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# West QE2

(West of Highway Queen Elizabeth II)

**- MAJOR AREA STRUCTURE PLAN -**

Bylaw No. 3398-2007  
Amendment No. 3398/A-2009  
Amendment No. 3398/A-2019  
Amendment No. 3398/A-2020

December 2007  
Amended February 2010  
Amended May 27, 2019  
Amended March 2, 2020

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# CITY OF RED DEER

## WEST QE2 MAJOR AREA STRUCTURE PLAN

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# CITY OF RED DEER

## WEST QE2 MAJOR AREA STRUCTURE PLAN

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### 1.0 INTRODUCTION

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#### 1.1 AREA LOCATION

The West QE2 area consists of 8 quarter sections, totalling approximately 503.7 ha (1,245 acres) of land. The area is located in the north west quadrant of Red Deer, situated west of Queen Elizabeth II Highway (formerly Provincial Highway No. 2) and south of Highway 11A. The area is shown in Figure 1 - Plan Area. In 2007, these lands were annexed by the City of Red Deer from Red Deer County as part of an annexation application seeking areas for new industrial growth for the city. The subject lands are presently held by several different owners. Primary access into the area is from Highway 11A.

#### 1.2 ENABLING LEGISLATION

This plan is intended as a major area structure plan for the lands within the West QE2 area. A major area structure plan (MASP) is a generalized plan, typically covering several quarter sections of land. Major area structure plans are prepared by The City of Red Deer to set broad planning direction for the specified area of land. The plans are broader in nature than an individual industrial or neighbourhood area structure plan as MASPs cover several neighbourhoods or several quarter sections of development. MASPs identify only major roads such as expressways and arterial roadways and general categories of land use such as commercial, industrial, residential, school sites, and major parks. More detailed planning dealing with matters such as local roads or specific land use districts is carried out at the neighbourhood or industrial area structure plan level.

The *West QE2 Major Area Structure Plan* has been adopted by The City as a statutory plan in accordance with Section 633 of the Municipal Government Act.

#### 1.3 BACKGROUND

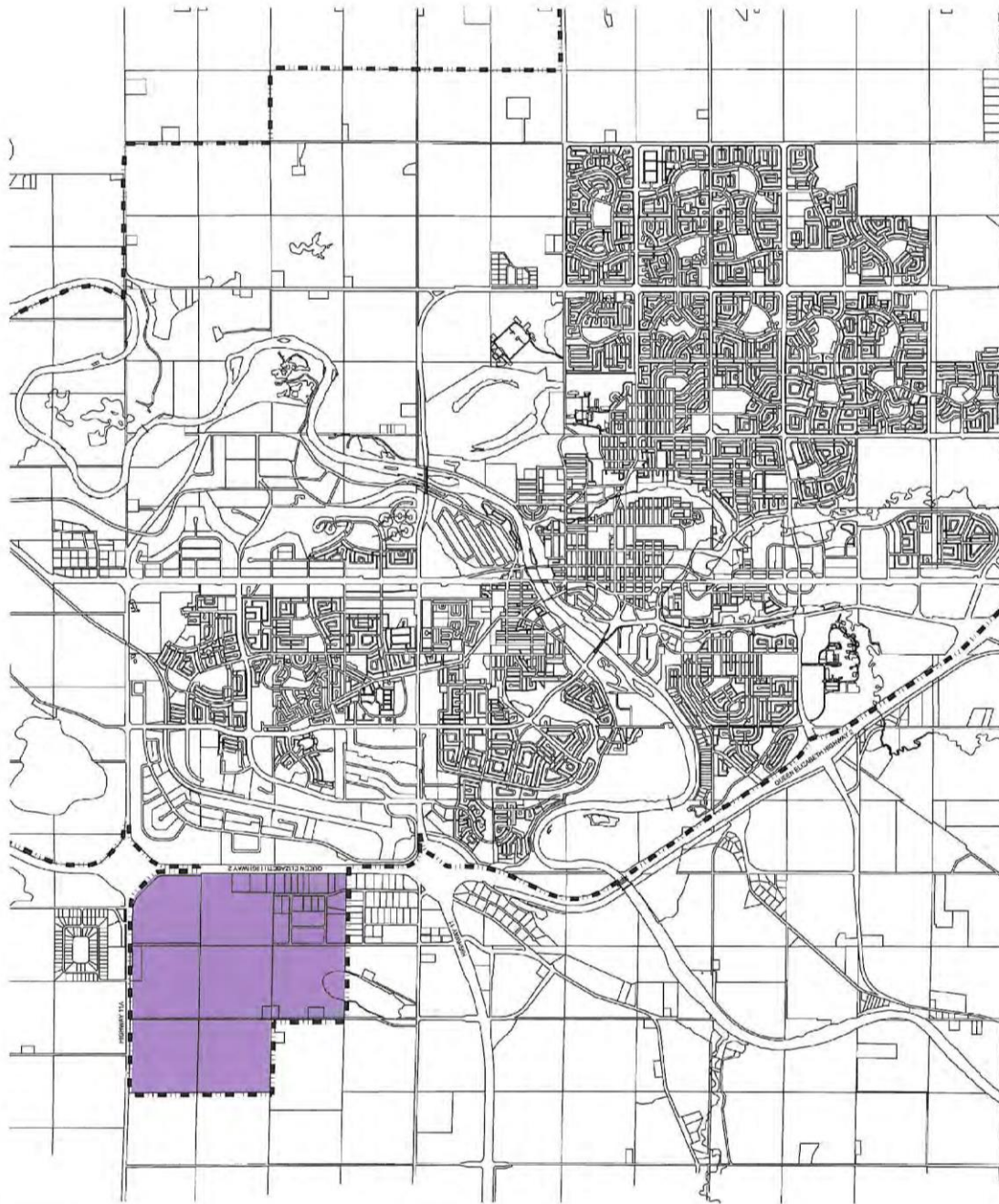
Prior to annexation in 2007, the lands in the plan area were within the jurisdiction of Red Deer County. At that time they were included within the *Burnt Lake Area Structure Plan* (adopted by Red Deer County Council in March 2000). The *Burnt Lake Area Structure Plan* provided for industrial land uses. However, in 2007 following annexation, the City of Red Deer adopted the *West QE2 MASP*. As a result of the approval of this plan by The City of Red Deer, the lands contained within it are no longer governed by Red Deer County's *Burnt Lake Area Structure Plan*.

In order to address evolving land use and transportation considerations, amendments to the West QE2 MASP were proposed in 2009. Amendments specific to evolving land use were proposed in 2019.

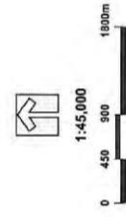


**The City of Red Deer  
West QE2  
Major Area Structure Plan**

**FIGURE 1 - PLAN AREA**



■ Plan Area  
- - - Municipal Boundary



**GENIVAR** FARMLAND COMMUNITY PLANNING SERVICES

NOVEMBER 12, 2009

## 1.4 PLANNING FRAMEWORK

The *West QE2 Major Area Structure Plan* is one of a series of inter-related planning documents adopted by the City of Red Deer. These plans include:

### 1.4.1 City of Red Deer Strategic Plan

The City of Red Deer Strategic Plan is adopted to provide long term municipal direction in all aspects of city services. It serves as the basis for municipal programs and services. The 2009-2011 plan includes a vision, mission statement, and goals. The objectives of the plan and strategies for achieving the plan were brought forward to Council for approval in 2009.

### 1.4.2 County – City Intermunicipal Development Plan

Intermunicipal planning provides for any two or more neighbouring municipalities to jointly plan for growth and development such as future land uses, roads, and services. An Intermunicipal Development Plan (IDP) must establish a process for dispute resolution as well as for administration of the plan. In October 1999, the City and County councils adopted their first Intermunicipal Development Plan. The IDP was reviewed in 2007 and a new plan was adopted by both councils. The current IDP includes areas of land surrounding the city which have now been annexed into the city's jurisdiction and which are now contained within the West QE2 MASP. This document complies with the IDP.

### 1.4.3 Municipal Development Plan

Under the Municipal Government Act, the City is required to adopt a Municipal Development Plan (MDP). The City adopted the current MDP in 2008. The Municipal Development Plan provides generalized land use policies for future land use, provision of servicing, and facilities such as roads as well as proposed phasing of development.

### 1.4.4 Area Structure Plans

The West QE2 is one of three Major Area Structure Plans adopted within the city; the others include the Northwest Major Area Structure Plan and the East Hill Major Area Structure Plan. These plans cover several quarter sections of land. Neighbourhood Area Structure plans (including industrial area structure plans) are adopted under each of these Major Area Structure Plans.

### 1.4.5 Land Use Bylaw

The Land Use Bylaw divides the city into districts and regulates the use of land and development. The Land Use Bylaw implements the policies and goals outlined in the Municipal Development Plan and any area structure plans.

### 1.4.6 Additional Policies for Industrial Planning

In addition to the Land Use Bylaw and statutory and strategic plans, The City of Red Deer has specific policies relating to industrial planning. These policies include *Industrial Planning Guidelines & Standards*. In addition, ecological profiles are prepared for all neighbourhoods or areas prior to development including areas intended for industrial development.

The City of Red Deer *Industrial Planning Guidelines & Standards* provides guidelines and standards based on Smart Growth principles for the planning and design of industrial

areas including land use, roadways, servicing, the natural environment and heritage, and safety. This document provides the requirements for industrial ASPs and the subdivision approval process.

The West QE2 area is part of the *Regional Ecological Profile - Proposed Industrial Lands and Associated Natural Areas (2005/2007)*. This report provides a detailed overview of natural environmental features within the plan area along with recommendations for their preservation. The document is designed to identify and recommend regional preservation priorities for natural habitat that may be impacted by development in the proposed area. The document offers strategies for the incorporation and use of natural habitat as a green resource or green infrastructure.



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## 2.0 PLAN VISION

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### 2.1 PLAN GOAL

The goal of the West QE2 Major Area Structure Plan is to provide a framework for the orderly and efficient development of lands within the City of Red Deer west of the Queen Elizabeth II Highway. Lands are to be developed in a sustainable manner which fosters economic development, social wellbeing, and a high quality built and natural environment.

### 2.2 PLAN OBJECTIVES

The following objectives support the goal:

- i) *To plan for the provision of an adequate supply of lots for industrial land uses and complimentary commercial land uses consistent with planning, environmental, and market requirements;*
- ii) *To facilitate the establishment of locations for highly desirable business and employment opportunities;*
- iii) *To provide a planning, infrastructure and service framework for the subdivision of industrial lots in a manner that promotes economic, social, and ecological sustainability;*
- iv) *To preserve and protect special natural features (natural capital) in the plan area;*
- v) *To acknowledge and respect the intent of the existing Red Deer County land use plans while planning for a sustainable future for the City of Red Deer and to acknowledge and respect existing development within the plan area.*

In pursuing these goal and objectives, the plan compiles with The City's *Industrial Area Planning Guidelines & Standards*. Furthermore, the plan attempts to address environmentally sustainable principles and best management practices including ecological conservation, management of the city's ecological footprint, the use of green infrastructure, and efforts to work towards regional conservation.

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## 3.0 EXISTING SITE CHARACTERISTICS

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### 3.1 TREE AND WETLAND NATURAL HABITAT AREAS

The topography of the plan area consists of generally flat land, with a marked rise towards the west boundary of the plan area. Most of the undeveloped land in the plan area has been used primarily for agricultural purposes with limited vegetation and small tree stands remaining. Water courses, wetlands and a variety of natural areas, including treed areas or other vegetation growth and escarpment exist within the plan area.

In preparing this plan The City's *Ecospace (Natural Habitat) Management Plan* which is updated regularly to preserve and enhance Red Deer's natural environment through careful community planning, as well as the more detailed *Regional Ecological Profile – Proposed Industrial Lands & Associated Natural Areas (2005/2007)* were consulted. Appendix 1, Natural Features, illustrates the location of the natural features in the area at the time that the regional eco-space profile was prepared. At the time of the regional ecological profile the identified tree stands were generally comprised of good quality vegetation. As well, at that time, seasonal streams following the natural contours of the land were also evident in the West QE2 area.

In addition, two major wetlands are located in the plan area – one which straddles the northerly boundary and one which straddles the southerly boundary (Cameo Lake) of the plan area. The primary function of wetlands, as noted in the regional profile, is the provision of natural catchment and cleansing areas to conserve and protect ground water. The wetlands in this area may experience wetter or drier phases and short term changes or undulations in water levels. This is normal. Wetland wildlife and vegetation will affect and be affected by water level changes. Any development within these areas shall conform to the policies of Alberta Environment's *Wetland Restoration/Compensation Policy*.

The natural areas in the West QE2 MASP include lands which serve as drainage areas or natural features serving as wildlife corridors and significant reserves of biodiversity. These preservation focus areas are identified to flag their presence and significance and to develop strategies for their preservation. The preferred strategy is to preserve these focus areas intact as natural features. Alternately, where it is not possible to preserve them as natural areas, it is suggested that they be blended with constructed components for storm water drainage or within roadways.

Focus preservation areas identified in Appendix 1 are the following:

- W<sub>1</sub> - this wetland is a permanent pond/lake. It is a probable wildlife movement/staging area. It also contributes to flood and erosion control and the long-term maintenance of the hydrological regime within and beyond its boundaries;
- W<sub>2</sub> - this wetland is a semi-permanent pond which contributes to flood and erosion control;
- W<sub>3</sub> - this wetland is a semi-permanent pond surrounded by shrubs and trees;
- T - small and large tree stands, and shelter belts that provide wildlife habitat and/or corridors, some of which may be remnants of the original aspen parkland that have been left intact as part of the evolving agricultural landscape.

It is the general intent of this plan to attempt to preserve the tree stands, shelter belts and wetlands identified in the regional ecological profile for preservation focus to as great an extent as is possible based on the development concept and based on what is remaining as of the date

of the adoption of this plan. This will be achieved by designating the selected areas (shown in Figure 3) as municipal reserve or environmental reserve.

Based on the report *Wetland Ecological Assessment (2005)* prepared by Westhoff Engineering Resources Inc. all the wetlands in the plan area have wide riparian zones which are very sensitive and have high ecological value. Therefore a wide buffer free of construction should be left around the wetlands. The report indicated that there is also the opportunity to incorporate the wetlands into the storm water management plan.

## **3.2 NATURAL RESOURCE EXTRACTION AND LANDFILLS**

### **3.2.1 Natural Resource Extraction**

Subsurface activity/extraction of oil and gas is occurring in the West QE2 area. Figure 2 identifies active and abandoned oil and gas wells and pipelines. The required setbacks from these wells and pipelines, as prescribed by the Energy Resources Conservation Board (ERCB) for Alberta, will be detailed in Phase 1 site assessments, which will be submitted as part of any subsequent industrial area structure plan (IASP).

In the detailed planning and design for each development phase, the IASP will incorporate any required setbacks in any one of a number of ways: as part of a public utility lot, as part of municipal reserve (but not necessarily included as part of the required 10% municipal reserve dedication), within road right of way, or as easements across industrial land, subject to approval by the City.

The relatively large lot sizes in an industrial area means that some of the required pipeline and well setbacks could potentially be accommodated within utility easements. This category of utility easement remains within the private property; however, development on the easement is restricted.

The City's policy with regard to future oil and gas extraction facilities is outlined in the *Municipal Development Plan*.

### **3.2.2 Landfills**

To the best of our knowledge there are no landfill sites within the plan area. A Phase 1 Environmental Site Assessment for each development phase will provide additional information on landfill sites should any be discovered.

As per the Province of Alberta Subdivision and Development Regulation, a 450-metre development setback is required from any active landfill site and a 300-metre development setback is required from any inactive or closed landfill site. This setback applies to subdivision or development for a school, hospital, food establishment or residential (including commercial accommodation) use. The City may apply to Alberta Environment to reclassify dry landfill sites, based on case by case requests supported with geotechnical evidence.



**The City of Red Deer  
West QE2  
Major Area Structure Plan**

**FIGURE 2 - RESOURCE  
EXTRACTION**

- Plan Boundary
- - - Municipal Boundary
- Gas/Oil Pipeline
- Abandoned Gas/Oil Pipeline
- Fibre Optics Line
- Well Site (w/100-m setback)
- Abandoned Well Site



### **3.3 EXISTING ZONING AND LAND USE**

The plan area and adjacent lands are predominantly used for agriculture, agricultural business, light industry and residential (scattered farmsteads and first-parcel-out dwelling units). The West QE2 Major Area Structure Plan recognizes the existing designations and land uses on lands adjacent to the plan area within Red Deer County, and proposes compatible land uses. Where there is a potential incompatibility, such as between the proposed industrial land uses and the proposed golf course community on the N ½ of Section 26-38-28-4, the plan proposes buffering measures to mitigate potential adverse land use impacts.

Prior to annexation, and therefore prior to the original adoption of this MASP, the lands within the plan area were designated under the Red Deer County Land Use Bylaw within the Ag (Agricultural), BSI (Business Service Industrial) and MI (Medium Industrial) Districts.

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## 4.0 DEVELOPMENT CONCEPT

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### 4.1 LAND USE

All future subdivision and development within the plan area shall conform to the land use concept illustrated in Figure 3. The land use concept is based on current and anticipated industrial market trends, the objectives of this plan, as well as relevant principles contained in the *City's Municipal Development Plan, Industrial Area Planning Guidelines & Standards* and *The City of Red Deer 2004 Growth Study*.

#### 4.1.1 Industrial and Business Services

The majority of land within the plan area is designated for industrial use, which includes, but is not limited to: oilfield activities, industrial support services, manufacturing, processing, warehousing, and distribution. Properties within this use category are designated into the I1 Industrial (Business Services) District or the I2 Industrial (Heavy Industrial) District depending on the probability of nuisance factors as described in the Land Use Bylaw. Within the West QE2 area all I2 Districts shall maintain a setback distance of:

- 400 metres from Provincial Highways 11A and the Queen Elizabeth II.
- 100 metres from any arterial roadway
- 100 metres from the plan boundary, where the plan abuts an area other than that proposed or developed for industrial uses

Parcels within the I2 District shall not abut any eco-industrial parks, however they may be located adjacent to one another where they are separated by a roadway, berm or other land use.

#### 4.1.2 Vehicle, Recreational Vehicle, and Machinery Dealerships District

Parcels located along Highway QEII have higher than the usual visibility given the volume of traffic passing by on the highway. While the West QE2 area is intended as an industrial area, it is recognized that not all industrial uses require this amount of exposure. On the other hand, it has been suggested that many commercial land uses (specifically vehicle, recreational vehicle, and machinery dealerships) do require moderate to highly visible locations. In considering the most appropriate use of the parcels along Highway QEII, many needs and issues had to be considered as these related to both industrial and vehicle sales related land uses.

Review of traffic considerations, development needs, current development levels and pressures, and the mitigation and prevention of conflict between land uses were all key components in looking at future land use in this location. In brief, planning and traffic engineering research indicated that parcels along Highway QEII are highly visible allowing the type of marketing opportunities required by vehicle dealers. It was also acknowledged that some of the properties are already operating as dealerships. Under I1 zoning, these businesses would be non-conforming. Further, studies indicated that vehicle and machinery sales and service uses in the area can be supported through

roadway enhancements and should not cause excessive conflict with other land uses in the area if restricted to specific locations.

Therefore, specific parcels adjacent to the Highway QEII, as identified on Figure 3, have been designated for a specialized land use district which will build upon the key locational attributes of these parcels. This specialized district allows for the continued operation of the land uses which are existing at present (where development has already occurred), but also allows for the development of automobile dealerships and vehicle sales/service including recreational vehicles, heavy machinery and trucks, cars and automotive vehicles, as well as trailer sales and service.

The district will be implemented through the use of direct control zoning (a Direct Control or DC District). Additional detail regarding this district will be contained in future IASPs.

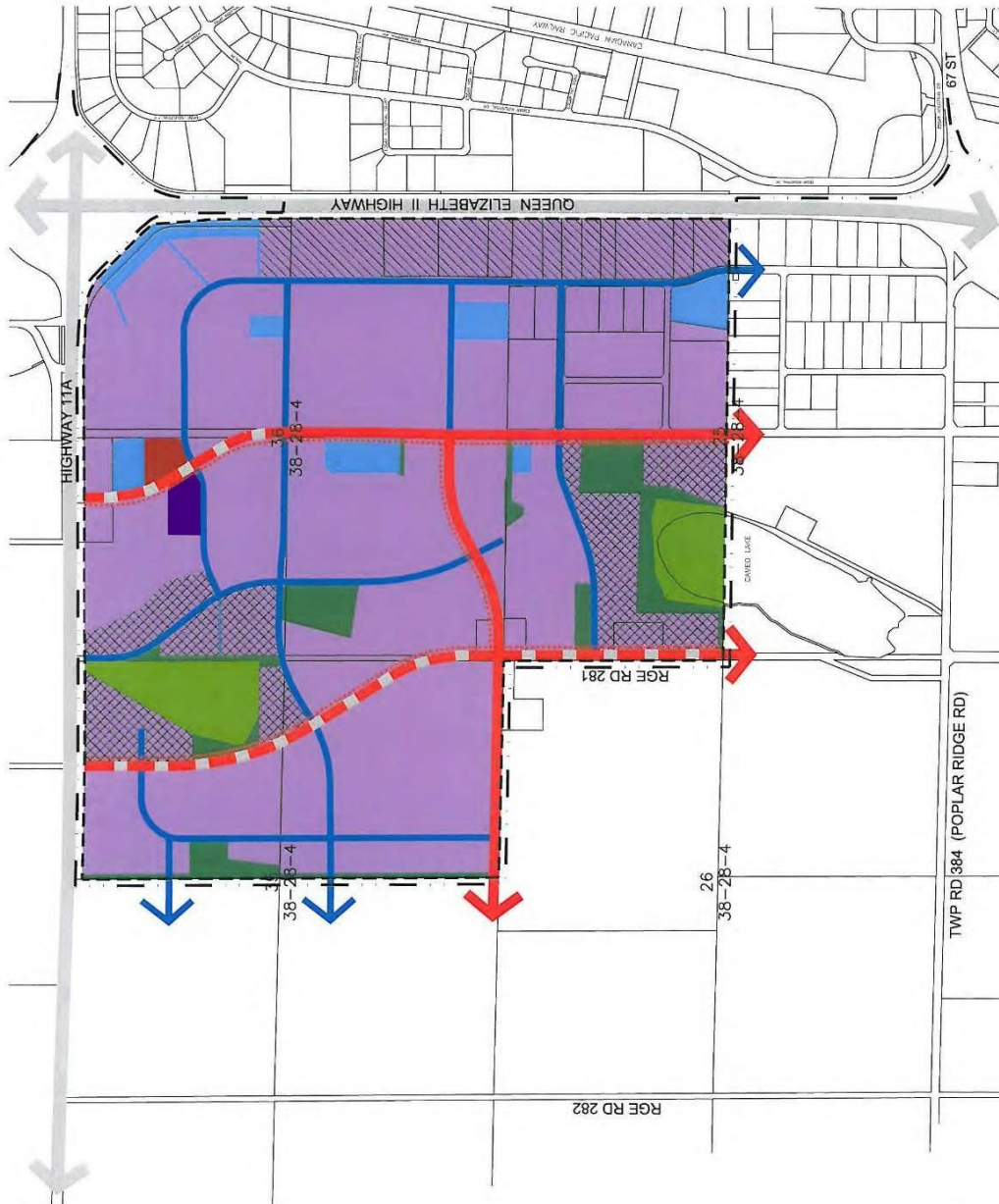
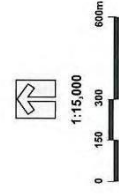
Since the time this Plan was adopted, the direct control district, DC (24), has been replaced with the I1B/AD district which combined the DC (24) and I1 district uses and regulations (Bylaw 3357/N-2019). The intent of this amendment was to reflect the current market demands and expand the number of considered uses in this area while being compatible with the neighbouring I1 district uses.



**The City of Red Deer  
West QE2  
Major Area Structure Plan**

**FIGURE 3 - LAND USE CONCEPT**

- Plan Boundary
- - - Municipal Boundary
- Expressway
- Arterial Road - Undivided
- Arterial Road - Divided
- Collector Road
- Paved Trail
- Industrial & Business Service
- Eco-Industrial Park
- Combined Industrial (Business Service) and Automobile Dealerships
- Commercial
- Municipal Reserve
- Environmental Reserve
- Public Utility
- Commercial/Industrial



### 4.1.3 Green Infrastructure and Eco-Industrial Park

#### *Green Infrastructure*

Typically, industrial areas are expected to contain higher concentrations of heavy equipment, heavy truck traffic, emissions, noise, or other pollutants in a confined area than most other districts within the city. These factors can negatively impact air quality. Therefore, the increased planting of vegetation throughout existing industrial areas and/or the preservation and integration of existing vegetation in new industrial developments is a current “*green infrastructure*” concept. *Green infrastructure* refers to the incorporation and use of natural capital features as functional infrastructure components. Examples include using a wetland as a component of the storm water management system to improve the quality of storm water runoff, or planting trees and shrubs for improving air quality. Existing vegetation in new industrial areas should be considered a valuable natural asset and should be preserved wherever possible. Section 4.4 of this plan provides more information on the use of green infrastructure within the plan area.

#### *Eco-industrial Park*

Another emerging idea in the *green infrastructure* category is the concept of an *eco-industrial park*. Due to the common uses and volume of materials produced in a confined area, an industrial park offers potential for companies to work closely together to help recycle or reuse products, pool resources, and reduce environmental impacts through green building standards. An eco-industrial park is an industrial park where these inter-relationships are identified and promoted through developing cooperative design and operational plans for the whole industrial park. An example is the reuse of one company’s by-products by another company.

Within the plan area, a portion of the developable lands within the NE ¼ Section 35-38-28-4, the NW ¼ Section 36-38-28-4 and the NW ¼ Section 25-38-28-4 are designated for eco-industrial park development. Since additional studies are required to develop a market strategy, confirm potential tenants, and pursue possible grants, The City and/or private developers/landowners will further explore this concept when subsequent IASPs are submitted for approval of the detailed design of these quarter sections. Any IASP accommodating an identified eco-industrial park within the MASP shall contain policies fostering the industry intent and principles of eco-industrial park development.

The West QE2 Major Area Structure Plan strongly supports eco-industrial development, however, once additional research is conducted on this concept and based on what this research may demonstrate; Council could consider altering, refining, or changing the scale/size of the eco-industrial area if necessary in some specific locations. Such a decision would be made at the Industrial Area Structure Plan (IASP) level and would be informed by landowner and public input, administrative consideration, eco-industrial and tenant research, area market conditions, and merit of alternative development concepts.

### 4.1.4 Commercial

There is an existing commercial development on Highway 11, south of the plan area within Red Deer County, providing limited commercial services to residents and employees within this area. The County’s *Burnt Lake Area Structure Plan* envisions that this commercial node expand to offer a wider range of services. In addition, a full range

of commercial services is available throughout the city of Red Deer albeit that most of these services are located approximately 4 kilometres or further from the plan area. As the West QE2 area becomes more developed and plans to house additional employees, more commercial services will be demanded and in closer range. Therefore, this plan provides for some additional commercial land uses within its boundaries.

At present, some limited commercial development can be accommodated within the I1 Industrial (Business Service) District as this district allows service stations, restaurants, and industrial support services. The intent of limiting the amount and scope of commercial use within the I1 district is to ensure that industrial areas do not compete with the established and future commercial retail areas of the city. In addition, the commercial limitations ensure that industrial land uses remain the focus in the district. However, given the projection that there will be multiple new jobs created in the West QE2 area and given the location of the industrial park across major highways from the city's main commercial areas, it is prudent to plan for an additional, limited range of commercial opportunities within the West QE2 area.

Therefore, two sites of approximately 2.0 hectares each providing for commercial development, are located along the main arterial roadway within the plan area. These sites will provide the full range of commercial facilities and services anticipated to be in demand from the population employed within the plan area. Commercial uses may include, but not be limited to, banking, convenience stores, dining, and dry cleaning. The two sites providing for commercial are intended primarily to provide services to the area's daytime population, but it is expected that some traffic and customers may be drawn from Highway 11A.

One additional commercial site of up to 2 hectares to serve the needs of the local employment base could be considered within the central portion of the *West QE2 Major Area Structure Plan* at the time of preparation of an Industrial Area Structure Plan (IASP). Impacts on adjacent landowners and land uses, the transportation system, and servicing, market demand, and access must be assessed through the IASP to determine the suitability of the proposed commercial site.

## **4.2 DEVELOPMENT STANDARDS**

### **4.2.1 Major Entry Area Landscaping Requirements**

The lands within this MASP are situated at the junction of two major provincial highways, Highway 11A and Queen Elizabeth II Highway (Highway QEII). This junction serves as a key entrance point into the city of Red Deer and Red Deer Region. Therefore, The City of Red Deer and Red Deer County are undertaking a regional initiative to encourage consistent landscaping and upgraded development standards along Highway QEII and other along entrance ways into the city.

While the study is not yet complete, it is expected that land adjacent to major highways leading into the City of Red Deer (such as the Highway QEII, 11 or 11A) will be designated as major entry points into the city. Further, the study is likely to introduce increased standards applicable to developments on lands adjacent to major entry points which may include increased landscaping, architectural, site, and signage standards. In order to ensure that the intent of major entry area site requirements are met, all primary

buildings located upon lots adjacent to Highway 11A or Highway QEII shall provide to The City an elevation fronting Highway QEII prior to development.

#### **4.2.2 Interface Treatment of Adjacent Lands**

A 20-metre wide buffer strip is proposed along the plan boundary where industrial uses interface with agricultural and/or residential uses, including the E ¼ Section 35-38-28-4.

Buffer strips will accommodate a landscaped berm between 2.5 and 4.0 metres high, except where the conservation of natural features precludes the construction of a berm (e.g. the tree stand adjacent to the buffer strip on part of the E ½ of Section 35-38-28-4).

Where adjacent lands are developed or are proposed for development as industrial land a berm would not be required.

### **4.3 VEHICLE AND PEDESTRIAN CIRCULATION**

The plan area is predominantly industrial with some commercial/commercial type land uses. In order to accommodate the traffic flows associated with these types of land use, a planned system of trails, transit routes, and roadways will effectively manage transportation activity patterns. All planned trails, roadways and transit routes are to be constructed according to City of Red Deer *Engineering Design Guidelines* and *Industrial Area Planning Guidelines & Standards* to ensure a fully integrated, consistent and safe circulation system.

Access to country residential parcels shall be via the local road network. Direct access from any arterial or collector road to residential properties shall not be permitted.

#### **4.3.1 Trail System**

The three main arterial roadways will accommodate 3.0 metre wide trails within the road right-of-way to provide an east-west and two north-south pedestrian linkages through the plan area. Along shelter belts and treed parks in the NW ¼ Section 25-38-28-4 the arterial trail will be constructed outside of the road right-of-way and within the park as a separate pathway where possible while preserving the existing tree stands.

In addition to these major trails, there are opportunities for informal trails to develop along any of the buffer strips and linear parks and within the larger treed park sites. It is particularly appropriate for such a trail to develop from the wetland in the north portion of the plan area to Cameo Lake in the south portion of the plan area. Further consideration must be given at the time of subdivision to establish a system of linear parks, buffers and public utility lots that facilitates a direct linkage.

The proposed trails, illustrated on Figure 3, and sidewalks will be provided at the standards contained in the *Trails & Pathways Master Plan*.

Interpretive features, in accordance with City standards and requirements, will be required at the north wetland and Cameo Lake. These features shall be explored/required within the applicable subsequent industrial area structure plan.

### 4.3.2 Transit

The arterial and collector road structure is suitable to accommodate public transit service. In general, the viability of service within the plan area will be subject to need/usage projections and may also depend on partnerships with area businesses.

### 4.3.3 Roadways

The three classes of roadways contained within the West QE2 Major Area Structure Plan are described below. All local roadways will be identified within the land use concept of any subsequent industrial area structure plans.

#### (a) Arterial Roadways

Arterial roadways provide for the movement of large volumes of traffic, including truck and transit routes. Arterial roads also accommodate pedestrian trails, by connecting major areas of traffic generation within the City. The plan provides for divided and undivided arterial roadways. As efficient flow of traffic is the primary function of this classification of roadway, direct industrial lot access is not permitted to/from an arterial roadway. Subject to the approval of The City a right in/ right out site access to a large lot may be permitted. Such access shall include a deceleration lane along the arterial road.

All-turn intersections onto divided arterials are provided at 400 metre intervals to effectively channel traffic from the major collector network.

As described in paragraph 4.3.1, identified arterial roadways shall accommodate major 3.0 metre wide trails. In addition, arterial roadways will form the designated *Dangerous Goods Routes*. The collector and local roads within the West QE2 area will form supplemental routes.

#### (b) Collector Roadways

Designated collector roadways are identified on Figure 3. Typically a collector roadway provides direct frontage access to abutting land uses, provides public parking on both sides, accommodates snow storage, serves as a transit route and, where required by The City, provides sidewalks.

However, as described previously, the MASP establishes a direct control district (DC24) to allow for vehicle, recreational vehicle, and machinery dealerships along the east boundary of the plan area. To prevent or lessen any potential traffic conflicts and ensure compatibility for dealerships, which are a unique use being situated in what is a primarily industrial area, some variation of these typical practises will be necessary for roadways serving the Direct Control area. Specifically, it is the intention of this MASP to restrict parking along the collector road serving the dealerships.

The alignment of collector roadways proposed on Figure 3 is based on the standard of 400 metre minimum intersection spacing onto arterial roadways and 800 metre

intersection spacing onto expressways, as well as the requirement for collector street linkages between adjacent quarter sections without creating opportunities for shortcutting.

Sidewalks (1.5 metres in width) will be constructed along one side of collector roadways as required.

In 2019 the DC (24) was replaced with the I1B/AD district which combined the DC (24) and I1 district uses and regulations (Bylaw 3357/N-2019).

### **(c) Highways**

Provincial highways are intended to serve a large volume of faster moving traffic. One of their primary purposes is to serve as thoroughfares for vehicles using the highway as a means to travel through Red Deer for other destinations. Highways move both passengers and goods, and may also be referred to as freeways or expressways. Roads in this category tend to have restrictive access standards, minimum intersection spacing or grade-separated intersections at specified locations. The Queen Elizabeth II Highway (Highway 2) adjacent to the east boundary of the plan area is categorized as a freeway. Numerous provincial standards/restrictions apply to this freeway.

Highway 11A, adjacent to the north boundary of the plan area, is considered an expressway. The expressway classification of road reflects the highest level of urban roadway function. On expressways, minimum intersection spacing is 800 metres.

Figure 3 illustrates the regional transportation routes including highways relative to the plan area and identifies the accesses off highways – Highway 11/67 Street in the south and Highway 11A/81 Street in the north.



**The City of Red Deer  
West QE2  
Major Area Structure Plan**

**FIGURE 4 - NATURAL  
FEATURES PRESERVATION**

- Plan Boundary
- - - Municipal Boundary
- ▨ Natural Features Retained



1:15,000  
0 150 300 600m



NOVEMBER 12, 2016

#### 4.4 PUBLIC OPEN SPACE

Public open space within the plan area is made up of the natural areas being preserved for conservation and public access purposes and public utility lots intended to facilitate servicing but also available in some cases for public access.

##### (a) Public Utility Lots

Public utility lots are lands set aside for surface, underground or overhead infrastructure. This infrastructure could include such things as electric transmission lines, well sites, oil/gas pipelines, storm water detention ponds or water reservoirs are identified on Figure 3. Their primary purpose is to facilitate servicing of land (or in the case of oil and gas pipeline, subsurface resource extraction). However, these corridors or lots are often left as open space which can then serve as public open space.

##### (b) Natural Areas

Natural areas include lands such as drainage areas or wetland areas that qualify for environmental reserve dedication under the *Municipal Government Act*, as well as areas which do not qualify such as tree stands, but that are deemed environmentally significant. Natural areas in West QE2 are identified on Appendix 1.

The wetlands identified in Figure 4 shall be incorporated into storm water management facilities. Where wetlands are to be removed, their removal will be subject to the compensation requirements in place through Alberta Environment's Wetland Restoration/Compensation Policy.

Figure 3 illustrates the location of proposed roadways, public utility lots, municipal reserve lots and environmental reserves relative to the actual location of those natural features that are to be preserved (as confirmed by the aerial photography).

##### (i) Potential Environmental Reserve

Based on the information provided in Figure 4, the development concept in Figure 3 identifies those natural areas which, with reasonable certainty and without having conducted a complete site analysis, qualify for environmental reserve dedication in accordance with the *Municipal Government Act*. Reasonable certainty is based on the existence of, for example, a natural drainage course or a wetland that consists of a permanent or semi-permanent pond.

Based on the report *Wetland Ecological Assessment (2005)* prepared by Westhoff Engineering Resources Inc., the wetlands in the plan area have wide riparian zones which are very sensitive and have high ecological value, and therefore a wide buffer free of construction should be left around the wetlands. The report indicated that there is also the opportunity to incorporate the wetlands into the storm water management plan.

Lands that are dedicated as environmental reserves are excluded from the net developable area. The following areas are identified as future environmental reserve dedication:

- That portion of the wetland (semi-permanent pond) that is located on the NE ¼ Section 35-38-28-4 including a suitable setback around it to prevent pollution and ensure public access.



- The portion of Cameo Lake that is located within the plan area on the NW ¼ Section 25-38-28-4 including a suitable setback around it.

The detailed setbacks required around these natural features will be determined through a Phase 1 Environmental Site Assessments undertaken at the time of more detailed planning and prior to subdivision of these development phases.

Other areas not identified on Figure 3 may also qualify for environmental reserve dedication based on site assessment at more detailed levels of planning for subsequent development phases.

(ii) Other Natural Areas

The preservation of natural features, where deemed appropriate, that do not qualify as environmental reserve will require any one or a combination of the following strategies:

- 1) The natural areas are included as part of the required 10% municipal reserve dedication;
- 2) The natural areas are included as part of municipal reserve dedication in excess of the required 10%; and/or
- 3) Funds are identified by The City or group with an interest in conservation to purchase and preserve the natural areas.

The following areas contain natural features that do not qualify as environmental reserve under the *Municipal Government Act* but are conservation-worthy:

On the NW ¼ Section 25-38-28-4:

- 1) The pipeline right-of-way on the north section line incorporates a shelter belt and will in part be dedicated as municipal reserve.
- 2) Attached to the above mentioned shelter belt is a tree stand that will be preserved within municipal reserve.
- 3) The east-west linear park (located mid-quarter section) consisting of municipal reserve incorporates a tree stand.
- 4) A large tree stand in the east centre portion of the quarter section will be incorporated into municipal reserve.

On the NE ¼ Section 35-38-28-4:

- 5) A portion of a large tree stand straddling the NW and NE ¼ Sections 35-38-28-4 is proposed to be incorporated into municipal reserve as part of a buffer strip separating agricultural and industrial land uses.
- 6) Municipal reserve dedication in the southeast corner of the quarter section incorporates a portion of a shelter belt.

On the NW ¼ Section 36-38-28-4:

- 7) Tree stand within a shelter belt located on the east side of the quarter section is expected to be retained within the public utility lot or within the proposed commercial node.

On the SW ¼ Section 36-38-28-4:

- 8) A large tree stand in the northwest portion of the quarter section is incorporated into municipal reserve.
- 9) A portion of the shelter belt along the centre section line may be incorporated as municipal reserve.

### **(c) Buffer Strips, Parkettes and Linear Parks**

Buffer strips, parkettes and linear parks may be developed on municipal reserve lots. Municipal reserve lots that contain the natural capital listed in 4.3 (b) (ii) above will be left in a natural state. Municipal reserve lots may combine active and passive recreation along with a trail.

### **(d) Municipal Reserve Dedication**

Based on the requirements of the Municipal Government Act, and the City's Municipal Development Plan, each quarter section of land within the West QE2 MASP must provide 10% municipal reserve dedication. This dedication can take the form of: land dedication, cash in lieu of land, or a combination of the two. Those quarter sections with less than 10% of the land identified as municipal reserve will be required to provide cash in lieu of land.

The total land area in the Major Area Structure Plan is 503.7 hectares. Once the identified Environmental Reserve of 22.4 hectares is subtracted the total area is 481.3 hectares. Therefore, for the Major Area Structure Plan area, 48.13 hectares of land (or cash-in-lieu or a combination of the two) will be owing as municipal reserve. Each Industrial Area Structure Plan in the area will be required to identify how reserve requirements within its boundaries will be addressed.

## **4.5 EMERGENCY SERVICES**

The plan area will be served by Emergency Services Station No. 5 within the Johnstone Crossing neighbourhood. This station is in close proximity to the plan area to enable a large majority of the responses to fall within The City's planning guideline for a four minute travel time to a fire or medical emergency for the first arriving, fully staffed vehicle (90 percent of the time).

## **4.6 LAND USE STATISTICS**

The following table illustrates general land use statistics for the plan area. Considering the large size of the land base encompassed by the MASP boundary, the statistics in Table 1 should only be used for general comparison rather than specific referencing purposes. More detailed and precise land use calculations, which are better suited to referencing purposes, will be included within any subsequent industrial area structure plan.

**Table 1: Land Use Statistics**

<b>LAND USE CATEGORY/COMPONENT</b>	<b>AREA (ha +/-)</b>	<b>% OF DEVELOPABLE AREA</b>
Plan Area	503.7	100.0%
Emergency Services Site	-	-
Arterial Road Widening	-	-
Environmental Reserve	22.4	4.4%
<i>Land Use Districts/Land Uses</i>	<b>387.9</b>	<b>77.0%</b>
Industrial & Business Services	299.4	59.4%
Eco-Industrial Parks	47.0	9.4%
Commercial (including Commercial/Industrial parcel)	4.5	0.9%
Combined Industrial (Business Service) and automobile dealerships	36.9	7.3%
<i>Roadways</i>	<b>49.3</b>	<b>9.8%</b>
Arterials	24.6	4.9%
Collectors	24.7	4.9%
<i>Open Space</i>	<b>44.1</b>	<b>8.8</b>
Municipal Reserve	25.1	5.0*
Public Utilities	19.0	3.8

\*Monies-in-lieu will be provided by the developer where 10% dedication of the parcel as municipal reserve land is not achieved.

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## **5.0 MUNICIPAL UTILITY SERVICES**

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The development of the West QE2 area relies on appropriate servicing. Servicing includes storm water drainage, sanitary sewer, water distribution, power, and natural gas services. Sustainable development principles encourage the combining of natural features with servicing requirements - often referred to as green infrastructure. Examples include the Michener area storm ponds on the East Hill that have combined storm water management with an existing wetland to create a multi-purpose facility with storm drainage and natural interpretative functions.

Therefore, the ecological profile for the plan area must be considered when developing servicing plans for the consideration of potential multi-purpose features.

A portion of the plan area was subdivided and partially developed prior to completion of this MASP, specifically within the NE ¼ Section 25-38-27-4 (sometimes referred to as “The Sullivan Quarter”). Drainage, power, gas and telecomm services have been provided to these areas, but water and sanitary sewer services were not. However, right of ways have been provided for future service routes. If and when the City or the property owners decide that these services should be provided, a Local Improvement process would be initiated to apportion the construction costs to the benefiting property owners.

### **5.1 STORM WATER DRAINAGE**

The West QE2 Major Area Structure Plan has been divided into separate storm drainage basins, each with its own designed system of gathering surface water runoff as shown on Figures 5A, 5B and 5C. The City has adopted a policy of restricting direct storm water discharges into the creeks and river in order to limit potential damage associated with increased rates of runoff from urban developments. The restrictions are imposed through the use of a storm water collection system that incorporates water retention and detention facilities for the area. A number of “dry-ponds” are designated for the plan area.

The City will also support alternative methods of storm water management, including the incorporation of natural marshes or wetlands into the overall storm water system (i.e. green infrastructure) where this can be accomplished without causing concerns for potential flooding.

### **5.2 SANITARY SEWER**

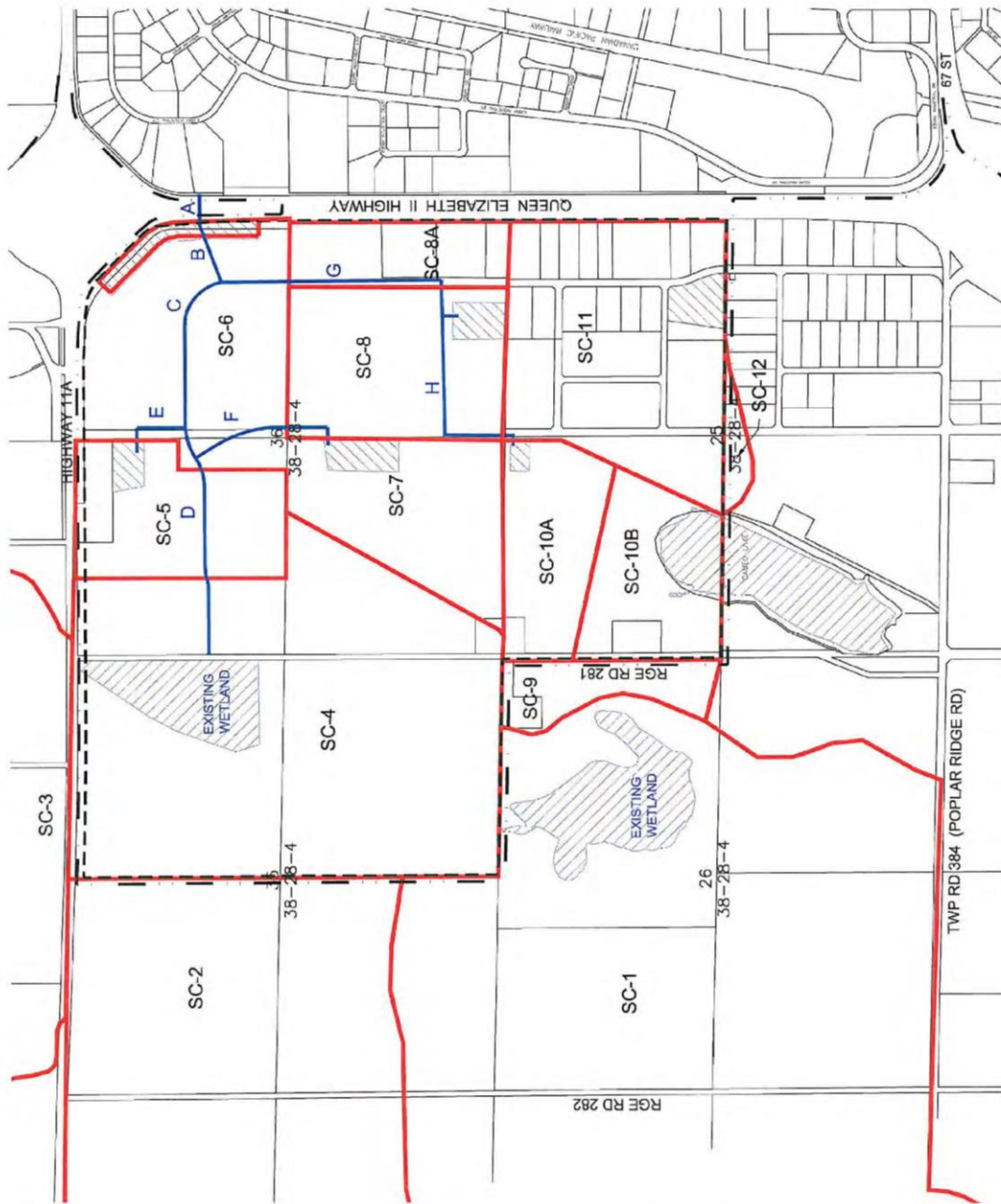
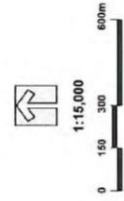
The sanitary sewer system, shown on Figure 6, is divided into two drainage basins. This collection system is designed to use a combination of sewage lift stations and gravity trunk mains to direct all sewage to the highway crossings then to the wastewater treatment plant located at the north end of the City along the river.

As new development occurs, the extension of existing trunk mains will permit all areas within the boundaries of the West QE2 Major Area Structure Plan to be serviced. By over-sizing certain mains areas outside the plan area can also be serviced.

**The City of Red Deer**  
**West QE2**  
**Major Area Structure Plan**

**FIGURE 5A - CATCHMENT  
 DELINEATION &  
 STORMWATER SERVICING**

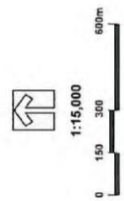
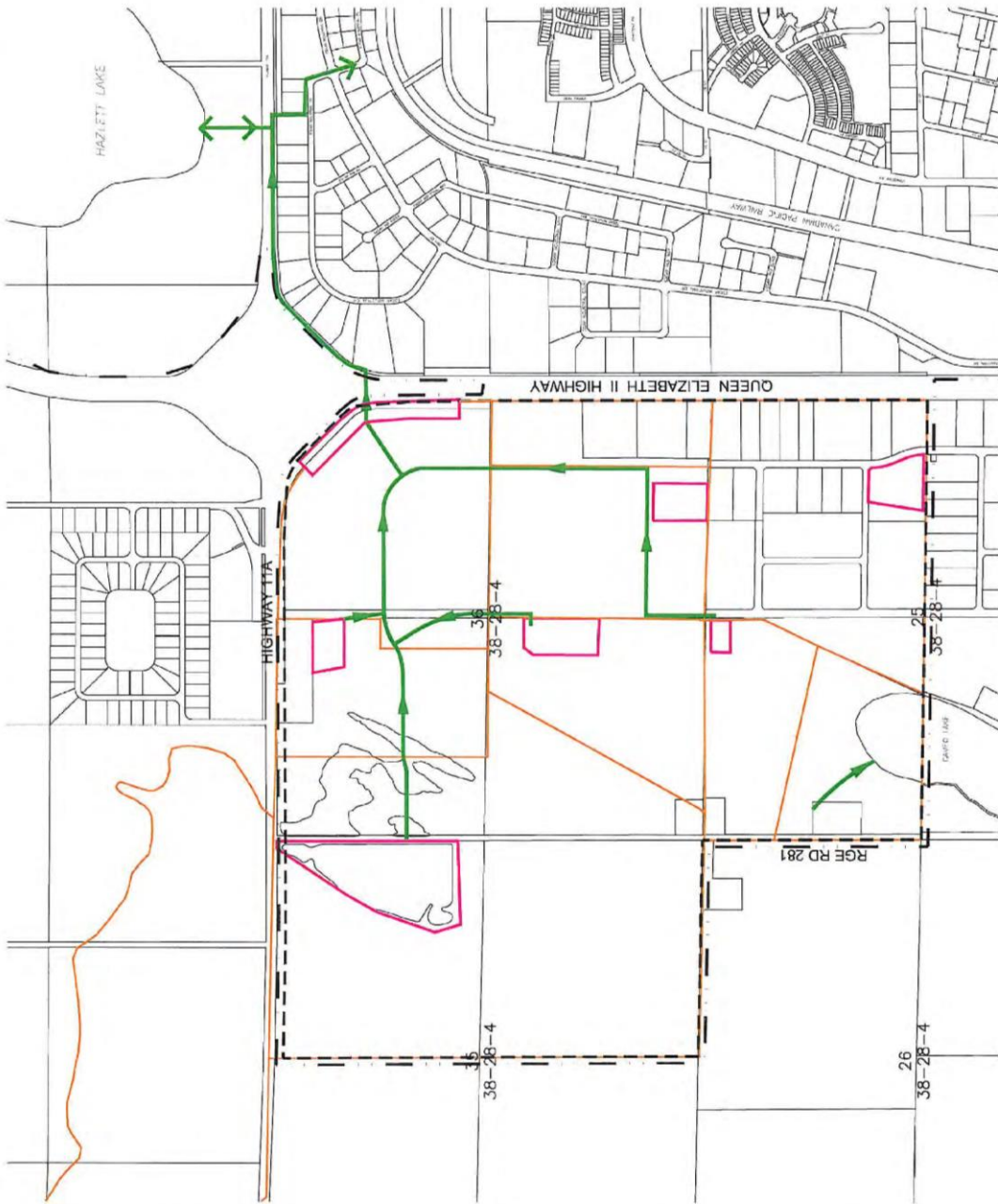
- Plan Boundary
- - - Municipal Boundary
- Stormwater Trunk
- A Stormwater Trunk Identifier
- Catchment Area Boundary
- SC-1 Catchment Area Identifier
- ▨ Stormwater Management Facilities



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**West QE2**  
**Major Area Structure Plan**

**FIGURE 5B - OVERALL  
 STORMWATER CONCEPT**

- Plan Boundary
- - - Municipal Boundary
- Proposed Major Drainage Route
- Proposed / Existing Stormwater Management Facility
- Proposed Catchment Basin Boundary

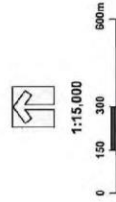




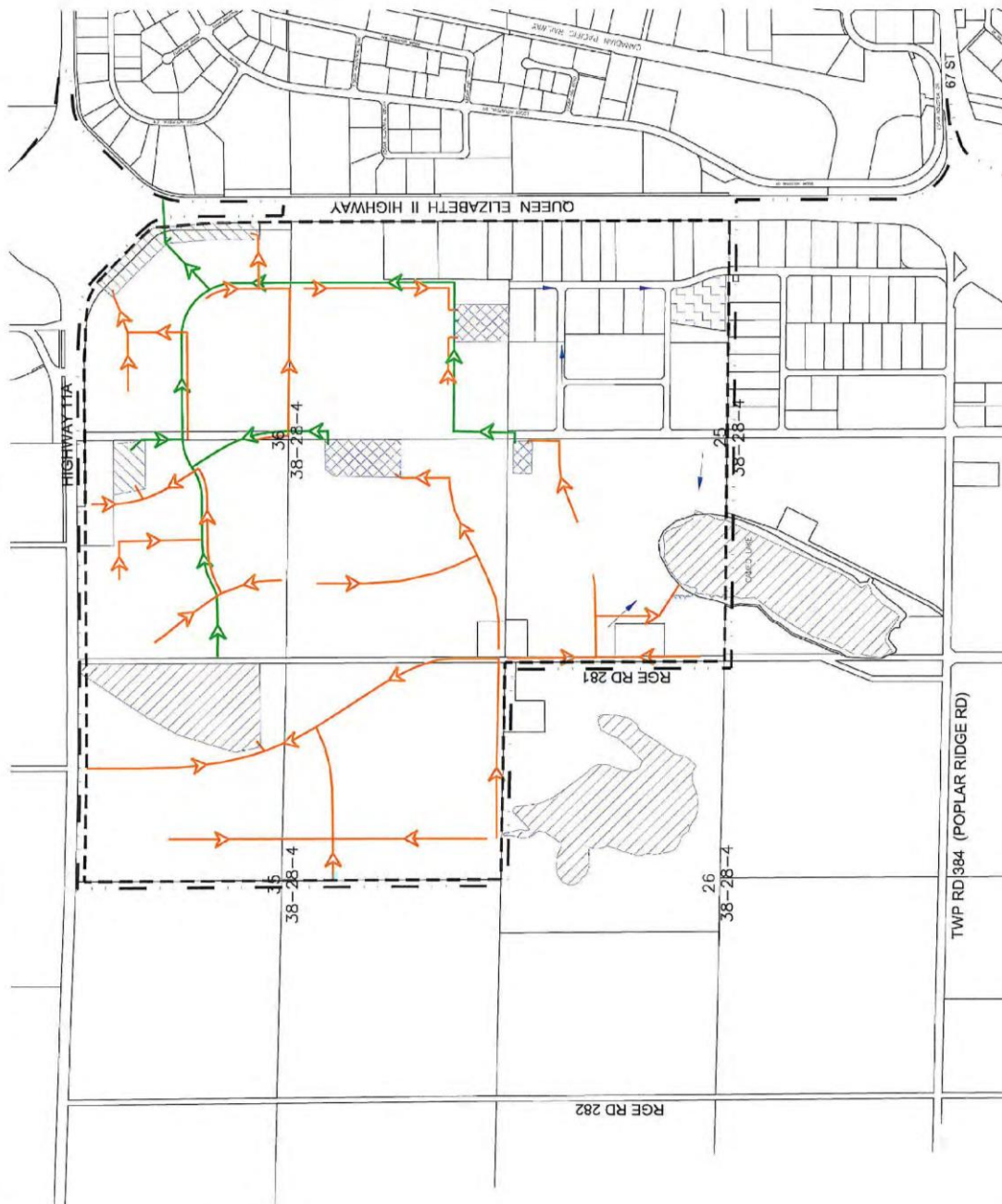
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**FIGURE 5C - STORM MAIN SERVICING CONCEPT**

- - - Plan Boundary
- · - Municipal Boundary
- Proposed Gravity Flow Direction - Trunk System
- Proposed Gravity Flow Direction - Minor System (>375mm)
- Overland Flow Direction - Minor System
- Existing Wetland
- Proposed Constructed Wetland
- Proposed Pond
- Existing Retention Pond



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 FABRIANO  
 COMMUNITY PLANNING  
 SERVICES  
 NOVEMBER 12, 2008







### **5.3 WATER DISTRIBUTION**

The City of Red Deer obtains raw water from the Red Deer River. Water treatment is accomplished with two plants located at the river. The City's water distribution system for the plan area consists of a combination of water pressure zones, booster pump stations, water reservoirs, and trunk mains to adequately distribute water to meet industrial and fire flow demands, as illustrated in Figure 7.

Currently, the water distribution system presented in Figure 7 has sufficient storage capacity to serve the area in the event that maintenance on the main supply main is required. In the future, a secondary water connection to the West QEII area will be provided to serve lands within future annexation phases, but at this time there is adequate capacity for water distribution.

### **5.4 POWER DISTRIBUTION**

The servicing for the planed area will be transferred from Fortis Alberta to the Electric, Light, and Power Department (EL&P) of The City of Red Deer in 2010.

EL&P will service the area with lines crossing Highway QEII from the Edgar Industrial Park. A potential electrical servicing concept is illustrated in Figure 8.

### **5.5 NATURAL GAS**

Natural gas servicing ultimately will extend from the south portion of the plan area. ATCO Gas has a gate station located within SE ¼ Section 25-38-28-4 and has extended their mains through NE ¼ Section 25-38-28-4.

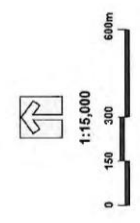
Development of the early phases is intended to be within the north portion of the plan area. This may present complications as ATCO Gas will require extensions of its mains through the SE ¼ Section 36-38-28-4 to do so. This may be accommodated by using temporary alternate arrangements from existing small distribution systems within the area.

In addition, there are existing lines in the plan area that would likely be able to be abandoned as development proceeds. Any servicing conflict would be examined in detail once phasing and development plans are finalized.

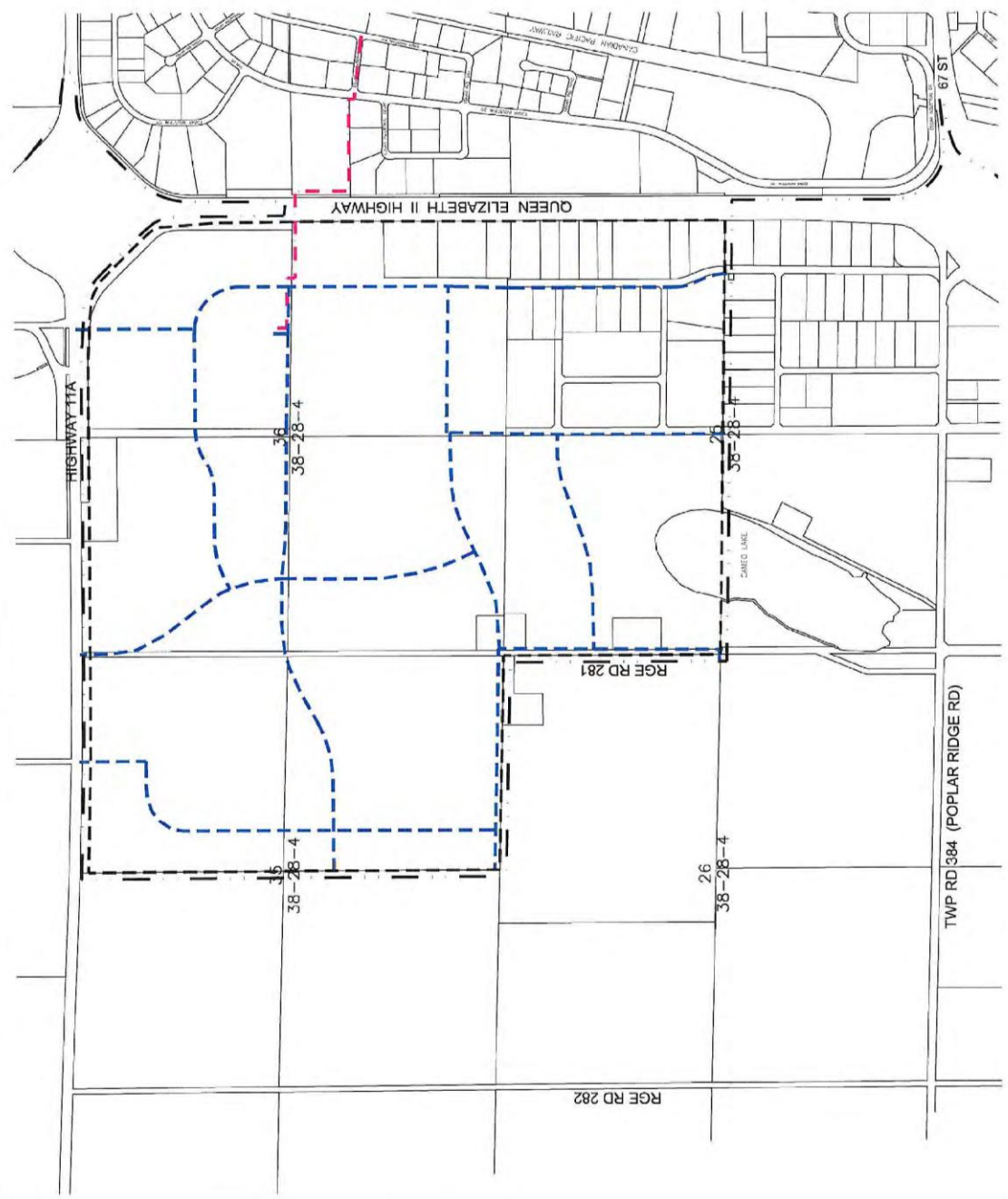
**The City of Red Deer  
West QE2  
Major Area Structure Plan**

**FIGURE 7 - WATER SERVICING  
CONCEPT**

- - - Plan Boundary
- - - Municipal Boundary
- - - Water Distribution Main (>250 mm)
- - - Water Supply Main



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COMMUNITY PLANNING  
SERVICES  
NOVEMBER 12, 2009

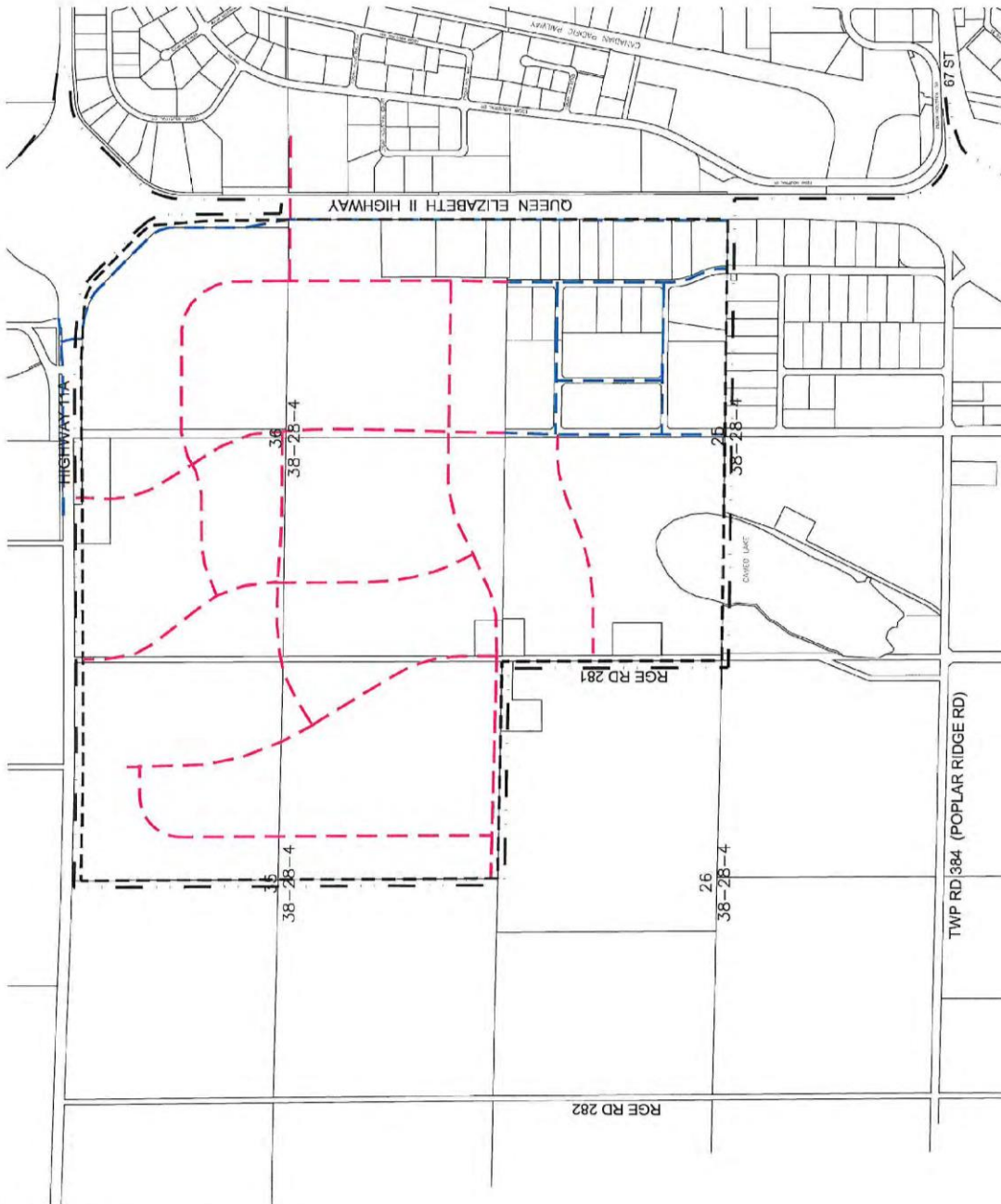


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**West QE2**  
**Major Area Structure Plan**

**FIGURE 8 - ELECTRICAL  
SERVICING CONCEPT**

- - - Plan Boundary
- - - Municipal Boundary
- - - Existing Power Line
- - - Proposed Power Line

Note: Alignments are subject to change



1:15,000  
0 150 300 600m

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## 6.0 PLAN IMPLEMENTATION

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### 6.1 DEVELOPMENT PHASING

This plan acknowledges that there is some existing development within the plan area. With regard to phasing of new development within the West QE2 MASP, development will occur in a logical, efficient manner. Phasing will consider existing infrastructure and services. Detailed phases of development will be illustrated within subsequent ASPs. In general, development of the plan area will commence in the northeast portion of the plan area and progress in a westerly and southerly manner.

### 6.2 AREA STRUCTURE PLANS

The objectives of the West QE2 Major Area Structure Plan shall be implemented by further industrial area structure plans, with the exception of development presently accommodated within a County approved structure plan or outline plan existing prior to October 2007 (i.e. *Burnt Lake Commercial Development NE ¼ 25-38-28-W4*). As new quarter sections are being considered for future development, the developer is required to undertake an IASP which will include additional detail for the next development phase(s). Such detail will include:

- 1) a Phase 1 Environmental Site Assessment;
- 2) a layout of local roadways;
- 3) a servicing study; and
- 4) a development phasing plan.

All subsequent area structure plans shall be prepared in accordance with the City of Red Deer's *Industrial Area Planning Guidelines & Standards*.

### 6.3 AMENDMENTS TO THIS PLAN

All plan amendments shall be prepared in accordance with the *Industrial Area Planning Guidelines & Standards* and shall follow the process outlined in the *Municipal Government Act* and the City's *Industrial Area Planning Guidelines & Standards*.

Provided the intent of the Plan is maintained, minor adjustments to proposed land use boundaries or roadway and servicing alignments, etc. may be incorporated where necessary without amendment to this Plan.

#### 6.3.1 Future Planning

Land use districts shall be in accordance with an Industrial Area Structure Plan. Parcels within the NE ¼ Section 25-38-28-4 may be exempt from requiring the preparation of an IASP prior to rezoning.

Any rezoning requests for parcels within NE ¼ Section 25-38-28-4 shall be subject to review by Parkland Community Planning Services. The proposed land use shall be reviewed to ensure that the intent of the West QE2 MASP is maintained.

Subdivision of the above described lands will not be recommended for approval without the prior adoption of an IASP containing these lands.

#### **6.4 BURNT LAKE AREA STRUCTURE PLAN**

As a result of the approval of this plan by The City of Red Deer, the lands contained within it are no longer regulated by Red Deer County's Burnt Lake Area Structure Plan. The City of Red Deer *West QE2 Major Area Structure Plan* acknowledges the land uses contained in the *Burnt Lake Area Structure Plan*, however for the portions of the plan area that now fall under city jurisdiction and under the jurisdiction of this plan, the following alternate land uses apply:

- E ½ of Section 35-38-28-4: changed from agriculture and natural areas to industrial and natural areas;
- Portion of the W ½ of Section 36 and half of the NW ¼ Section 25: changed from country residential and natural areas to industrial and natural areas.

The City of Red Deer West QE2 Major Area Structure Plan continues to propose preservation of the wetlands on the NE ¼ Section 35, the NW ¼ Section 36-38-28-4 and Cameo Lake on the W ½ of Section 25-38-28-4.

#### **6.5 PLAN REVIEW**

The *West QE2 Major Area Structure Plan* should be subject to a comprehensive review and update every five (5) years to allow for consideration of any changing or emerging land use planning and development issues and trends.

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# APPENDICIES

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## APPENDIX 1 – NATURAL FEATURES



