

## Bylaw No. 876-2014

Page 1

---

### A BYLAW OF THE CITY OF LEDUC IN THE PROVINCE OF ALBERTA, TO ADOPT THE AREA STRUCTURE PLAN FOR THE: SOUTH WEST QUARTER OF 31-49-25-W4M

---

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

**AND:** the SW ¼ Section 31, Township 49, Range 25, West of the 4<sup>th</sup> Meridian Area Structure Plan addresses the requirements of an Area Structure Plan as outlined in the Act;

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

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

#### PART I: BYLAW TITLE

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

#### PART I: APPLICATION

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

#### PART II: ENACTMENT

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

READ A FIRST TIME IN COUNCIL THIS 24<sup>th</sup> OF OCTOBER, AD 2014.

READ A SECOND TIME IN COUNCIL THIS 8<sup>th</sup> DAY OF DECEMBER, AD 2014.

READ A THIRD TIME IN COUNCIL AND FINALLY PASSED THIS 8<sup>th</sup> DAY OF DECEMBER, AD 2014.

'original signed'

---

**D. Smith**  
**DEPUTY MAYOR**

'original signed'

---

**Paul Benedetto**  
**CITY MANAGER**

**Dec. 9, 2014**

---

Date Signed

# LAKESIDE INDUSTRIAL

## AREA STRUCTURE PLAN

submitted to the  
**City of Leduc**

prepared for  
**0973733 BC Ltd.**

prepared by  
 **WATKINS LAND**  
DEVELOPMENTS  
in association with

**G M A C**  
Greg MacKenzie + Associates Consulting Ltd.

September 11, 2014



# Lakeside Industrial Area Structure Plan

submitted to the

**City of Leduc**

prepared for

**0973733 BC Ltd.**

prepared by



in association with



Greg MacKenzie + Associates Consulting Ltd.

September 11, 2014

## TABLE OF CONTENTS

<b>1.0</b>	<b>PURPOSE.....</b>	<b>1</b>
1.1	Introduction   Plan Area .....	1
1.2	Rationale .....	1
1.3	Stakeholder and Public Consultation .....	4
<b>2.0</b>	<b>POLICY CONTEXT.....</b>	<b>5</b>
2.1	Capital Region Growth Plan .....	5
2.2	City of Leduc/Leduc County Intermunicipal Development Plan 2010-2044, Bylaw No. 772-2011 .....	5
2.3	City of Leduc Municipal Development Plan, Bylaw No. 773-2011 .....	6
2.4	Telford Lake Master Plan, March 2010 .....	8
2.5	Harvest Industrial Park Area Structure Plan, August 2010.....	9
2.6	City of Leduc Land Use Bylaw 809-2013 .....	11
2.7	Edmonton International Airport Vicinity Protection Area Regulation, Alberta Regulation 55/2006.....	11
2.8	Edmonton International Airport Zoning Regulation, C.R.C., c. 81 – February 6 2014.....	11
<b>3.0</b>	<b>LAND USE CONCEPT .....</b>	<b>12</b>
3.1	Existing Conditions and Topography.....	12
3.1.1	<i>Existing Land Uses</i> .....	12
3.1.2	<i>Telford Lake Shoreline</i> .....	12
3.1.3	<i>Wetlands</i> .....	14
3.1.4	<i>Woodland</i> .....	15
3.1.5	<i>Soils</i> .....	15
3.1.6	<i>Topography</i> .....	15
3.2	Land Use Concept.....	16
3.2.1	<i>Light Industrial</i> .....	18
3.2.2	<i>Business Commercial</i> .....	19
3.2.3	<i>Park (Municipal Reserve)</i> .....	20
3.2.4	<i>Environmental Reserve</i> .....	22
3.2.5	<i>Land Use Statistics</i> .....	23
3.3	Transportation .....	23
3.3.1	<i>Future Major Roadway</i> .....	25
3.3.2	<i>Arterial and Collector Roadway Network</i> .....	25
3.3.3	<i>Local Street Network</i> .....	26
3.4	Servicing.....	26
3.4.1	<i>Stormwater Management</i> .....	26
3.4.2	<i>Sanitary Sewer</i> .....	29
3.4.3	<i>Water Network</i> .....	32
3.5	Implementation .....	35
3.5.1	<i>Zoning</i> .....	35
3.5.2	<i>Staging</i> .....	35

<b>LIST OF MAPS</b>	<b>PAGE</b>
Map 1.1 Location	2
Map 1.2 Land Ownership	3
Map 2.1 MDP Context	7
Map 2.2 ASP Context	10
Map 3.1 Existing Conditions	13
Map 3.2 Land Use Concept	17
Map 3.3 Transportation Plan	24
Map 3.4 Stormwater Concept	28
Map 3.5 Sanitary Sewer Concept	30
Map 3.6 Offsite Interim Sanitary Concept	31
Map 3.7 Water Network Concept	34
Map 3.8 Staging Plan	37

<b>LIST OF TABLES</b>	<b>PAGE</b>
Table 1 – Land Use Statistics	23

## **APPENDICES**

Appendix A – Certificates of Title

Appendix B – City of Leduc Road Cross Sections

Appendix C – City of Leduc Proposed North East Sanitary Sewer Trunk Plan

Appendix D – Planning Policy Context

Appendix E – Water Network Plan

## **1.0 Purpose**

---

Following is a description of land included within the Lakeside Industrial ASP. An introductory description of the rationale and intent of the plan is also provided, along with a discussion of the stakeholder and public consultation process which was conducted for the ASP. A detailed description of the existing site conditions, the land use concept, provision of transportation and municipal servicing infrastructure and conceptual staging of development for the ASP area is provided in Section 3.0.

### **1.1 Introduction | Plan Area**

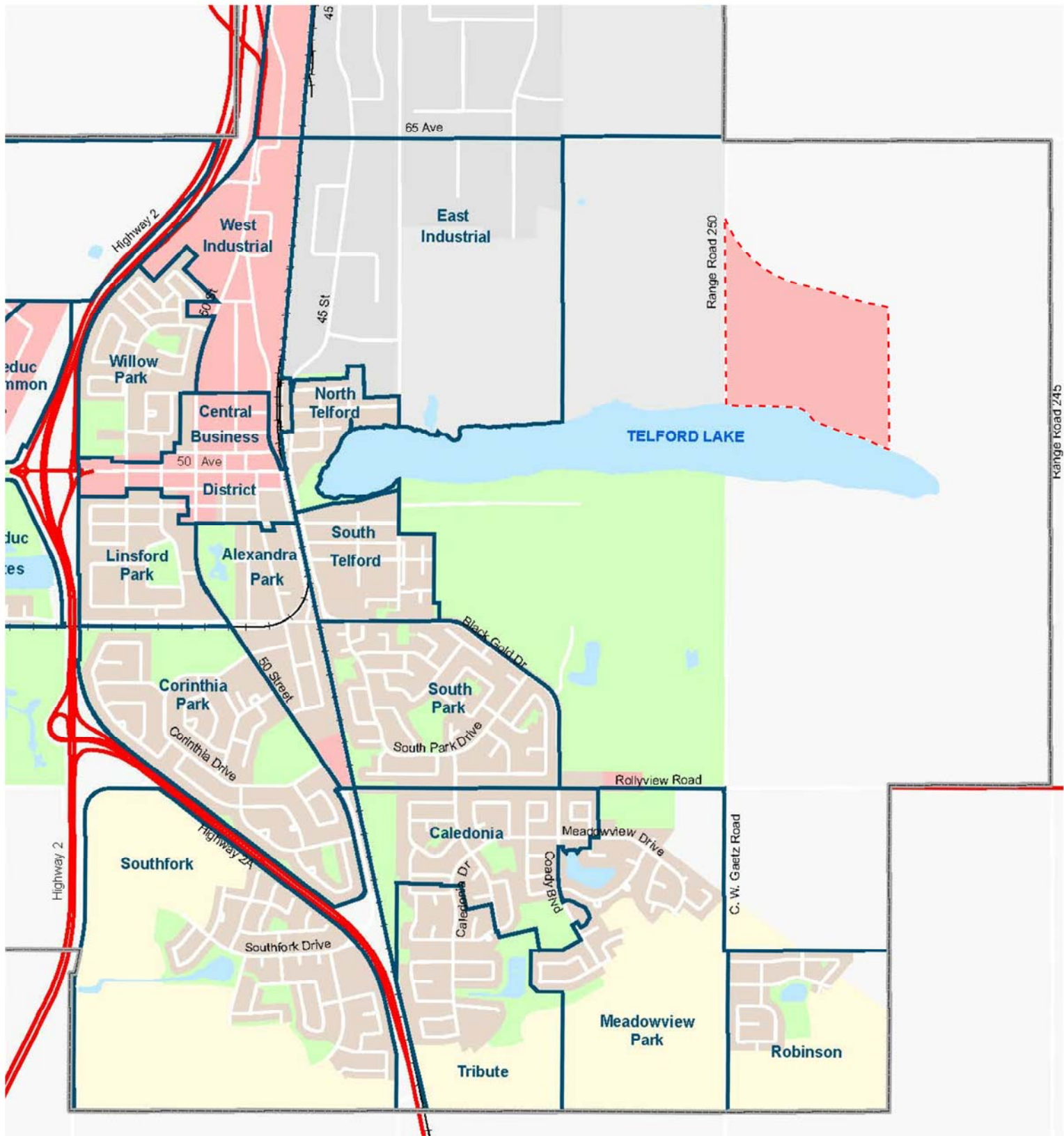
The purpose of the Lakeside Industrial Area Structure Plan (ASP) is to establish a framework for the future zoning, subdivision and development of lands located north of Telford Lake, immediately east of the Harvest Industrial Park ASP area. The plan area includes approximately 55ha (136ac) of land. The ASP area is bounded by Telford Lake to the south, the future major road right-of-way (an extension of the Nisku Spine Road) to the north, the undeveloped Range Road 250 right-of-way to the west and private lands to the east (see Map 1.1 – Location).

The lands within the ASP area are legally described as the SW ¼ 31-49-24 W4M (47.3ha) and a portion of the NW ¼ 31-49-24 W4M (7.7ha), in the City of Leduc, Alberta and are privately owned (see Map 1.2 – Land Ownership). Certificates of Title for lands within the ASP area are included as Appendix A.

### **1.2 Rationale**

Consistent with the City's Municipal Development Plan - as further described in Section 2.3 - this ASP proposes light industrial and commercial uses to serve the strong market demand for these types of development in the City. Based on recent development of similar land uses in this area of the City it is anticipated that development in the plan area could proceed within three to five years and potentially build-out within ten years.

The proposed land uses and roadway and servicing alignments within the ASP area form an extension of the development envisioned in the Harvest Industrial ASP area, as further described in Section 2.0.



Legend  
 ASP Area

## Map 1.1 Location

Lakeside Industrial  
 Area Structure Plan  
 Leduc, Alberta  
 N.T.S.



Legend  
 ■ ASP Boundary  
 — Ownership Boundary

## Map 1.2 Land Ownership

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



**WATKINS LAND DEVELOPMENTS**

**G M A C**  
Greg Mackenzie & Associates Consulting Ltd.

Industrial and commercial development will provide an economic benefit to the City of Leduc through increased tax revenue and employment generation. In addition, this type of development will extend services and roadways through an area of the City impacted by the Airport Vicinity Protection Area Regulation.

### **1.3 Stakeholder and Public Consultation**

Landowners within the ASP area were contacted and made aware of the preparation of the Lakeside Industrial ASP. An opportunity was provided to meet to discuss the ASP as well as the initial findings of the technical reports, the land use concept and development statistics.

An Open House was held, following the review of the ASP by City Administration, to share information and address questions from the public regarding the ASP application.

## **2.0 Policy Context**

---

Following is a summary of statutory documents and policies which are relevant to development in the ASP area. A brief discussion of how the Lakeside Industrial ASP complies with the policies of these statutory documents is also provided. Section 3.0 of the ASP provides policy to guide development in the ASP area consistent with the existing policy framework summarized below.

### **2.1 Capital Region Growth Plan**

The City of Leduc, including the ASP area, is located within Priority Growth Area (PGA) “E” as identified in the Capital Region Growth Plan (CRGP). Organized under six headings, the CRGP provides Principles and Priorities to guide growth within the PGAs. Relevant Policies and Priorities from the CRGP related to industrial development were addressed through the preparation of the municipal plans by the City and County. Through compliance with the applicable municipal plans, as described in the following sections, the ASP complies with the Principles and Priorities of the CRGP.

### **2.2 City of Leduc/Leduc County Intermunicipal Development Plan 2010-2044, Bylaw No. 772-2011**

The City of Leduc/Leduc County Intermunicipal Development Plan (IDP) addresses a range of issues and interests of common concern to the City and County. It presents a development pattern based on an analysis of development opportunities and constraints as well as existing policies and plans.

The IDP identifies the ASP area as primarily within the “Nisku / Leduc Business Industrial” Policy Area. A small area in the southeast corner of the ASP area has been conceptually identified as within the “Transitional Residential Mixed Use” Policy Area, following the N.E.F. 30 contour. Through the more detailed ASP level planning, it is understood that this area is to be developed for industrial uses, reflecting logical land ownership patterns and that an amendment to the IDP is not required to support this.

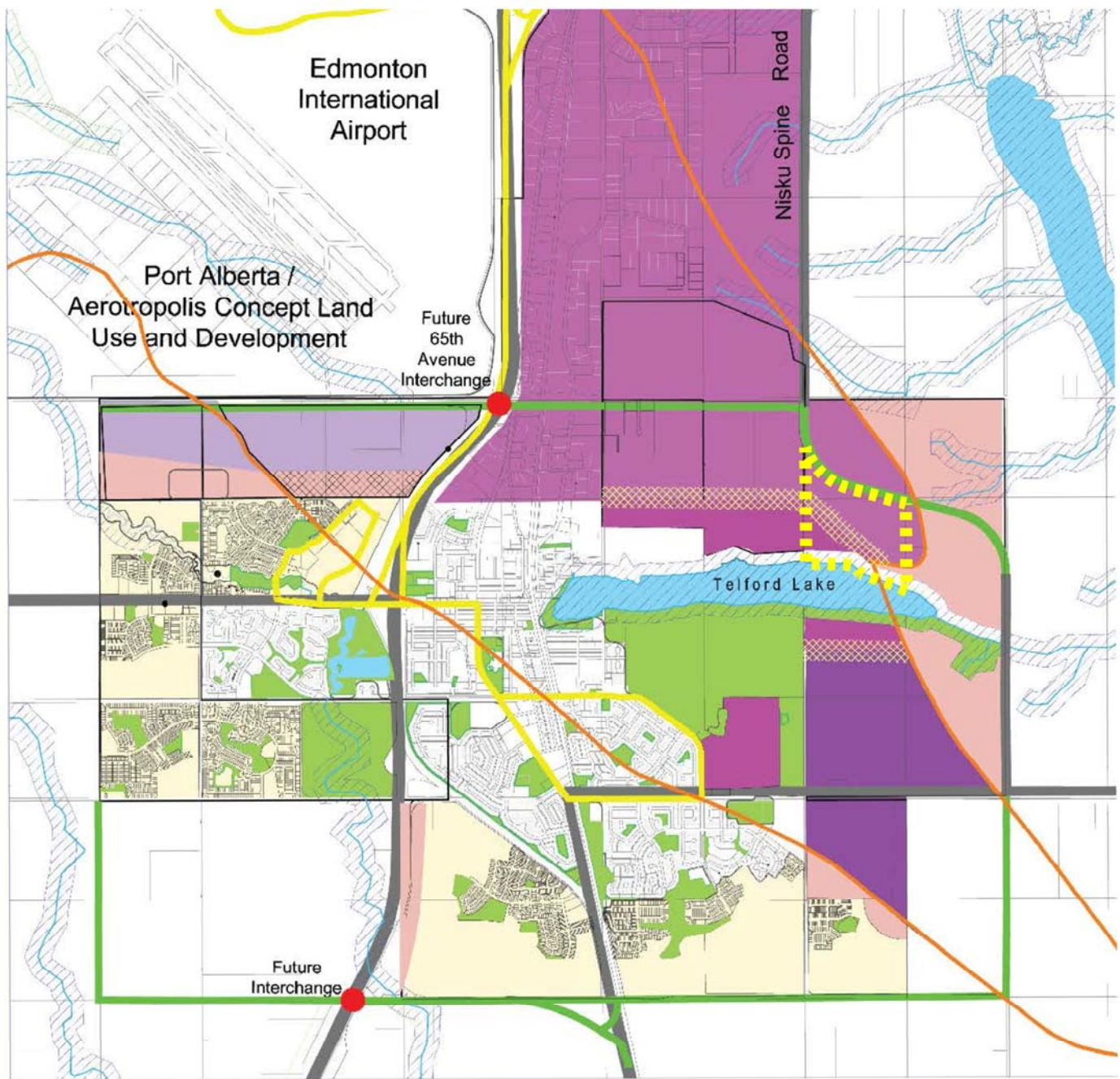
High-level policies to guide industrial and commercial growth provided in the IDP have been developed in more detail in the City’s Municipal Development Plan (MDP). Through its compliance with the applicable MDP policies, as described in the following section, the ASP complies with the policy direction of the IDP.

## **2.3 City of Leduc Municipal Development Plan, Bylaw No. 773-2011**

The City of Leduc Municipal Development Plan (MDP) provides a vision, principles, priorities and policy direction to guide development in the City. It defines future land uses in the City by Policy Areas and also provides direction for the provision of open space, transportation and servicing infrastructure.

The MDP identifies the ASP area as primarily within the “Nisku / Leduc Business Industrial” Policy Area. A band of “Transitional Industrial Use” Policy Area is identified in the southern portion, with the southwest corner of the ASP being within the “Telford Lake Commercial, Office, Light Industrial and Business Park” Policy Area (see Map 2.1 - MDP Context). A small area in the southeast corner of the ASP area has been conceptually identified as within the “Transitional Residential Mixed Use” Policy Area, following the N.E.F. 30 contour. Through the more detailed, ASP level, planning it is understood that this area is to be developed for industrial uses, reflecting logical land ownership patterns and that an amendment to the MDP is not required to support this. The industrial and development proposed for the ASP area supports the City’s policies related to Industrial and Business Park Development and Commercial Development.

A detailed summary of the relevant MDP policies and how the ASP complies is provided as Appendix D – Planning Policy Context.



### Legend

- City of Leduc Boundary
- Transitional Residential Mixed Use
- Aerotropolis Business Industrial
- Nisku/Leduc Business Industrial

- Southeast Business Industrial
- Telford Lake Commercial, Office, Light Industrial, and Business Park
- Open Space and Greenways
- Approved Residential ASPs
- Water Bodies, Creeks and Rivers

- Transitional Business Mixed Use
- Transitional Industrial Use
- Riparian Areas
- Future Major Roadway (conceptual - refer to Figure 7)
- Future Interchanges (conceptual)
- C-Line Transit
- N.E.F. 30 Contour

**CITY OF Leduc**

CENTRAL MDP Planning  
Created March 14, 2012

Scale 1 : 50,000  
0 0.75 1.5 3 km

Legend  
■ ASP Boundary

## Map 2.1 MDP Context

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 50,000  
0 250 500 1,000



**WATKINS LAND DEVELOPMENTS**

**G M A C**  
Greg Mackenzie & Associates Consulting Ltd.

## 2.4 Telford Lake Master Plan, March 2010

The Telford Lake Master Plan provides a comprehensive plan and strategy for the long term development and management of Telford Lake and the lands surrounding it, including the southern portion of the ASP area. The four key objectives of the Master Plan, relevant to the Lakeside ASP are:

1. Environmental Protection: to provide for the quality of the Lake by protecting water quality, habitat and vegetation for wildlife and visitors.
2. Multiway and Trails: to provide for the extension and development of a multiway (multi-use trail with trail amenities) around Telford Lake, integrated with the City of Leduc trail network, to meet the needs of a variety of users.
3. Recreational Open Space and Facilities: for residents of Leduc to recreate in a natural setting all around Telford Lake through an integrated series of recreational spaces, amenities and natural areas.
4. Land Acquisition: to implement the Master Plan the land acquisition requirements and processes available to the City are defined.

The Master Plan identifies specific areas of conservation interest and presents a design concept for the lands surrounding Telford Lake. Following is a summary of how the ASP supports the recommendations of the Master Plan:

- An approximately 60m wide open space buffer along the shoreline is provided in the ASP area. This buffer consists of a 10m Environmental Reserve (ER) strip directly adjacent to the Lake and an approximately 50m strip of MR north of the ER. This open space buffer is connected to a day-use area MR area, via a corridor of MR dedication as described above, as well as the naturalized stormwater management facility (SWMF).

The ER portion of this open space buffer protects areas of steep slopes in the southwest corner of the ASP area. It also protects existing tree stands and minimizes the loss and alteration of wetland habitat.

The MR portion of this open space buffer provides an opportunity for development of the Telford Lake Trail multiway. Opportunities for environmental

interpretation/education development along the Telford Lake Trail related to the development of the naturalized SWMF and integration of the natural and built environment could be explored by the City. The MR area should be developed to be naturalized and provide retention of grassland, marsh shoreline and aspen shoreline habitat identified in the Biophysical Assessment for the ASP area, prepared by Spencer Environmental Management Services Ltd.

Exact areas of MR and ER dedication will be confirmed at the subdivision stage.

- The Biophysical Assessment for the ASP area identified a “forest of interest” as a natural feature to be considered for conservation through MR dedication. Through consultation with the City, it was determined that MR dedication available should be allocated primarily along the shoreline of Telford Lake to provide the maximum separation between development and the lake. This natural feature will not be retained in the developed context.
- A number of Industrial Lands Development Guidelines included in the Master Plan have been incorporated into the Telford Industrial Overlay in the City’s Land Use Bylaw. Development in the ASP area will be in accordance with the regulations of the Telford Industrial Overlay.

## **2.5 Harvest Industrial Park Area Structure Plan, August 2010**

The Harvest Industrial Park Area Structure Plan (ASP) provides a land use concept and guidelines to inform future subdivision and industrial development. It considered existing features of the lands, transportation, servicing and integration with surrounding areas.

This approved Area Structure Plan offers a mix of industrial, open space and utility usage (see Map 2.2 – ASP Context). Land uses within the Lakeside ASP will complement adjacent land uses within the Harvest Industrial Park ASP, and the collector roadway network within the Lakeside ASP will tie directly into that of the Harvest Industrial Park ASP.



Legend  
 ■ ASP Boundary

## Map 2.2 ASP Context

Lakeside Industrial  
 Area Structure Plan  
 Leduc, Alberta

Scale 1 : 10,000

Source: City of Leduc Harvest Industrial Park ASP - Figure No. 5 Site Plan, August 2010  
 (<http://www.leduc.ca/Assets/Departments/Planning+and+Development/Harvest+Industrial+Park.pdf>)

I  
 N

WATKINS LAND  
 DEVELOPMENTS

G M A C  
 Greg Mackenzie • Associates Consulting Ltd.

September 11, 2014

## **2.6 City of Leduc Land Use Bylaw 809-2013**

Lands within the Lakeside Industrial ASP area currently zoned UR – Urban Reserve and the southern portion of the ASP area falls within the Telford Industrial Overlay area. Rezoning of the lands will be required prior to development to accommodate the land uses within the ASP, as described in the Section 3.0.

## **2.7 Edmonton International Airport Vicinity Protection Area Regulation, Alberta Regulation 55/2006**

Development within the Lakeside Industrial ASP area will adhere to the regulations of the Edmonton International Airport Vicinity Protection Area Regulation. Under the Regulations, the majority of the ASP area is within the Noise Exposure Forecast (NEF) 30-35 area, with the southeast portion of the ASP area within the NEF 25-30 area.

Land uses prohibited within the NEF 30-35 area include hospitals, nursing homes, schools, outdoor spectator entertainment facilities, outdoor spectator sports facilities, campgrounds and residences. Only campgrounds are prohibited as a land use within the NEF 25-30 area.

## **2.8 Edmonton International Airport Zoning Regulation, C.R.C., c. 81 – February 6 2014**

The Lakeside ASP area is within the area subject to the Edmonton International Airport Zoning Regulation. This Regulation sets out “approach surfaces”, “outer surfaces” and “transitional surfaces” within which:

- buildings, structures and objects which would exceed the elevations of any of the surfaces cannot be constructed;
- any natural growth which exceeds the elevations of any of the surfaces may be subject to removal, at the discretion of the Minister; and
- no waste disposal will be permitted which may be attractive to, or edible by, birds.

Methods for calculating the heights of the surfaces are provided in the Regulation, which must be consulted at the development and construction stage.

## **3.0 Land Use Concept**

---

Following is a description of the existing conditions and topography within the Lakeside Industrial ASP area accompanied by discussion of how future development will retain and / or alter these existing conditions.

This is followed by a description of the land use concept as well as municipal servicing and transportation strategies for the ASP area, with associated policies to guide development.

### **3.1 Existing Conditions and Topography**

#### **3.1.1 Existing Land Uses**

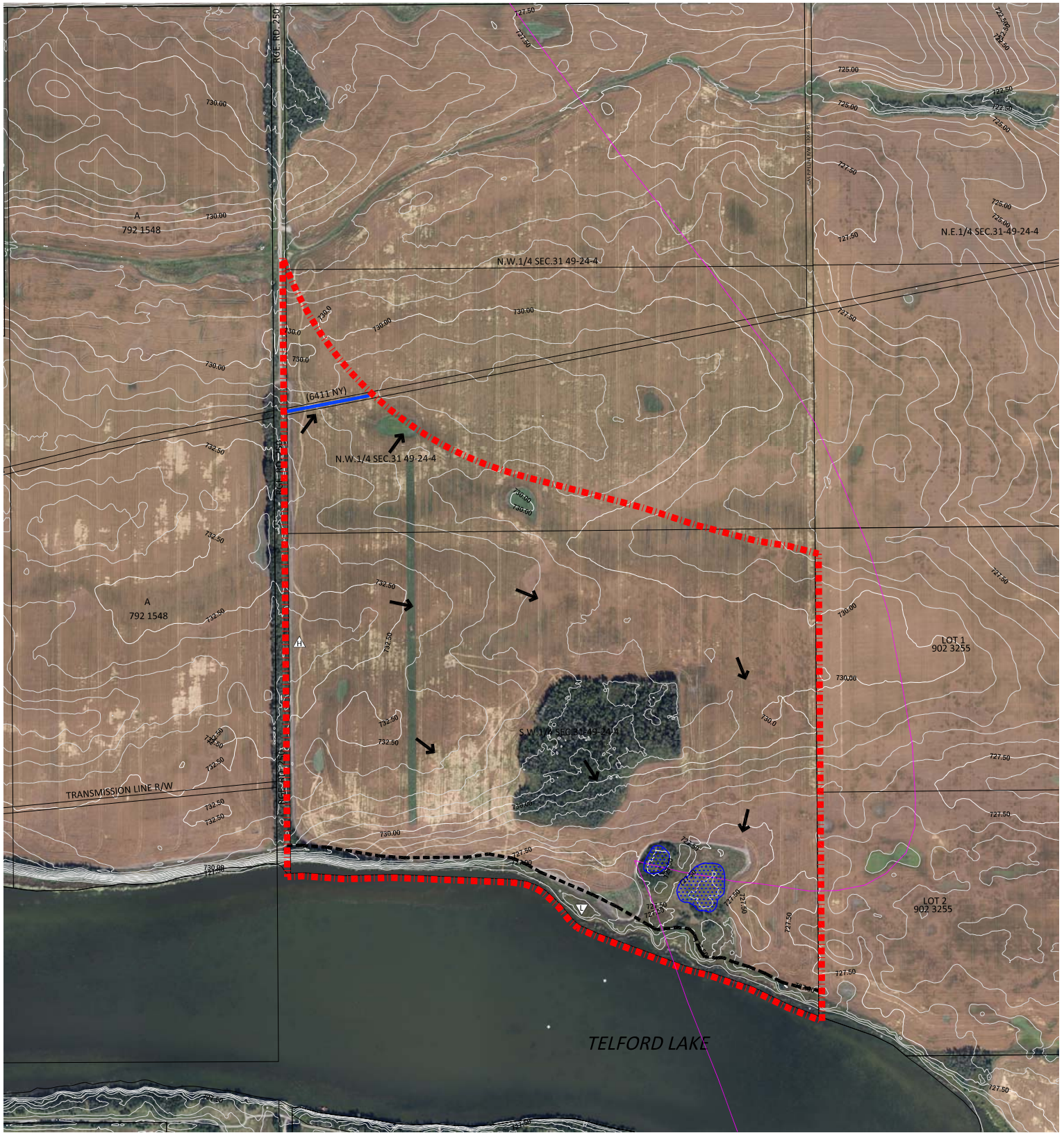
The ASP area has been predominantly cleared and utilized for agricultural purposes (see Map 3.1 – Existing Conditions). Areas not cultivated include a woodland in the south-central portion of the ASP area and the Telford Lake shoreline area – occupied by steeper slopes, grasslands, marsh and wetland areas and a smaller stand of trees. There are no buildings within the ASP area.

A high pressure gas pipeline right-of-way, URW 6411NY, crosses east-west through NW ¼ 31-49-24 W4M. This pipeline contains sweet gas and there is no development setback outside of the pipeline right-of-way itself. A Phase I Environmental Site Assessment (ESA) was completed for the SW ¼ Sec. 31-49-24 W4M by Trace Associates. No potential sources of environmental concern and impairments of the ASP area related to on-site or off-site operations were identified. The Phase I ESA recommends no further environmental investigation.

According to the historical air photograph review completed for the Phase I ESA, the ASP area has been under continuous cultivation since at least 1949. A Historic Resources Overview (HRO) was completed by Western Heritage and submitted to Alberta Culture. A Clearance Letter was provided by Alberta Culture on January 21, 2014. No further historic resources investigations are required.

#### **3.1.2 Telford Lake Shoreline**

A Biophysical Assessment prepared by Spencer Environmental Management Services Ltd. identified the majority of the shoreline of Telford Lake to be comprised of deep and shallow marsh vegetation. The width of the marsh shoreline is narrowest in the western



- Legend**
- ASP Boundary
  - Top of Bank
  - Existing Wetland
  - N.E.F. 30 Contour
  - Contour (0.5m Interval)
  - High Pressure Gas Pipeline
  - △ High Point
  - ▽ Low Point
  - Direction of Drainage

# Map 3.1

## Existing Conditions

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



**WATKINS LAND DEVELOPMENTS**

**G M A C**  
Greg Mackenzie • Associates Consulting Ltd.

portion of the ASP area, where the bank steepens. It is widest in the central and eastern portions of the ASP area, where the bank flattens.

Upslope of the marsh vegetation is a band of upland grassland. With the variation of slope and height of the bank of Telford Lake, the width of the grassland area also varies from narrow in the western portion of the ASP area to wide in the central and southeast portions.

Along the top of bank in the southwest portion of the ASP area a narrow strip of aspen woodland extends eastward along the shoreline.

The approximately 60m wide ER / MR open space buffer adjacent to Telford Lake will retain the natural features of the Telford Lake shoreline. This buffer will also maintain ecological connectivity along the lake shore and provide opportunity for the natural features along the shoreline to mature. The extent of the bed and shore of Telford Lake, and in turn the extent of the open space buffer, will require verification by an Alberta Land Surveyor and approval by the Province at the time of subdivision.

### **3.1.3 Wetlands**

The Biophysical Assessment indicates that approximately 0.5 ha of the ASP area consists of wetlands, comprised of two Class III wetlands to the southeast of the woodland area. Classified on the basis of the presence of awned sedge, it is presumed that neither of these shallow marsh wetlands contain water year-round.

The southeastern shallow marsh wetland is to be reconstructed as part of a larger naturalized stormwater management facility. This facility is anticipated to replace many of the main ecological functions provided by the wetland. The northwestern shallow marsh wetland and its associated grassland upland area will be removed. Neither the Biophysical Assessment nor the Telford Lake Master Plan indicate any claim of ownership of these wetlands by the Crown. It is acknowledged that, at the development stage, removal / reconstruction of these wetlands will require approval pursuant Alberta's Water Act and compensation for wetland loss may be required.

The Biophysical Assessment also identifies a number of small areas which appear consistently wet from year to year, with no evidence of wetland vegetation visible in any aerial photographs. These areas have all been subject to annual cultivation and do not constitute functional wetlands and provide limited habitat value and are, thus, defined

as “tilled ponds”. These tilled ponds will not be retained in the developed context. The Biophysical Assessment acknowledges the magnitude of the loss of the tilled ponds to be relatively minor.

#### **3.1.4 Woodland**

The Biophysical Assessment identifies an approximately, 4.1 ha aspen-balsam woodland in the south-central area of the ASP area. Through consultation with the City, it was determined that available MR should be allocated primarily along the shoreline of Telford Lake to provide the maximum separation between development and the lake. This natural feature will not be retained in the developed context.

#### **3.1.5 Soils**

A Geotechnical Investigation was conducted by J.R. Paine & Associates Ltd. This investigation confirmed that slope stability and coal mining issues should not be a concern. Topsoil was encountered at the surface of all testholes. In general, the soils encountered below the topsoil consisted of clay till over transitional bedrock-like clay, followed by bedrock to testhole termination depths. Soil transitions were gradual.

Watertable readings were taken. The watertable is within 3m below ground surface in five testholes, mostly located in the east half and central portion of the site. The watertable elevations were also highly variable, with no sign of correlation with the lake water level.

Recommendations for site grading, preliminary building foundations, underground and surface utilities, groundwater issues, stormwater management facilities and cement were provided.

#### **3.1.6 Topography**

The ASP area is generally flat with some low-lying wet areas observed throughout, as further described in the following Sections. Generally, the ASP area slopes to the east. Total elevation difference across the ASP area is approximately 7m, with a high-point of approximately 733m elevation observed in the southeast and the lowest elevation of 726m being the shoreline of Telford Lake. The bank along Telford Lake is steeper in the western portion of the ASP area, with an elevation difference of approximately 5m, and

flattens in the central and eastern portion of the ASP area, with an elevation difference of approximately 1m – 2m.

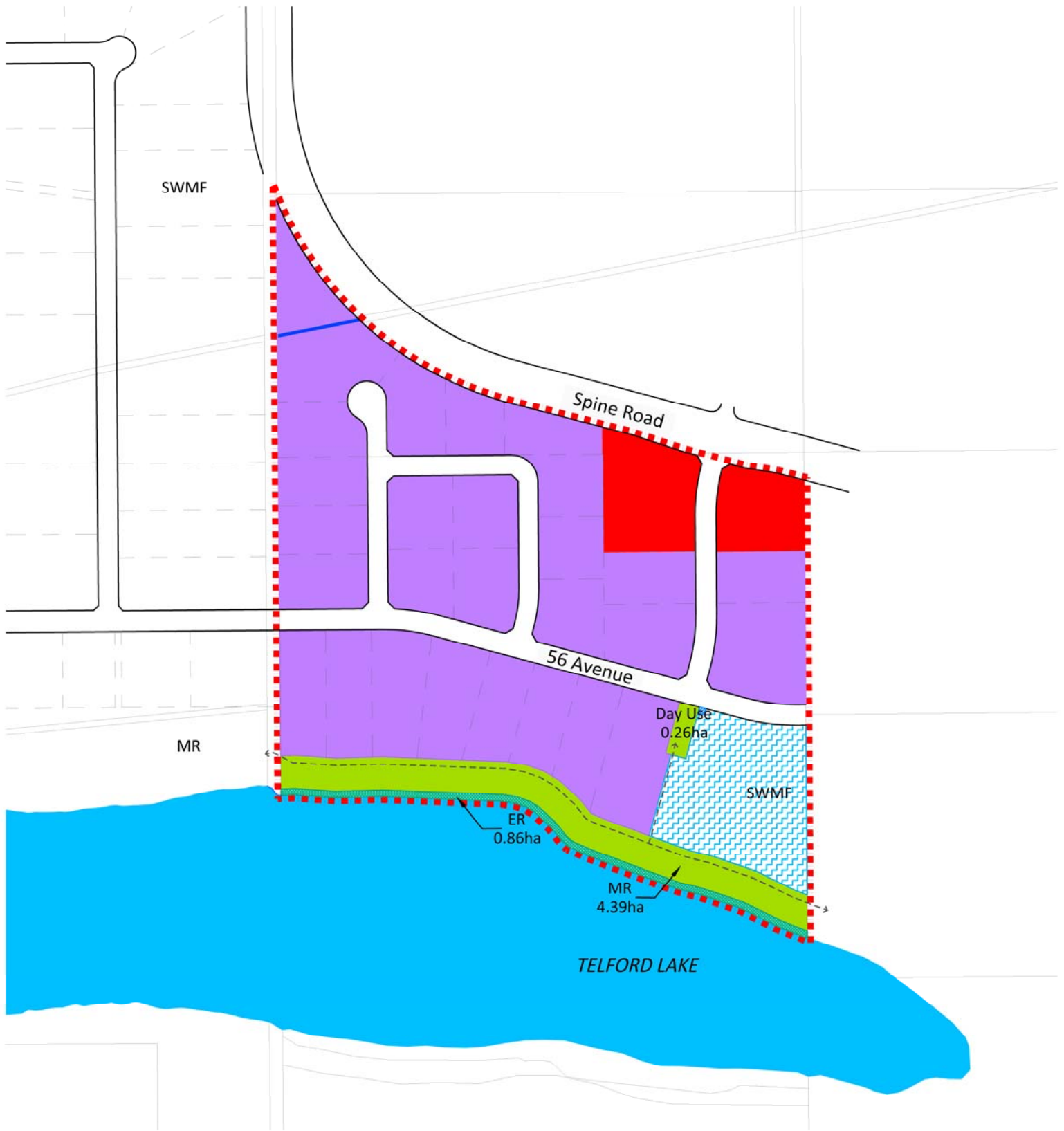
An east-west ridge feature traverses the northern portion of the ASP area. Lands north of this ridge drain northeast, to Saunders Lake, and lands south of this ridge drain southeast, to Telford Lake.

The land use concept contemplates site grading to bring all drainage within the southern portion of the ASP area to a naturalized stormwater management facility in the low, southeast, corner of the ASP area and from there into Telford Lake. With grading, the northern portion of the ASP area will require an on-site stormwater management facility and outfall to the natural drainage channel to the north (see Section 3.4.1 - Stormwater Management) which drains to Saunders Lake.

### **3.2 Land Use Concept**

The Lakeside Industrial ASP area will be developed for primarily industrial uses, supporting economic development in the City and region consistent with the policy direction of the CRGP, IDP and MDP. Complementary commercial uses are also planned to take advantage of access to, and exposure from, the future major roadway extension forming the north boundary of the ASP. Natural open spaces are planned to protect the ecology of the Telford Lake area and to provide expanded passive recreation opportunities in the City. The ASP also provides for a naturalized stormwater management facility, augmenting the open space areas.

Map 3.2 – Land Use Concept presents a conceptual plan for the future development of the ASP area that aligns its roadways, open spaces and land use patterns with those of the Harvest Industrial Park ASP to the west. This Land Use Concept also conceptually identifies a lotting pattern for the ASP area that will be refined through subdivision applications for each phase of development.



- Legend**
- ASP Boundary
  - Telford Lake Trail (Multiway)
  - Light Industrial
  - Business Commercial
  - Park
  - Environmental Reserve
  - Urban Services
  - Interim Lift Station
  - High Pressure Gas Pipeline

Note: This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.

## Map 3.2 Land Use Concept

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000

N

**WATKINS LAND DEVELOPMENTS**

**G M A C**  
Greg Mackenzie & Associates Consulting Ltd.

September 11, 2014

## **Land Use Concept Policies:**

- Policy 3.2.1: Land uses in the Lakeside Industrial ASP area shall be developed generally in accordance with the Land Use Concept.*
- Policy 3.2.2: The regulations within the Edmonton International Airport Zoning Regulation as well as the Airport Vicinity Protection Area Regulation must be adhered to for all development within the Lakeside Industrial ASP area.*

### **3.2.1 Light Industrial**

Approximately 34.76ha of the Lakeside Industrial ASP area is planned for industrial development. A range of light industrial, business park, office and commercial uses can be developed in the Light Industrial area of the ASP in accordance with the policy direction of the MDP and IDP.

Redistricting from UR – Urban Reserve to an appropriate zoning will be required prior to development in the Industrial area. Development in accordance with the regulations of the LUB will ensure attractive development which provides adequate separation between land uses. The Telford Industrial Overlay provides regulations which will ensure development provides an appropriate interface with Telford Lake.

## **Industrial Policies:**

- Policy 3.2.1.1: A range of light industrial, business park, office and commercial uses – Including (but not limited to): light manufacturing, service industrial, logistics, warehousing, distribution, agri-business, business parks, and office park uses – will be permitted in the Light Industrial area.*
- Policy 3.2.1.2: Heavy industrial uses will not be permitted within the Lakeside Industrial ASP area.*
- Policy 3.2.1.3: Possible strategies to promote eco-industrial development in the ASP area will be discussed with the City, for potential implementation by the developer and / or the City, at the development stage.*
- Through marketing for the sites, the developer will endeavor to encourage the implementation of eco-industrial development strategies. The City will consider developing incentives to promote the implementation of eco-industrial development strategies.*
- Possible eco-industrial strategies for the Lakeside Industrial ASP area could include:*
- co-location of industrial uses to promote waste / feedstock synergies; and*
  - sustainable building and site design measures which: promote employee comfort and productivity, reduce energy consumption*

*and greenhouse gas production; use recycled and / or locally produced construction materials; support reduction and management of solid and hazardous waste and promote recycling; and incorporate Low Impact Design strategies for managing stormwater.*

*Policy 3.2.1.4: Development in the Light Industrial area adjacent to Telford Lake will be in accordance with the Telford Industrial Overlay in the Land Use Bylaw, which ensure site and building layout is compatible with the parks and natural areas adjacent to the shoreline and that the architectural, urban design, and landscape architecture standards exceed those typically required for light industrial development.*

*Policy 3.2.1.5: Development in the Light Industrial area adjacent to the eastern boundary of the ASP area shall not produce nuisance factors that extend beyond the limits of their respective sites.*

### **3.2.2 Business Commercial**

Approximately 4.04ha of the Lakeside Industrial ASP area, centred on the entrance to the area from the future major roadway to the north, is planned for general and business retail commercial development. A range of commercial, office, light industrial, and business park uses can be developed in the Business Commercial area of the ASP in accordance with the policy direction of the MDP and IDP.

Locating commercial uses in the northeast portion of the ASP area provides a transitional land use between industrial uses in the ASP area and potential future residential uses in the lands to the east. Commercial development in this location also provides an opportunity to establish an attractive gateway to the ASP area and the City from the future major roadway.

These uses will serve employees and visitors in the ASP area as well as future residential neighbourhoods to the north and east. Taking advantage of access to, and exposure from, the extension of the future major roadway from the Nisku area to the north (the Nisku Spine Road), these commercial uses will also serve the travelling public.

Redistricting from UR – Urban Reserve to an appropriate zoning will be required prior to development in the Business Commercial area. Development in accordance with the regulations of the LUB will ensure attractive development which provides adequate separation between land uses.

### **Commercial Policies:**

*Policy 3.2.2.1: A range of commercial, office, light industrial and business park – consistent with the use classes permitted in the appropriate commercial districts of the Land Use Bylaw – will be permitted in the Business Commercial area.*

*Policy 3.2.2.2: Development in the Business Commercial area will be in accordance with the regulations of the Land Use Bylaw, which ensure architectural, urban design and landscape architecture of a high standard.*

*Policy 3.2.2.3: Site design in the Business Commercial area will provide adequate pedestrian connections on site and to the trail, pathway, and Multiway systems in the ASP area in accordance with the City's Engineering Standards.*

*Policy 3.2.2.4: Site and building design in the Business Commercial area will ensure appropriate design for pedestrians and provide adequate access for persons of all ages and abilities in accordance with the City's Engineering Standards, the regulations of the Land Use Bylaw and the Alberta Building Code.*

*Policy 3.2.2.5: Appropriate strategies to promote environmental design approaches for the Business Commercial area will be discussed with the City, for implementation by the developer and / or the City, at the development stage.*

*Through marketing and sale agreements for the sites, the developer will encourage the implementation of environmental design techniques for commercial development. The City will consider developing incentives to promote the implementation of environmental design techniques for commercial development.*

*Environmental design techniques for commercial development suitable for the Lakeside Industrial ASP area could include:*

- sustainable building and site design measures which: promote employee comfort and productivity, reduce energy consumption and greenhouse gas production; use recycled and / or locally produced construction materials; support reduction and management of solid and hazardous waste and promote recycling; and incorporate Low Impact Design strategies for managing stormwater.*

*Policy 3.2.2.6: Commercial signage shall be oriented to take advantage of exposure to adjacent roadways and will be provided in accordance with the regulations of the Land Use Bylaw.*

### **3.2.3 Park (Municipal Reserve)**

For the SW ¼ 31-49-24 W4M approximately 4.65ha of land, or 10% of Gross Developable Area, will be dedicated as Park (MR) land, with the final amount of land dedication to be

established at the subdivision stage. Cash-in-lieu of land will be provided for the NW ¼ 31-49-24 W4M, for the approximately 0.87ha of MR dedication required within the Plan area.

An approximately 50m wide strip of MR Park space will be provided upland of a 10m Environmental Reserve (ER) strip directly adjacent to Telford Lake. This Park area is occupied primarily with grassland, marsh shoreline and aspen shoreline. It will be kept in its natural state to the extent feasible and left to mature in order to augment the shoreline ER buffer. The Telford Lake Trail multiway will be developed, as a 3.0m wide asphalt trail, through this Park area. Some alteration of lands within this Park area will be required to provide an outlet from the naturalized stormwater management facility in the southeast corner of the ASP area. Opportunities for environmental interpretation / education development along the Telford Lake Trail related to the development of the naturalized SWMF and integration of the natural and built environment could be explored by the City.

Additional Park dedication is allocated directly west of the SWMF for potential development of a day-use area, as envisioned in the Telford Lake Master Plan. This day-use amenity area could be developed by the City to provide picnic tables/shelters, benches, washrooms, a viewpoint to the lake and associated parking. Opportunities for environmental interpretation/education development related to the preservation of riparian habitat exist within the day use area. These amenities would serve employees in the ASP area as well as the general public.

**Park Policies:**

*Policy 3.2.3.1: With subdivision, Park (MR) dedication will be allocated as land for SW ¼ 31-49-24 W4M to provide an approximately 50m wide open space area adjacent to the 10m ER setback from Telford Lake. Cash-in-lieu of land will be provided for the NW ¼ 31-49-24 W4M.*

*Policy 3.2.3.2: With subdivision, Park (MR) dedication remaining following dedication of the MR area described in Policy 3.2.3.1 will be allocated to create an approximately 0.25ha day use area and to provide an open space connection between the day use area and the shoreline open space.*

*Policy 3.2.3.3: Final amounts of Park (MR) dedication within the ASP area will be established at the subdivision and development stage, calculated from a legal boundary survey prepared by an Alberta Land Surveyor.*

*Policy 3.2.3.4: The extent of the bed and shore of Telford Lake, and in turn the location of the approximately 50m Park strip upland of the shoreline, will be*

*verified by an Alberta Land Surveyor and approved by the Province at the time of subdivision.*

*Policy 3.2.3.5: Wherever possible impacts to wetland features from development will be minimized. Where impacts cannot be avoided, compensation will be provided for damage to or loss of natural features pursuant to the provisions of the Water Act and Alberta Wetland Policy.*

### **3.2.4 Environmental Reserve**

Approximately 0.86ha of the Lakeside Industrial ASP area will be dedicated as Environmental Reserve (ER). This ER consists of a 10m wide setback from the shoreline of Telford Lake within SW ¼ 31-49-24 W4M, consistent with the recommendations of the Telford Lake Master Plan and the Biophysical Assessment completed for the ASP area.

This ER area is occupied primarily by marsh shoreline, grassland and some aspen shoreline vegetation. This area will be left in its natural state, to the extent feasible. Some alteration of lands within the ER area will be required to provide the outlet from the naturalized stormwater management facility.

Through integration with the MR dedication for the ASP area, habitat preservation and ecological connectivity is supported.

#### **Environmental Reserve Policy:**

*Policy 3.2.4.1: Delineation of the 10m ER setback from Telford Lake within the ASP area will be established at the subdivision and development stage, based on a legal boundary survey prepared by an Alberta Land Surveyor.*

*Policy 3.2.4.2: Lands dedicated as ER will not be altered except where necessary to construct the outlet from the stormwater management facility to Telford Lake. Disturbance of lands within the ER area during construction of the stormwater outlet will be minimized to the extent feasible.*

*Policy 3.2.4.3: "Tilled pond" areas, identified in the Biophysical Assessment for the ASP area are considered developable lands and will not be dedicated as ER or MR.*

### 3.2.5 Land Use Statistics

**Table 1 - Land Use Statistics**

	Area (ha)	% GDA	Jobs Created
<b>Gross Area</b>	<b>55.07</b>		
Environmental Reserve (ERD)	0.86		
<b>Gross Developable Area (GDA)</b>	<b>54.21</b>	<b>100.00</b>	
Arterial Roadway	0.00		
Pipeline R/W (US)	0.13		
Light Industrial (IL)	34.89	64.36	872.25
Business Commercial (GC / CBO)	4.04	7.45	202.00
Urban Services (SWMF)	4.74	8.74	
Park (GR)*	4.65	8.58	
Circulation	5.76	10.63	

\* cash-in-lieu of land for MR will be provided for the NW ¼ 31-49-24 W4M

MR dedication for SW ¼ 31-49-24 W4M will be taken as land, calculated as:

$$\begin{aligned}
 \text{Gross Area} &= 47.32\text{ha} \\
 &\quad - 0.86\text{ha} \text{ (ERD)} \\
 &= 46.46\text{ha} \text{ (GDA)} \\
 \text{x 10\%} &= 4.65\text{ha} \text{ (GR)}
 \end{aligned}$$

MR dedication for NW ¼ 31-49-24 W4M will be taken as cash-in-lieu, calculated as:

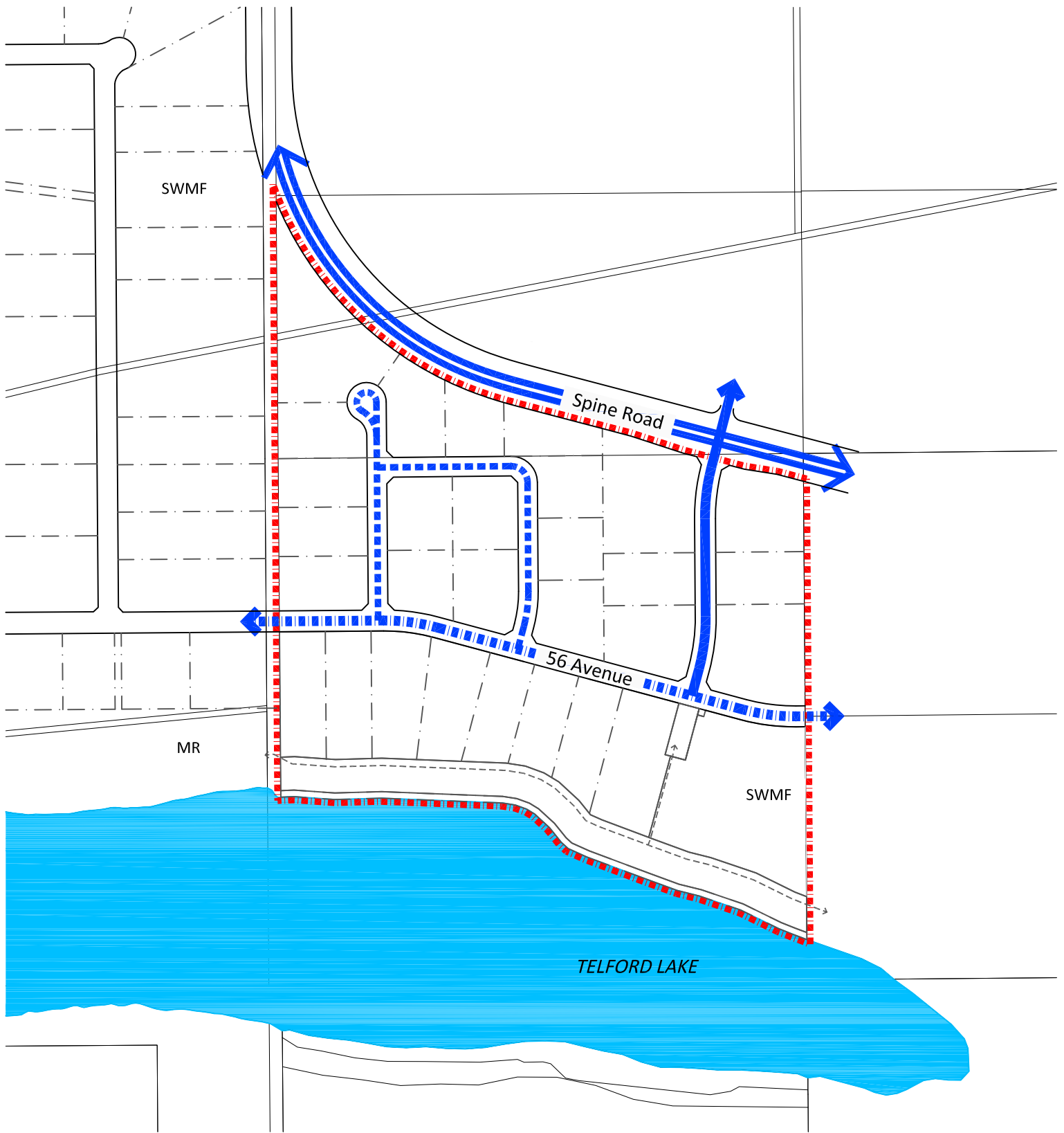
$$\begin{aligned}
 \text{Gross Area} &= 7.75\text{ha} \\
 &\quad - 0.00\text{ha} \text{ (ERD)} \\
 &= 7.75\text{ha} \text{ (GDA)} \\
 \text{x 10\%} &= 0.78\text{ha} \text{ (GR)}
 \end{aligned}$$

### 3.3 Transportation

The roadway network for the Lakeside Industrial ASP provides an extension of that planned for the surrounding areas. Following is a description of the roadway network. A Traffic Impact Assessment (TIA) for the ASP was completed by CIMA+ and submitted under separate cover.

#### Transportation Policy:

*Policy 3.3.1: Roadways within the Lakeside Industrial ASP shall be developed generally in accordance with Map 3.3 – Transportation Plan.*



- Legend**
- ASP Boundary
  - Future Major Roadway (Arterial)
  - Industrial / Commercial Arterial Roadway (4 Lane)
  - Industrial / Commercial Collector Roadway (2 Lane)
  - Local Roadway (Rural, 2 Lane)
  - Telford Lake Trail (Multiway)

Note: This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.

## Map 3.3 Transportation Plan

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



**WATKINS LAND  
DEVELOPMENTS**

**G M A C**  
Greg Mackenzie + Associates Consulting Ltd.

September 11, 2014

### 3.3.1 Future Major Roadway

The “Future Major Roadway”, which is the southward extension of the Nisku Spine Road, forms the northern boundary of the ASP area. This Future Major Roadway provides the primary access for development in the ASP area. In addition, as this roadway is the future eastern ring road for the City connecting to Highway 2, it provides strong access from the ASP area to the City of Leduc, the Capital Region and the rest of the Province.

For the purpose of preparing the ASP, the right-of-way for this roadway was based on the 2012 “Range Roads 245 / 250 Functional Planning Study” prepared by McElhanney Consulting Services Ltd. for the City of Leduc and Leduc County. The functional plan identified this roadway as a 65m wide (widening to 70m at the access to the ASP area), 6 lane, rural cross section.

In order to provide for efficient development of lands within the ASP area and the lands to the east, the access point from the Future Major Roadway to the ASP area has been located approximately 75m west of where it was identified in the Functional Planning Study. With this change, the design for the Future Major Roadway continues to meet TAC standards. No access to the Future Major Roadway will be permitted from Range Road 250.

#### **Future Major Roadway Policy:**

*Policy 3.3.1.1: Final delineation of the right-of-way for Range Roads 245 / 250 (the southern extension of the Nisku Spine Road) through detailed engineering will establish the north boundary of development in the ASP area.*

### 3.3.2 Arterial and Collector Roadway Network

A north-south 4-lane Industrial/Commercial Arterial roadway provides a connection from the east-west collector roadway to the Future Major Roadway and provides the principal access for the ASP area. Additional width of road right-of-way required at the intersection of this north-south arterial roadway and the Future Major Roadway will be established at the subdivision stage.

An east-west 2-lane Industrial/Commercial Collector roadway will connect from the Harvest Industrial Park ASP area, through the Lakeside ASP area, to the existing 56

Avenue. The location of this roadway in the ASP area has been provided to tie-in to that proposed in the Harvest Industrial Park ASP.

These arterial and collector roadways are identified in the MDP and the Functional Planning Study for the Future Major Roadway.

**Arterial and Collector Roadway Network Policy:**

*Policy 3.3.2.1: Arterial and collector roadways within the Lakeside Industrial ASP will be provided to a rural or urban standard as an extension of the roadways developed in the Harvest Industrial area. At the time of writing, roadways in the Harvest Industrial area were planned to be provided as rural standard roadways. All roadways in the Lakeside Industrial area will be designed and developed in accordance with the City's Minimum Engineering and Design Standards.*

*Policy 3.3.2.2: Prior to development proceeding in the Lakeside Industrial area a connection to 56 Avenue and / or the Future Major Roadway will be required. If development in the Lakeside Industrial area is to proceed prior to a roadway connection being extended to the boundary of the Plan area, off-site roadway connections will be required to be constructed. Costs associated with these off-site roadway connections will be recovered from benefiting owners when development within adjacent areas proceeds.*

### **3.3.3 Local Street Network**

A 2-lane Industrial/Commercial local street system provides access from the collector roadway network to the Industrial area in the northwest portion of the ASP area.

**Local Street Network Policy:**

*Policy 3.3.3.1: Local streets within the Lakeside Industrial ASP will be provided as rural streets, designed and developed in accordance with the City's Minimum Engineering and Design Standards.*

## **3.4 Servicing**

### **3.4.1 Stormwater Management**

As noted in Section 3.3 – Transportation, roadways within the Lakeside Industrial ASP will be developed to a rural or urban standard as an extension of those in the Harvest Industrial area which, at the time of writing, are planned for a rural standard. Appendix B contains the City of Leduc's standard cross section for local, collector and arterial rural

roads. If roadways are developed to a rural standard, to minimize imported clay fill, 0.3% road and roadside ditch grades are proposed for a majority of ASP area. Subdrains will be required below these ditches.

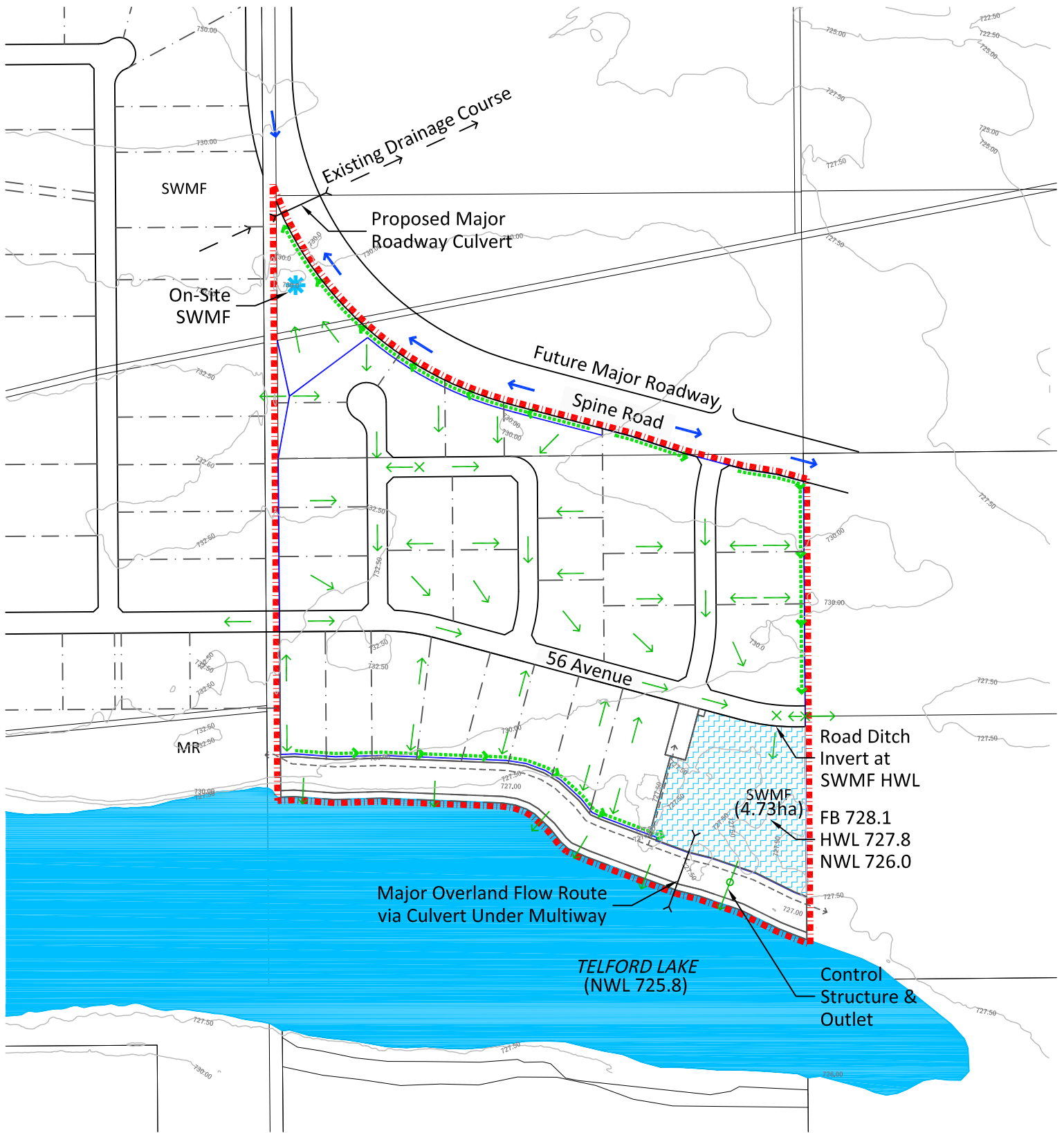
The proposed stormwater management concept is shown on Map 3.4 which generally follows the existing drainage pattern. The majority of the site will drain to the southeast while a small portion drains to the northwest. Drainage swales are also proposed along the north, east and south boundaries. These swales, along with the roadside ditches and / or pipes (should major roadways within the area be developed to an urban standard) will convey the major and minor storm flows. The proposed drainage swale adjacent to the future Major Roadway could be deleted and the lots drain directly to the future Major Roadway ditches if construction in the ASP area and the future Major Roadway coincide.

A naturalized Stormwater Management Facility (SWMF) is proposed in the south east corner of the site to service the majority of the ASP area, and will outfall to Telford Lake. The Telford Lake level is controlled by a weir at its outlet. The normal water level is 725.8m and remains relatively constant. The northwest corner of the site will require a small on-lot SWMF before discharging to Saunders Lake via the existing natural drainage channel. Development which drains to Saunders Lake will require an indemnification agreement with Leduc County.

Prior to undertaking the detailed design, a Conceptual Servicing Plan is required by the City. In conjunction with the Conceptual Servicing Plan, a Stormwater Management Plan will be undertaken to further define the two SWMFs and to meet the design criteria as outlined in the City of Leduc's Minimum Engineering Design Standards.

**Stormwater Management Policy:**

*Policy 3.4.1.1: Stormwater management for the Lakeside Industrial ASP shall be in general accordance with the proposed plan shown as Map 3.4 – Stormwater Concept. Detailed design of the stormwater management system will be based on the outcomes of a Stormwater Management Plan prepared in accordance with the City's Minimum Engineering Standards.*



- Legend**
- ASP Boundary
  - Future Major Roadway Grading (Functional Planning Study, 2011)
  - Proposed ASP Grading
  - Proposed Drainage Swales
  - Proposed ASP Storm Basin
  - Existing Contours

## Map 3.4 Stormwater Concept

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



Note: This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.

September 11, 2014

### 3.4.2 Sanitary Sewer

The Lakeside Industrial ASP is included in the City of Leduc's Proposed North East Sanitary Sewer Trunk basin and is located at the upper reach of this basin. According to the North East Sewer Trunk Plan, the ASP area sewer system is to drain by gravity to the southeast portion of the site. Appendix C contains the City's proposed North East Sanitary Sewer Trunk Plan.

Map 3.5 shows the proposed gravity sanitary sewer layout. Also shown is a proposed interim system until the downstream sanitary system is in place. The interim system is proposed to be comprised of a prefabricated package lift station with a forcemain directed via the unopened Range Road 250 to the existing North East Sanitary Trunk sewer as shown on Maps 3.5 and 3.6.

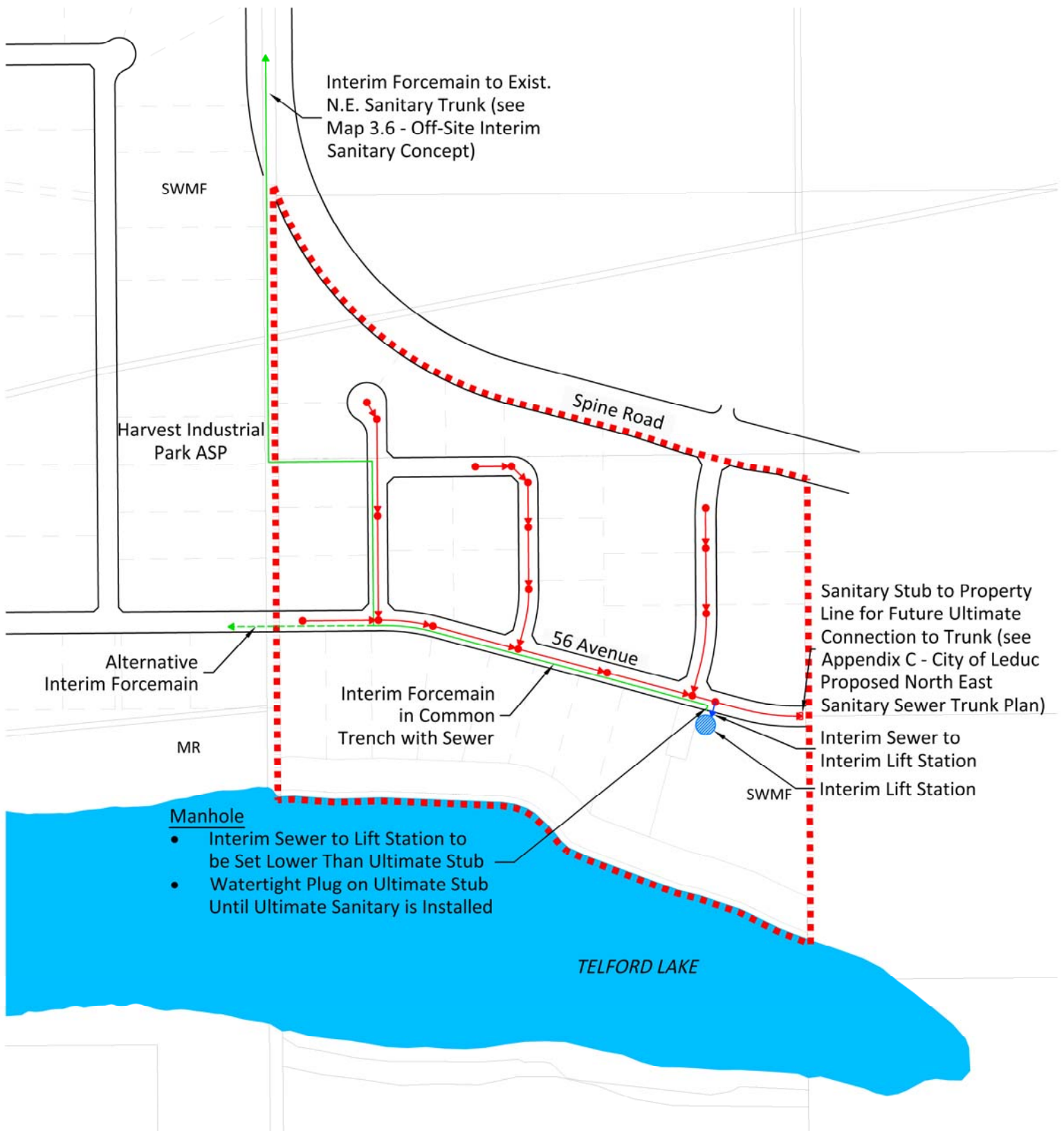
An alternative interim system (see Map 3.5) would be directed to the Harvest Industrial Park ASP sanitary sewer system. The City has advised that the sanitary basin that includes the Harvest Industrial Park ASP is at its capacity. Thus, the Lakeside ASP interim lift station would have to provide additional storage and pump at off-peak times. This alternative would require consultation with the City Engineering department at the Conceptual Servicing Plan stage.

As required by the City of Leduc, a Conceptual Servicing Plan is to be submitted prior to commencing with the detailed design.

#### **Sanitary Sewer Policy:**

*Policy 3.4.2.1: Development within the Lakeside Industrial ASP shall connect to the municipal sanitary sewer system based on the outcomes of a Conceptual Servicing Plan prepared in accordance with the City's Minimum Engineering Standards.*

*Policy 3.4.2.2: If development in the Lakeside Industrial area is to proceed prior to sanitary sewer connections being extended to the boundary of the Plan area, interim and/or off-site sanitary connections will be required to be constructed. Costs associated with interim sanitary connections will be not be recovered from adjacent development and will not exempt development in the Lakeside Industrial area from contributing to costs associated with the ultimate utility network. Costs associated with off-site connections to the ultimate sanitary sewer network will be recovered from benefiting owners when development within adjacent areas proceeds.*



- Legend**
- ASP Boundary
  - Proposed Sanitary Sewer, Manhole + Direction of Flow
  - Interim Forcemain to Exist. N.E. Sanitary Trunk
  - Alternative Interim Forcemain to Harvest Industrial Park ASP
  - Interim Sewer
  - Interim Lift Station

## Map 3.5 Sanitary Sewer Concept

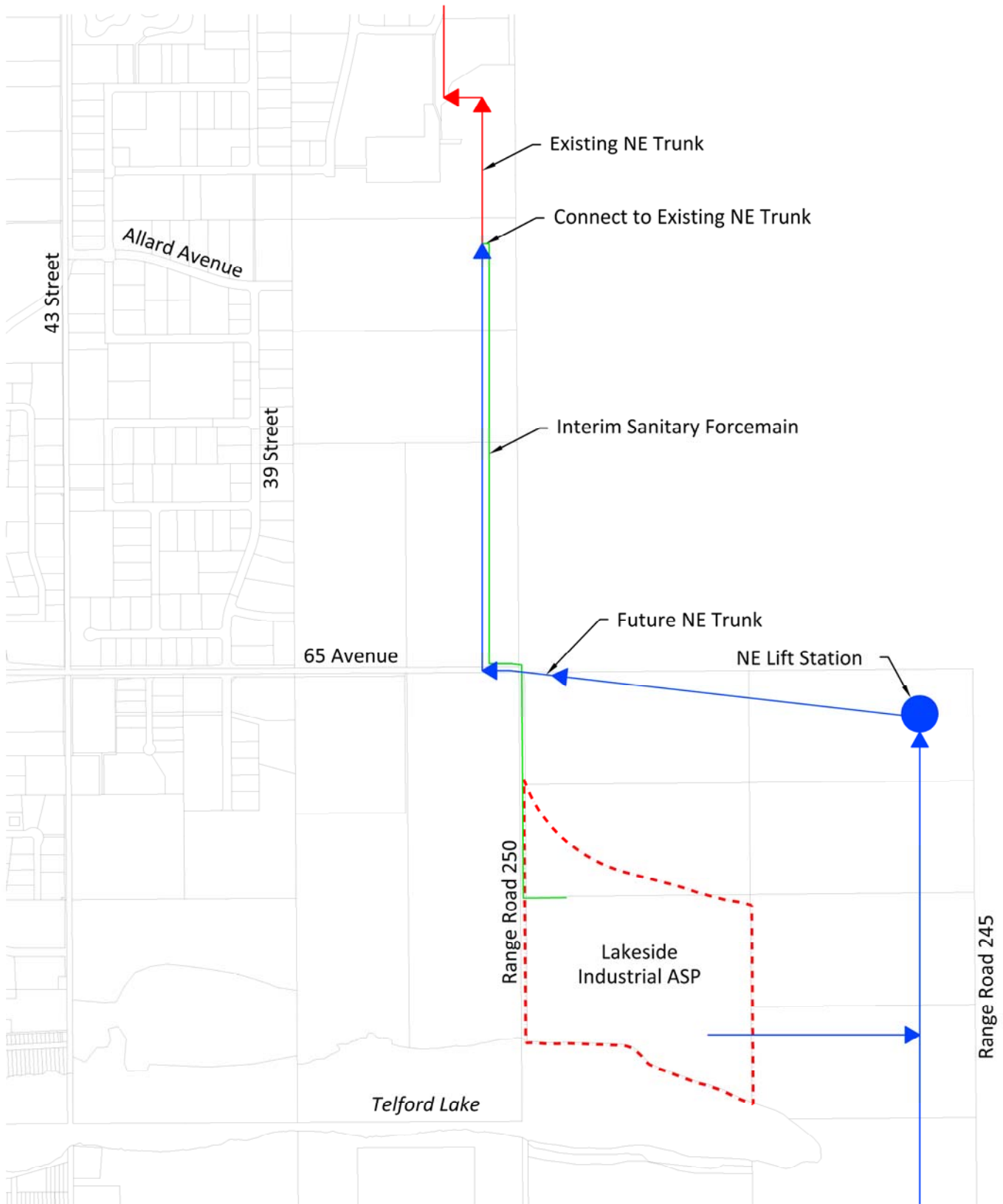
Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



Note: This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.

September 11, 2014



- Legend**
- Lakeside Industrial ASP Boundary
  - Existing NE Sanitary Trunk
  - Interim Sanitary Forcemain
  - Future NE Sanitary Trunk

## Map 3.6

### Offsite Interim Sanitary Concept

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 20,000



September 11, 2014

### 3.4.3 Water Network

An existing 400mm diameter watermain on 65 Avenue is proposed to extend easterly as development advances. The end of the existing 400mm watermain is currently located on 65 Avenue approximately 800m west of Range Road 250.

The adjacent Harvest Industrial Park ASP identifies a 300mm diameter watermain connection on the west side of Lakeside Industrial ASP. However, the City has provided an updated water network plan which is included as Appendix E – Water Network Plan. Map 3.7 reflects the updated main diameter to 350mm.

As outlined in Appendix E, a 400mm watermain connection is required from the north to provide the ultimate watermain looping. There are two options for the north watermain connection. Option 1 is within the proposed Spine Road right of way. This option is dependent upon the timing of the purchase of the Spine Road right of way by the City. Option 2 is from future development to the north and is dependent upon timing of development to the north. Other off-site water connection options are possible.

Depending upon the timing of the 400mm watermain a second watermain connection from the Harvest Industrial Park is proposed to provide looping for the first stage of development of the Lakeside Industrial ASP.

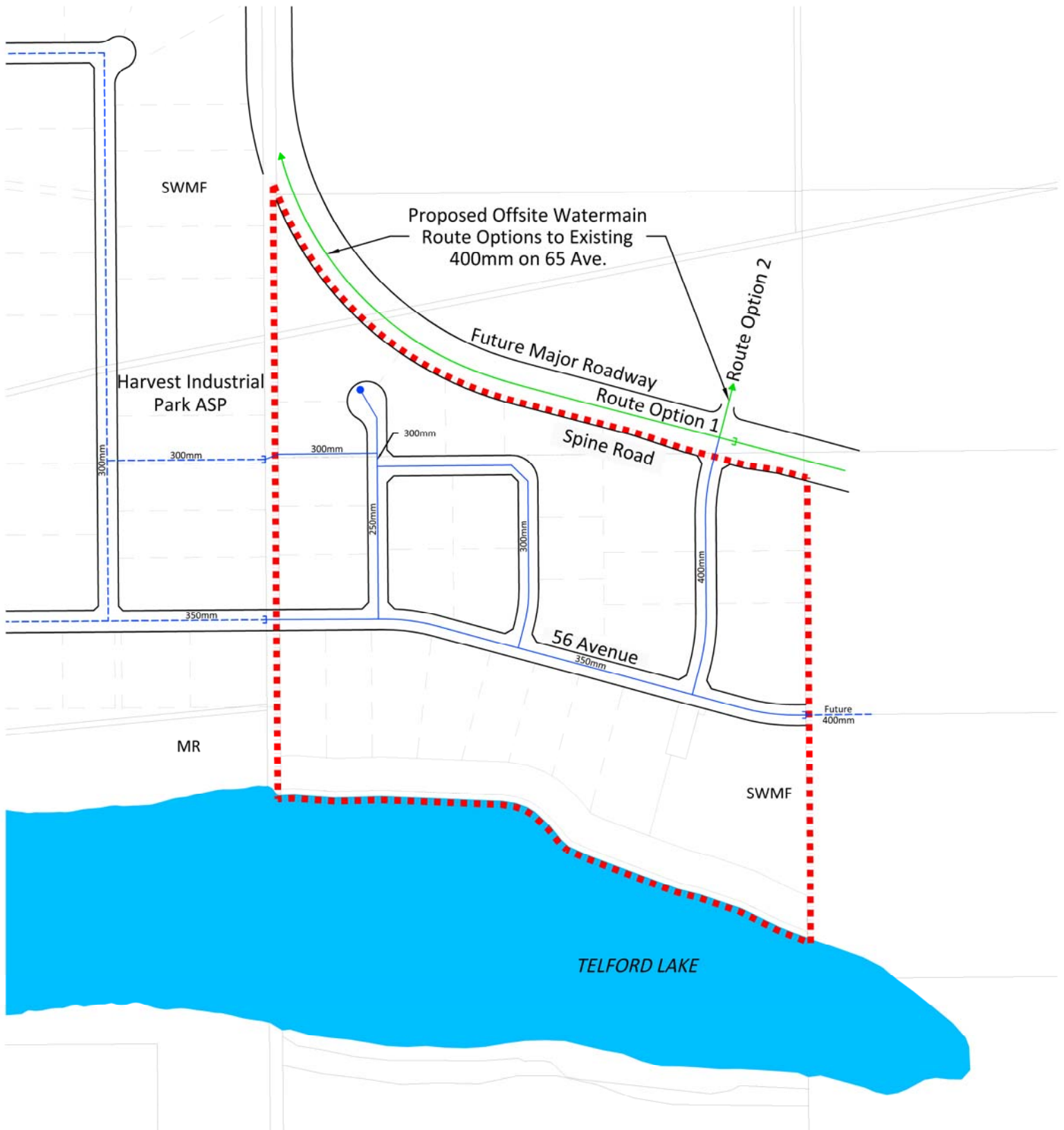
Map 3.7 shows the proposed off-site water connections and options as well as the proposed on-site water network in accordance with Appendix E.

To adhere to the City of Leduc's Minimum Engineering Standards a Water Network Analysis should be undertaken in conjunction with the Conceptual Servicing Plan to include: review of the various off-site water connection routes; looping requirements; peak day consumption and fire flows; pressures; and pipe sizing. The analysis and servicing plan is to be undertaken prior to detailed design.

#### **Water Network Policy:**

*Policy 3.4.3.1: Water infrastructure for the Lakeside Industrial ASP will be provided in accordance with the City's Minimum Engineering Standards, based on the outcomes of a Water Network Analysis.*

*Policy 3.4.3.2: If development in the Lakeside Industrial area is to proceed prior to watermain connections being extended to the boundary of the Plan area, off-site water connections will be required to be constructed. Costs associated with off-site connections to the ultimate water network will be recovered from benefiting owners when development within adjacent areas proceeds.*



- Legend**
- ASP Boundary
  - Proposed Off-Site Watermain
  - Proposed Watermain
  - Proposed Offsite Watermain Route

**Notes:**  
 This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.  
 Proposed Watermain sizing and route to be confirmed at the Conceptual Servicing Plan stage.

## Map 3.7 Water Network Concept

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



September 11, 2014

### 3.5 Implementation

This ASP is a statutory plan providing guidance to achieve orderly, efficient and economic development of the Lakeside Industrial area. To ensure development within the ASP area complies with the policies provided, the City of Leduc will review and approve all plans for development prior to their implementation.

#### Implementation Policy:

*Policy 3.5.1: Prior to issuance of a development permit, Engineering Design and Construction drawings will be provided to the City of Leduc for review and approval.*

#### 3.5.1 Zoning

Lands within the Lakeside Industrial ASP area are currently zoned UR – Urban Reserve. Lands designated by the ASP for Industrial, Commercial, Park, Environmental Reserve and Urban Services will require rezoning to an appropriate land use district provided by the Land Use Bylaw.

#### 3.5.2 Staging

Development staging within the Lakeside Industrial ASP area is anticipated to be from the access to the Future Major Roadway, proceeding south and then west.

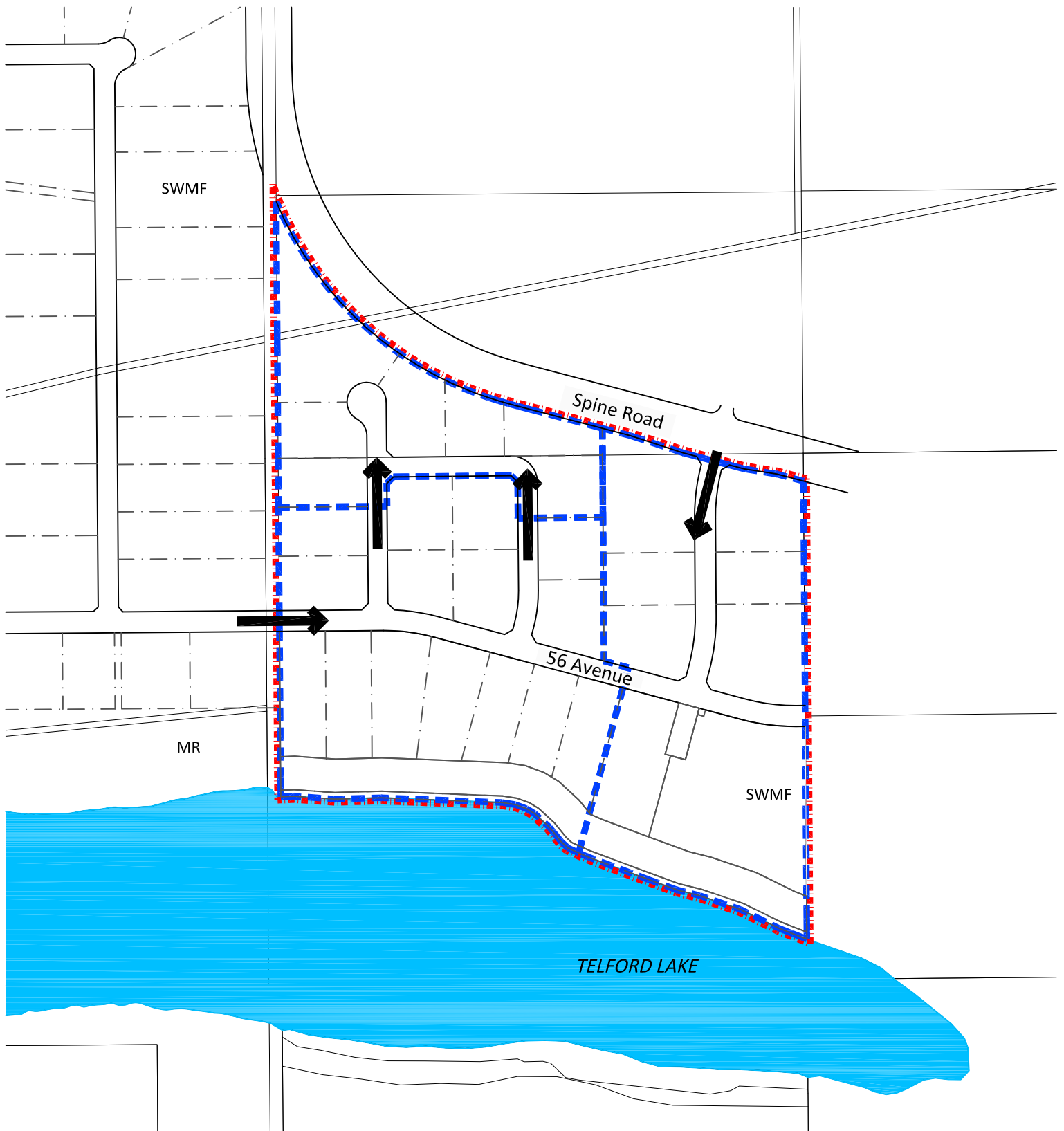
A first stage of development taking access from the extension of the collector roadway in the Harvest Industrial Park area, potentially prior to the Future Major Roadway being extended to the ASP area, may be possible. Development of such a stage must be supported by a specific Traffic Impact Assessment and the outcomes of a Stormwater Management Plan, a Conceptual Servicing Plan and a Water Network Analysis.

Staging is dependent upon which is built first; the Future Major Roadway or Harvest Industrial Park.

#### Staging Policy:

*Policy 3.5.2.1: Development shall proceed generally in accordance with Map 3.8 – Staging Plan.*

*Policy 3.5.2.2: If development in the Lakeside Industrial area is to proceed prior to roadway and utility connections being extended to the boundary of the Plan area, interim and/or off-site connections will be required to be constructed. Costs associated with interim connections will be not be recovered from adjacent development and will not exempt development in the Lakeside Industrial area from contributing to costs associated with the ultimate transportation and utility network. Costs associated with off-site connections to the ultimate roadways and servicing network will be recovered from benefiting owners when development within adjacent areas proceeds.*



**Legend**  
 ■ ASP Boundary  
 ■ Staging Boundary  
 ➡ Direction of Development

**Notes:**  
 This plan is conceptual only and the exact location and alignment of uses, facilities, roadways, lot lines and services will be determined at the zoning and subdivision stage.  
 Staging is approximate only and may change subject to market conditions and the provision of interim servicing and transportation options.  
 The number of stages may vary depending on market conditions.

## Map 3.8 Staging Plan

Lakeside Industrial  
Area Structure Plan  
Leduc, Alberta

Scale 1 : 8,000



**WATKINS LAND  
DEVELOPMENTS**

**G M A C**  
Greg Mackenzie + Associates Consulting Ltd.

September 11, 2014



## **APPENDIX A**

### Certificates of Title





LAND TITLE CERTIFICATE

S  
LINC                      SHORT LEGAL                      TITLE NUMBER  
0021 768 981            4;24;49;31;SW            132 243 850

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 24 TOWNSHIP 49  
SECTION 31  
ALL THAT PORTION OF THE SOUTH WEST QUARTER OF  
NOT COVERED BY THE WATERS OF A CERTAIN SURVEYED  
LAKE, AS SHOWN ON A PLAN OF SURVEY OF THE SAID  
TOWNSHIP SIGNED AT OTTAWA ON THE 25TH DAY OF  
SEPTEMBER A.D. 1883, CONTAINING 44.1 HECTARES  
(109 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: CITY OF LEDUC

REFERENCE NUMBER: 962 297 492

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
132 243 850	09/08/2013	TRANSFER OF LAND	\$4,000,000	\$4,000,000

OWNERS

0973733 B.C. LTD.  
OF 1489 MARINE DRIVE WEST  
VANCOUVER  
BRITISH COLUMBIA V7T 1B8

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION		
NUMBER	DATE (D/M/Y)	PARTICULARS
6150EA	26/06/1929	UTILITY RIGHT OF WAY GRANTEE - FORTISALBERTA INC. 320-17 AVE SW CALGARY

( CONTINUED )

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 132 243 850

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS  
-----

ALBERTA T2S2V1

"PART (DATA UPDATED BY TRANSFER OF UTRW. NO.  
5888GH) "

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 002298519)

(DATA UPDATED BY: CHANGE OF NAME 042560821)

872 008 104 14/01/1987 ZONING REGULATIONS

BY - HER MAJESTY THE QUEEN IN RIGHT OF CANADA  
AS REPRESENTED BY DEPARTMENT OF TRANSPORT  
EDMONTON INTERNATIONAL AIRPORT

872 152 705 03/07/1987 CAVEAT

RE : EASEMENT

CAVEATOR - DUCKS UNLIMITED CANADA.

302, 10335 - 172 ST., EDMONTON

ALBERTA

AGENT - NANCY MONEY

132 243 851 09/08/2013 MORTGAGE

MORTGAGEE - GEOFFREY LEONARD GAETZ

P.O. BOX 146

MULHURST BAY

ALBERTA T0C2C0

ORIGINAL PRINCIPAL AMOUNT: \$3,000,000

TOTAL INSTRUMENTS: 004

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 10 DAY OF  
DECEMBER, 2013 AT 10:10 A.M.

ORDER NUMBER: 24966072

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

( CONTINUED )

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S) .





LAND TITLE CERTIFICATE

S

LINC                      SHORT LEGAL  
0026 014 621        4;24;49;31;NW

TITLE NUMBER  
072 644 869 +1

LEGAL DESCRIPTION

MERIDIAN 4    RANGE 24    TOWNSHIP 49  
SECTION 31

ALL THAT PORTION OF THE NORTH WEST QUARTER  
WHICH LIES SOUTH OF A LINE DRAWN THROUGHOUT AND AT  
RIGHT ANGLES TO THE WEST BOUNDARY 402.3 METRES  
SOUTHERLY FROM THE NORTH WEST CORNER THEREOF,  
CONTAINING 32.4 HECTARES (80 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: CITY OF LEDUC

REFERENCE NUMBER: 952 002 507

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
072 644 869	30/10/2007	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

1355181 ALBERTA LTD.  
OF #303, 9811-34 AVE  
EDMONTON  
ALBERTA T6E 5X9

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION		
NUMBER	DATE (D/M/Y)	PARTICULARS
6369PJ	10/01/1968	CAVEAT RE : EASEMENT CAVEATOR - PLAINS WESTERN GAS & ELECTRIC CO LTD.
26RG	29/10/1968	CAVEAT

( CONTINUED )

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 072 644 869 +1

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS  
-----

RE : EASEMENT

CAVEATOR - PLAINS WESTERN GAS & ELECTRIC CO LTD.

170RT 18/09/1969 CAVEAT

CAVEATOR - PLAINS WESTERN GAS & ELECTRIC CO LTD.

832 254 121 19/10/1983 UTILITY RIGHT OF WAY

GRANTEE - ICG UTILITIES (PLAINS-WESTERN) LTD.

872 008 104 14/01/1987 ZONING REGULATIONS

BY - HER MAJESTY THE QUEEN IN RIGHT OF CANADA  
AS REPRESENTED BY DEPARTMENT OF TRANSPORT  
EDMONTON INTERNATIONAL AIRPORT

092 398 777 04/11/2009 CAVEAT

RE : LEASE INTEREST

CAVEATOR - PAUL LARSEN

HERITAGE LAW OFFICES

#108 2841 109 ST

EDMONTON

ALBERTA T6J6B7

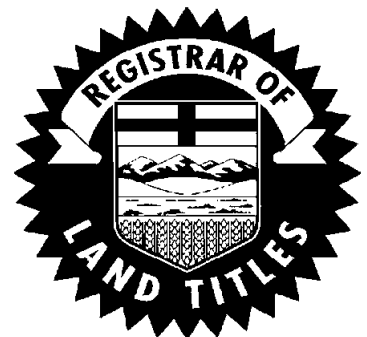
AGENT - MAXINE LARSEN

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 10 DAY OF  
DECEMBER, 2013 AT 10:10 A.M.

ORDER NUMBER: 24966072

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED  
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,  
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM  
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,  
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS  
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING  
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).


## **APPENDIX B**

### City of Leduc Road Cross Sections







<b>REVISIONS</b>			 #1 Alexandra Park, Leduc Alberta, T9E 4C4, Canada		
Date	Details	Drawn	<b>2 LANE INDUSTRIAL / COMMERCIAL LOCAL - RURAL</b>		
			Director of Engineering: <i>R. Hanson</i>		
			City Engineer: <i>A. Yarnachuk</i>		
			Date: Nov. 2005	Scale: N.T.S.	Drawn: S. Salmas
			<b>DWG. NO.</b>  <b>3.11</b>		

## **APPENDIX C**

### City of Leduc Proposed North East Sanitary Sewer Trunk Plan

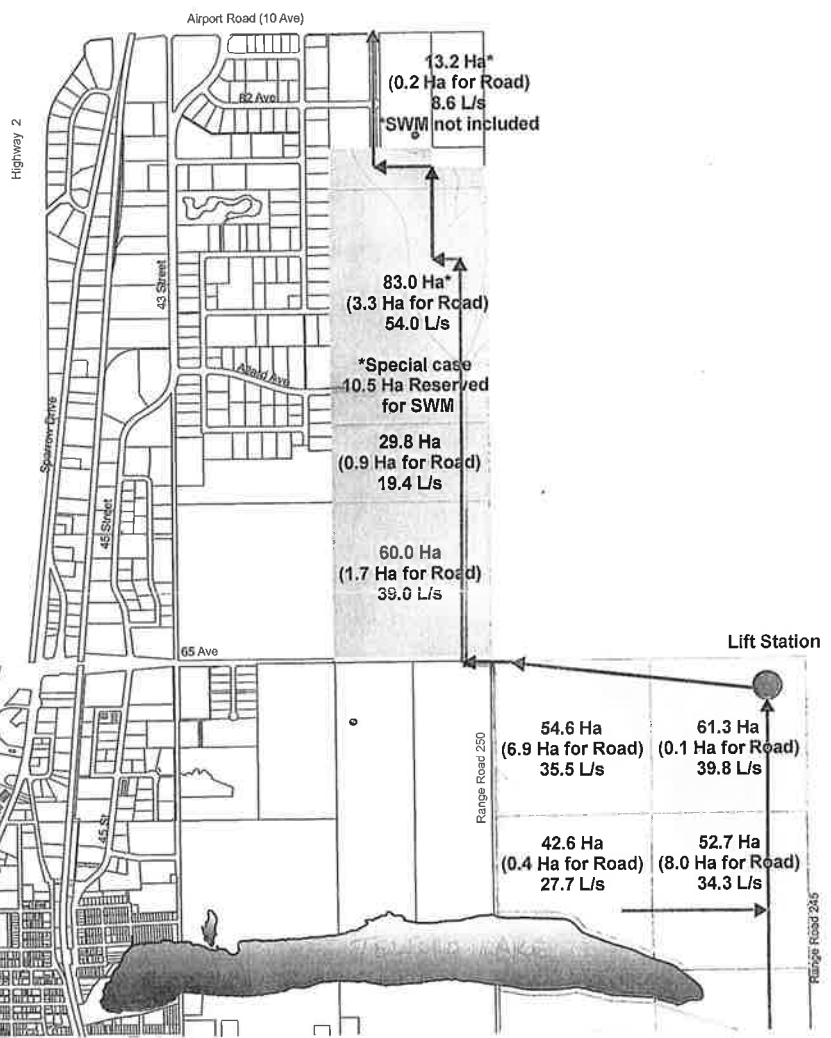


Sanitary flows  
carried by gravity

Sanitary flows  
carried by force main

Assume = 0.65 L/s allowable for each Ha

	Total Area (Ha)	Total Flow (L/s)
Red	186.0	121.0
Green	211.2	137.3
Blue	405.9	263.9
Total	803.1	522.2





## **APPENDIX D**

### Planning Policy Context



The Lakeside ASP is in conformance with and supports the policies identified in the City of Leduc Municipal Development Plan (MDP). This Appendix describes – in greater detail to what is provided in the ASP – the relevant MDP policies and the ASP’s conformance to each policy.

Municipal Development Plan Policy	ASP Compliance
<b>4F. Commercial Development</b>	
2. providing for new commercial development in clearly established corridors adjacent to Edmonton International Airport, the QE II Highway, and other primary highways such as Highway 39, where it would serve to buffer residential neighbourhoods from significant sources of highway and airport noise;	Commercial development in the ASP area has been located to take advantage of access and exposure from the extension of the future major roadway (the Nisku Spine Road) from Airport Road. This commercial development provides an attractive gateway to the ASP area, and the City of Leduc, from the major roadway.
4. requiring that the commercial, office, light industrial, and business park uses to be developed along the north and south sides of Telford Lake: <ul style="list-style-type: none"> <li>incorporate physical separation between development areas and the natural areas and park spaces surrounding Telford Lake,</li> <li>use low-impact stormwater management practices,</li> <li>provide for appropriate recharge of clean stormwater into aquifers and natural areas, and</li> <li>exceed the architectural, urban design, and landscape architecture standards typically required for light industrial development;</li> </ul>	Commercial development within the ASP area is physically removed from the natural open space provided along the shore of Telford Lake. Low Impact Development (LID) stormwater management practices, including ditches for conveyance of stormwater and a naturalized stormwater management facility are planned for the ASP area. These measures support natural treatment and infiltration of stormwater into aquifers and natural areas.  The regulations of the Land Use Bylaw ensure a high standard of commercial development.
7. providing for commercial and retail areas that support and have access to nearby residential neighbourhoods;	Due to its exposure and ready access from the future major roadway, the location of the commercial development serves to benefit future residential development areas planned further to the east.
10. requiring that all commercial and retail development and redevelopment provide adequate pedestrian connections on site and to the City’s trail, pathway, and Multiway systems;	Site design within commercial lots will ensure appropriate pedestrian connections are provided, and will be detailed at the development stage.
11. requiring that commercial development incorporate pedestrian-oriented frontages;	Building design for commercial development will ensure appropriate design for pedestrians is provided, and will be detailed at the development stage.
12. requiring that parking areas for commercial development provide for pedestrian circulation,	Site design for commercial development will ensure appropriate design for the comfort and safety of

Municipal Development Plan Policy	ASP Compliance
landscaping, and architectural elements to enhance the safety and comfort of pedestrians;	pedestrians is provided, and will be detailed at the development stage.
13. requiring that commercial and retail development and redevelopment provide adequate access for persons of all ages and abilities in accordance with the principles of universal access;	Building and site design will comply with all regulations relating to accessibility, and will be detailed at the development stage.
14. integrating public transit with commercial development;	Site design will provide access to public transit and will be detailed at the development stage. The City should endeavor to provide the ASP area with transit service as early as possible when development proceeds.
15. protecting rights-of-way for future public transit service;	The ASP provides a roadway network in accordance with the City's Engineering Standards. Provision of future public transit service to the ASP area will be established by the City when development proceeds.
16. encouraging the use of low impact development, environmental design, green building techniques, and recycled construction materials in commercial development;	<p>Low Impact Development (LID) stormwater management practices, including ditches for conveyance of stormwater and a naturalized stormwater management facility are planned for the ASP area. These measures support natural treatment and infiltration of stormwater into aquifers and natural areas.</p> <p>Development within the ASP area will be in accordance with the regulations of the City's Land Use Bylaw. While marketing the sites, the developer will encourage the implementation of low impact development, environmental design and green building techniques as well as the use of recycled construction materials. The City should also consider developing incentives to promote the implementation of these measures.</p>
19. requiring that all signs for commercial and retail development conform to the applicable City of Leduc bylaws and design guidelines; and	Signs in the ASP area will be provided in accordance with City regulations.
<b>4G. Industrial and Business Park Development</b>	
1. ensuring that a generous supply of fully serviced land will be available in a variety of locations for a complete range of light manufacturing, service industrial, logistics, warehouse, distribution, eco-industrial, agri-business, aerotropolis, business park, and high-quality office park uses;	Land uses planned for the ASP area support a continuous supply of serviced land will be available to accommodate development of a range of industrial employment and commercial services to meet demand for growth in the City of Leduc.

Municipal Development Plan Policy	ASP Compliance
<p>4. promoting eco-industrial development such as value-added food chain, renewable energy, resource recovery, bio-technology, environmental technology, and green building industries, which will:</p> <ul style="list-style-type: none"> <li>• achieve improvements in the productivity of human and natural resources,</li> <li>• conserve and use energy that is generated locally,</li> <li>• introduce fewer non-biodegradable wastes into the environment,</li> <li>• connect with the community,</li> <li>• be compatible with other non-residential land uses,</li> <li>• have links with inter-company networks that bring about new efficiencies and new market opportunities,</li> <li>• incorporate sustainable land use and sustainable design of facilities, and</li> <li>• adopt new technologies rapidly;</li> </ul>	<p>Sustainable building and site design measures for development in the ASP area which: promote employee comfort and productivity; reduce energy consumption and greenhouse gas production; and support reduction and management of solid and hazardous waste and promote recycling should be established by the developer, in consultation with the City, at the development stage.</p> <p>The ASP includes an interconnected open space network adjacent to Telford Lake. This network provides connectivity to development immediately to the east and west as well as to the City as a whole. Roadway networks for the ASP area have been designed to integrate with those planned to the west and to provide future connectivity to the lands to the east. Industrial and commercial development within the ASP area will conform to the regulations of the City's Land Use Bylaw, which provides for appropriate transitions between uses within and adjacent to the ASP area.</p>
<p>5. promoting the development of industries related to food production and the processing of agricultural products, particularly in relation to local agricultural operations and food that is produced within the region;</p>	<p>The industrial and commercial uses within the ASP area will provide flexibility to accommodate development related to food production and processing of agricultural products.</p>
<p>6. requiring that commercial, office, light industrial, and business park uses are developed in the non-residential areas along the north and south sides of Telford Lake, in a manner that is compatible with adjacent residential development, parks, and natural areas;</p>	<p>Lands west and east of the ASP area are identified for industrial, commercial and office uses. A naturalized stormwater management facility in the southeast corner of the ASP area will provide separation between industrial uses in the ASP area and potential residential uses in the lands to the east. The N.E.F. 30 contour extends into the lands east of east-central and northeast portions of the ASP area. This ensures non-residential uses will be developed adjacent to industrial uses along the eastern boundary of the ASP area. Site and building design within the ASP area will conform to the regulations of the City's Land Use Bylaw, providing compatibility between uses within and adjacent to the ASP area.</p>
<p>7. requiring that the commercial, office, light industrial, and business park uses to be developed along the north and south sides of Telford Lake:</p>	<p>Physical separation between development in the ASP area and the natural open space provided along the shore of Telford Lake will be in accordance with the regulations of the Telford Industrial Overlay section of the City's Land Use Bylaw. Low Impact Development (LID) stormwater</p>

Municipal Development Plan Policy	ASP Compliance
<ul style="list-style-type: none"> <li>incorporate physical separation between development areas and the natural areas and park spaces surrounding Telford Lake,</li> <li>use low-impact stormwater management practices,</li> <li>provide for appropriate recharge of clean stormwater into aquifers and natural areas, and</li> <li>exceed the architectural, urban design, and landscape architecture standards typically required for light industrial development;</li> </ul>	<p>management practices, including ditches for conveyance of stormwater and a naturalized stormwater management facility are planned for the ASP area. These measures support natural treatment and infiltration of stormwater into aquifers and natural areas.</p> <p>The regulations of the Telford Industrial Overlay will require development to exceed the architectural, urban design, and landscape architecture standards typically required for light industrial development.</p>
<p>8. allowing for development in the areas designated for Transitional Industrial Uses in Figure 4, which would incorporate land use and design transitions between the Telford Lake commercial, office, light industrial, and business park areas and the adjacent industrial areas;</p>	<p>A collector roadway provides a logical physical transition between the Telford Lake Commercial, Office, Light Industrial and Business Park area in the south of the ASP from the Nisku / Leduc Business Industrial area in the north.</p>
<p>9. continuing to promote the development of the Northeast Industrial Area for serviced light industrial uses;</p>	<p>The industrial uses within the ASP area support this City objective.</p>
<p>11. prohibiting heavy industrial development anywhere within the City of Leduc;</p>	<p>Heavy industrial development is not proposed within the ASP area, in support of this objective.</p>
<p>13. providing public transit service to industrial and high employment areas including, where feasible, access to C-Line transit service;</p>	<p>The City should endeavor to provide the ASP area with transit service as early as possible when development proceeds.</p>
<p>14. protecting rights-of-way for future public transit service;</p>	<p>The ASP provides a roadway network which, in accordance with the City's Engineering Standards, can support future public transit service.</p>
<p>15. encouraging the use of low impact development, environmental design, green building techniques, and recycled construction materials in industrial development;</p>	<p>Development within the ASP area will be in accordance with the regulations of the City's Land Use Bylaw. While marketing the sites, the developer will encourage the implementation of low impact development, environmental design and green building techniques as well as the use of recycled construction materials. The</p>

Municipal Development Plan Policy	ASP Compliance
	City should also consider developing incentives to promote the implementation of these measures.
16. requiring the preparation of Area Structure Plans for new industrial and business park areas, by landowners where feasible or by the City where the strategic economic development interests of the City are best served;	The preparation of the Lakeside Industrial ASP supports this City objective.
17. requiring that all new industrial and business park Area Structure Plans are supported by comprehensive engineering, servicing, environmental, geotechnical, and transportation studies approved by the City;	An ASP level engineering review has been completed with recommendations incorporated into the ASP. Additional studies prepared and submitted in support of the ASP include a Phase I Environmental Site Assessment, a Biophysical Assessment, a Geotechnical Investigation, a Transportation Impact Assessment and a Historic Resources Overview. Outcomes of these technical studies are summarized in Section 3.0.
18. approving new industrial and business park subdivisions only where a full range of municipal infrastructure or appropriate innovative servicing solutions can be provided in an environmentally sound, economical, and timely manner;	Future subdivision and development of lands within the ASP area will be served by municipal infrastructure or supported by alternative servicing solutions approved by the City. Provision of municipal infrastructure to support development in the ASP area is described in Section 3.0.
19. requiring that all industrial and business park developers be responsible for on-site and appropriate off-site costs of municipal infrastructure and community services; and	On-site and appropriate off-site costs for provision of municipal infrastructure and community services will be the responsibility of the developer, subject to a Development Agreement.
20. ensuring that industrial and business park areas are developed with high quality buildings, appropriate landscaping, mitigation of impacts on adjacent land uses and the environment, pedestrian connections, and amenities for employees.	<p>Development of buildings and landscaping within the ASP area is regulated by the City's Land Use Bylaw which also provides regulations for appropriate interfaces and separations between land uses.</p> <p>Environmentally sensitive areas, as identified in the Biophysical Assessment, are protected and preserved through designation of Environmental and Municipal Reserves and the siting of the naturalized stormwater management facility. These open spaces provide attractive pedestrian connections and amenity areas for employees as well as visitors.</p>



## **APPENDIX E**

### Water Network Plan



**From:** [Sean Carter](#)  
**To:** ["Greg MacKenzie"](#)  
**Cc:** [Qumars Fani](#)  
**Subject:** FW: Lakeside Industrial  
**Date:** September 11, 2014 4:31:21 PM  
**Attachments:** [20140911160614546.pdf](#)

---

Hi Geg,

Please find attached watermain looping information from our engineering department.

Thanks,

Sean

-----Original Message-----

From: Qumars Fani  
Sent: September-11-14 4:27 PM  
To: Sean Carter  
Cc: Kevin Cole  
Subject: RE: Lakeside Industrial

Hi Sean,

Please see attached watermain looping network for Lakeside industrial area, please pass this to the Lakeside Industrial consultant for the update.

Regards,

Qumars Fani, B.Sc. Civil Eng.  
Project Engineering Coordinator  
T 780.980.7146  
qfani@leduc.ca www.leduc.ca

This message and any attached documents are only for the use of the intended recipient(s), are confidential and may contain privileged information. Any unauthorized review, use, retransmission, or other disclosure is strictly prohibited. If you have received this message in error, please notify the sender immediately, and then delete the original message. Thank you.







# WATER MASTER PLAN UPDATE

## PROPOSED WATER DISTRIBUTION SYSTEM STAGE 3 DEVELOPMENT

### LEGEND:

- STUDY AREA BOUNDARY
- MUNICIPAL BOUNDARY (AS OF JANUARY 1, 2014)
- EXISTING RESERVOIR AND PUMPHOUSE
- PROPOSED RESERVOIR AND PUMPHOUSE
- PROPOSED PRV STATION

### PIPE SIZES:

- EXISTING 100mm
- EXISTING 150mm
- EXISTING 200mm
- EXISTING 250mm
- EXISTING 300mm
- EXISTING 350mm
- EXISTING 400mm
- EXISTING 450mm
- EXISTING 500mm
- EXISTING 600mm
- PROPOSED 200mm
- PROPOSED 250mm
- PROPOSED 300mm
- PROPOSED 350mm
- PROPOSED 400mm
- PROPOSED 450mm
- PROPOSED 600mm

### PEAK HOUR PRESSURE:

- LESS THAN 50 psi (345 KPa)
- 50 psi (345 KPa) to 80 psi (552 KPa)
- 80 psi (345 KPa) to 90 psi (620 KPa)
- OVER 90 psi (620 KPa)

SCALE: 1:35,000

MAY, 2014

