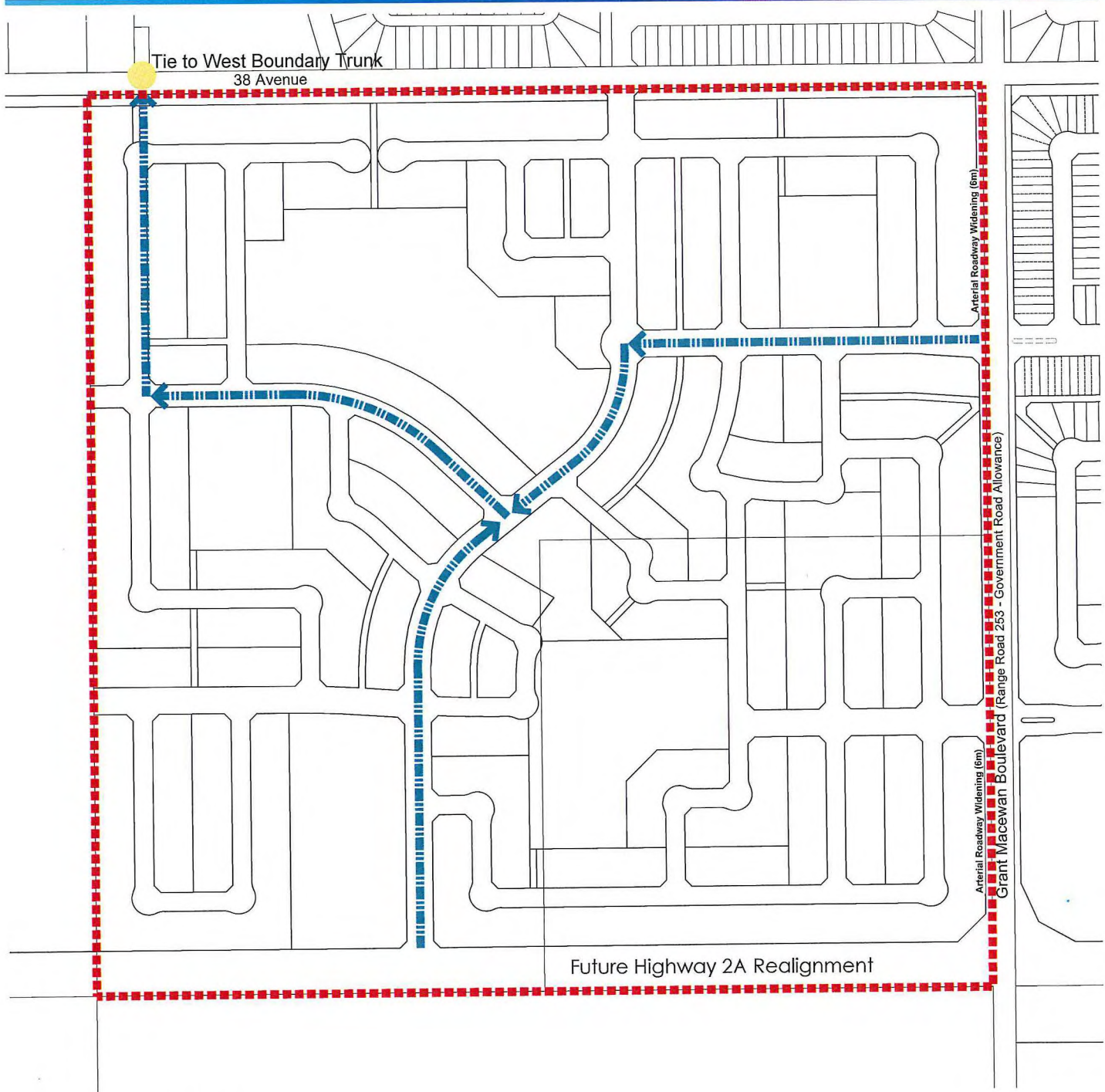
-  Existing 400mm Water Main
-  Proposed 350mm Water Main

Note: Size of Watermain to be confirmed with Hydraulic Network Analysis



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**Legend**

-  Proposed 525 mm Sanitary Main
-  Tie to Existing Main

Note: Size of sanitary main to be confirmed with Sanitary Servicing Plan

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## 5.4 IMPLEMENTATION

The plan has been prepared with the recognition that there is a need to provide flexibility to ensure development corresponds to changing market demands and demographics.

The Brightwell ASP creates a policy framework guiding future subdivisions and development. The staging of development will progress in a logical and cost effective manner, initiating in the northeast area and following the collector road through the plan area (**Figure 10 - Development Staging**). Development of Stage 1 may not proceed until a suitable connection to the sanitary trunk is available to the satisfaction of City of Leduc Engineering.

The staging provided in the ASP is conceptual and may change depending on future development demand. With each stage of development, an amendment to the land use bylaw will be submitted. These amendments will involve redistricting the current Urban Reserve District to the applicable land use districts.

### Objectives:

- To develop land in accordance with the City of Leduc policy framework.
- To develop the ASP lands in a logical and cost effective manner.
- To ensure that the environmental status of the lands within Brightwell are suitable for development.

### Policies:

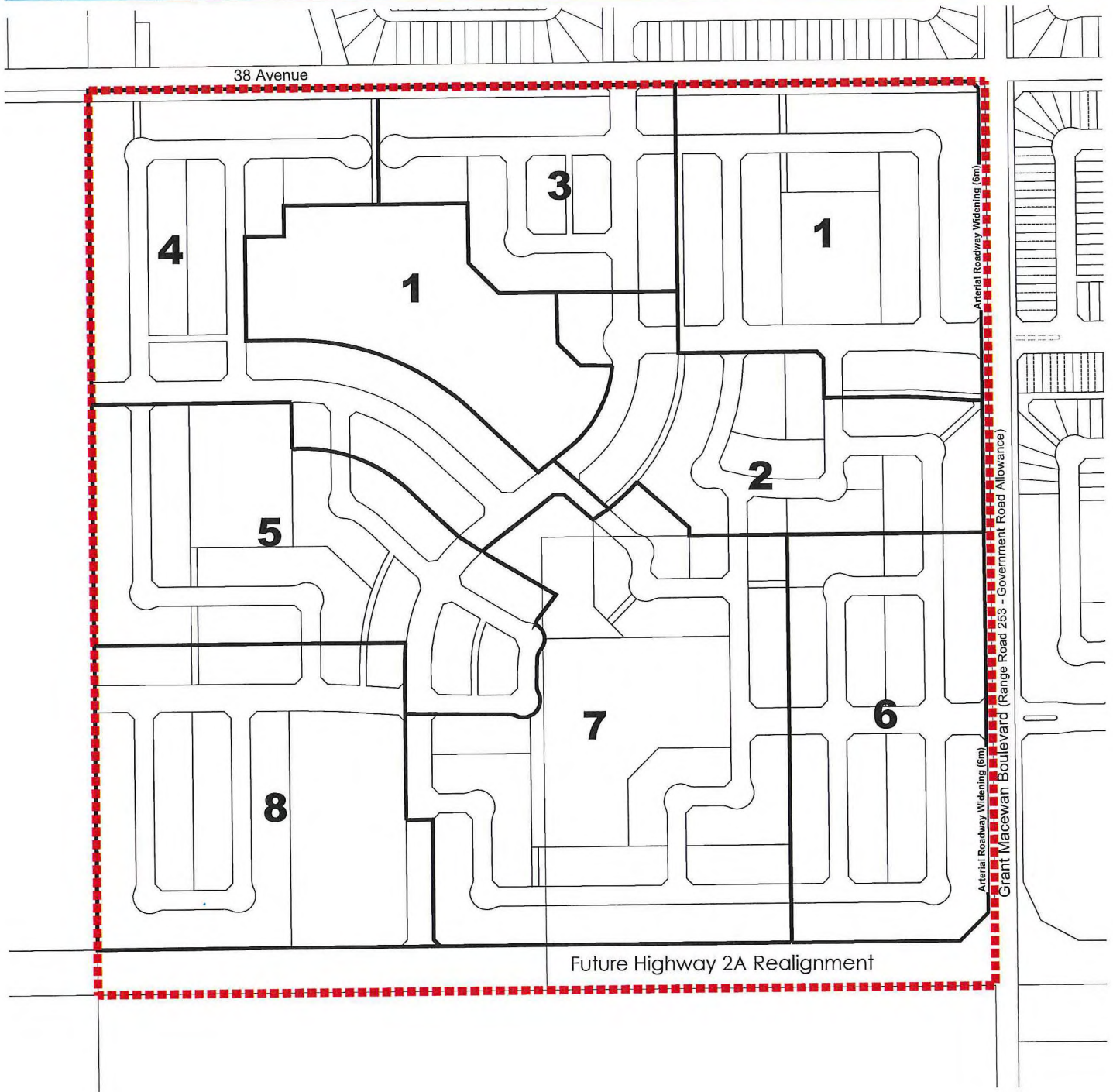
**5.4.1.1** Land shall be developed with consideration given to adjacent statutory and non-statutory plans, located in the City of Leduc.

**5.4.1.2** Order of development shall generally occur as outlined in **Figure 10 - Development Staging**.

**5.4.1.3** Development shall generally be in accordance with the land use concept in **Figure 4 - Land Use Concept**.

**5.4.1.4** The interim use for all lands located in the Brightwell ASP shall remain as agricultural or for the purposes of public utility.

**5.4.1.5** A Phase I Environmental Site Assessment (ESA) shall be required for the parcel of land in the southeast quadrant of the plan area (Lot 1 Block 1 Plan 0721480) at the rezoning and subdivision stage.



Legend

**1-8** General Staging Sequence

— Staging Boundary

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## 6.0 POLICY COMPLIANCE

### 6.1 CAPITAL REGION BOARD

Capital Region Land Use Plan	Brightwell ASP
<b>I. Protect the Environment and Resources</b>	
<b>A. Preserve and Protect the Environment</b>	
<b>Policy (i)</b> – Any development which may cause detrimental effects such as erosion or pollution to lakes, rivers, water bodies and shorelines shall be prohibited unless appropriate mitigation measures are implemented.	Policies in the ASP ensure stormwater will be clean and free of pollutants by minimizing landscape irrigation and promoting natural infiltration.
<b>Policy (v)</b> – Support innovative design, construction and operational technologies and strategies which reduce emissions.	The ASP provides opportunities for the application of low impact development strategies.
<b>Policy (vi)</b> – Manage land use distribution patterns to reduce reliance on automobiles.	The ASP promotes a complete and walkable community by supporting a multiway network through the community and locating higher density residential uses in proximity to future transit uses.
<b>II. Minimize Regional Footprint</b>	
<b>A. Identify, Protect and Prioritize Lands for Regional Infrastructure</b>	
<b>Policy (i)</b> – Ensure that lands identified for regional infrastructure such as energy transmission, highways, municipal infrastructure, transit and related facilities are protected from incompatible development.	The ASP requires compatible development in the vicinity of major transportation corridors, or an appropriate buffer area between incompatible uses.
<b>Policy (v)</b> – Encourage and support sustainable development within the region.	The ASP promotes sustainable and compact development providing diverse housing forms and potential for increased density.
<b>B. Concentrate New Growth Within Priority Growth Areas</b>	
<b>Policy (i)</b> – Most new growth shall occur within priority growth areas.	The Brightwell ASP is in Priority Growth Area E. This Area requires a minimum net residential density target of 25-30 units per net residential

Capital Region Land Use Plan	Brightwell ASP
	hectare. The ASP meets this density target.
<b>Policy (v)</b> – Priority growth areas shall incorporate intensive forms of development that significantly exceed existing development patterns.	The ASP promotes the development of a variety of higher density residential forms that meet the Capital Region Board's target density for the area.
<b>Policy (ix)</b> – Development on or near municipal boundaries shall be compatible and consistent with the policies of the Plan and shall not impede the sustainable delivery of infrastructure.	The ASP provides appropriate transitions to the adjacent municipality's land uses.
<b>D. Support Expansion of Medium and Higher Density Residential Housing Forms</b>	
<b>Policy (i)</b> – New residential development shall provide a greater proportion of higher density residential units.	The ASP supports the development of new and alternative residential forms and promotes the integration of higher-density residential development.
<b>Policy (ii)</b> – Support innovative housing designs and / or built forms within new and existing residential neighbourhoods.	
<b>Policy (iii)</b> – Greenfield developments shall make provision for a mixture of uses including a diversity of housing forms, community services, local retail and employment opportunities.	The ASP supports the development of pedestrian-friendly neighbourhoods with a variety of essential services.
<b>Policy (iv)</b> – Transit accessibility must be included in the design of all new developments.	The land use concept is equipped to accommodate future transit service on collector roadways.
<b>III. Strengthen Communities</b>	
<b>A. Create Inclusive Communities</b>	
<b>Policy (i)</b> – Encourage and support the establishment of social infrastructure throughout the region.	The ASP promotes the development of recreational and public service facilities within the area.
<b>Policy (ii)</b> – Support initiatives to improve the livability of communities.	The ASP proposes key recreational features in the plan area and promotes the integration of these features into the neighbourhood fabric.

Capital Region Land Use Plan	Brightwell ASP
<b>Policy (iii)</b> – Integrate uses with adjacent developments to improve connectivity and accessibility to local parks, open space, commercial, and community services.	The multiway trail system provides connectivity between uses, including local parks, open space, and residential.
<b>Policy (iv)</b> – Encourage co-location and/or shared use of compatible public service infrastructure, such as education facilities, parks and civic uses.	The ASP supports the development of education facilities, local employment, and residential land uses.
<b>B. Support Healthy Communities</b>	
<b>Policy (i)</b> - Support the implementation of present and future initiatives to create and enhance parks, trails and natural areas for public use.	The ASP supports the development of a hierarchy of parks, open spaces, and natural areas across the plan area.
<b>Policy (ii)</b> – Improve accessibility to community services by providing sidewalks and bicycle trails to encourage walking and cycling and locate these services within proximity to transit, where possible.	The multiway network will connect focal points with residential areas across the plan area and into adjacent communities.
<b>Policy (iv)</b> - Encourage and support innovative and green design solutions for neighbourhoods and buildings.	The ASP promotes low impact development practices and green development principles.
<b>C. Support Public Transit</b>	
<b>Policy (i)</b> – Provide a mix of higher intensity land uses along transit corridors, at nodes, and employment centres.	The ASP encourages medium density residential development in proximity of open spaces.
<b>Policy (iii)</b> – New developments shall be designed for connectivity and accessibility to transit facilities.	
<b>D. Support Innovative and Affordable Housing Options</b>	
<b>Policy (i)</b> - Municipalities shall provide for a diversity of housing needs for the entire population of the region.	The ASP promotes the development of a variety of housing types and sizes, including single detached duplex, townhouses, and low-

Capital Region Land Use Plan	Brightwell ASP
<b>Policy (ii)</b> – All residential developments shall provide a greater variety of housing types.	rise medium density housing.
<b>IV. Increase Transportation Choice</b>	
<b>A. Integrate Transportation Systems with Land Use</b>	
<b>Policy (ii)</b> – Ensure the integration of public transportation infrastructure and land use development	The ASP provides policies for the provision of future transit service.
<b>Policy (iii)</b> – Design transportation infrastructure to support multiple modes of transport.	The ASP promotes the development of a multiway network to support opportunities for active transportation across the plan area.
<b>Policy (iv)</b> – Support development of inclusive communities to reduce the need for travel.	The ASP provides a mix of residential and residential-related land uses to support the development of a complete community.
<b>B. Support the Expansion of Transit Service in Various Forms</b>	
<b>Policy (i)</b> – Expand and extend the level, quality and range of public transportation options available to serve the Region.	The ASP encourages multiple modes of transportation. The multi-use trail provides connectivity between open spaces and residential uses.
<b>Policy (iv)</b> – Support multi-modal transportation options by providing multi-use streets sufficient to accommodate bicyclists, motorists and pedestrians.	The neighbourhood is equipped to accommodate the integration of public transit when available.
<b>II. Land Use</b>	
<b>2.3 Land Use Policies</b> Density Targets – Priority Growth Area “E”: 25 – 30 dwelling units per net residential hectare.	The ASP proposes a residential density that meets the minimum growth target mandated by the Capital Region Board.

## 6.2 CITY OF LEDUC MUNICIPAL DEVELOPMENT PLAN

City of Leduc Municipal Development Plan		Brightwell ASP
<b>2B Clean Air and Greenhouse Gas Emissions</b>		
<p><b>2.</b> Encouraging the use of alternatives to motorized transport in collaboration with the school boards and other community partners, including active modes of travel such as walking and cycling, through integrated planning and the promotion of compact urban form and mixed land use.</p>	<p>The Brightwell ASP includes higher density residential forms connected by a network of multiways across the plan area and between neighbouring communities.</p>	
<p><b>3.</b> Providing realistic alternatives to single occupant automobile use.</p>		
<b>2D Water Resources</b>		
<p>The City shall protect water resources and manage municipal water supplies by:</p>		
<p><b>8.</b> Controlling water pollution through the implementation of dependable, cost-effective, and environmentally responsible best practices such as low impact development.</p>	<p>Minor storms will drain into the stormwater management facility. The facility will provide retention and primary treatment.</p>	
<b>2F Natural Areas and Urban Forests</b>		
<p>The City shall conserve and protect natural areas for the purposes of protecting wildlife habitat and corridors, supporting natural systems, and providing recreational opportunities by:</p>		
<p><b>4.</b> Providing buffer areas around sensitive natural areas in order to minimize the impacts of development on natural features.</p>	<p>Where appropriate, natural features will be maintained by providing adequate buffers and setbacks.</p>	
<p><b>5.</b> Providing low impact public access to natural areas that can sustain human uses with minimal impacts to the overall health of ecosystems.</p>	<p>The will explore accommodating low impact and naturalized stormwater drainage through the plan area.</p>	
<p><b>6.</b> Developing public open spaces with environmentally sensitive best practices such as bio-swales, which will enhance and</p>	<p>Bioswales may be incorporated into the overall stormwater management network for the plan area where determined suitable and agreed to by the City. Landscaping of</p>	



City of Leduc Municipal Development Plan	Brightwell ASP
integrate natural systems.	parks, open spaces, and stormwater management facilities may incorporate native and naturalized plant species to minimize landscape irrigation.
<b>2G City Beautification</b>	
The City shall enhance the beautification of Leduc by:	
1. Maintaining minimum design standards for parks and open spaces that reflect the community's vision for landscaping on public lands.	Parks will be designed according the City of Leduc standards.
5. Supporting enhanced way finding and community identity through the development of attractive entrance features and public signs at the entrances to Leduc and throughout the community.	Signage and entrance features shall be outlined at time of subdivision and detailed design.
<b>4A Growth Management</b>	
The City shall manage growth by:	
1. Promoting compact urban form through sensitive redevelopment of existing developed areas and efficient development of undeveloped areas.	The Brightwell ASP lands propose a density of approximately 30 dwelling units per net residential hectare, which will result in a more compact urban form.
7. Ensuring that new development will be approved adjacent to existing developed areas, so that public services and infrastructure will be extended logically and efficiently to create contiguous development.	Brightwell ASP capitalizes on the logical extension of municipal infrastructure. The water service for the plan area will be provided through the extension of the future water main. The sanitary sewer network for the Brightwell ASP lands will tie into a future sanitary trunk.
8. Meeting transportation demand through provision of choice among mobility options including non-vehicular travel, the private automobile, and public transit.	The Brightwell ASP provides options for alternative modes of travel: the multiway system provides connectivity throughout the ASP and to the greater community.

City of Leduc Municipal Development Plan	Brightwell ASP
<p><b>9.</b> Achieving residential densities in conformance with the density targets of the Capital Region Board.</p>	<p>The Brightwell ASP proposes densities that meet the requirements mandated by the Capital Region Board.</p>
<p><b>10.</b> Approving new subdivisions only where a full range of municipal infrastructure (sewer, water, and roads) can be provided in an environmentally sound, economical, and timely manner.</p>	<p>The Brightwell ASP lands will be serviced to full urban standards. Extending sewer, water, and roads in this area is a logical extension of infrastructure.</p>
<p><b>4B General Land Use Planning</b></p>	
<p>The City shall achieve the orderly, economical and beneficial development and use of land by:</p>	
<p><b>4.</b> Prohibiting the premature subdivision and development of land prior to the availability of municipal infrastructure (sewer, water, and roads).</p>	<p>The Brightwell ASP lands will be serviced to a full urban standard. Extending sewer, water, and roads in this area is a logical extension of infrastructure for the area.</p>
<p><b>6.</b> Planning for land uses at safe distances from development constraints such as landfills, major rail and road rights-of-way, oil and gas facilities, and noise sources.</p>	<p>Setbacks from arterial roadways and oil and gas facilities will be maintained to ensure compatibility.</p>
<p><b>7.</b> Prohibiting land uses and developments that may create negative impacts on safe airport operations.</p>	<p>The Brightwell ASP lands are outside of the Edmonton International Airport NEF-25 boundary.</p>
<p><b>12.</b> Providing for new residential neighbourhoods with a variety of housing types, which have full access to a complete range of municipal infrastructure, community services, retail establishments, commercial developments, open space, recreational facilities, and educational institutions.</p>	<p>The Brightwell ASP lands will be designed to be a part of a broader complete community. Full urban services, as well as parks and multiways, will be available within the neighbourhood. Connections to the greater community ensure access to City-based amenities.</p>
<p><b>13.</b> Facilitating the development and redevelopment of local and regional commercial and retail areas that will serve all of the consumer needs of the region.</p>	<p>No commercial uses are proposed within the ASP.</p>

City of Leduc Municipal Development Plan	Brightwell ASP
<p><b>16.</b> Dedicating local and regional parks and natural open space areas with generous access to trails, pathways, and the Multiway system.</p>	<p>The Brightwell ASP proposes a robust open space and multiway network throughout the neighbourhood.</p>
<p><b>17.</b> Promoting innovative planning and development concepts and methods such as low impact development, environmental design, green building techniques, innovative servicing technologies, and recycled construction materials.</p>	<p>Low impact design features will be utilized in the design of stormwater management facilities and open spaces, where feasible. These features will be detailed at time of subdivision.</p>
<p><b>20.</b> Requiring that all Area Structure Plan, Area Redevelopment Plan, land use re-designation, subdivision, and development approvals generally conform to the land uses designated in Figure 4 — Municipal Development Plan Policy Areas, while allowing for minor adjustments to the boundaries of those Policy Areas without an MDP amendment if such adjustments are supported by detailed planning studies.</p>	<p>The Brightwell ASP is intended to conform to the requirements of the Municipal Development Plan, as the land uses proposed support the concentrated growth.</p>
<p><b>4E New Residential Development</b></p>	
<p>The City shall provide for new residential neighbourhoods by:</p>	
<p><b>1.</b> Requiring that all new residential Area Structure Plans achieve the target densities mandated by the Capital Region Board.</p>	<p>The Brightwell ASP achieves a density of 30 units per net residential hectare (du/ net ha).</p>
<p><b>3.</b> Measuring net residential density in new residential Area Structure Plans in order to maintain consistency with the density measures used by the Capital Region Board.</p>	

City of Leduc Municipal Development Plan	Brightwell ASP
<p><b>4.</b> Acknowledging new trends in household formation (e.g., smaller households) in the design of new residential neighbourhoods and the provision of a variety of housing types.</p>	<p>The Brightwell ASP provides a variety of housing sizes and types, supporting the development of a balanced neighbourhood which can accommodate a range of family types, sizes, and income groups throughout their life stages.</p>
<p><b>5.</b> Requiring that all new residential Area Structure Plans provide a variety of housing types including, where appropriate, types such as single-detached, semi-detached, duplex, triplex, fourplex, townhouse, or apartment dwellings, with no more than 50% of the total number of dwelling units in any residential Area Structure Plan to be designated within the same residential land use district of the Land Use Bylaw.</p>	<p>The Brightwell ASP provides a variety of housing sizes and types, supporting the development of a balanced neighbourhood which can accommodate a range of family types, sizes, and income groups throughout their life cycle.</p>
<p><b>7.</b> Supporting the provision of affordable market and financially supported housing in all new neighbourhoods</p>	<p>The Brightwell ASP proposes a mix of housing types and sizes.</p>
<p><b>8.</b> Balancing higher residential densities with the provision of open space.</p>	<p>The land use concept identifies a distributed network of open space.</p>
<p><b>9.</b> Ensuring that all new residential neighbourhoods have full access to a complete range of municipal infrastructure (sewer, water, and roads), community services, retail establishments, commercial developments, open space, recreational facilities, and educational institutions.</p>	<p>The Brightwell ASP concept proposes open spaces for active and passive recreational activities. There is access to other recreational facilities and educational institutions within the City of Leduc and Leduc County.</p>
<p><b>10.</b> Providing for neighbourhood commercial (office, personal service business, and retail) development at key locations within new residential Area Structure Plans, which will complement and integrate with the surrounding residential neighbourhoods</p>	<p>No commercial uses are proposed in the ASP.</p>

City of Leduc Municipal Development Plan	Brightwell ASP
through mitigation of traffic and parking impacts, appropriate site planning and architecture, landscaping, and pedestrian connections.	
<b>11.</b> Protecting and creating access to adjacent neighbourhoods, natural amenities, open space, and the Multiway system.	The ASP supports the development of a hierarchy of parks, open spaces, and natural areas across the plan area.
<b>12.</b> Protecting and creating views to natural amenities.	Stormwater management facilities will be a fully landscaped feature and integrated into the proposed open space.
<b>13.</b> Incorporating public transit into new neighbourhoods.	The ASP policies support the future provisions of local transit service.
<b>14.</b> Protecting rights-of-way for future public transit service.	
<b>17.</b> Requiring that all residential developers be responsible for on-site and appropriate off-site costs of municipal infrastructure (sewer, water, and roads) and community services, through mechanisms such as off-site levies, bylaws, and development agreements.	A servicing agreement will be finalized prior to development.
<b>18.</b> Requiring that all new residential Area Structure Plans are supported by comprehensive engineering, servicing, environmental, geotechnical, and transportation studies approved by the City.	At time of subdivision, detailed engineering design will be provided.
<b>19.</b> Prohibiting new residential development on undeveloped lands where the noise contours established by the Airport Vicinity Protection Area (AVPA) Regulation exceed NEF 30, except where special area exemption designations have been granted under the AVPA Regulation.	The lands within the Brightwell ASP are outside the NEF 25 Overlay Boundary.
<b>20.</b> Directing new residential development away from significant noise generators such as Edmonton International Airport, the Canadian	The lands within the Brightwell ASP are outside the NEF 25 Overlay Boundary. The lands are not adjacent to Canadian Pacific Railway

City of Leduc Municipal Development Plan	Brightwell ASP
Pacific Railway, and the QE II Highway.	lines or the QEII Highway.
<p><b>24.</b> Requiring that any new residential development that may be affected by significant noise generators incorporate noise mitigation measures such as berms, sound attenuation walls, site planning, building orientation, landscaping, or building construction techniques.</p>	<p>The land use concept provides a 6.0 m area along the entire length of Grant MacEwan Boulevard. It is intended that this area will accommodate future road widening as well as a noise attenuation fence. A noise attenuation study for the future Highway 2A bypass will be prepared and, if required based on the results of the study, noise attenuation measures will be accommodated along the south boundary of Brightwell.</p>
<p><b>25.</b> Requiring that all new residential subdivision and site plans include landscaping and open space plans that take into account, integrate, and where appropriate, protect existing natural vegetation, topography, wildlife, soils, water bodies, drainage courses, and climatic conditions.</p>	<p>A stormwater management facility will accommodate on-site stormwater drainage.</p>
<p><b>26.</b> Ensuring that all new residential subdivision and site plans conform to the City of Leduc Neighbourhood Design Guidelines.</p>	<p>Development on the Brightwell ASP lands will conform to the City of Leduc's Neighbourhood Design Guidelines.</p>
<p><b>27.</b> Encouraging city beautification, public art, and high quality urban design in new residential neighbourhoods that will exceed the minimum requirements of the Neighbourhood Design Guidelines.</p>	<p>Appropriate roadway widths, park locations, and mix of housing products have been considered for the site design of the Brightwell ASP lands. Details will be provided at the engineering design stage, at time of subdivision.</p>
<p><b>4H Transportation and Utility Servicing Infrastructure</b></p>	
<p>The City shall integrate land use planning and development with infrastructure investments based upon regional, city-wide, and sectoral priorities by:</p>	

City of Leduc Municipal Development Plan	Brightwell ASP
<p><b>8.</b> Providing a balanced transportation system that offers choice among mobility options including non-vehicular travel, the private automobile, and public transit.</p>	<p>Connectivity to the greater community will be provided via multiways and the collector roadway network.</p>
<p><b>9.</b> Planning for public transit routes and stops where transit service can most efficiently be provided to major concentrations of employment, residential population, and community services, including schools.</p>	<p>Community design and densities proposed are supportive of future public transit routes.</p>
<p><b>15.</b> Integrating pedestrian infrastructure such as sidewalks, trails, pathways, and the Multiway system into the overall transportation network.</p>	<p>Integrated multiways and trails are proposed for the area. Connections to the greater transportation network will allow ubiquitous travel throughout the Brightwell ASP lands and the greater community.</p>
<p><b>17.</b> Requiring developers:</p> <ul style="list-style-type: none"> <li>a. to conduct engineering, servicing, environmental, geotechnical, and transportation studies for approval by the City,</li> <li>b. to identify significant development constraints and mitigate any impacts that such constraints may have on proposed development,</li> <li>c. to pay for the costs of providing adequate water and sewage services, stormwater management facilities, roadways, curbs and sidewalks, and franchise utilities (e.g. gas, power, cable, telephone) to new developments,</li> <li>d. to pay for appropriate off-site costs of municipal infrastructure (sewer, water, and roads) and</li> </ul>	<p>Preliminary geotechnical and environmental reports were conducted for the Brightwell ASP lands. Further geotechnical is required prior to subdivision, detailing site specific conditions for development.</p>

City of Leduc Municipal Development Plan	Brightwell ASP
<p>community services, through mechanisms such as off-site levies, bylaws, and development agreements, and</p> <p>e. To provide irrevocable security to ensure that road and infrastructure construction meets City standards.</p>	
<p><b>5C Healthy, Inclusive, and Safe Communities</b></p>	
<p>The City shall promote social well-being and will help individuals, couples, and families to develop and maintain healthy lifestyles by:</p>	
<p><b>15.</b> Ensuring that growth and development support the positive social atmosphere of Leduc and its reputation as a community that provides a safe and pleasant environment for raising families.</p>	<p>CEPTED principles have been utilized in community design to ensure safety of citizens.</p>
<p><b>16.</b> Adhering to urban design principles that address universal access, lighting, clear sightlines, building security, site planning, landscaping, and parking facilities in order to enhance safety, crime prevention, walkability, diversity, and sense of place.</p>	<p>Universal access design, site planning, lighting, building security, landscaping, and parking design will utilize CEPTED principles, which will be outlined at time of detailed design.</p>
<p><b>6A Active and Healthy Communities</b></p>	
<p>The City shall promote the creation of an active and healthy community that reflects the needs of residents by:</p>	
<p><b>1.</b> Creating a range of park spaces with a variety of site amenities to meet the diverse needs of City residents.</p>	<p>Active and passive recreational opportunities are proposed for the Brightwell ASP lands. These will be in the form of open spaces connected via the multiway system.</p>
<p><b>2.</b> Developing outdoor public spaces for year round use, with appropriate plantings and park design.</p>	<p>Design of outdoor spaces will be finalized at time of subdivision and detailed engineering design stages.</p>
<p><b>3.</b> Developing the Multiway system as a</p>	<p>The proposed multiway system is a complete</p>



City of Leduc Municipal Development Plan	Brightwell ASP
<p>complete network that promotes walkability and links residential subdivisions, recreation and cultural destinations, hubs of commerce, and high activity areas.</p>	<p>network and will be integrated within the larger extent of the community.</p>
<p><b>5.</b> Working with developers to have parks and the Multiway established in the early stages of development to ensure residents in new areas have access to outdoor recreational spaces.</p>	<p>The multiway path system has been integrated at the preliminary design stages of the Brightwell ASP lands.</p>
<p><b>6C High Quality, Safe, and Accessible Public Open Spaces</b></p>	
<p>The City shall create high quality public open spaces that are accessible, safe, and responsive to the needs of residents by:</p>	
<p><b>1.</b> Developing efficient and sustainable public open spaces that incorporate natural systems where appropriate.</p>	<p>Public open spaces may incorporate naturalized landscaping, where appropriate.</p>
<p><b>2.</b> Locating parks, playgrounds, public open space, and Multiway trail heads so they are highly visible as well as easily and safely accessible for pedestrians and cyclists.</p>	<p>Proposed multiways and public spaces are sited in accordance to CEPTED principles. They will be located along collectors and local road systems.</p>
<p><b>3.</b> Promoting safety in parks and the Multiway system with accessible design, snow clearing and ice control, street lighting, and pedestrian-oriented design.</p>	<p>Orientation and layout of multiways will be finalized at time of subdivision and detailed engineering design of the lands within the Brightwell ASP.</p>
<p><b>7.</b> Balancing the development of large automobile-oriented parks and recreation facilities with small pedestrian-oriented local parks and recreation facilities.</p>	<p>The Brightwell ASP Concept provides a mix of open space types and sizes. In addition to the main school/park site, there are smaller parks and a stormwater management facility. The smaller park sites are intended to provide passive recreational space within close walking distance to neighbourhood residents. The lands that surround the stormwater management facility provide a</p>

City of Leduc Municipal Development Plan	Brightwell ASP
	natural location for passive recreational opportunities. Multiways between these focal points improve overall walkability and promote active transportation and healthy lifestyles for neighbourhood residents.
<b>8.</b> Obtaining lands for parks, open space, and school sites, in consultation with the school boards, through dedication at the time of subdivision approval of municipal reserve, municipal and school reserve, and school reserve, as defined in the Municipal Government Act.	The Brightwell ASP identifies lands as MR within the boundaries. Land use statistics can be found in Table 4, in Section 4.1.
<b>10.</b> Developing stormwater management facilities, where appropriate, as attractive and usable park areas with public access.	The proposed stormwater management facility is landscaped, utilized as a park space, and integrated into the overall park network.
<b>11.</b> Locating residential dwellings within walking distance of open space.	All residential units within the Brightwell ASP lands are within 400 m walking distance of open space.

### 6.3 CITY OF LEDUC/LEDUC COUNTY INTERMUNICIPAL DEVELOPMENT PLAN

Intermunicipal Development Plan	Brightwell ASP
<b>Residential</b>	
<b>4.2.2.1</b> Residential development in the IDP area should generally conform to the areas identified for residential or mixed-use development as shown on Figure 11 – Intermunicipal Development Plan Policy Areas and as addressed in the policies for Areas A, B, C, and D in Section 5.0 of the Leduc City and County's IDP.	The proposed Brightwell ASP lands are identified as area "A" on Figure 11, within the City of Leduc/Leduc County's Intermunicipal Development Plan.

Intermunicipal Development Plan	Brightwell ASP
<p><b>4.2.2.3</b> All residential development and subdivision within new Area Structure Plans in the IDP area shall achieve a target density of 25 - 30 units per net residential hectare.</p>	<p>The Brightwell ASP complies with the target densities outlined in the Intermunicipal Development Plan.</p>
<p><b>4.2.2.5.</b> The minimum residential densities required in this IDP should be achieved through a variety of housing types including single-detached, semi-detached, townhouse, and apartment dwellings.</p>	<p>The residential densities required in the IDP are proposed to be achieved through a combination of medium density, townhouses, and low density residential units.</p>
<p><b>4.2.2.6.</b> New residential communities/neighbourhoods within the IDP area should incorporate design that:</p> <ul style="list-style-type: none"> <li>• reduces vehicle dependency</li> <li>• includes a variety of housing choices</li> <li>• exceeds minimum residential densities</li> <li>• comprises mixed uses and activities in neighborhood nodes</li> <li>• supports pedestrian and public transit connections and</li> <li>• provides access to open space and recreational areas and facilities.</li> </ul> <p>Through the ASP and subdivision processes, both municipalities will ensure residential neighbourhoods and communities are designed and developed in a manner to make them safe, attractive and well serviced through the following design principles:</p> <ul style="list-style-type: none"> <li>• The design of the neighbourhood or community wherever possible should maintain and protect stands of trees, watercourses, wetlands, ravines and other natural features. In the more rural areas, a conservation (cluster) subdivision design form should be encouraged.</li> <li>• Provide a wide range of housing forms and tenure.</li> </ul>	<p>Safe and attractive communities will be achieved by utilizing CEPTED principles, and incorporating a high standard of landscaping in the entry, parks, and open spaces.</p> <p>The multiway system provides options for residents to utilize active transportation modes.</p> <p>Densities achieved are in adherence to the Capital Region Board requirements</p> <p>Communities are designed to be complete communities; the Brightwell ASP lands are designed to include lands for schools, parks, and trails.</p> <p>Housing will not be fronting on to Grant MacEwan Boulevard or the future bypass along the southern boundary of the quarter section.</p> <p>There are adequate parks and open spaces within the Brightwell ASP boundaries. A centralized landscaped stormwater management facility has been provided, which will also serve as an amenity feature for the community.</p> <p>The multiway system allows ubiquitous travel throughout the Plan Area. This amenity will allow residents opportunity for active</p>

Intermunicipal Development Plan	Brightwell ASP
<ul style="list-style-type: none"> <li>• Try to exceed minimum residential densities specified in the IDP.</li> <li>• The design of the neighbourhoods and communities should avoid dwellings fronting onto highways or arterial roadways.</li> <li>• The design needs to provide for adequate parks and open space to serve the neighbourhood and community, preferably in the form of a large centralized or linear park area which is more usable and easier to maintain.</li> <li>• Wherever possible, provisions need to be made in the design of the neighbourhood and community to encourage alternative sustainable transportation such as walking, cycling and public transit to reduce vehicle dependence.</li> </ul>	<p>transportation modes.</p>
<b>Environmental</b>	
<p><b>4.6.2.2</b> All proponents of development proposals adjacent to significant natural features, such as the major creeks within the IDP area and Saunders Lake, shall be responsible at the subdivision stage for delineating the top-of-bank, based upon the approval of a qualified engineer, to the satisfaction of the relevant municipal approving authority.</p>	<p>The Brightwell ASP lands are not adjacent to any significant natural features such as major creeks within the IDP area or Saunders Lake.</p>
<p><b>4.6.2.5</b> Subject to joint intermunicipal planning, the conceptual networks, locations, and alignments of trails within the IDP area shall be included in future Area Structure Plans, and will be determined in more detail at the land use re-designation and subdivision stages of development.</p>	<p>The multiway network outlined in the Brightwell ASP lands will be detailed during the engineering design, at time of subdivision.</p>
<p><b>4.6.2.7</b> The development of trails, parks, and school sites shall be coordinated among the municipalities, the appropriate school boards,</p>	<p>The locations of multiways and parks will be confirmed through circulation to City</p>

Intermunicipal Development Plan	Brightwell ASP
and any residents' associations.	administration.
<p><b>4.6.2.8</b> For all residential or commercial subdivisions, a minimum of 10% of the gross developable area of land to be subdivided shall be dedicated for the purposes of providing Municipal Reserve, School Reserve, or Municipal and School Reserve.</p>	<p>The 10% municipal reserve is outlined within the Brightwell ASP, and shall be provided at time of subdivision.</p>
<p><b>4.6.2.9</b> Landscaped elements of parks and open space systems may include buffers, berms, tree planting, or boulevards along major roadways.</p>	<p>The landscaped elements of the parks and open spaces within the Brightwell ASP will be detailed at time of subdivision, included in the detailed design stage.</p>
<p><b>4.6.2.10</b> At the Area Structure Plan, land use re-designation, or subdivision stage, Environmental Impact Assessments addressing natural areas on site or Environmental Site Assessments addressing contamination on site, shall be prepared by qualified environmental consultants, to the satisfaction of the relevant municipal approving authority.</p>	<p>An environmental assessment has been conducted for the Brightwell ASP lands by Hoggan Engineering and Testing (1980) Ltd. The results of the Phase 1 ESA did not reveal any undue constraints to future development.</p>
<p><b>4.6.2.11</b> Lands identified as sensitive natural areas may be designated as Environmental Reserve at the subdivision stage in accordance with the Municipal Government Act. Such areas may also be identified at the Area Structure Plan stage. In the case of identification at the Area Structure Plan stage, sensitive natural areas would require the appropriate land use designation before subdivision could proceed. If at the subdivision stage private ownership of environmentally sensitive lands is deemed more appropriate by the relevant municipal approving authority, then environmental reserve easements may be registered to protect the sensitive lands.</p>	<p>There are no lands identified as sensitive natural areas within the Brightwell ASP lands.</p>

Intermunicipal Development Plan	Brightwell ASP
<p><b>4.6.2.12</b> Owners of lands with existing tree stands will be encouraged to retain them to the extent possible at the time of development.</p>	<p>The Biophysical Assessment determined there were two tree stands within the plan area. The larger of the two tree stands has been assessed by an arborist and determined it to be appropriate for retention as part of the neighbourhood development.</p>
<p><b>4.6.2.16</b> When considering Area Structure Plan, land use redesignation, subdivision, and development proposals within the IDP area, the City of Leduc and Leduc County shall apply ERCB setback regulations and guidelines respecting oil and gas facilities.</p>	<p>Setback requirements have been adhered to for all development within the Brightwell ASP lands.</p>
<p><b>Transportation</b></p>	
<p><b>4.7.2.10</b> At the Area Structure Plan stage, the City and County shall require the identification of pedestrian and bicycle trail networks in the IDP area.</p>	<p>Figure 5 shows connections to open spaces within the Brightwell ASP lands as well as lands outside of the ASP boundary.</p>
<p><b>4.7.2.14</b> The City and County shall require that development and subdivision along major roadways within the IDP area:</p> <ul style="list-style-type: none"> <li>• obtain approvals, as required, from Alberta Transportation</li> <li>• coordinate the number of entry and exit points to major roadways</li> <li>• provide sufficiently wide rights-of-way or setbacks to accommodate berms, landscaping, trees, dividers, or similar noise attenuation and aesthetic features</li> <li>• be suitably set back in order not to interfere with the improvement or widening of roadways</li> </ul>	<p>Primary access to the Brightwell ASP lands is from Grant MacEwan Boulevard. The transportation routes of the ASP lands have been coordinated to provide adequate access and egress.</p> <p>The land use concept provides a 6.0 m area along the entire length of Grant MacEwan Boulevard. It is intended that this area will accommodate future road widening as well as a noise attenuation fence. A noise attenuation study for the future Highway 2A bypass will be prepared and, if required based on the results of the study, noise attenuation measures will be accommodated along the south boundary of Brightwell.</p>
<p><b>Municipal Services</b></p>	

Intermunicipal Development Plan	Brightwell ASP
<p><b>4.8.2.2</b> The provision of municipal services into new development areas shall be based upon logical extensions of existing infrastructure and upon the cost implications of such extensions.</p>	<p>The extension of services within the ASP lands is the logical extension of municipal infrastructure. The services will be further refined at time of subdivision and detailed engineering design stage.</p>
<p><b>4.8.2.4</b> Area Structure Plans shall include detailed servicing concept studies for the provision of water, sanitary sewer, stormwater management, and franchise utilities.</p>	<p>The Brightwell ASP outlines Stormwater Management, Water Servicing, and Sanitary Servicing in Figures 7, 8, and 9.</p>
<p><b>4.8.2.5</b> All new multi-lot development within the IDP area shall be provided with full municipal services, including piped water, piped sewage, stormwater management, natural gas, and franchise utilities (electric power, cable, and telephone).</p>	<p>Full urban municipal services have been proposed for the Brightwell ASP lands. Water, sanitary sewer, and stormwater management facilities are outlined in Figures 7, 8, and 9.</p>
<p><b>4.8.2.6</b> All landowners, developers, or development proponents shall be responsible for the costs of providing adequate water and sewage services, stormwater management facilities, roadways, curbs and sidewalks, and franchise utilities (e.g. gas, power, cable, telephone) to a new development area or site.</p>	<p>The proponent of the Brightwell ASP development will enter into a servicing agreement with the County of Leduc.</p>
<p><b>4.8.2.12</b> The relevant municipal approving authority shall require, as a condition of subdivision approval, the preparation and submission of stormwater management plans prepared by a qualified professional engineer registered in the province of Alberta, which shall demonstrate how the use of stormwater best management practices will reduce post-development run-off rates to pre-development levels.</p>	<p>Stormwater management facilities have been outlined in Figure 7.</p>
<p><b>4.8.2.14</b> All required stormwater management plans shall include, at a minimum:</p> <ul style="list-style-type: none"> <li>• topography of the development lands and surrounding area</li> </ul>	<p>Detailed stormwater management plans will be outlined at time of subdivision, and included in the engineering design stage.</p>

Intermunicipal Development Plan	Brightwell ASP
<ul style="list-style-type: none"> <li>• watershed affected by the development</li> <li>• proposed major drainage systems (including the direction of surface drainage) proposed minor drainage systems (including ditches, pipes, and catch basin locations)</li> <li>• proposed on-site detention and retention facilities (including locations and sizes)</li> <li>• locations of outflow or outfall structures</li> <li>• any related modeling or calculation information.</li> </ul>	
<b>AIRPORT VICINITY PROTECTION AREA</b>	
<p><b>4.9.2.1</b> When making decisions on Area Structure Plans, Area Redevelopment Plans, land use redesignations, subdivisions, and development permits, the relevant municipal approving authorities shall comply with the requirements of the Edmonton International Airport Vicinity Protection Area Regulation and the Edmonton International Airport Zoning Regulations.</p>	<p>The Brightwell lands are outside of the NEF 25 overlay under the Edmonton International Airport Vicinity Protection Overlay Regulation.</p>

## 6.4 CITY OF LEDUC NEIGHBOURHOOD DESIGN GUIDELINES

Neighbourhood Design Guidelines	Brightwell ASP
<b>Neighbourhood Structure</b>	
<p>2.1.1 Defined edge: residential neighbourhoods should have well-defined edges that are obvious to area residents. Common neighbourhood edges are urban infrastructure (i.e: arterials roads or rail lines) and natural areas (i.e: ravines or major tree stands).</p>	<p>The Brightwell ASP boundary is defined by transportation corridors on three sides: the active transportation corridor to the north, Grant MacEwan Drive to the west, and the future Highway 2A bypass to the south.</p>



Neighbourhood Design Guidelines	Brightwell ASP
2.1.2 Walkable: neighbourhoods should be compact and typically have a radius of 400 metres, which represents a reasonable walking distance from the centre of the neighbourhood to services and amenities.	All residents are located within a short walking distance of neighbourhood focal points, connected by a network of multiways.
2.1.3 Complete neighbourhoods: residential neighbourhoods should include (1) housing; (2) places for gathering, playing and enjoying nature; and (3) daily goods and services that are within easy walking distance of residences	The Brightwell ASP provides a diversity of housing types, parks and open spaces within walking distance of neighbourhood residents. Nearby commercial services are available adjacent to Grant MacEwan Boulevard in the Black Stone Neighbourhood.
2.1.4 Housing options: residential neighbourhoods should provide (1) a range of housing types and sizes (ie: single-detached, multi-plexes, townhomes and apartments); (2) a variety in housing styles and architecture; (3) the full spectrum of housing affordability, from affordable entry-level to executive housing; and (4) both homeownership and rental opportunities.	The Brightwell ASP supports the development of a variety of housing sizes, types, and styles to accommodate a range of family sizes and incomes.
2.1.5 Neighbourhood themes: creation of a consistent neighbourhood character or theme is encouraged. For example, similar landscape material, public art, decorative signage and/or street lighting, and other streetscape elements may be used.	The Brightwell ASP recognizes the City of Leduc's strong relationship with the oil and agriculture industries. A street decoration and street naming scheme has been developed around this theme.
2.1.6 Entrance features: decorative entrance features should be located at main neighbourhood access points, which are typically located at major collector and arterial street intersections. Small scale entrance features are encouraged at secondary neighbourhood access points, which are typically located along major roadways.	Entryways into Brightwell will include architectural features to provide a feeling of arrival, a sense of place, and coherent theme to the community, with the thoughtful application of enhanced landscaping and architectural details.

Neighbourhood Design Guidelines	Brightwell ASP
2.1.7 Focal points: neighbourhood focal points are encouraged, such as park spaces, urban plazas, mixed-use developments, multiway access features or decorative islands.	Focal points are located in the central portion of plan area. These include parks connected by a multiway network.
2.1.8 Energy-efficient design: street orientation in relation to the sun, the strategic placement of buildings, incorporation of energy efficient technology—such as LED lighting, and lighting (street lights and private signage) designed to reduce light pollution—and the strategic use of landscaping material should be implemented to contribute to the energy efficiency of the community.	Details of energy efficient lighting will be outlined in detailed design provided with the first stage of subdivision.
<b>Natural Features and Environmental Sensitive Design</b>	
2.2.1 Natural areas & wildlife corridors: natural areas, such as ravines and tree stands, and known wildlife corridors shall be protected using appropriate municipal reserve and environmental reserve allocations.	A natural area tree stand is located in the central portion of the neighbourhood. In addition to providing natural habitat for wildlife, the area will also accommodate passive recreational activities.
2.2.2 Protect natural features: a buffer area is encouraged around existing natural features, such as tree stands or ravines, to minimize the impacts of development and to help conserve the feature. Provide public access where appropriate.	A natural area tree stand is located in the central portion of the neighbourhood. In addition to providing natural habitat for wildlife, the area will also accommodate passive recreational activities.  The tree stand has been assessed by an arborist and determined it to be appropriate for retention as part of the neighbourhood development.
2.2.3 Reduce water dependence: efficient use of water through the use of natural drainage, use of permeable surfaces and drought tolerant landscaping, where appropriate, is encouraged.	The Brightwell ASP supports the implementation of low impact development principles.

Neighbourhood Design Guidelines	Brightwell ASP
<b>Land Use Distribution</b>	
2.3.1 Compact building form: increased land efficiency and a reduced urban footprint are encouraged. Housing diversity (multifamily, 2-stories, bungalows, etc) and a range of housing types (ie: entry-level, move-up and executive housing) must be provided within each neighbourhood.	The Brightwell ASP supports the development of a range of housing types and sizes to use the land efficiently.
2.3.3 Density: higher-density developments should be located in close proximity to future transit routes, neighbourhood entranceways, major roadways, planned commercial and mixed-use areas, and park space.	Higher density residential land uses are located along the collector network to provide appropriate access to future transit service.
2.3.4 Walkability: housing should be located within 400 meters or a reasonable walking distance of daily goods and services, such as parks, convenience stores, schools and identified future transit stops. Consideration should be given to providing direct pedestrian routes to destination points. Secure bike parking and storage space should be provided at all retail and service locations.	All residential uses in Brightwell will be within a 400m walking distance of focal points, or transit services.
2.3.5 Noise mitigation: noise mitigation measures, such as berms and noise attenuation fences, are to be implemented when locating residential land uses near major sources of noise. The type and style of such noise mitigation measures chosen should fit with and enhance the neighbourhood theme.	The Brightwell ASP accommodates future widening and noise attenuation requirements along Grant MacEwan Boulevard and Highway 2A.
<b>Street Network</b>	
2.4.1 Connectivity: the residential street pattern should promote pedestrian and vehicle connectivity, allow for long-term flexibility in land use, and aim to reduce road	The design of the local road network supports the development of a modified grid street network with shorter block faces. The development of cul-de-sacs has been

Neighbourhood Design Guidelines	Brightwell ASP
<p>infrastructure. Consideration should be given to traditional, modified or fused grid street designs. Cul-de-sacs and dead-end streets must provide for and enhance pedestrian connectivity throughout the neighbourhood and access to services. Smaller block faces are encouraged, as they allow for better continuity for both pedestrians and vehicles, break up on-street parking, and provide for an interesting streetscape.</p>	<p>minimized.</p>
<p>2.4.2 Public transit: potential transit routes and key transit stops must be considered in all neighbourhood plans. Most households should have a potential transit stop located within 400 meters. Consider locating appropriate and supportive land uses along potential transit routes, such as mixed-use and higher density developments. To minimize the impact on residents, potential bus stops should be located adjacent to parks, open spaces or commercial sites. If necessary, potential bus stops may be located along the flanking side of a corner lot.</p>	<p>The Brightwell ASP supports the future development of transit services along the collector roadway network.</p>
<p>2.4.3 Design focused: street alignments should reinforce focal points and distinctive neighbourhood features. Decorative islands can be both a neighbourhood focal point, as well as provide for the efficient and safe movement of traffic.</p>	<p>The design of the collector roadway network provides vistas of the stormwater management facility and park spaces, and includes decorative islands at neighbourhood entryways.</p>
<p>2.4.4 Integrated: road infrastructure should be integrated with the multiway to create a fully-connected transportation system that allows for diversity in transportation options and provides interesting and multiple routes options for pedestrians and cyclists. Consider dedicated bicycle lanes along primary collector roads.</p>	<p>The collector roadway network in Brightwell will be integrated with the multiway network through the neighbourhood.</p>

Neighbourhood Design Guidelines	Brightwell ASP
2.4.5 Traffic control: consideration must be given to the safe integration of pedestrians, cyclists and vehicles in the design of a residential street network. Consider the appropriate location of crosswalks, four-way stops and other traffic control mechanisms.	Appropriate crossing features will be incorporated into the detailed design of the neighbourhood with the first stage of subdivision.
2.4.6 Safety: traffic calming should be provided at major pedestrian intersections and crossings. Consider curb extensions, decorative islands or special pavement treatments. Traffic-calming technique should be consistent through the neighbourhood to promote driver familiarity.	Appropriate traffic calming features will be incorporated into the detailed design of the neighbourhood with the first stage of subdivision.
<b>Streetscape</b>	
2.5.1 Attractive streets: create an attractive streetscape through urban design. Consider landscaped boulevards and decorative fencing. Enhanced landscape boulevard treatments and the use of hardy, large canopy trees are encouraged along primary collector roads.	Streetscapes and architectural detailing of neighbourhood streets will be determined with further market research.
2.5.2 On-street parking: the appearance of on-street parking should be addressed. Consider integrating parking spaces in landscaped cul-de-sac islands, using landscaped curb extensions and/or shorter blocks to break up on-street parking. Snow storage must be considered in any streetscape design.	On-street parking will be accommodated within the neighbourhood.
2.5.3 Walkability: sidewalks should be provided along all street frontages and be free of obstructions such as light standards, fire hydrants and trees.	Sidewalks will be provided along all neighbourhood streets.
2.5.4 Pedestrian-friendly streets: create pedestrian-friendly streets through attractive building façades, interesting and varied	Neighbourhood streets will be designed to accommodate safe pedestrian movement through the neighbourhood and between

Neighbourhood Design Guidelines	Brightwell ASP
landscaping, appealing human-scale architecture, and interesting streetscape elements.	neighbourhood focal points.
2.5.5 Residential streetscapes: reinforce residential streetscapes by locating buildings close to the street, particularly at main neighbourhood entrances. Comprehensively planned townhouse developments should include front-facing units along the public street and institutional and commercial uses should be located close to the street, with parking provided in the rear.	Architectural detailing of all residential units will be determined with further market research.
<b>Parks, Public Spaces, &amp; Multiways</b>	
2.6.1 Integrated: an interconnected open-space system should be implemented, which integrates the multiway, parks and natural areas within neighbourhoods and adjacent to neighbourhoods.	The Brightwell ASP provides a variety of open spaces across the plan area connected by a network of multiways.
2.6.2 Year-round use: design main pedestrian routes for year-round use. Consider appropriate plantings and pathway locations that provide windbreaks and allow for winter sun exposure.	The design of multiways will be outlined at time of subdivision, included in the engineering design stage.
2.6.3 Native and/or low maintenance plantings: the use of native and/or low maintenance vegetation, and landscape design is encouraged. Consider clustering plantings or placing plantings in beds to allow for the efficient maintenance of vegetation and the surrounding grassed areas.	The Brightwell ASP supports the use of native and naturalized plant species in the landscaping of parks and open spaces.
2.6.4 Public art: the incorporation of public art in parks and public spaces is encouraged.	Neighbourhood entryways will accommodate architectural features to create a sense of place and arrival to the neighbourhood.

Neighbourhood Design Guidelines	Brightwell ASP
<p>2.6.5 Timely development: multiway and parks are to be installed early in the development process and alongside residential development to ensure residents of a developing neighbourhood have access to park space and the multiway.</p>	<p>One of the park spaces is proposed to be included in the first stage of subdivision.</p>
<p>2.6.6 Accessible parks: parks and other public places are to be highly visible and easily and safely accessible by pedestrians and cyclists. Vehicle access and parking should be considered for community parks and larger neighbourhood parks and public areas. Most homes should be located within 400 meters of a park or open space.</p>	<p>All residents in Brightwell will be within a 400 m walking distance of parks and open spaces.</p>
<p>2.6.7 Accessible multiway: multiway access points are to be highly visible and easily and safely accessible by pedestrians and cyclists. Consideration should be given to increased pathway widths, higher quality landscape features, and/or decorative paving patterns at trail heads and access points.</p>	<p>The design of multiways will be outlined at time of subdivision, included in the engineering design stage.</p>
<p>2.6.8 Diversity: a diversity of public places is encouraged in each neighbourhood, which may include squares, plazas, multiway, passive parks, active parks and natural areas.</p>	<p>The Brightwell ASP provides a diversity of parks and open spaces across the plan area connected by a network of multiways.</p>
<p>2.6.9 Gathering places: main gathering spaces should be specifically designed and provided in each neighbourhood. Such areas should be highly visibility, provide good accessibility, be aesthetically pleasing and be the main focal points of the neighbourhood. Consideration should be given to seating, shade, windbreaks and play structures. School sites are encouraged to be the main gathering places of neighbourhoods and be integrated with other public spaces, such as parks, to increase their size and prominence.</p>	<p>Parks and open spaces in the Brightwell ASP are intended to be focal points and neighbourhood gathering places for neighbourhood residents.</p>

Neighbourhood Design Guidelines	Brightwell ASP
<p>2.6.10 SWMF: Storm Water Management Facilities (SWMF) should be designed as usable, attractive and prominent public spaces within neighbourhoods. It is encouraged that such places be integrated with parks to increase their size and functionality. Consideration should be given to creating the SWMF as a neighbourhood focal point, providing appropriate park infrastructure, integrating with the multiway system and providing opportunities for parking.</p>	<p>The stormwater management facility will be designed to accommodate passive recreational activities by accommodating the development of a multiway network around a portion of the facility.</p>
<p>2.6.11 Public access: public access to open space features of a neighbourhood—such as natural areas, parks and SWMFs—must be provided. When homes back onto such areas, consider providing multiway or clearly designated public park space around the feature. Such public accesses must be clearly indicated on all marketing material for the subdivision to ensure lot purchasers are aware of public accessible areas.</p>	<p>Public access to the parks and stormwater management facility will be provided.</p>
<p>2.6.12 Playgrounds: to increase visibility, accessibility and safety, playground structures are to be located with clear visibility to public streets.</p>	<p>The design of the park sites will locate the playgrounds in highly visible locations.</p>
<p>2.6.13 Plazas and squares: plazas or squares are encouraged adjacent to or within neighbourhood mixed use centres and higher density developments. Consideration should be given to including decorative street furniture, a combination of interesting landscaping features, signage and decorative lighting.</p>	<p>Neighbourhood gathering spaces will be provided in the parks area.</p>



Neighbourhood Design Guidelines	Brightwell ASP
<b>Siting, Sizing, and Building Design</b>	
<p>2.7.1 Lot diversity: a mixture of different lot sizes and dimensions that will accommodate a variety of dwelling types is encouraged. Continuous rows of small frontage lots are strongly discouraged.</p>	<p>The Brightwell ASP supports the development of a variety of housing types, sizes, and styles.</p>
<p>2.7.2 Housing Style: a variety in housing style and design is encouraged. Consider providing a variation in rooflines, window placement, materials, colour and porches. Significant and abrupt changes in building height are, however, discouraged. Repetition of a similar housing designed is also discouraged. A minimum of three dwellings between the same housing style is suggested.</p>	<p>The Brightwell ASP supports the development of a variety of housing types, sizes, and styles.</p>
<p>2.7.3 Transitioning: appropriate transitioning between high, medium and low density housing is required to provide for a logical neighbourhood form and structure.</p>	<p>Appropriate transitioning between land uses will be considered with each stage of subdivision.</p>
<p>2.7.4 Multifamily individuality: emphasizing individual units of townhouses and multi-plex buildings in a way that contributes to the overall character of the neighbourhood is encouraged. Consider off-setting alternating units, using varying exterior fixtures or defining different roof forms.</p>	<p>Architectural detailing of all residential units will be determined with further market research.</p>
<p>2.7.5 Views and vistas: views and vistas from private dwellings to prominent site features—such as natural areas, parks or focal points—are encouraged.</p>	<p>Location and siting of Brightwell residences provides vistas of the parks and stormwater management facility.</p>
<p>2.7.6 Porches: front porches, low-profile courtyards (patios) and verandas are encouraged.</p>	<p>Architectural detailing of all residential units will be determined with further market research.</p>

Neighbourhood Design Guidelines	Brightwell ASP
<p>2.7.7 Garages: front-attached garages should not dominate the front façade of dwellings. Consider off-setting individual doors on homes with double or triple car garages or aligning or recessing the garage with the front façade of the home.</p>	<p>Architectural detailing of all residential units will be determined with further market research.</p>
<p>2.7.8 Energy efficiencies: incorporation of energy-efficient technologies and building design is encouraged. Consider high-efficiency building materials (insulation and windows) and appliances, as well as positioning the building and using appropriate landscaping to take advantage of passive solar opportunities. Technologies that are visible and may impact the buildings appearance, such as solar panels, must be appropriately incorporated into the overall house design.</p>	<p>Energy efficient strategies will be determined through consultation with the builders in each stage of subdivision.</p>
<p>2.7.9 Integrating non-residential uses: the façade of non-residential and mixed-use buildings should be designed to blend with the surrounding residential neighbourhood. Consider the building architecture, colour, materials and landscaping. Building signage should be compatible with the surrounding neighbourhood and respect the building form and architectural features. Down-casted lighting is encouraged to limit potential impacts to surrounding properties.</p>	<p>Architectural detailing of all residential units will be determined with further market research.</p>