

Bylaw No. 1111-2021
BANKS OF CRYSTAL CREEK AREA STRUCTURE PLAN BYLAW

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A BYLAW OF THE CITY OF LEDUC IN THE PROVINCE OF ALBERTA, TO ADOPT AN AREA STRUCTURE PLAN FOR THE SW ¼ SECTION 28-49-25-W4 AND NW ¼ SECTION 21-49-25-W4

The *Municipal Government Act*, R.S.A. 2000, Chapter M-26, as amended, 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 area structure plan for the SW ¼ Section 28-49-25-W4 and the NW ¼ Section 21-49-25-W4 addresses the requirements of an area structure plan in accordance with 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 bylaw shall be known as the "Banks of Crystal Creek Area Structure Plan" Bylaw.

PART II: APPLICATION

1. The Banks of Crystal Creek Area Structure Plan, attached hereto as Schedule A, is hereby adopted.


READ A FIRST TIME IN COUNCIL THIS 24TH DAY OF JANUARY, 2022.

READ A SECOND TIME IN COUNCIL THIS 28TH DAY OF MARCH, 2022.


READ A THIRD TIME IN COUNCIL THIS 28TH DAY OF MARCH, 2022.

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Bob Young
MAYOR



Macarena Hormazabal
DEPUTY CITY CLERK

March 28, 2022

Date Signed

The Banks of Crystal Creek Area Structure Plan

Leduc, Alberta

Prepared for Melcor Developments Ltd.
Prepared by Stantec Consulting Ltd.

DECEMBER 2021



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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 Banks of Crystal Creek ASP has been prepared in accordance with the Municipal Government Act and is consistent with the required policies and guidelines established in the Edmonton Metropolitan Region Growth Plan, City of Leduc/Leduc County Intermunicipal Development Plan, City of Leduc's Municipal Development Plan, and other applicable statutory and non-statutory documents.

1.2 LOCATION

The Banks of Crystal Creek ASP comprises two quarter sections of land totaling approximately 128 hectares of land in the southwest section of the City of Leduc (See Map No. 1.0 Context Plan). The ASP is located south of the Crystal Creek neighbourhood and west of the Suntree and Brightwell neighbourhoods.

The following boundaries define the ASP:

- North: Quarter section boundary (SW 28-49-25 W4) / Canadian Pacific (CP) rail line
- East: Quarter section boundary (SW 28-49-25 W4 and NW 21-49-25 W4)
- West: 74th Street (Range Road 254) / City boundary
- South: Future Highway 2A bypass / City boundary

Lands west and south of this ASP, within the County of Leduc are used for agricultural purposes. The Suntree and Brightwell neighbourhoods are located immediately east and are currently developing.

1.3 BACKGROUND & CONTEXT

In 2012, the City of Leduc announced its proposal to annex approximately 536 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 Banks of Crystal Creek 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 bypass arterial, as well as existing and planned schools. The Banks of Crystal Creek 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.

2.0 DEVELOPMENT AREA

2.1 LEGAL DESCRIPTION & LAND OWNERSHIP

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

Table 1 - Land Ownership

#	Legal Description	Landowner	Proponent	Area (ha)
1	NW 21-49-25 W4	Melcor Developments Ltd.	Yes	62.14
2	SW 28-49-25 W4	Laskoski	No	0.81
3	1025439;1;1	St. Peter's Evangelical Lutheran Church	No	3.93
4	8122797;1; A	McKinney	No	0.78
5	0728322;1;1	McKinney	No	0.78
6	SW 28-49-25 W4	Melcor Developments Ltd.	Yes	55.64
7	1220180; A	AltaLink	No	2.56
			Total Area (ha)	126.64

2.2 EXISTING LAND USES

The plan area consists predominantly of cultivated lands for agricultural purposes and a meandering ravine that divides the ASP into two west and east halves. The Plan area currently has access from 74th Street to the west and 38th Avenue which divides the ASP into two north and south halves.

Within the agricultural lands, several oil and gas facilities are integrated into the farmland and pose minimal physical constraints to crop production. Three existing residential acreages are located in the southwest area of SW28, north of 38th Avenue and east of 74th Street. A farmstead within NW21, located east of the ravine and south of 38th Avenue, consists of a number of small to medium agricultural-related out buildings and a residence.

The Leduc Substation 325S, operated by AltaLink, is situated in the southwest corner of the Plan area, east of 74th Street. This substation has recently undergone enhancements and is intended to remain in this location in perpetuity and be integrated into the neighbourhood development.

2.3 PIPELINES AND WELL SITES

Pipelines

An east-west pipeline runs along the entire northern boundary of NW21-49-25 W4. This pipeline contains natural gas and is licensed to AltaGas Utilities. A second corridor contains a light volatile products (LVP) pipeline owned by Alberta Products Pipeline Ltd. (APPL) carrying jet fuel that extends north-south near the east boundary of the plan area. Two pipelines operated by Sino-Western Petroleum, Inc. extend into NW21-49-25 W4 from a battery site located south of this ASP boundary. For the approximate locations of pipelines within The Banks of Crystal Creek ASP, see Map No. 4.0 Site Constraints. Pipelines containing natural gas, oil and other similar products are regulated by the Alberta Energy Regulator (AER). Development abutting pipelines will be in accordance with any AER regulations.

Table 2 - Pipelines within The Banks of Crystal Creek ASP

License/Line #	Company	Substance	Status	Max. Pressure	H2S
40372-2	SINO-WESTERN PETROLEUM, INC.	Salt Water	Operating	9,930kPa	0 mol
17069-3	SINO-WESTERN PETROLEUM, INC.	Oil Well Effluent	Operating	280 kPa	0.5 mol
1055-17	ALTAGAS UTILITIES INC.	Natural Gas	Operating	4,830 kPa	0 mol
7634-3	ALBERTA PRODUCTS PIPE LINE LTD.	LVP Products	Operating	9,930kPa	0 mol

Well Sites

There is one abandoned oil well site located in SW28-49-25 W4, as shown on Map No. 4.0 Site Constraints. According to the Alberta Energy Regulator (AER) a 10 m radius setback is required around this well site. Once a reclamation certificate has been issued, the minimum radius setback may be decreased to 5 m.

There is one active oil well site situated within northwest portion of NW21-49-25 W4. No development will be permitted within 100 m of the wellhead until it has been abandoned. Once the wellhead is abandoned, a 10 m radius setback is required around this well site. Once a reclamation certificate has been issued, the minimum radius setback may be decreased to 5 m.

One water well site is also located in NW21-49-25 W4, as shown on Map No. 4.0 Site Constraints.

For the approximate locations of all well sites within The Banks of Crystal Creek ASP, see Map No. 4.0 Site Constraints.

Table 3 – Well Sites within The Banks of Crystal Creek ASP

Ref #	License #	Company	Well Name	Status
1	21057	CALPINE CANADA RESOURCES COMPANY	TOL IMP LEDUC 6-28-49- 25	CR-OIL ABD
2	7814	SINO-WESTERN PETROLEUM, INC.	SINOWEST LEDUC-WB 13-21-49-25	CR-OIL Pump
3	6825	SINO-WESTERN PETROLEUM, INC..	SINOWEST LEDUC-WB 11-21-49-25	WATER DISP

Further analysis will need to be conducted at the subdivision stage, if any, to ensure appropriate risk mitigation for active pipelines and/or well sites. At the subdivision stage, environmental site assessments and risk management plans will be conducted as per the Alberta Energy Regulator, Alberta Environment, and Alberta Health Services guidelines to determine appropriate pipeline relocation as necessary.

2.4 LEDUC SUBSTATION 325S

The Leduc Substation 325S is operated by AltaLink and is situated in the southwest corner of the ASP, north of the future Highway 2A bypass and east of 74th Street (see Map No. 4.0 Site Constraints). This substation has recently undergone enhancements and is intended to remain in this location in perpetuity and be integrated into the neighbourhood development. The intersection location of 74th Street and the future Highway 2a bypass as well as the roadway setback requirements to the substation will be re-evaluated once classification and road alignments are confirmed.

2.5 CANADIAN PACIFIC RAIL

A CP Rail line (Class 2) is located running east-west across the north ASP boundary (see Map No. 4.0 Site Constraints). Residential development abutting this rail corridor will be in accordance with Federal, Provincial, and Municipal regulations and policies. Prior to any residential development abutting this railway, consultation with CP Rail will be required and the Guidelines for New Development in Proximity to Railway Operation will be considered at the time of subdivision.

2.6 EXISTING TOPOGRAPHY

In general, the plan area is generally flat to gently undulating, with a meandering shallow ravine and creek. The slopes of the ravine vary from shallow and nearly flat to gentle and varying

between 1 m – 5 m in depth. The highest elevation is approximately 729 m in the southeast corner and lowest elevation is approximately 717 m in the northwest corner of the plan area (see Map No. 3.0 Topography).

2.7 BIOPHYSICAL ASSESSMENT

Two separate Biophysical Assessments were completed by Bruce Thompson & Associates Inc in July 2013 and Stantec Consulting Ltd. in November 2016 (submitted under separate cover). These two assessments determine the ecological value of the natural areas located within SW 28-49-25 W4 and NW 21-49-25 W4. The assessments consist 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.

A large central watercourse, an east tributary of the Whitemud Creek, transects the ASP area flowing south to north and creating a natural barrier between east and west halves of the ASP. The upper bank of the ravine provides pockets of aspen and poplars of various health and age. The creek is permanent and naturally occurring, and therefore the Crown should claim the bed and shore.

A minor tributary originates east of the ASP area and connects to the larger central creek within the ASP. This surface fed drainage channel intermittently supplements the surrounding agricultural lands as an outlet of surface water that outlets into the larger central watercourse, aided by a culvert underneath 38th Avenue. There are patches of willows along its course but is mainly grasses and sedges. Considering its low ecological value and that upstream surface water will be diverted by the Brightwell and Blackstone neighbourhoods, it is unlikely that this will be claimed by the Crown and the drainage channel will be incorporated into the abutting development.

Several other areas of wet soils are found in intermittently within low topographic depressions. These are areas where surface water tends to collect due to the topographical elevation change and any man-made barriers (e.g. roadway or railways) that prevent adequate drainage. These smaller depressions continue to be cultivated and seeded throughout the year, maintaining low ecological significance.

An ecological valuation analysis determined that the majority of ecological components within the plan area are of low ecological value, except for the larger central watercourse and ravine, including the riparian and upland vegetation, which is anticipated to support a variety of breeding bird species, amphibians, and other wildlife (see Map No. 4.0 Site Constraints).

2.8 SOIL AND GROUNDWATER CONDITIONS

Geotechnical Reports were prepared by Hoggan Engineering & Testing (1980) Ltd. in April 2013 (SW28) and August 2014 (NW21), to determine if the ASP lands are suitable for urban development. These reports have been submitted to the City of Leduc under separate cover. The contents of the reports consist of an evaluation of the geological, soil, and water table

characteristics of the subject area. These reports are intended for preliminary planning and design purposes only, as they speak generally to the ASP lands. From the test hole samples taken, the soil and groundwater conditions were determined to be satisfactory for residential development. At the subdivision or redistricting stages, further geotechnical investigation will be required.

From the test holes observed, native clay deposits were found to overlay glacial clay till, on top of a fine grained native sand deposit. These layers terminated at bedrock, 3.5 m - 8 m in depth, made up of layered sandstone and clay shale bedrock soils.

Generally, with moist sandy clay fill combined with a seasonal presence of high groundwater test holes suggests some construction difficulties, particularly for underground trenches.

2.9 ENVIRONMENTAL SITE ASSESSMENT

A Phase I Environmental Site Assessment (ESA) is meant to evaluate the location and type of surface and/or subsurface impacts that may be present on the subject site and adjacent areas. Where deemed to be required, a Phase II or Phase III ESA will further evaluate areas where contamination may be present.

A Phase I ESA was completed by CTA Engineering (May 2013) for SW28 -49-25 W4, excluding the lands owned by non-participating landowners. For the NW21-49-25 W4 parcel, a Phase I ESA was completed by Thurber Engineering Ltd. (May 2014) and a combined Phase II and III ESA was completed by Thurber Engineering Ltd. (August 2014). These reports have been submitted under separate cover. At the subdivision or redistricting stages, further environmental site assessment will be required.

2.9.1 Farmstead and Houses

The farmstead and currently occupied house occupy a rectangular area approximately 2.0 ha (4.94 ac) in size. The farmstead has a residential house with an attached automobile garage that has a concrete slab floor.

A semi-trailer transport truck, grain truck, seeder implement, tractor lawn mower, plastic AST and an accumulation of fuel jerry cans were observed inside the earthen-floored north Quonset (Quonset 1). A second Quonset further south (Quonset 2), containing a parked tractor and swather as well as several, one to 45-gallon containers of refined petroleum products, also had an earthen floor that was stained throughout.

2.9.2 Oilfield Facilities

A capped oil well was located in the northwest portion of the Subject Property. A metal shed containing a water injection/disposal unit was located approximately 50 m south of the Brown tree plantation. This water injection/disposal unit, as well as a crude oil battery located approximately 225 m south in SW 21-49-25 W4M, are operated by Sino Western Petroleum Inc. (SWPI) and connected by high-pressure pipelines. Two SWPI high-pressure oil pipelines also

connect the battery with the well site in the Subject Property's northwest portion. Alberta Products Pipeline Ltd. (APPL) operates a high-pressure, multi-product pipeline along the east margin, while AltaGas Utilities Inc. (AltaGas) operates a high-pressure natural gas transmission pipeline with gas delivery pipelines branching to various residences enroute, across the north portion of the Subject Property.

2.10 HISTORICAL RESOURCES

Historical Resources Act Clearance was provided for SW 28-49-25-4 W4 through the West ASP preparation process. A Statement of Justification (SoJ) was prepared in May 2017 and submitted to Alberta Culture and Tourism (ACT) for review for NW 21-49-25-4 W4. ACT issued Historical Resources Act Requirements in response to the SoJ indicating that Historical Resources Impact Assessment (HRIA) studies are required for the project. Field studies are required for areas with high archaeological potential, including well-drained land abutting the ravine, as well as potential historic period structures within the farmyard. The HRIA shall be completed prior to rezoning or subdivision of NW 21-49-25-4 W4.

2.11 AGRICULTURAL IMPACT ASSESSMENT

An Agricultural Impact Assessment (AIA) was submitted in January 2018 for both NW 21-49-25-4 W4 and SW 28-49-25 W4. This study reviewed the agricultural potential, the existing and proposed land uses and site features, the surrounding development, and described the impact of the proposed land use changes on the local agricultural community. The proposed residential development within The Banks of Crystal Creek neighbourhood is not anticipated to have a significant negative impact on the long term agricultural uses and operations on the surrounding area.

3.0 PLANNING PROCESS

The consultation process proceeded in accordance with Leduc's Area Structure Plan and Outline Plan Guidelines (September 2013). The following is a summary of consultation activities that took place.

Pre-application consultation meetings were held with City administration on July 14, 2016 and February 2, 2017. This session involved relevant civic departments. The purpose of this session was to present neighbourhood information, identify technical constraints, discuss application process, and to receive general comments from the review agencies.

On October 2, 2018, an Open House was held with participating land owners and stakeholders to share the draft plan and receive information regarding development staging, timing and process as well as provide feedback on the land use concept.

In accordance with the MGA, landowners have been notified of the Public Hearing and were given the opportunity to provide written comments or register to speak in front of City Council. A public hearing was held to hear parties affected by the proposed bylaw, prior to receiving approval by City Council.

4.0 POLICY CONTEXT

4.1 GENERAL

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

4.2 MUNICIPAL GOVERNMENT ACT

The Banks of Crystal Creek 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.

4.3 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 Banks of Crystal Creek 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 Banks of Crystal Creek 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 comply 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 Banks of Crystal Creek ASP has considered 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

4.4 EDMONTON METROPOLITAN REGION GROWTH PLAN

The Edmonton Metropolitan Region Board Regulation (Alberta Regulation 189/2017) enabled legislation that established the Edmonton Metropolitan Region Board (EMRB). In October 2016, the Edmonton Metropolitan Region Growth Plan: Re-imagine. Plan. Build was approved. This Plan provides a comprehensive update and replaces the 2010 Capital Region Growth Plan: Growing Forward and integrates the policy directions from other CRB plans and studies. It provides an integrated policy framework to plan for and manage all the multifaceted components of urban growth through a comprehensive approach.

This ASP has been developed to comply with the Communities and Housing objectives of the Edmonton Metropolitan Region Growth Plan, including a minimum density target of 35 dwelling units per net residential hectare (upnrha) for greenfield residential development within Leduc metropolitan area.

4.5 CITY OF LEDUC (2020) MUNICIPAL DEVELOPMENT PLAN

The City of Leduc's Municipal Development Plan (MDP) as amended, 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.

4.6 CITY OF LEDUC – LEDUC COUNTY INTERMUNICIPAL DEVELOPMENT PLAN

The City of Leduc – Leduc County Intermunicipal Development Plan (IDP) as amended 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.

5.0 NEIGHBOURHOOD VISION

The Banks of Crystal Creek ASP is a residential neighbourhood defined by its unique ecological landscape. A meandering shallow ravine provides a central greenspace that is emphasized by various parks that connect to this unique green corridor and provide not only aesthetic and recreational benefits, but also an interesting place to encourage community activities and interaction.

The overall vision and objectives for this residential neighbourhood is to:

- Create a unique neighbourhood identity using appropriate urban design principles;
- Offer a variety of residential uses for a range of household types;
- Maintain a high regard for the central creek and ravine for its ecological significance;
- Provide parks and school facilities within easy walking distance of neighbourhood residents;
- Provide local commercial amenities that are accessible to neighbourhood residents;
- Ensures a compact urban form that provides efficient and orderly infrastructure; and
- Achieve a balanced transportation network and opportunities to integrate an efficient transit system.

The neighbourhood vision and overall goals form the basis for the following plan objectives and policies and are informed by the Neighbourhood Design Guidelines.

5.1 LAND USE CONCEPT

The Banks of Crystal Creek ASP has been prepared in response to current and anticipated residential market demands in the City of Leduc and a review of best practices in land use planning. This residential neighbourhood is planned to accommodate Low Density Residential and Medium Density Residential land uses to provide a diversity of household types. Medium Density Residential is provided in locations that allow for direct access to the collector road network. A centrally located neighbourhood scale commercial site has been located within the neighbourhood to provide conveniently located commercial amenities and services to residents. Parks and open spaces are distributed across the neighbourhood within a short walking distance from neighbourhood residences and purposefully located to enhance views and linkages to the ravine. A centrally located school and community park is planned for this community and will provide a Public K-9 school, community gathering place, as well as opportunities for active recreation. This ASP extends the roadway network from the adjacent Brightwell, Suntree, and West ASP areas and provides consistent and compatible residential neighbourhood uses. The land use concept is further illustrated in Map No. 5.0 Land Use Concept.

6.0 OBJECTIVES AND POLICIES

6.1 LAND USE

6.1.1 RESIDENTIAL

The Banks of Crystal Creek ASP offers a variety of residential opportunities for its residents (see Map No. 5 Land Use Concept). Providing a variety of housing sizes and types supports the development of a balanced neighbourhood that can accommodate a range of household types and income groups throughout their life cycle. Housing must be able to address changing demographics within the region by allowing for a wide range of housing typologies and tenure options that will allow for the opportunity for all to reside within the community. A diversity of housing options will allow the community to support a variety of lifestyle options. The Banks of Crystal Creek ASP will allow for a range of housing choices and sizes, a variety of housing styles and architecture, full spectrum of housing, and access to a variety of densities will be provided for within the area. The Banks of Crystal Creek ASP provides for the following residential designations:

Low Density Residential (LDR) supports the mixed development of single detached and duplex housing. Single detached and duplex housing allow the opportunity to develop low density housing within the neighbourhood with and without rear lanes. Single and duplex housing with access to the front garage provides a density of approximately 28 upnrha. Residential Land Use Districts within the City of Leduc's Land Use Bylaw allow for a wide-variety of Low Density Residential (LDR) housing forms such as Single Detached Dwellings on narrow lots, Garden and Garage Suite Dwellings, and Secondary Suite Dwellings. This variety of LDR housing product not only provides for more housing choice within the ASP area, but also helps facilitate a more efficient utilization of land while being considerate regarding surrounding uses.

Street Oriented Residential (SOR) directs vehicular access to rear lanes, which greatly increases the efficiency and utilization of land, while also contributing to more achievable housing options, and adding to the safety and visual appeal of the streetscape. This designation supports the development of single detached, duplex housing, and town housing with access to a rear lane and an approximate density of 40 upnrha. In accordance with the Land Use Bylaw, more innovative forms of housing, such as narrow lot development or Zero Lot Line Structures, increase land efficiency and provides for a wider range of household types and housing costs. Several residential Land Use Districts within the Land Use Bylaw allow for affordable residential development, while maintaining lot area, Site Coverage, and a Street Oriented character. Opportunities for intensification are provided through the consideration of Secondary Suite Dwellings and Garage Suite Dwellings. The compact urban form supported by this designation allows for the privacy and independence afforded by Single Detached housing forms while creating a more achievable housing option.

Medium Density Residential (MDR) supports the development of multi-unit residential developments on larger sites, including project-based town housing or apartments (up to four

storeys) at a density of approximately 90 upnrha. The type of housing pursued will depend on market demands.

These housing types are intended to cater to a diverse consumer market of different economic levels and lifestyles, while also contributing to a sustainable residential urban form. For neighbourhood land use, density, and population statistics see Section 7.0 Land Use and Population Statistics. Medium Density Residential designations allow for a variety of incomes, ages, and abilities to access the community, and support a variety of lifestyle options.

Objectives:

- To provide a variety of housing types in different built forms that serve a range of age groups, income levels, and lifestyles.
- To establish a residential density that achieves the target set out by the Edmonton Metropolitan Region Growth Plan.
- To locate higher-density residential development along major transportation corridors to provide efficient and convenient access.

Policies:

- 6.1.1.1** A variety of housing types shall be provided, including single detached, duplex, townhouses, and apartment housing.
- 6.1.1.2** Residential areas shall be developed in a manner compatible in scale and density to adjacent residential developments.
- 6.1.1.3** Townhouses and medium density residential development shall be located adjacent to the collector roadway network.
- 6.1.1.4** Residential density shall meet the minimum residential density target in accordance with the Edmonton Metropolitan Region Growth Plan.
- 6.1.1.5** No residential development shall be permitted within 100 m of an active oil well (see Map No. 4.0 Site Constraints) until it is abandoned, as per the City's Land Use Bylaw and Alberta Energy Regulator (AER) guidelines.
- 6.1.1.6** A Transportation Impact Assessment will be required for the medium density residential site located at the intersection of 74 Street and 38 Avenue at the time of rezoning.
- 6.1.1.7** Residential development adjacent to the CP Rail corridor will require a noise attenuation assessment to determine the appropriate level of noise attenuation measures prior to subdivision approval.

- 6.1.1.8** Lands designated for Medium Density Residential (MDR) shall not permit any form of low-density development.

6.1.2 COMMERCIAL

The addition of a Commercial designation along 38 avenue aims to provide daily goods and services that are in close proximity to residences within the community. The Commercial designation acts as a node within the central area of the community aimed at servicing residents and visitors alike, while contributing to the complete community character. The Commercial designation allows for both service and retail opportunities. The integration of the Commercial site will be designed and constructed in a manner which integrates appropriately within the community. 25.80 ha of larger format commercial opportunities exist within the West ASP directly north of the Banks of Crystal Creek plan area which will also meet the commercial needs of residents and visitors within both plan areas.

Commercial uses integrated with Residential uses (i.e., a Home-based Business) supplement the Commercial site within the Banks of Crystal Creek ASP area as well as areas in surrounding communities. Home-based Businesses support the needs of residents within the neighbourhood and allow for multiple contextually sensitive uses to co-exist within the community.

Objectives:

- To Provide commercial uses that meet the needs of residents within the ASP area.
- To integrate commercial development with the surrounding land uses.

Policies:

- 6.1.2.1 Commercial uses shall be located along an arterial or collector roadway to ensure adequate visibility and access.
- 6.1.2.2 Development shall utilize high quality design outcomes as per the City of Leduc Neighbourhood Design Guidelines.
- 6.1.2.3 Commercial uses shall be safely accessible by multiple modes of transportation including car, transit, cycling and walking.
- 6.1.2.4 Commercial uses are encouraged to be designed and developed to be contextually sensitive to the surrounding land uses through the use of design treatments such as, but not limited to, incorporating sufficient setbacks to residential development, utilizing high-quality materials, and limiting the use of continuous facades without visual breaks in the façade.

6.1.3 PARKS AND OPEN SPACE

A combination of multiway paths, school, and park spaces will be dedicated using Municipal Reserve. Together with stormwater facilities and the central creek, these areas form an integrated open space network within the ASP, as shown in Map No. 6.0 Parks and Open Space.

The Municipal Government Act Section 666 allows the City to require each parcel of land to dedicate 10 % of the gross developable area as land, cash in lieu, or a combination of the two for Municipal Reserve. The 10% MR requirement is assessed on a per parcel basis. However, MR dedication may be transferred between parcels through the use of a Deferred Reserve Caveat (DRC) registered on title. The Gross Developable Area for The Banks of Crystal Creek ASP is approximately 112 ha which requires 11.2 (up to 10 %) ha for Municipal Reserve dedication. The land use concept identifies 6.78 ha (or approximately 6.99% without the use of a DRC and 7.87 % with the use of a DRC of the GDA) of land for Municipal Reserve dedication within the plan area. Where land dedication is not required as part of this Plan (See Map No. 6.0 Parks and Open Space), money-in-lieu of land will be acquired through the subdivision and development process.

Natural Features

The majority of lands within The Banks of Crystal Creek ASP have been historically cultivated and used for agricultural purposes, except for a central creek. This creek and its ravine area will be retained through the dedication of Environmental Reserve (ER). This natural feature provides important habitat and travel corridor for fish and wildlife that is to be protected and integrated into the neighbourhood. Abutting the ravine, a multiway will be constructed to provide public access for the enjoyment of residents.

School and Community Park

The Banks of Crystal Creek ASP plans for a school and community park site. The park site is located in the southwest portion of the plan area, approximately 4.85 ha in area, and bounded by two collector roadways.

Parks

Several formal park sites have been distributed throughout the neighbourhood to be accessible within a short walking distance for all neighbourhood residents. These sites range from approximately 0.2 ha to 0.5 ha in area and accommodate both active and passive recreational activities. Smaller parkettes have been strategically located and identified as viewpoints along the ravine, as well as to provide public access to the multiway network located along the ravine.

Linear Park

A linear park is located along the north boundary of ASP, located south of the CP Railway corridor. This 10 m buffer will be dedicated as municipal reserve and will include a pathway to enhance pedestrian connectivity in the neighbourhood.

Stormwater Facilities

Stormwater facilities are considered neighbourhood amenities and part of the open space network. These facilities add to the neighbourhood's attractiveness, character, and sense of place. All storm ponds are linked within the neighbourhood trail network and complement the open space system by providing additional areas for passive recreation. However, these public utilities are not to be dedicated as Municipal Reserve.

Multiway Network

A multiway path system connects parks and open spaces providing improved pedestrian connectivity throughout the neighbourhood. There are five main multiway corridors in this neighbourhood:

- ❖ An east-west corridor located within a municipal reserve parcel along the north boundary of the ASP boundary, south of the CP railway, which includes a creek-crossing.
- ❖ An east-west corridor located within public utility lots south of 38th Avenue, which includes a creek-crossing and is part of the Trans Canada Trail.
- ❖ A north-south corridor located within public utility lots along the east boundary of the ASP boundary
- ❖ An east-west corridor located within road right of way that continues from Suntree Promenade
- ❖ A north-south corridor located within the environmental reserve parcel, abutting the creek and ravine.

These corridors will provide multiway connections that will enhance the overall walkability of the neighbourhood and promote healthy lifestyles for neighbourhood residents. In addition, these trials will improve the connectivity between adjacent neighbourhoods, promoting active commuting or convenient recreational use (see Map No. 8.0 Pedestrian Network).

Objectives:

- To preserve the central ravine and enhance its connectivity to the neighbourhood.
- To support the development of a connected open space network.
- To provide school and community facilities within the neighbourhood.
- To provide adequate access and appropriate open space amenity to meet the needs of the community.
- To provide pedestrian-friendly connectivity within the plan area and into adjacent communities.
- To develop stormwater facilities that are visually appealing and physically accessible to residents.

Policies:

- 6.1.3.1** The central ravine shall be preserved and designated as Environmental Reserve at the time of subdivision, in accordance with Section 664 of the Municipal Government Act.
- 6.1.3.2** As part of the subdivision approval process, Municipal Reserve shall be dedicated as land, cash in lieu of land, or a combination thereof, in accordance with Section 666 of the Municipal Government Act. As per the Letter of Understanding – Municipal Reserve Land Dedication Credit (November 28, 2013) with the proponent, and due to an over dedication of Municipal Reserve within NE 28-49-25-4 W4 (West Haven neighbourhood), the City of Leduc will credit 0.992 ha of Municipal Reserve land dedication to SW 28-49-25-4 W4 upon subdivision. As such, the required dedication for the ASP is decreased to approximately 10.2 ha (or approximately 9 % of the GDA).
- 6.1.3.3** Additional analysis shall be required at the zoning and subdivision stage for the stream reach identified in the Biophysical Assessments completed for this ASP and as identified in Section 2.7 of this ASP to ensure that the drainage and ecological functions are maintained as the plan area develops. Ecological connections may be maintained through treatments such as, but not limited to, the utilization of naturalized landscaping.
- 6.1.3.4** Low impact development best practices are encouraged to be incorporated into parks, stormwater management facilities, and open spaces.
- 6.1.3.5** It is intended that as development progresses, the two pipelines along the south boundary of 38th Avenue and the east boundary of this ASP will be relocated to better suit urban development and accommodate a multiway corridor. Proponents shall work with the City of Leduc and the pipeline operators to determine the location and construction standards within the public utility lots, which may affect the ultimate location and alignment of multiways within the public utility lots.
- 6.1.3.6** The multiway network within the community shall be constructed within public utility lots, parks, road rights-of-way and abutting the ravine, as generally illustrated on Map No. 8.0 Pedestrian Network.
- 6.1.3.7** Multi-ways will be constructed around storm water management ponds as per the minimums set out in the City of Leduc's Parks, Open Space and Trails Master Plan.
- 6.1.3.8** A minimum of one water fountain per quarter section will be included incorporated within the plan area.

6.1.4 URBAN SERVICES

Whether provided by the City of Leduc or by other agencies and organizations, urban service uses aid in the development of a complete community.

Place of Worship

One Urban Services (currently owned by the Evangelical Lutheran Church) site is located northwest of the intersection of 38th Avenue and unnamed collector roadway. The site is approximately 3.9 ha in area and will allow for the development of a place of worship.

School and Park

A 4.85 ha school and community sized park site has been allocated within the ASP. Should the school boards determine a school is not needed in the neighbourhood, a plan amendment may be required following an evaluation by the City of the best use(s) for the community park site.

Objectives:

- To support the future development of schools, place of worship, and other related institutional uses.

Policies:

6.1.4.1 Land shall be set aside for the purpose of the development of a place of worship, with adequate vehicular access and parking, based on the assessed requirements.

6.1.4.2 School boards will continually be engaged to verify school site needs. The potential school site shall be designed to provide adequate street frontage along collector roadways to accommodate flexible building design, parking access, and student drop-off/pick-up areas.

6.1.5 ENVIRONMENT AND ENERGY

Both active and abandoned oil and gas facilities are currently located within this community. Residential development in proximity of oil and gas well sites and pipelines will be planned in accordance with the City's Land Use Bylaw and Alberta Energy Regulator (AER) guidelines.

There are two pipeline corridors that remain located within this ASP. It is intended that with development of the area that the Alberta Products Pipeline Ltd. LVP pipeline will be relocated to the east boundary of Plan, and the AltaGas Utilities Inc. natural gas pipeline will be relocated immediately south of 38th Avenue to allow for efficient residential development and integration of the pedestrian multiway.

The Leduc Substation 325S is located in the southwest corner of this ASP, north of the future Highway 2A bypass and east of 74th Street. To support the power demands of Leduc and surrounding communities, this substation is anticipated to remain in this location in perpetuity and be integrated into the community. The substation and powerline create a negative visual impact to this residential community; however, the substation contains a treed perimeter buffer area to help mitigate this.

Objectives:

- To ensure that the environmental status of lands is adequately assessed and determined suitable for development.
- To ensure conscientious construction around oil and gas facilities and energy sites, mitigating potential risks to future residents.
- Ensure the ongoing operation and integrity of the oil and gas facilities and energy sites.

Policies:

- 6.1.5.1** Environmental conditions of each parcel shall be confirmed through submission of ESA reports and/or updates prior to rezoning or subdivision. At this time the responsibility for any remedial action and/or ongoing risk management, timelines and associated exposure controls will be determined and implemented to the satisfaction of AER, Alberta Environmental and Parks (AEP), Alberta Health Services (AHS), and the City of Leduc as required.
- 6.1.5.2** Development abutting the pipeline utility corridors shall be implemented in accordance with setbacks established with Section 20.3 of the City of Leduc Land Use Bylaw and AER guidelines to ensure the safe and ongoing operations of these facilities.
- 6.1.5.3** Rezoning, subdivision, or development near active and abandoned oil/gas well sites shall be in accordance with applicable provincial and municipal regulations and AER guidelines.
- 6.1.5.4** Proponents shall work with the City of Leduc and the pipeline right-of-way owner to determine the relocation and landscaping/construction standards for pipeline corridors.
- 6.1.5.5** Any development abutting the substation shall have regard for visual screening such as, but not limited to, building and site orientation, berms, fencing or landscaping.
- 6.1.5.6** Management of soils and topsoils within the plan area is to be done so in a responsible manner and are encouraged to be reused.

6.1.6 TRANSPORTATION

The Banks of Crystal Creek ASP maintains sufficient access to existing and planned roadways (see Map No. 7.0 Transportation Network), in accordance with the Transportation Impact Assessment which has been submitted to the City of Leduc under separate cover with this ASP.

Opportunities for transit service within the Banks of Crystal Creek ASP area will be provided for to establish convenient and effective mobility opportunities to connect residents to the various

neighbourhood focal points, surrounding employment opportunities and commercial amenities, and to the broader community. Transit opportunities within the Banks of Crystal Creek ASP area is not limited to traditional transit systems, but rather should also provide opportunities for alternative transit options such as on-demand service as an example.

Arterials and Highways

74th Street is the primary access to the west boundary of this ASP and is classified as a 4-lane divided arterial. The future Highway 2A bypass arterial provides access from the south of the neighbourhood. Road widening is needed for 74th Street and Highway 2A bypass. The exact alignment, road rights-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 assessment that will be required with the first stage of development along 74th Street and Highway 2A bypass. The location of the intersection at 74th Street as well as the roadway setback requirements to the substation will also be re-evaluated once classification and road alignments are confirmed.

Collectors

Collector roadways provide internal/external access to neighbourhoods and are spaced at appropriate intervals along arterial intersections to facilitate traffic progression and to ensure that sufficient distance is available to allow for both right and left turn-bay development. The minor and major collector roadway network provides efficient and convenient access to residential areas, creates a distinctive entryway into the neighbourhood, and establishes a pedestrian oriented streetscape through provision of separate sidewalks. Public transit may be provided on the collector roadways in the future, should the population and demand warrant its programming.

The existing 38th Avenue currently transects this ASP east-west between the two NW21 and SW28 parcels and 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 PUL to the south. Special design consideration will be given to the existing creek crossing along 38th Avenue. Design improvements to this creek crossing shall maintain aquatic wildlife passage and movement through this neighbourhood. The exact cross section, design, and timing of roadway improvements will be determined through consultation with the City of Leduc and the developer. Connections with 38th Avenue will require additional analysis to determine design details.

Local Roads

The local road network provides convenient access to residential uses, accommodating lower volumes of traffic. 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 on both sides.

Suntree Promenade, which is located in the Suntree Neighbourhood to the east of SW28, will continue as a local road with a modified cross section. This will allow the multiway to continue west to connect with the ravine. The exact cross section design will be determined at time of subdivision.

Multiway Network

In addition to the roadway infrastructure, the neighbourhood provides an integrated multiway network that will encourage active transportation. The multiway network will utilize major corridors adjacent to the ravine, CP rail corridor, arterial roads, and pipeline utility corridors, to enhance pedestrian connectivity of the local and collector roadway network (See Map No. 8.0 Pedestrian Network).

Objectives:

- To provide an efficient and convenient system of roads using a hierarchy of arterial, collector and local roadways for vehicular and pedestrian circulation linking uses within the ASP boundaries, to adjacent neighbourhoods, and to the regional transportation network.
- To accommodate the development of a safe and efficient roadway system for multi-modal transportation, including transit, vehicles, cyclists, and pedestrians.

Policies:

- 6.1.6.1** The local road network shall incorporate a network of streets that provide a high degree of connectivity and access to residential uses, parks, and institutional locations.
- 6.1.6.2** Front drive access for residential units along collector roadways shall be minimized, where possible.
- 6.1.6.3** The design of collector roadways shall accommodate multiple modes of transportation, including transit, vehicles, cyclists, and pedestrians.
- 6.1.6.4** The transportation concept shall include a system of multiway corridors to facilitate active transportation across the plan area.
- 6.1.6.5** All multiways shall connect to the main pedestrian circulation network.
- 6.1.6.6** The design of collector roadways shall accommodate pedestrians within a boulevard sidewalk.
- 6.1.6.7** The pedestrian network shall be designed and constructed in conjunction with future confirmation of roadway classifications and alignments.

6.1.6.8 Noise attenuation measures for the future Highway 2A bypass and 74th Street arterial, will be determined through future planning work and technical studies prior to subdivision, including a noise attenuation assessment,

6.1.6.9 Roadways and multiways shall be constructed in accordance with the City of Leduc Engineering Design Standards.

6.1.6.10 Opportunities to connect the Banks of Crystal Creek ASP area with adjacent development and the broader community along 38 Avenue, 74 Street, and the realigned Highway 2A corridor are encouraged.

6.1.7 TRANSIT

Opportunities for transit service within the Banks at Crystal Creek ASP area will be provided to establish convenient and effective mobility opportunities to connect residents to the various neighbourhood focal points, surrounding employment opportunities and commercial amenities, and to the broader community. Transit opportunities within the Banks at Crystal Creek ASP area is not limited to traditional transit systems, but rather should also provide opportunities for alternative transit options.

Policies:

6.1.7.1 Opportunities to connect the Banks at Crystal Creek ASP area with adjacent development and the broader community along 38 Avenue, 74 Street, and the realigned Highway 2A corridor are encouraged.

6.1.7.3 Higher density residential development shall be located along major transportation corridors within the plan area to encourage transit ridership.

6.1.8 AGRICULTURE

Development staging with the Banks of Crystal Creek ASP will be conducted in a manner that ensures the preservation of agricultural land and agricultural operations until such agricultural land is required for the eventual urban development within the plan area. Furthermore, the opportunity for urban agricultural practices may be promoted as part of the eventual development scheme for the residential development within the plan area.

Objectives:

- To allow for low impact agricultural uses until urban development occurs.

Policies:

6.1.8.1 Existing agricultural activity shall be permitted to continue as an interim use as set out by the regulations in the Land Use Bylaw (Urban Reserve district).

- 6.1.8.2** The raising of livestock should be discouraged where adjacent to lands that do not permit agriculture as a use.
- 6.1.8.3** Agricultural activity which continues as an interim use shall minimize land use conflicts.
- 6.1.8.4** Development shall minimize the premature fragmentation of agricultural land where possible.
- 6.1.8.5** Consider the use of soil retention in areas such as parks, open spaces, along swales and stormwater management facilities to support water infiltration and bioretention.

6.2 SERVICING

The lands within The Banks of Crystal Creek ASP will be fully serviced with water, sanitary sewer, and stormwater management facilities along with utilities that include power, natural gas, phone, and cable. The details of the proposed servicing scheme will be further defined through subsequent reports and detailed engineering design prior to rezoning and subdivision. The ASP has been designed to create a logical extension of infrastructure and services. Development staging and the extension of infrastructure will be contiguous, efficient, and economical. Prior to rezoning and subdivision, additional servicing details will be provided through the approval of an outline plan.

6.2.1 STORMWATER MANAGEMENT

Stormwater servicing in The Banks of Crystal Creek will be accommodated within three stormwater management facilities located east and west of the ravine and generally in lower areas within the proposed development to minimize site grading. The SWMF will retain stormwater from developed lands and release at a maximum predevelopment flow rate of 3.0 L/s/ha, unless otherwise approved by the City of Leduc Engineering Department, through outfall pipes to the creek located central to the plan area (See Map No. 11.0 Stormwater Management). Furthermore, the SWMF will align with the Blackmud/Whitemud Creek Watershed Management Study.

Stormwater management consists of a series of interconnected management facilities with controlled discharge that will provide storage for peak events as well as treatment of stormwater prior to release into existing watercourses. Low impact development (LID) principles related to stormwater management will be implemented wherever feasible to increase infiltration of stormwater, improve cleansing, and help manage runoff rates.

The City of Leduc is currently developing policies to encourage stormwater facilities to be constructed to mimic natural wetlands. Constructed wetlands provide ecological benefits including, increased water runoff quality and native plants suitable for wildlife habitats, in addition to drainage functionality. The City of Leduc's engineering design guidelines and constructed wetland policies will guide and direct the design and construction of stormwater

management facilities, with the most efficient and cost-effective method to ultimately be utilized.

A Water Act approval may be required for stormwater management facilities and/or tributary development which may require additional information for downstream conveyance and impact aspects of the servicing strategy. As a Water Act approval expires one (1) year from the date of issuance, if required, it is normally obtained during the Neighbourhood Design Brief stage or just prior to construction.

Objectives:

- To provide a stormwater management system that enhances stormwater runoff quality and quantity, safeguards against flooding, and protects private property.

Policies:

- 6.2.1.1** Landscaping of stormwater management facilities shall incorporate native and naturalized plant species to minimize landscape irrigation.
- 6.2.1.2** LID principles and best practices should be incorporated into the overall stormwater management network, where determined feasible and suitable to the area.
- 6.2.1.3** Stormwater servicing shall occur by gravity only and shall conform to the City's Engineering Standards.

6.2.2 WATER SERVICING

Water service for the lands within The Banks of Crystal Creek ASP will be provided through the extension of water mains from the developing neighbourhoods of Suntree and Brightwell to the east, and from Crystal Creek to the north. Water servicing within neighbourhood will align with the City of Leduc's Water Master Plan.

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 will be detailed in a Hydraulic Network Analysis approved by the City of Leduc prior to development. Map No. 9.0 Water Servicing illustrates the layout of the proposed water mains. While the Leduc Water Master Plan – 2014 illustrates minimum pipe sizes for mains in this area, the actual size of the mains will be confirmed with the finalized Hydraulic Network Analysis prior to subdivision.

Objective:

- To provide full services to meet the needs of The Banks of Crystal Creek ASP lands, using trunk sizing specified by the City of Leduc.

Policies:

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

6.2.3 SANITARY SEWER SERVICING

The sanitary sewer network for The Banks of Crystal Creek ASP lands will be a gravity system sized to accommodate sanitary flows within the neighbourhood. It is anticipated that this system will connect to the future sanitary trunk system in the northwest portion of the neighbourhood through 74th Street, north to Crystal Creek. 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. Map No. 10.0 Sanitary Servicing illustrates the direction of flow for the sanitary servicing trunk pipes. The actual size of the pipes will be confirmed with the finalized Sanitary Servicing Plan. Sanitary servicing within neighbourhood will align with the City of Leduc's Sanitary Sewer Master Plan.

Objectives:

- To provide full services to meet the needs of The Banks of Crystal Creek ASP lands, using trunk sizing specified by the City of Leduc.

Policies:

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

6.2.4 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 provider, adequate services are available in the area to supply the proposed ASP.

Gas

AltaGas Ltd. is the local gas utility. According to the utility provider, 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 boulevard or in easements 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:

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

6.2.5 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 and 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 will be based out of an already constructed Fire hall located within the West ASP area, in addition to existing fire halls located in the City of Leduc. This ASP is located within a short response time of this new fire hall.

6.3 STAGING

6.3.1 TIMING OF DEVELOPMENT

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 Banks of Crystal Creek ASP represents a logical extension of infrastructure and services. Development is expected to commence within a 5 year period after the approval of this ASP. The ASP is expected to develop over 10 to 15 years from the commencement of development, which will be dictated by market demand.

The Banks of Crystal Creek ASP creates a policy framework guiding future subdivisions and development. The staging of development will progress in a logical and cost effective manner, with the first stage to be developed in the northern quarter section, and extending south through the ASP (See Map No. 12.0 Staging Plan). 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.

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.

Policies:

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

- 6.3.1.2** Order of development shall generally occur as outlined in Map No. 12.0 Staging Plan.
- 6.3.1.3** Development shall generally be in accordance with the land use concept in Map No. 5.0 Land Use Concept.
- 6.3.1.4** The interim use for all lands located in The Banks of Crystal Creek ASP shall remain as agricultural or for the purposes of public utility.

7.0 LAND USE AND POPULATION STATISTICS

MELCOR SW-28-49-25-4

Land Use	Area (ha)	% of GA	% of GDA
Gross Area (GA)	55.65	100.00%	
Environmental Reserve (ER)	7.27	13.06%	
Gross Developable Area (GDA)	48.38	86.94%	100.00%
* Municipal Reserve @ 10%, plus credit	4.84		10.00%
Arterial Roadway Dedication	1.04		2.15%
MR Greenway (Rail buffer)	0.69		1.43%
Park (MR)	1.49		3.08%
SWMF	4.09		8.45%
Circulation	11.53		23.83%
Pipeline Rights-of-Way (PUL)	1.13		2.34%
Total Non-Residential Area	19.97		41.28%
Net Residential Area	28.41		58.72%

* Note: As per the Letter of Understanding – Municipal Reserve Land Dedication Credit (November 28, 2013) between the City of Leduc and Melcor Development Ltd., Melcor has agreed to an over dedication of Municipal Reserve within NE 28-49-25-4 (West Haven neighbourhood) and the City of Leduc will credit an additional 0.992 ha of Municipal Reserve to SW 28-49-25-4 upon subdivision.

Residential Land Use Summary	Area (ha)	Units/ha	Units	% Total Units	People/Unit	Population
Low Density Residential (LDR)	20.58	28	576	65%	2.8	1,613
Street Oriented (SOR)	7.83	40	313	35%	2.8	876
Total	28.41		889	100%		2,489

Gross Population Density:	51 persons per gross developable area
Net Population Density:	88 persons per net residential hectare
Gross Unit Density:	18 units per gross developable area
Net Unit Density:	31 units per net residential hectare

MELCOR NW-21-49-25-4

Land Use	Area (ha)	% of GA	% of GDA
Gross Area (GA)	64.66	100.00%	
Environmental Reserve (ER)	7.42	11.48%	
Gross Developable Area (GDA)	57.24	88.52%	100.00%
Municipal Reserve @ 10%	5.72		10.00%
Arterial Roadway Dedication	4.45		7.77%
Commercial	0.60		1.05%
School and Community Park	4.86		8.49%
Parks (MR)	1.14		1.99%
SWMF	3.60		6.29%
Circulation	11.34		19.81%
Altalink Substation (PUL)	1.70		2.97%
Pipeline Rights-of-Way (PUL)	1.82		3.18%
Total Non-Residential Area	29.51		51.55%
Net Residential Area	27.73		48.45%

Residential Land Use Summary	Area (ha)	Units/ha	Units	% Total Units	People/Unit	Population
Low Density Residential (LDR)	19.49	28	546	57%	2.8	1,529
Street Oriented Residential (SOR)	6.74	40	270	28%	2.8	756
Medium Density Residential (MDR)	1.50	90	135	14%	1.8	243
Total	27.73		951	100%		2,528

Gross Population Density:	44 persons per gross developable area
Net Population Density:	91 persons per net residential hectare
Gross Unit Density:	17 units per gross developable area
Net Unit Density:	34 units per net residential hectare

Remaining Parcels SW-28-49-25-4

Land Use	Area (ha)	% of GA	% of GDA
Gross Area (GA)	6.43	100.00%	
Gross Developable Area (GDA)	6.43	100.00%	100.00%
Municipal Reserve @ 10%	0.64		10.00%
Arterial Roadway Dedication	0.20		3.11%
Urban Services	3.90		60.65%
Circulation	0.04		0.62%
Total Non-Residential Area	4.14		64.39%
Net Residential Area	2.29		35.61%

Residential Land Use Summary	Area (ha)	Units/ha	Units	% Total Units	People/Unit	Population
Medium Density Residential (MDR)	2.29	90	206	100%	1.8	371
Total	2.29		206	100%		371

Gross Population Density: 58 persons per gross developable area
Net Population Density: 162 persons per net residential hectare
Gross Unit Density: 32 units per gross developable area
Net Unit Density: 90 units per net residential hectare

8.0 LIST OF MAPS

- Map No. 1.0 Context Plan
- Map No. 2.0 Land Ownership Plan
- Map No. 3.0 Topography
- Map No. 4.0 Site Constraints
- Map No. 5.0 Land Use Concept
- Map No. 6.0 Parks and Open Space
- Map No. 7.0 Transportation Network
- Map No. 8.0 Pedestrian Network
- Map No. 9.0 Water Servicing
- Map No. 10.0 Sanitary Servicing
- Map No. 11.0 Stormwater Management
- Map No. 12.0 Staging Plan

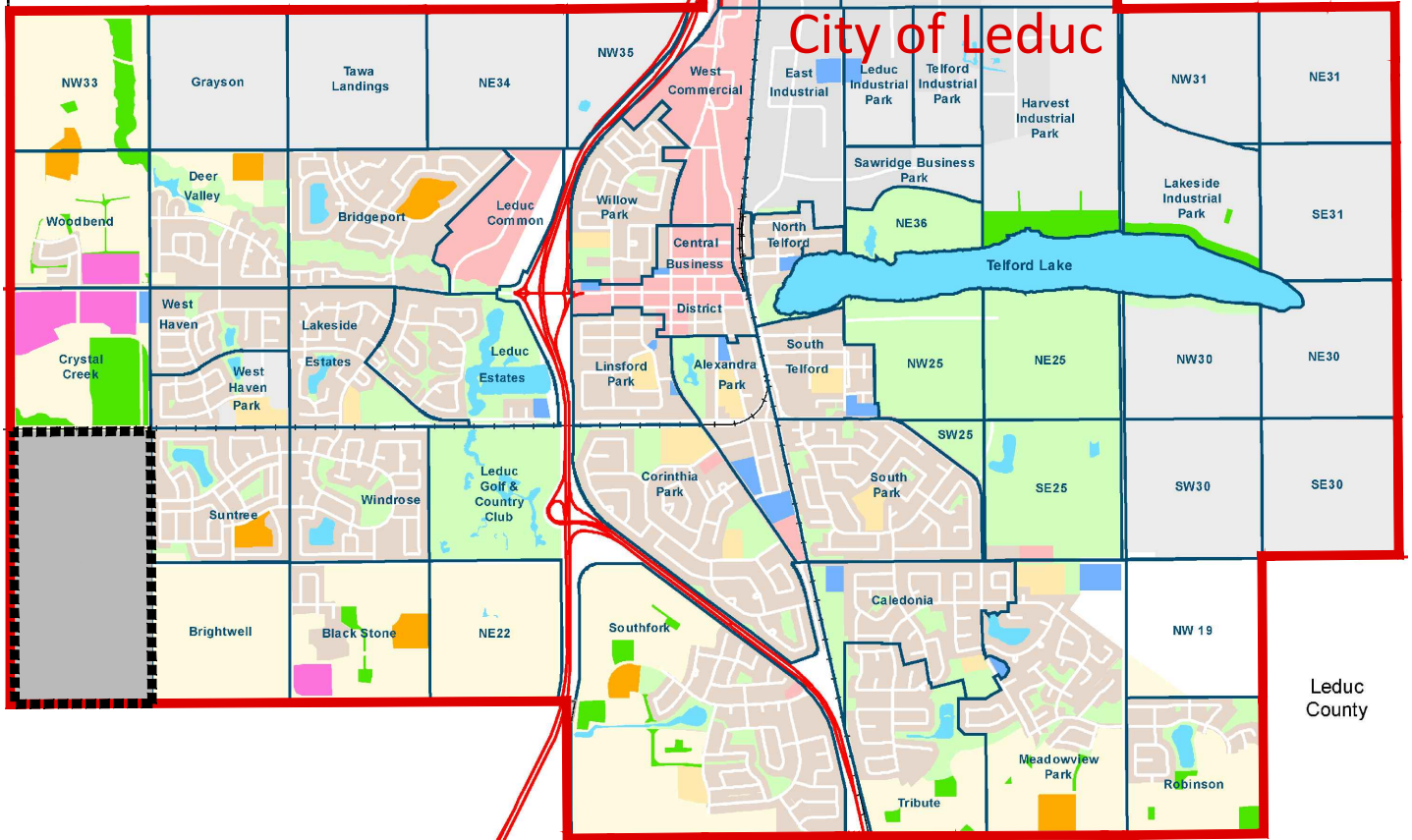


Edmonton International Airport (EIA)

Edmonton International Airport

Leduc County

City of Leduc



Highway 2A

Highway 2A



Leduc County

Leduc County

Not to Scale

October 7, 2021

Legend

-  City of Leduc Boundary
-  Area Structure Plan

The Banks of Crystal Creek Area Structure Plan

Map No.

1.0

Title

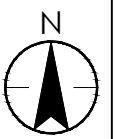
Context Plan



400-10220 103 Avenue - Edmonton, AB T5J 0K4

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Crystal Creek



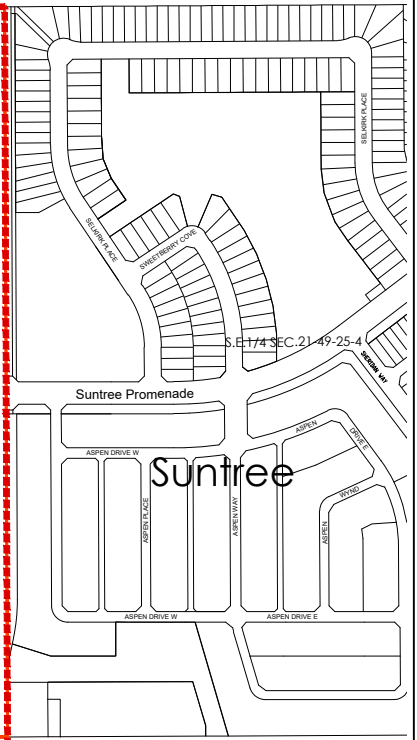
Canadian Pacific Railway

Lot 1, Plan 002 4356

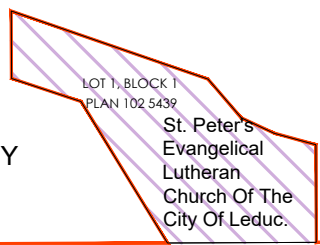
S.E.1/4 SEC.29-49-25-4

MELCOR

S.W.1/4 SEC.28-49-25-4

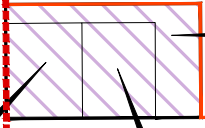


Suntree



LOT 1, BLOCK 1
PLAN 102 5439

St. Peter's
Evangelical
Lutheran
Church Of The
City Of Leduc.



McKINNEY

LOT A
BLOCK 1
PLAN 812 2797

38 Avenue

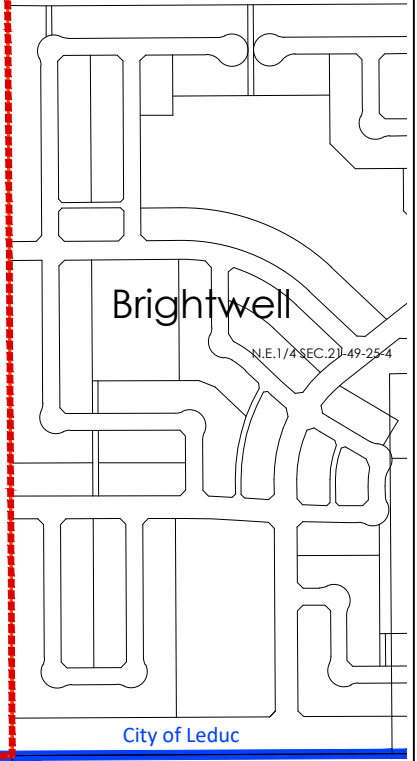
LASKOSKI
SW 28-49-25-4

McKINNEY

LOT 1
BLOCK 1
PLAN 072 8322

MELCOR

N.W.1/4 SEC.21-49-25-4



Brightwell

N.E.1/4 SEC.21-49-25-4



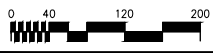
AltaLink

LEDUC 3255 SUBSTATION
AREA A
PLAN 122 0180

City of Leduc

Leduc County

S.W.1/4 SEC.21-49-25-4



October 7, 2021

- Legend
- - - ASP Boundary
 - City Boundary
 - Participant Owner
 - Non-Participant Owner

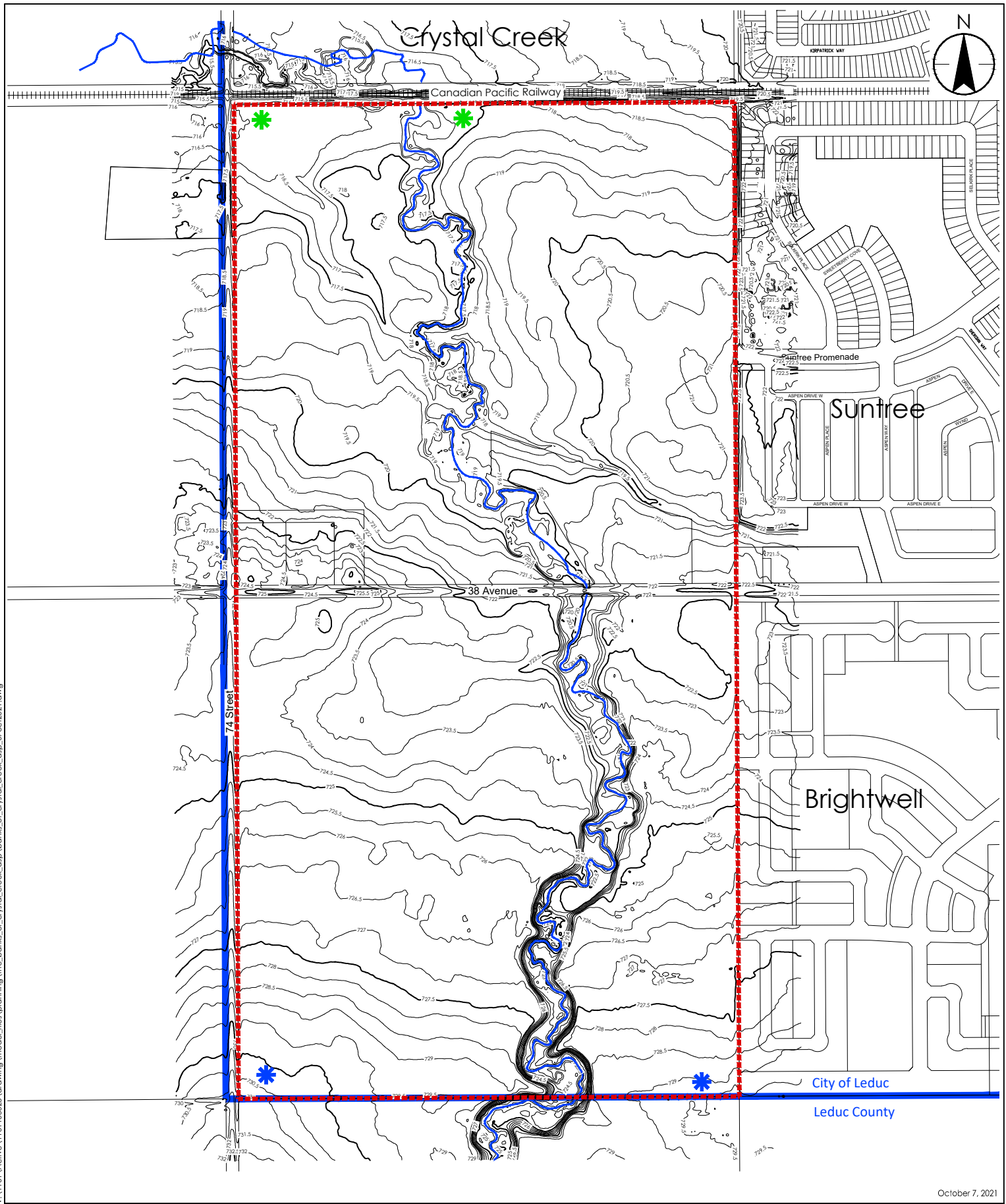
The Banks of Crystal Creek
Area Structure Plan
Figure No. 2.0
Title Land Ownership Plan



400-10220 103 Avenue - Edmonton, AB T5J 0K4

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Legend

- - - ASP Boundary
- City Boundary
- 0.5m Contour Interval
- Creek
- * High Point
- * Low Point

The Banks of Crystal Creek
Area Structure Plan

Figure No.

3.0

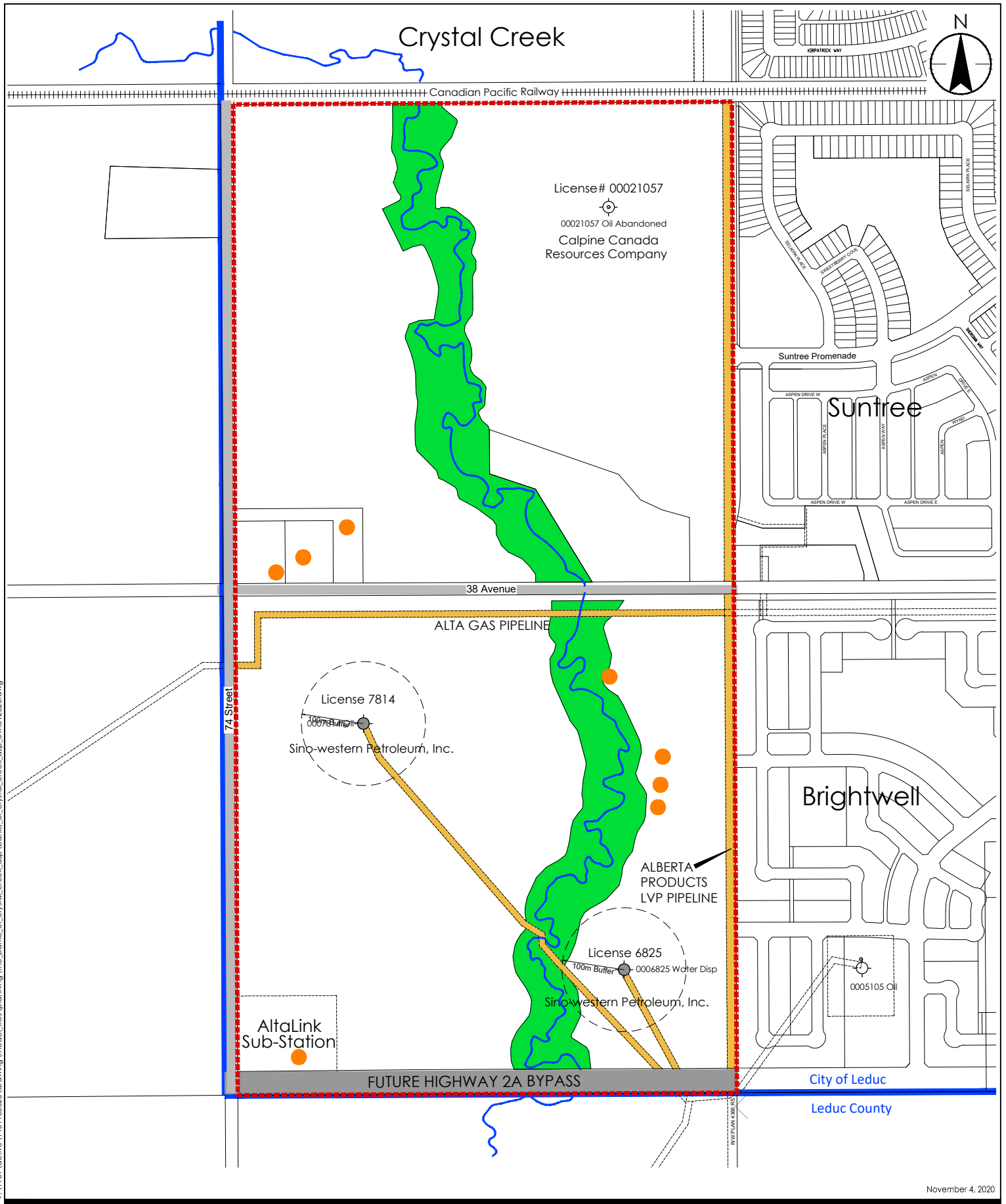
Title

Existing Topography

October 7, 2021



400-10220 103 Avenue - Edmonton, AB T5J 0K4



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November 4, 2020

Legend

- ▬▬▬▬ ASP Boundary
- ▬▬▬▬ City Boundary
- ▬▬▬▬ Ravine / Creek
- ▬▬▬▬ Utility Right of Way / Easement *
- ▬▬▬▬ Active / Abandoned Wells
- Existing Building
- ++++ C.P. Railway
- Existing Roadway
- Future Highway 2A
- * NOTE: UTILITY RIGHT-OF-WAY / EASEMENT LOCATIONS SHOWN ARE APPROXIMATE.

**The Banks of Crystal Creek
Area Structure Plan**

Figure No.

4.0

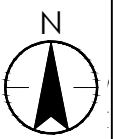
Title

Site Constraints



400-10220 103 Avenue - Edmonton, AB T5J 0K4

Crystal Creek



Canadian Pacific Railway

Lot 1, Plan 002 4356

S.E.1/4 SEC.29-49-25-4

S.E.1/4 SEC.21-49-25-4

S.W.1/4 SEC.28-49-25-4

38 Avenue

N.E.1/4 SEC.20-49-25-4

N.W.1/4 SEC.21-49-25-4

N.E.1/4 SEC.21-49-25-4

Future Highway 2A Realignment

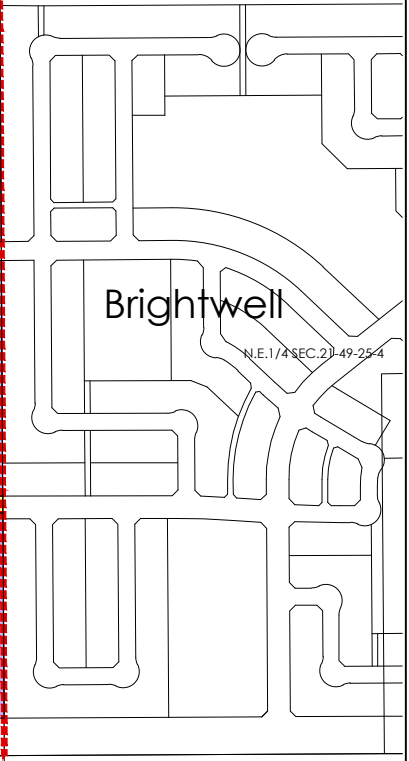
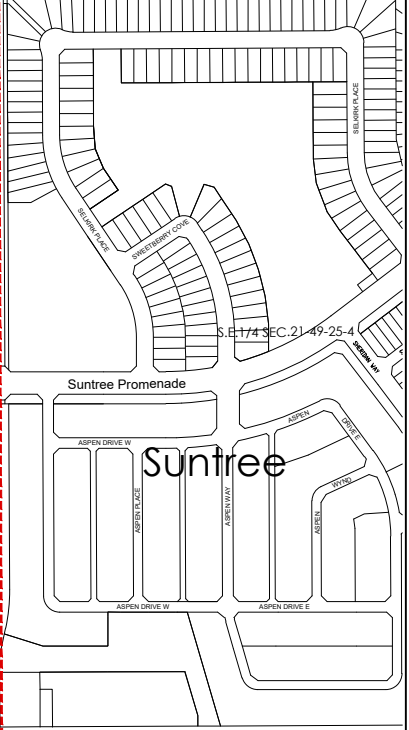
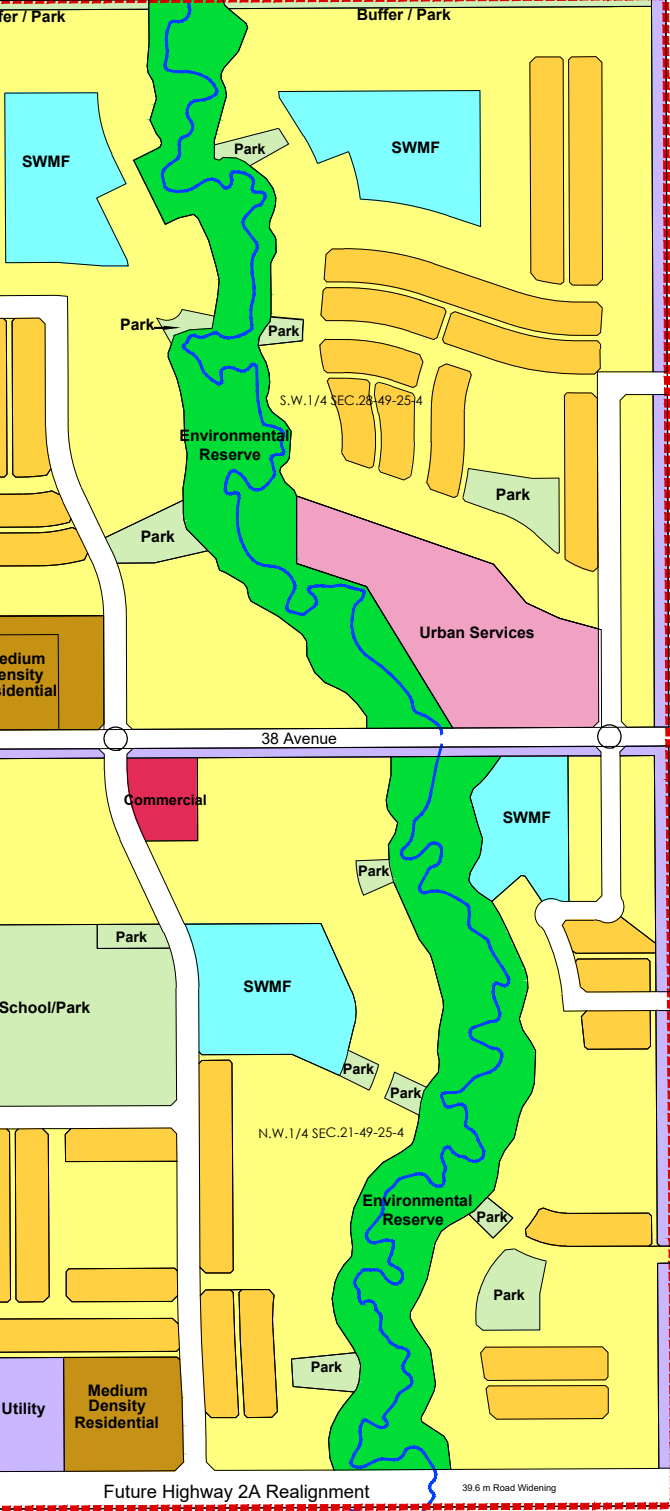
S.W.1/4 SEC.21-49-25-4

39.6 m Road Widening

16.0m Road Widening

74 Street

16.0 m Road Widening



Note:
Location of Alberta Products Pipeline PUL is approximate.

October 7, 2021

- Legend**
- - - - ASP Boundary
 - Low Density Residential
 - Street Oriented Residential
 - Medium Density Residential
 - Urban Services
 - Commercial
 - Environmental Reserve
 - School / Park / Buffer
 - Public Utility Lot
 - Storm Water Management
 - Creek

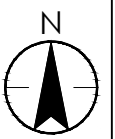
The Banks of Crystal Creek
Area Structure Plan
Figure No. 5.0
Title Land Use Concept



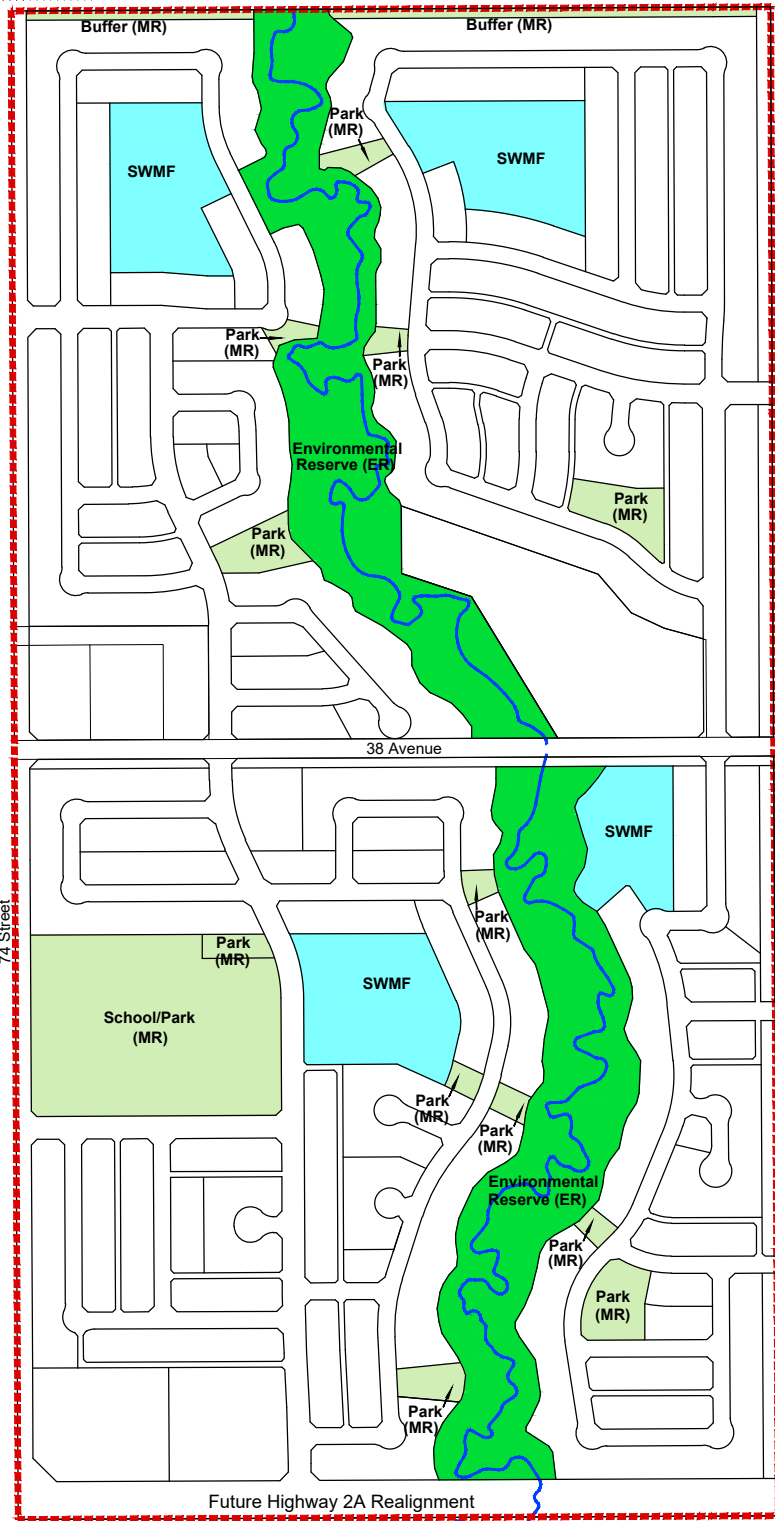
400-10220 103 Avenue - Edmonton, AB T5J 0K4

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Crystal Creek



Canadian Pacific Railway



- Legend**
- Environmental Reserve (ER)
 - School / Park / Buffer (MR)
 - Storm Water Management
 - ASP Boundary
 - Creek
 - CP Rail

The Banks of Crystal Creek
 Area Structure Plan
 Figure No. 6.0
 Title Parks and Open Space

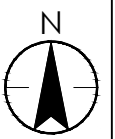
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October 7, 2021



400-10220 103 Avenue - Edmonton, AB T5J 0K4

Crystal Creek



Canadian Pacific Railway

Lot 1, Plan 002 4356

S.E.1/4 SEC.29-49-25-4

S.W.1/4 SEC.28-49-25-4

S.E.1/4 SEC.21-49-25-4

Suntree Promenade

Suntree

38 Avenue

Brightwell

N.E.1/4 SEC.20-49-25-4

N.W.1/4 SEC.21-49-25-4

N.E.1/4 SEC.21-49-25-4

74 Street

Future Highway 2A Realignment

S.W.1/4 SEC.21-49-25-4

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October 7, 2021

Legend

- ASP Boundary
- Arterial Roadway
- Major Collector (Modified Cross Section)
- Major Collector Roadway
- Minor Collector Roadway
- Modified Local Roadway
- Special Study Area

The Banks of Crystal Creek
Area Structure Plan

Figure No.

7.0

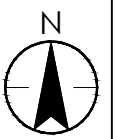
Title

Transportation Network

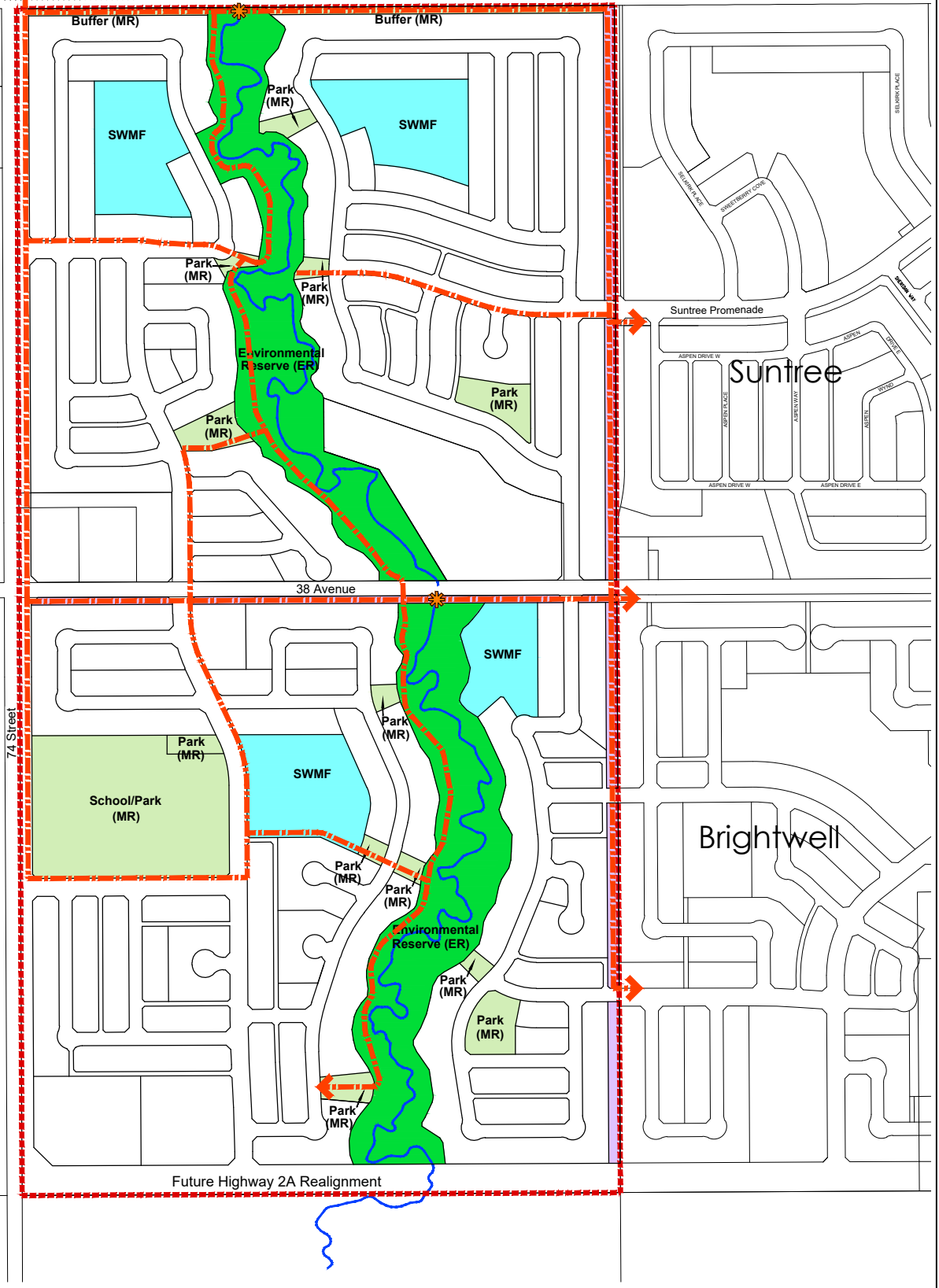


400-10220 103 Avenue - Edmonton, AB T5J 0K4

Crystal Creek



Canadian Pacific Railway



Legend

- - - - ASP Boundary
- - - - Multiway Trail
-  Trail Creek Crossing
-  Creek
-  Park (MR)
-  Environmental Reserve (ER)
-  Public Utility Lot
-  SWMF

The Banks of Crystal Creek
Area Structure Plan

Figure No.

8.0

Title

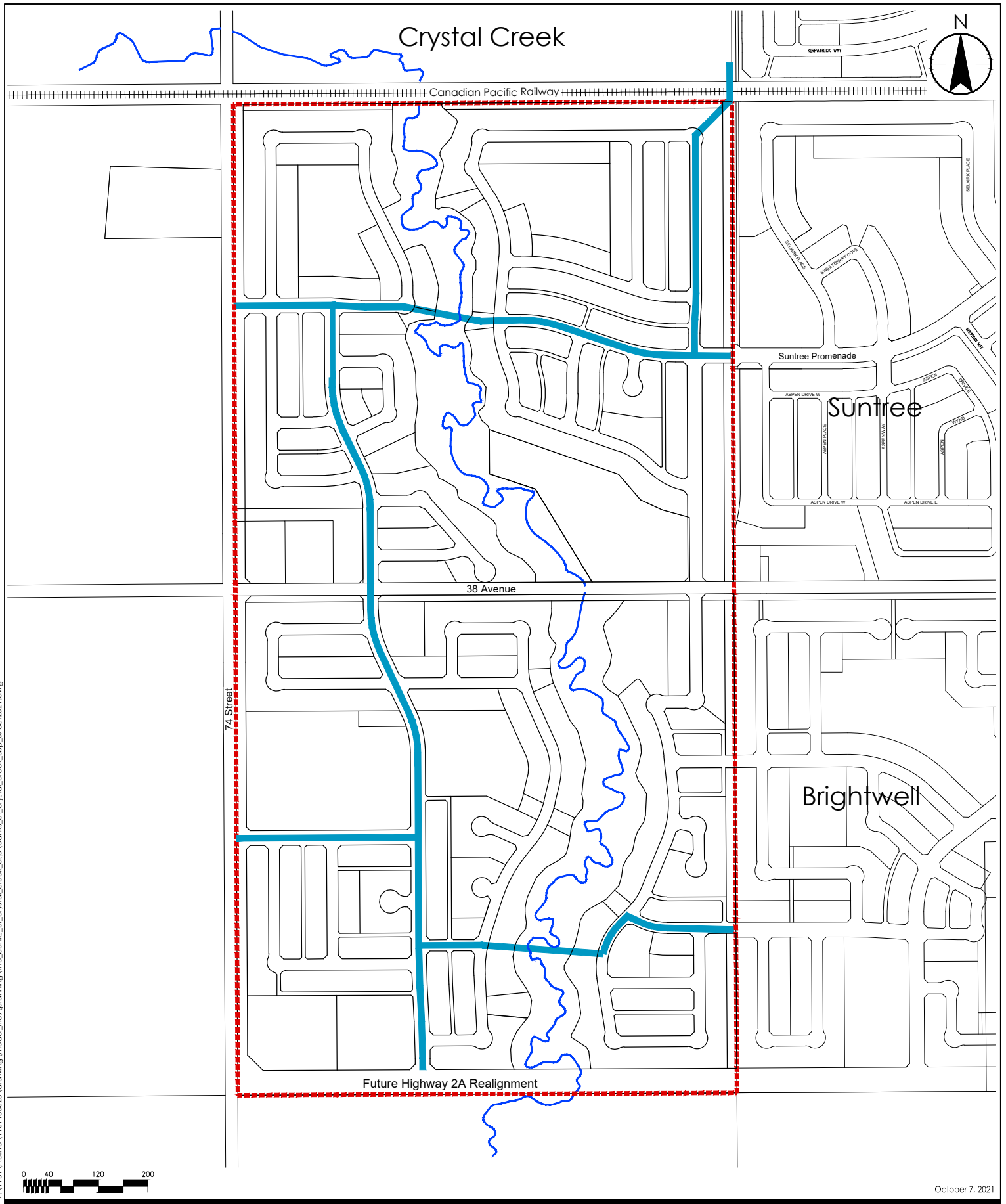
Pedestrian Network

October 7, 2021

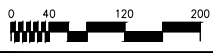
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October 7, 2021

Legend

- - - ASP Boundary
- Proposed Water Main

Note:
 Size of Watermain to be confirmed with Hydraulic Network Analysis.
 The water mains will be as per the sizing indicated in the City's Water Master Plan

The Banks of Crystal Creek
 Area Structure Plan

Figure No.

9.0

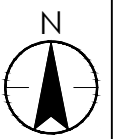
Title

Water Servicing



400-10220 103 Avenue - Edmonton, AB T5J 0K4

Crystal Creek



Canadian Pacific Railway

Lot 1, Plan 002 4356

S.E.1/4 SEC.29-49-25-4

S.W.1/4 SEC.28-49-25-4

S.E.1/4 SEC.21-49-25-4

Suntree Promenade
Suntree

38 Avenue

74 Street

N.E.1/4 SEC.20-49-25-4

N.W.1/4 SEC.21-49-25-4

Brightwell

N.E.1/4 SEC.21-49-25-4

S.W.1/4 SEC.21-49-25-4

October 7, 2021

Legend
Gravity Main

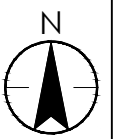
The Banks of Crystal Creek
Area Structure Plan
Figure No. 10.0
Title Sanitary Servicing



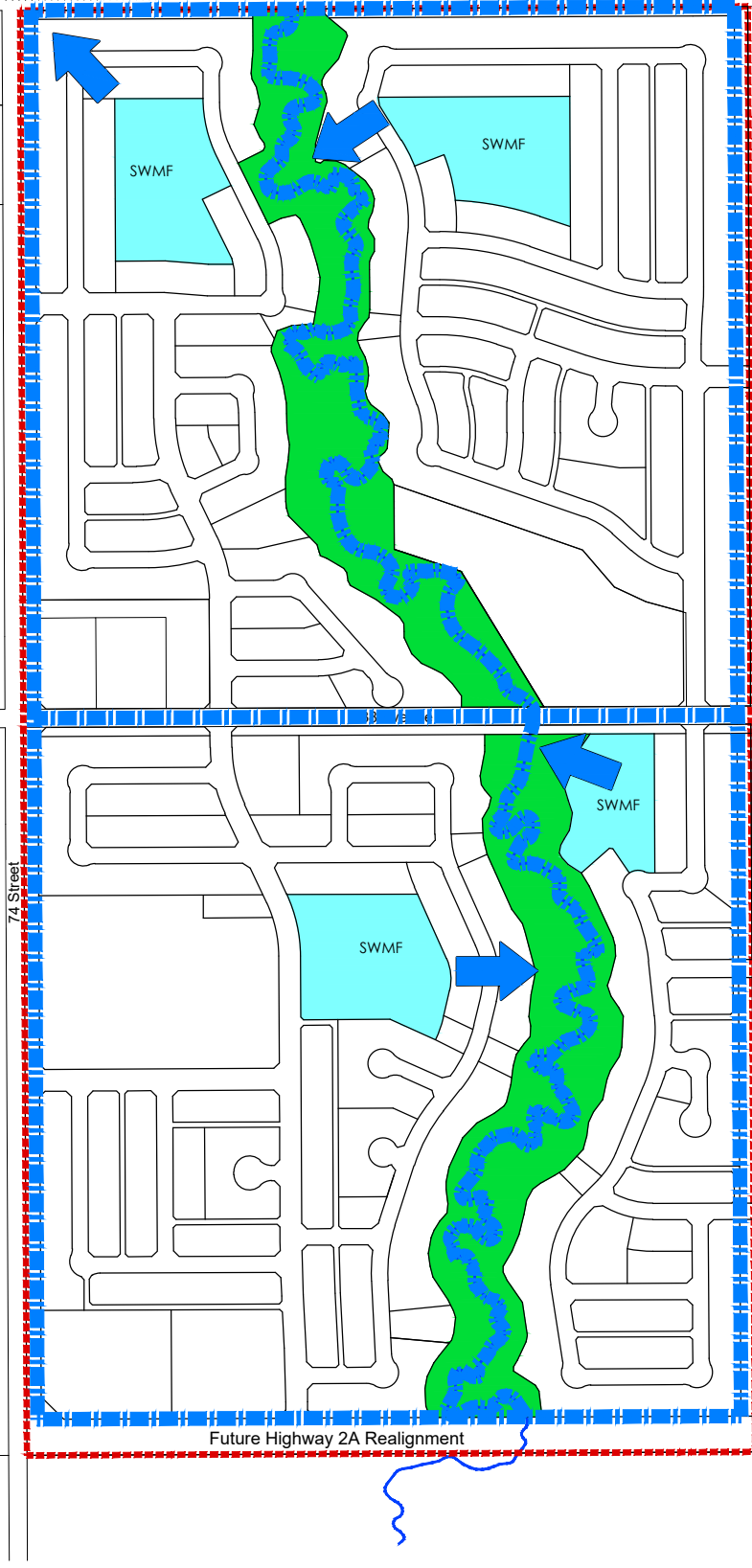
400-10220 103 Avenue - Edmonton, AB T5J 0K4

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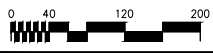
Crystal Creek



Canadian Pacific Railway



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October 7, 2021

- Legend**
- Storm Water Management
 - General Direction of Flow
 - Basin Boundary

The Banks of Crystal Creek
Area Structure Plan

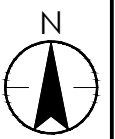
Figure No.
11.0

Title
Stormwater Management



400-10220 103 Avenue - Edmonton, AB T5J 0K4

Crystal Creek



Canadian Pacific Railway

Lot 1, Plan 002 4356

S.E.1/4 SEC.29-49-25-4

S.W.1/4 SEC.28-49-25-4

S.E.1/4 SEC.21-49-25-4

Suntree Promenade
Suntree
Suntree Way
Aspen Place
Aspen Drive W
Aspen Drive E

38 Avenue

74 Street

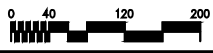
N.E.1/4 SEC.20-49-25-4

N.W.1/4 SEC.21-49-25-4

Brightwell



N.E.1/4 SEC.21-49-25-4

S.W.1/4 SEC.21-49-25-4



October 7, 2021

Legend

-  Indicates General Direction of Development
-  ASP Boundary

The Banks of Crystal Creek
Area Structure Plan

Figure No.

12.0

Title

Staging Plan



400-10220 103 Avenue - Edmonton, AB T5J 0K4

9.0 APPENDIX A – POLICY COMPLIANCE

Please note that for the Policy Compliance charts that have been provided below, only policies that are relevant for comparison have been included.

9.1 EDMONTON METROPOLITAN REGION BOARD GROWTH PLAN. RE-IMAGINE. PLAN. BUILD.

EMRB Growth Plan	The Banks of Crystal Creek ASP
Policy Area 1: Economic Competitiveness and Employment	
1.4 Promote the livability and prosperity of the Region and plan for the needs of a changing population and workforce	
1.4.1 To improve housing diversity in the Region, market affordable and non-market housing will be planned and developed within close commuting distance to major employment areas and within centres, appropriate to the level of service and amenities identified in Table 1A-C.	The ASP supports and promotes sustainable, alternative, and compact residential development providing diverse housing forms and potential for increased density, in close community distance of the planned employment area within the West ASP.
1.4.3 To attract and retain a diverse range of workers, complete communities will be planned and developed appropriate to the scale and level of service identified in Table 1A-C and in accordance with the policies in the Communities and Housing policy area.	The Banks of Crystal Creek ASP lands will be designed to be a part of a broader complete community for various household types. Full urban services, as well as parks, school, and multiways, will be available within the neighbourhood. Connections to the greater community ensures access to City-based amenities.
Policy Area 2: Natural Living Systems	
2.1 Conserve and restore natural living systems through an ecological network approach	
2.1.1 Natural living systems of regional, provincial and federal significance identified on Schedule 4 will be conserved in addition to other natural features identified for protection under provincial and federal legislation to maintain and enhance the Region's biodiversity.	There are no Regional, Provincial or Federal natural living systems of significance in the plan area. However, an unnamed ravine, tributary of the Whitemud Creek, is centrally located in the neighbourhood and has been identified as significant through the City of Leduc's Environmental Significant Areas Study (2017). While the north-south portion of the Whitemud Creek tributary has been preserved using Environmental Reserve, the associated smaller east-west reach will not be classified as Environmental Reserve due to the limited

EMRB Growth Plan	The Banks of Crystal Creek ASP
	<p>ecological value. This small reach has previously been impacted by significant channel straightening and agricultural activities, with little or no natural vegetation remaining on the shore of the creek. As this reach does serve a drainage function for the subject lands and surrounding area, this function will be incorporated within the overall servicing strategy as development of the area occurs.</p> <p>Policy:</p> <ul style="list-style-type: none"> Additional analysis shall be required at the zoning and subdivision stage for the identified stream reach to ensure that the drainage functions are maintained as the plan area develops.

2.2 Protect regional watershed health, water quality and quantity

<p>2.2.1 The provincial Water for Life and Alberta’s Strategy for Sustainability will guide statutory plans, regional plans and regional infrastructure projects to protect, enhance, and restore the water quality in the Region. Statutory plans, regional plans and regional infrastructure projects will include policies and initiatives to:</p> <ol style="list-style-type: none"> conserve natural areas along waterways; improve water quality and quantity; incorporate best practices to minimize soil erosion, protect and enhance riparian zones, and conserve and enhance areas that contain habitat for significant, rare or endangered plant species; and conserve wetlands with sufficient buffers to maintain their water quality and hydraulic function, as well as upland habitat necessary to support the life cycle needs of the wetland ecosystem. 	<p>A Biophysical Report has been completed and did not identify any significant wetlands or other upland natural features for conservation. The centrally located ravine will be preserved using Environmental Reserve.</p>
<p>Policy (v) – Encourage and support sustainable development within the region.</p>	<p>The ASP promotes sustainable and compact development providing diverse housing forms and potential for increased density.</p>

2.3. Plan development to promote clean air, land and water and address climate change impacts

EMRB Growth Plan	The Banks of Crystal Creek ASP
<p>2.3.1 The planning, design and construction of new development and infrastructure in greenfield areas and built-up urban areas will incorporate low-impact development and green building practices.</p>	<p>The ASP promotes low impact development practices and green design principles. LID principles and best practices will be used where practical in the landscaping of parks, open spaces, and stormwater management facilities.</p>

Policy Area 3: Communities and Housing

<p>3.1 Plan and develop complete communities within each policy tier to accommodate people's daily needs for living at all ages</p>	
<p>3.1.1 Built-up urban areas and greenfield areas will be planned and developed as complete communities generally in accordance with Table 1A-C.</p>	<p>The ASP provides a compact and contiguous mix of residential, commercial, and residential-related land uses, in support of developing a complete community within the Metropolitan Area (Table 1B).</p>
<p>3.1.4 In the metropolitan area, greenfield areas will be planned and developed as complete communities that:</p> <ul style="list-style-type: none"> a. are compact, contiguous, and incorporate a mix of uses; b. are accessible and age-friendly; c. provide a diversity of housing options in terms of density and built form; d. achieve the minimum greenfield density, in accordance with Schedule 6; e. incorporate an interconnected street network and urban form to support active transportation; f. integrate local services, amenities, institutional and commercial uses with residential development, within buildings and/or within a five-minute walk (400 metres); g. incorporate higher density uses along existing and planned transit corridors and at major transit stations; and h. provide high quality parks, trails and open spaces. 	<p>The Banks of Crystal Creek plans for a variety of household types, providing compact residential development provided with urban services, commercial uses, school and parks, and an interconnected network of multiway paths and streets.</p>

EMRB Growth Plan	The Banks of Crystal Creek ASP
3.1.5 Built-up urban areas and greenfield areas will be planned and developed to provide municipal public services and open spaces to support population growth.	The Banks of Crystal Creek plans to provide urban services, school, and an interconnected network of multiway paths, parks, stormponds ravine and school for its residents.
3.2 Plan for and promote a range of housing options	
3.2.1 Housing will be planned and developed to address the changing demographics in the Region by including housing that offers a diversity of types, forms and levels of affordability to support a variety of lifestyle options, income levels and to meet the needs of all residents.	The ASP supports the development of new and alternative residential forms and offers housing for a diversity of lifestyles and income levels.
3.2.3 The greatest density and diversity of housing in terms of type, form and affordability, including row housing and low, mid and high-rise buildings, will be directed to centres and areas with existing or planned regional infrastructure, transit and amenities, at a scale appropriate to the community.	This ASP plans for a variety of housing options, include street-oriented development which offers a higher density of single and semi-detached and row housing development. Low rise apartment homes are also appropriate for this area of greenfield development and is directed toward collector intersections and future transit avenues.
Policy Area 4: Integration of Land use and Infrastructure	
4.1 Establish a compact and contiguous development pattern to accommodate employment and population growth	
4.1.2 Employment and population growth will be accommodated in a compact form and a contiguous pattern within existing urban communities.	The City of Leduc had annexed land in 2014 for the purpose of providing contiguous urban development to sustain its urban growth. This ASP is located within this annexation boundary and is contiguous to planned greenfield development.
4.3 Plan and develop greenfield areas in an orderly and phased manner to contribute to complete communities	
4.3.1 Greenfield areas shall be part of a new statutory plan and planned, developed and phased in a contiguous pattern to: <ul style="list-style-type: none"> a. achieve the minimum greenfield density as identified in Schedule 6; b. provide a mix of land uses in a compact form, including a mix of residential and 	The ASP proposes a residential density that meets the minimum growth target mandated by Schedule 6 of the EMRB Growth Plan and provides the basis of a complete and compact residential neighbourhood.

EMRB Growth Plan	The Banks of Crystal Creek ASP
<p>employment uses to support the creation of complete communities;</p> <ul style="list-style-type: none"> c. incorporate innovative and sustainable development standards to achieve compact development; d. incorporate an interconnected street network and open space network to support active transportation and transit viability, where applicable; and e. provide for a mix of housing forms and housing options that are attainable in areas close to existing and planned major and local employment areas and multi-modal transportation access. 	<p>The ASP plans for a variety of residential, commercial, and complimentary uses (urban services and parks) that are within a short walking distance and connected by a hierarchical network of streets, walkways and multiways.</p>
<p>4.3.2 Greenfield areas will only be considered for development in locations that meet all of the following criteria:</p> <ul style="list-style-type: none"> a. are part of an existing urban community; b. are contiguous to planned areas approved through a statutory plan or are adjacent to existing or planned infrastructure or support the logical and orderly extension of infrastructure; c. have long term municipal storm, water and wastewater servicing capacity to accommodate the planned development; d. an agricultural impact assessment has been completed to identify the potential adverse impacts of the proposed development on prime agricultural lands and existing agricultural operations, in accordance with the policies in the Agriculture policy area; and e. if the lands are part of a new area structure plan including or adjacent to prime agricultural lands as identified on Schedule 11, an agricultural impact assessment shall be completed by a qualified professional in accordance with Policy 6.2.5. 	<p>The Banks of Crystal Creek is the next logical and orderly extension of infrastructure from the surrounding planned Crystal Creek, Suntree, and Brightwell neighbourhoods. A review of Leduc's master servicing plans for water and sanitary servicing has been done to ensure there is capacity within the City's system. Ongoing review and detailed design will ensure that development is accommodate in a logical manner.</p> <p>An Agricultural Impact Assessment has been submitted under separate cover, which evaluates the land use change and impacts to existing agriculture lands adjacent to the proposed area structure plan.</p>

Policy Area 5: Transportation Systems

EMRB Growth Plan	The Banks of Crystal Creek ASP
<p>5.1 Develop a regional transportation system to support and enhance growth and regional and global connectivity</p>	
<p>5.1.1 The regional transportation system shown conceptually on Schedules 10A-10C will be planned and developed to:</p> <ul style="list-style-type: none"> a. deliver viable multi-modal transportation choices that provide urban and rural residents and businesses with convenient access to the Region's economic, educational, recreational and cultural opportunities; b. ensure that regional transportation corridors provide connections to major employment areas and link the Region with local and extra-regional markets in Canada and abroad; c. provide an efficient system of regional truck routes and over dimensional corridors to ensure the effective and efficient movement of goods into and out of significant industrial, commercial and agricultural areas; and d. ensure that access, intersection and interchange practices recognize and support the economic activities and provide a reasonable balance between access, efficiency and safety. 	<p>The Banks of Crystal Creek ASP Plan for the dedication and future construction of the 74th Street arterial road west of its boundary as well as the Highway 2 regional expressway south of its boundary. The ASP plans for a hierarchical network of major and minor collectors and local roadways to provide safe and efficient movement through the residential neighbourhood. In addition, a network of multiway will be connected within the neighbourhood as well as to the surrounding communities.</p>
<p>5.2.3 Active transportation networks and facilities will be integrated into transportation and land use planning to provide safe, comfortable and reliable travel for pedestrians and cyclists within greenfield areas and built-up urban areas, and provide nonmotorized linkages to transit services, adjacent neighbourhoods and employment and recreational destinations, where applicable.</p>	<p>The ASP encourages multiple modes of transportation. The multiway network provides connectivity between open spaces, commercial uses, residential uses, and into adjacent communities.</p> <p>The neighbourhood is equipped to accommodate the integration of public transit when available.</p>
<p>5.3 Coordinate and integrate land use and transportation facilities and services to support the efficient and safe movement of people, goods and services in both urban and rural areas</p>	

EMRB Growth Plan	The Banks of Crystal Creek ASP
<p>5.3.1 The locations, types, scale and built form of residential, commercial, institutional and industrial uses will be planned and developed to optimize the use of transportation infrastructure to ensure efficient, convenient and safe movement of people and goods.</p>	<p>The ASP provides a mix of residential and residential-related land uses including commercial uses and encourages multiple modes of transportation.</p> <p>The neighbourhood is equipped to accommodate the integration of public transit when available. The ASP provides policies for the provision of future transit service, should it be warranted.</p>
<p>5.3.2 The locations, types, scale and built form of development, including related parking regulations, will be actively managed with transit service, routing and alignment planning to foster a modal shift towards transit and active transportation modes.</p>	
<p>5.3.3 The provision of transportation infrastructure and services will be consistent with and supportive of the guiding principles, objectives and policies of this Plan.</p>	

Policy Area 6: Agriculture

<p>6.1 Identify and conserve an adequate supply of prime agricultural lands to provide a secure local food source for future generations</p>	
<p>6.1.3 In the metropolitan area, prime agricultural lands identified through the land evaluation and site assessment tool shall be conserved for agricultural purposes for as long as possible, recognizing that these lands will urbanize over time to accommodate growth.</p>	<p>An Agriculture Impact Assessment has been provided under separate cover. This neighbourhood has been identified for residential growth, while other higher priority agricultural lands will be preserved for agricultural uses. The staging of this land and timing of development will promote the continued agriculture use, until urban services are economically extended and available.</p>
<p>6.2 Minimize the fragmentation and conversion of prime agricultural lands for non-agricultural uses</p>	
<p>6.2.4 In the metropolitan area, the fragmentation and conversion of prime agricultural lands for nonagricultural uses will only be considered when the proposed development meets all of the following criteria:</p>	<p>The ASP is planned for non-agricultural uses that are contiguous with planned neighbourhood to the north and east. The logical and economical extension of services to this area will deter the fragmentation of existing agricultural uses.</p>

EMRB Growth Plan	The Banks of Crystal Creek ASP
<ul style="list-style-type: none"> a. the lands are contiguous with built-up urban areas and/or planned areas; b. the lands are required to accommodate municipal employment and population projections in accordance with Schedule 1; c. if residential uses are proposed, the lands are within a proposed statutory plan in conformance with the applicable minimum greenfield density identified in Schedule 6; d. an agricultural impact assessment has been completed to identify the potential adverse impacts of the proposed development on agricultural lands and existing agricultural operations on-site and offsite in the surrounding area; and e. mitigation measures recommended through an agricultural impact assessment are incorporated in the planning and design of the proposed development to minimize potential adverse impacts on agricultural lands and active agricultural operations on-site and off-site in the surrounding area from near neighbour impacts of urban growth. 	<p>The ASP is planned to meet the target (35 dwelling units per net residential hectare), in accordance with Schedule 1 of the Growth Plan.</p> <p>An Agricultural Impact Assessment has been submitted under separate cover, that reviews the impacts of the planned development and recommends mitigation measures, if necessary. The planned arterial roadways separating urban uses from agricultural uses provide a clear delineation and adequate buffer from potentially non-compatible of uses.</p>
<p>6.2.5 An agricultural impact assessment prepared by a qualified professional shall be required when a new area structure plan proposes development in a greenfield area that contains prime agricultural land as identified on Schedule 11. The application and contents of an assessment may be subject to review following completion of the Regional Agriculture Master Plan. The assessment shall:</p> <ul style="list-style-type: none"> a. describe the proposed development and contextual factors; b. determine potential adverse impacts on agricultural lands and active agricultural operations on-site and off-site in the surrounding area; and 	<p>An Agricultural Impact Assessment has been submitted under separate cover, that reviews the impacts of the planned development and recommends mitigation measures, if necessary. The planned arterial roadways separating urban uses from agricultural uses provide a clear delineation and adequate buffer from potentially non-compatible of uses.</p>

EMRB Growth Plan	The Banks of Crystal Creek ASP
c. recommend measures to buffer, mitigate and minimize potential land use conflicts.	

9.2 CITY OF LEDUC MUNICIPAL DEVELOPMENT PLAN

City of Leduc Municipal Development Plan	The Banks of Crystal Creek ASP
<h3>2.1 Complete Communities</h3> <p>Goal: The City of Leduc will be a complete and well-planned community.</p>	
<h4>2.1.1 Land Development</h4>	<p>The Banks of Crystal Creek ASP is consistent with the City of Leduc's respective Master Plans.</p>
<h4>2.1.2 Contiguous & Efficient Growth</h4>	<p>The Banks of Crystal Creek is the next logical and orderly extension of infrastructure from the surrounding planned Crystal Creek, Suntree, and Brightwell neighbourhoods.</p> <p>The neighbourhood's net residential density meets the minimum greenfield residential density of 35 du/nrha.</p>
<h4>2.1.3 Housing</h4>	<p>The Banks of Crystal Creek 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>
<h4>2.1.4 Commercial Development</h4>	<p>A Commercial site is proposed within the Banks of Crystal Creek ASP to meet the daily needs of residents and contribute to a Complete Community. In addition, the neighbourhood is well connected to larger commercial sites within adjacent neighbourhoods.</p>
<h4>2.1.5 Urban Design</h4>	<p>A unique neighbourhood identity will be established via further market research and</p>

	<p>will adhere to and incorporate strong urban design principles.</p> <p>Streetscapes and architectural detailing of neighbourhood streets will be determined with further market research.</p>
2.1.6 Natural Areas and Open Space	<p>Municipal Reserve and Environmental Reserve has been dedicated within the Banks of Crystal Creek plan area to ensure that there is adequate land and open space for municipal and school facilities as well as to ensure the preservation of environmentally sensitive areas such as Whitemud Creek.</p> <p>The various open spaces and environmental areas within the plan area have been connected through a multi-modal transportation network.</p>
2.1.7 Development Constraints	<p>Setbacks from arterial roadways, CP railway, and oil and gas facilities will be maintained to ensure compatibility.</p>
<p>2.2 Environmental Sustainability</p> <p>Goal: The City of Leduc will be a community leader in environmental sustainability and stewardship.</p>	
2.2.1 Environmental Sustainability	<p>The Whitemud Creek will be conserved and dedicated as Environmental Reserve.</p>
2.2.5 Contaminated Sites	<p>Environmental assessments have been conducted for The Banks of Crystal Creek ASP lands. The results of the Phase 1 ESA did not reveal any undue constraints with regards to contaminated sites to future development.</p>
2.2.6 Urban Forest and Natural Habitats	<p>Where required, natural features will be conserved by providing adequate buffers and setbacks.</p> <p>Access to the Whitemud Creek ravine will be provided via multiway, to provide public access and constructed of hard surface material to prevent multiple trails to be compacted.</p>

	LID principles and best practices will be used where practical in the landscaping of parks, open spaces, and stormwater management facilities may incorporate native and naturalized plant species to minimize landscape irrigation.
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2.4 Infrastructure and Utilities

Goal: The City of Leduc will ensure the efficient provision of infrastructure and utilities.

2.4.1 Infrastructure	
2.4.2 Communication Infrastructure	ROWS will be provided within the plan area for available telecommunications companies.
2.4.3 Water Resources	<p>Water service for the lands within The Banks of Crystal Creek ASP will be provided through the extension of water mains from the developing neighbourhoods of Suntree and Brightwell to the east, and from Crystal Creek to the north.</p> <p>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 will be detailed in a Hydraulic Network Analysis approved by the City of Leduc prior to development.</p>
2.4.4. Stormwater	<p>Minor storms will drain into stormwater management facilities that will provide retention and primary treatment prior to discharge. LID principles will be supported, where practical.</p> <p>Stormwater management facilities will be fully landscaped features and integrated into the proposed open space system.</p> <p>The Whitemud Creek will be conserved and dedicated as Environmental Reserve. Stormwater management facilities will</p>

	<p>provide primary treatment to runoff water, prior to discharging into the creek.</p> <p>Detailed stormwater management plans will be outlined at time of subdivision and included in the engineering design stage.</p> <p>The SWMF will retain stormwater from developed lands and release at a maximum predevelopment flow rate of 3.0 L/s/ha, unless otherwise approved by the City of Leduc Engineering Department, through outfall pipes to the creek located central to the plan area.</p>
<p>2.4.5 Wastewater</p>	<p>The Banks of Crystal Creek is the next logical and orderly extension of infrastructure from the surrounding planned Crystal Creek, Suntree, and Brightwell neighbourhoods.</p> <p>A review of Leduc's master servicing plans for water and sanitary servicing has been done to ensure there is capacity within the City's system. Ongoing review and detailed design will ensure that development is accommodate in a logical manner.</p>

2.5 Transportation and Mobility

Goal: The City of Leduc will provide safe and reliable multi-modal transportation to the region and all parts of the city for all users

<p>2.5.1 Transportation</p>	<p>The neighbourhood is designed in a manner that achieves a density that will efficiently utilize transportation infrastructure and support a multi-modal transportation system to and through the neighbourhood.</p> <p>Active transportation is supported through the inclusion of a multi-way network that runs throughout the neighbourhood and connects to adjacent communities along major arterial roadways and linear PULs.</p>
<p>2.5.2 Transit</p>	<p>The neighbourhood is equipped to accommodate the integration of public</p>

	<p>transit when available. The ASP provides policies for the provision of future transit service, should it be warranted.</p> <p>Community design and densities proposed are supportive of future public transit routes.</p>
<p>2.5.3 Walkability and Accessibility</p>	<p>Public areas, parks, and the multi-way system will incorporate design principles that ensure that persons of all ages and abilities are able to utilize them in an equitable manner.</p> <p>Multiways between these focal points improve overall walkability and promote active transportation for healthier lifestyles. The proposed multiway system is a complete network and will be integrated within the larger extent of the community.</p> <p>The linear PULs that run east / west along 38 Avenue and along the eastern boundary of the plan area may serve as a connection point between the adjacent communities and broader multi-way network.</p>

2.6 Recreation and Parks

Goal: The City of Leduc will enhance its network of recreational opportunities and parks to meet various needs.

Parks and open spaces within the Banks of Crystal Creek plan area will be developed in a manner that ensures a variety of active and passive recreation opportunities are available to the local residents and broader community to meet the diverse needs of this population. The Banks of Crystal Creek ASP development concept provides a mix of open space types and sizes. In addition to the school and community park site, there are smaller parks and stormwater management facilities. The smaller park sites are intended to provide passive recreational space within close walking distance to Whitemud Creek and neighbourhood residents. Stormwater management facilities provide obvious passive recreational opportunities.

Active and passive recreational opportunities are proposed for The Banks of Crystal Creek ASP lands. These will be in the form of open spaces connected via the multiway system. Multiways between these focal points improve overall walkability and promote active transportation for healthier lifestyles. The proposed multiway system is a complete network and will be integrated within the larger extent of the community. The multiway path system has been integrated at the preliminary design stages of The Banks of Crystal Creek ASP lands. The proposed multiway and public spaces are sited in accordance with CPTED principles. They will be located along collectors and local road systems.

Whitemud Creek has been dedicated as Environmental Reserve and will function as a passive and active recreational open space spine that runs north to south throughout the plan area.

All residential units within The Banks of Crystal Creek ASP lands are within 400 m walking distance of open space and multiways.

2.7 Arts, Culture, and Heritage

Goal: The City of Leduc will be a hub of arts and culture that values and protects its tangible and intangible heritage.

Neighbourhood entryways within the Banks of Crystal Creek plan area will accommodate and incorporate architectural features to create a sense of place and arrival to the neighbourhood.

2.9 Agriculture

Goal: The City of Leduc will support agriculture in the region through compact urban development that provides services to the agricultural industry, and by promoting urban agriculture opportunities in the community.

Development staging with the Banks of Crystal Creek ASP will be conducted in a manner that ensures the preserves the preservation of agricultural land and agricultural operations until such agricultural land is required for the eventual urban development within the plan area. Furthermore, the opportunity for urban agricultural practices may be promoted as part of the eventual development scheme for the residential development within the plan area.

9.3 CITY OF LEDUC/LEDUC COUNTY INTERMUNICIPAL DEVELOPMENT PLAN

Intermunicipal Development Plan	The Banks of Crystal Creek ASP
Residential	
<p>4.2.2.1 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.</p>	<p>The proposed The Banks of Crystal Creek ASP lands are identified as area "A" on Map 11, within the City of Leduc/Leduc County's Intermunicipal Development Plan.</p>
<p>4.2.2.3 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 Banks of Crystal Creek ASP complies with the target densities outlined in the Intermunicipal Development Plan.</p>
<p>4.2.2.5. 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>4.2.2.6. New residential communities/neighbourhoods within the IDP area should incorporate design that:</p> <ul style="list-style-type: none"> • reduces vehicle dependency • includes a variety of housing choices • exceeds minimum residential densities • comprises mixed uses and activities in neighborhood nodes • supports pedestrian and public transit connections and • provides access to open space and recreational areas and facilities. <p>Through the ASP and subdivision processes, both municipalities will ensure residential</p>	<p>Safe and attractive communities will be achieved by utilizing CPTED 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 Banks of Crystal Creek ASP lands are designed to include lands for schools, parks, and trails. A Commercial site is also included within The Banks of Crystal</p>

Intermunicipal Development Plan	The Banks of Crystal Creek ASP
<p>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"> • 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. • Provide a wide range of housing forms and tenure. • Try to exceed minimum residential densities specified in the IDP. • The design of the neighbourhoods and communities should avoid dwellings fronting onto highways or arterial roadways. • 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. • 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. 	<p>Creek ASP to provide for the daily needs of the future residents.</p> <p>Housing will not be fronting onto Range Road 254, Township Road 494, or the future bypass along the southern boundary of the quarter section.</p> <p>There are adequate parks and open spaces within The Banks of Crystal Creek ASP boundaries. Three stormwater management facilities have been provided, which also serve as neighbourhood amenities and focal points.</p> <p>The multiway system allows for convenient pedestrian and cycling throughout the Plan Area. This amenity will allow residents opportunity for active transportation modes.</p>

Environmental

<p>4.6.2.2 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</p>	<p>The Banks of Crystal Creek ASP protects Whitemud Creek, which is a major creek meandering through the centre of this ASP. The top-of-bank will be determined at the subdivision stage.</p>
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Intermunicipal Development Plan	The Banks of Crystal Creek ASP
satisfaction of the relevant municipal approving authority.	
<p>4.6.2.5 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 Banks of Crystal Creek ASP lands will be detailed during the engineering design at time of subdivision.</p>
<p>4.6.2.7 The development of trails, parks, and school sites shall be coordinated among the municipalities, the appropriate school boards, and any residents' associations.</p>	<p>The locations of multiway and parks will be confirmed through circulation to City administration.</p>
<p>4.6.2.8 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>Municipal reserve is outlined within the Land Use and Population Statistics, and shall be dedicated as land, money-in-lieu, or a combination thereof, at time of subdivision.</p>
<p>4.6.2.9 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 Banks of Crystal Creek ASP will be detailed at time of subdivision, included in the detailed design stage.</p>
<p>4.6.2.10 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>Environmental assessments have been conducted for The Banks of Crystal Creek ASP lands. The results of the Phase 1 ESA did not reveal any undue constraints to future development.</p>

Intermunicipal Development Plan	The Banks of Crystal Creek ASP
<p>4.6.2.11 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>Whitemud Creek will be preserved and dedicated as Environmental Reserve at the subdivision stage. Two further areas have been identified as significant natural areas.</p>
<p>4.6.2.12 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 did not identify any significant tree stands to be retained outside of the Whitemud Creek ravine area.</p>
<p>4.6.2.16 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>Policies of this ASP adhere to the setback requirements for development in proximity to oil and gas facilities within this ASP.</p>

Transportation

<p>4.7.2.10 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>Map No. 8.0 Pedestrian Network shows connections to open spaces within The Banks of Crystal Creek ASP lands as well as lands outside of the ASP boundary.</p>
<p>4.7.2.14 The City and County shall require that development and subdivision along major roadways within the IDP area:</p> <ul style="list-style-type: none"> • obtain approvals, as required, from Alberta 	<p>It is intended that this area will accommodate future road widening at the subdivision stage, as well as noise attenuation where required. A noise attenuation study for the future Highway 2A</p>

Intermunicipal Development Plan	The Banks of Crystal Creek ASP
<p>Transportation</p> <ul style="list-style-type: none"> • coordinate the number of entry and exit points to major roadways • provide sufficiently wide rights-of-way or setbacks to accommodate berms, landscaping, trees, dividers, or similar noise attenuation and aesthetic features • be suitably set back in order not to interfere with the improvement or widening of roadways 	<p>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 the neighbourhood.</p>
<p>Municipal Services</p>	
<p>4.8.2.2 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>4.8.2.4 Area Structure Plans shall include detailed servicing concept studies for the provision of water, sanitary sewer, stormwater management, and franchise utilities.</p>	<p>The Banks of Crystal Creek ASP outlines Stormwater Management, Water Servicing, and Sanitary Servicing in Map No. 9, Map No. 10, and Map No. 11.</p>
<p>4.8.2.5 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 will be made available for The Banks of Crystal Creek ASP lands. Water, sanitary sewer, and stormwater management facilities are outlined in Map No. 9, Map No. 10, and Map No. 11.</p>
<p>4.8.2.6 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 Banks of Crystal Creek ASP development will enter into a servicing agreement with the County of Leduc.</p>
<p>4.8.2.12 The relevant municipal approving authority shall require, as a condition of subdivision approval, the preparation and</p>	<p>Stormwater management facilities have been outlined in Map No. 11.</p>

Intermunicipal Development Plan	The Banks of Crystal Creek ASP
<p>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>4.8.2.14 All required stormwater management plans shall include, at a minimum:</p> <ul style="list-style-type: none"> • topography of the development lands and surrounding area • watershed affected by the development • proposed major drainage systems (including the direction of surface drainage) proposed minor drainage systems (including ditches, pipes, and catch basin locations) • proposed on-site detention and retention facilities (including locations and sizes) • locations of outflow or outfall structures • any related modeling or calculation information. 	<p>Detailed stormwater management plans will be outlined at time of subdivision and included in the engineering design stage.</p>

AIRPORT VICINITY PROTECTION AREA

<p>4.9.2.1 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 Banks of Crystal Creek lands are outside of the NEF 25 overlay under the Edmonton International Airport Vicinity Protection Overlay Regulation.</p>
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9.4 CITY OF LEDUC NEIGHBOURHOOD DESIGN GUIDELINES

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
Neighbourhood Structure	
<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>Transportation, pipeline, and railway corridors define The Banks of Crystal Creek ASP boundaries, each with multiway.</p>
<p>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.</p>	<p>All residents are located within a short walking distance of neighbourhood focal points, connected by a network of multiway.</p>
<p>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</p>	<p>The Banks of Crystal Creek ASP provides a diversity of housing types, parks, and open spaces within walking distance of neighbourhood residents. A centrally located Commercial site has also been provided within the plan area to allow residents to access daily goods and services.</p>
<p>2.1.4 Housing options: residential neighbourhoods should provide (1) a range of housing types and sizes (i.e.: 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.</p>	<p>The Banks of Crystal Creek ASP supports the development of a variety of housing sizes, types, and styles to accommodate a range of family sizes and incomes.</p>
<p>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</p>	<p>The Banks of Crystal Creek ASP has been created to provide a consistent and comprehensively designed community, initiated by a single proponent.</p>

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
streetscape elements may be used.	Streetscapes and architectural detailing of neighbourhood streets will be determined with further market research.
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 The Banks of Crystal Creek 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.
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 Whitemud Creek, school and 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.

Natural Features and Environmental Sensitive Design

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 tributary of the Whitemud Creek is centrally located in the neighbourhood. In addition to providing natural habitat for wildlife, the area will also accommodate a multiway for active and 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	Whitemud Creek is centrally located in the neighbourhood. In addition to providing natural habitat for wildlife, the area will also

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
impacts of development and to help conserve the feature. Provide public access where appropriate.	accommodate a multiway for active and passive recreational activities.
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 Banks of Crystal Creek ASP supports the implementation of low impact development principles and best practices.
Land Use Distribution	
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 (i.e.: entry-level, move-up and executive housing) must be provided within each neighbourhood.	The Banks of Crystal Creek 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 The Banks of Crystal Creek will be within a 400m walking distance of focal points, multiway, and 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	The Banks of Crystal Creek ASP accommodates future rights-of-way widening and noise attenuation, where required, along Range Road 254 and Highway 2A.

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
such noise mitigation measures chosen should fit with and enhance the neighbourhood theme.	
Street Network	
<p>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 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>Given the unique landscape of this neighbourhood, Whitemud Creek traverses through the centre of the neighbourhood, providing constraints to the design of the road and multiway network. Still, the development of cul-de-sacs has been minimized and modified grid street pattern preferred wherever possible.</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 Banks of Crystal Creek 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 facilities, Whitemud Creek, and park spaces, and includes decorative boulevards at neighbourhood entryways.</p>

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<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 The Banks of Crystal Creek will be integrated with the multiway network through the neighbourhood.</p>
<p>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.</p>	<p>Appropriate crossing features will be incorporated into the detailed design of the neighbourhood with the various stages of subdivision and detailed design.</p>
<p>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.</p>	<p>Appropriate traffic calming features will be incorporated into the detailed design of the neighbourhood.</p>
<p>Streetscape</p>	
<p>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.</p>	<p>Streetscapes and architectural detailing of neighbourhood streets will be determined with further market research.</p>
<p>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</p>	<p>On-street parking will be accommodated within the neighbourhood.</p>

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
streetscape design.	
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 landscaping, appealing human-scale architecture, and interesting streetscape elements.	Neighbourhood streets will be designed to accommodate safe pedestrian movement through the neighbourhood and between 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.
Parks, Public Spaces, & Multiways	
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 Banks of Crystal Creek ASP provides a variety of open spaces across the plan area connected by a network of multiway.
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 and layout of multiway will be outlined at time of subdivision, included in the engineering design stage.

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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 Banks of Crystal Creek 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.
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.	Parks and multiway development will be provided in a staged manner, concurrently with residential development.
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.	All residents in The Banks of Crystal Creek will be within a 400m walking distance of parks, multiway, and open spaces.
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.	The design of multiway will be outlined at time of subdivision, included in the engineering design stage.
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.	The Banks of Crystal Creek ASP provides a diversity of parks and open spaces across the plan area connected by a network of multiway and Whitemud Creek.

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<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>Whitemud Creek, school, parks, and open spaces in The Banks of Crystal Creek ASP are intended to be focal points and gathering places for neighbourhood residents.</p>
<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 facilities will be designed to accommodate passive and active recreational activities by accommodating the development of multiway and street frontage around a portion of each 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 Whitemud Creek, school, parks, and stormwater management facilities 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>Park sites with playgrounds will be designed to locate the facilities in highly visible locations from public streets.</p>

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<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>Streetscapes, park and stormwater design, and architectural detailing of neighbourhood buildings will be determined with further market research.</p>

Siting, Sizing, and Building Design

<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 Banks of Crystal Creek 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 Banks of Crystal Creek 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>

Neighbourhood Design Guidelines	The Banks of Crystal Creek ASP
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.	Location and siting of residential uses provide vistas of the parks and stormwater management facilities as well as Whitemud Creek.
2.7.6 Porches: front porches, low-profile courtyards (patios) and verandas are encouraged.	Architectural detailing of all residential units will be determined with further market research.
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.	Architectural detailing of all residential units will be determined with further market research.
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.	Energy efficient strategies will be determined through consultation with the builders in each stage of subdivision.
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.	Architectural detailing of all residential units will be determined with further market research.

