

ROYAL CUBERA LOCAL AREA STRUCTURE PLAN
BYLAW NO. 22-23
LEDUC COUNTY

A BYLAW FOR THE ADOPTION OF THE ROYAL CUBERA LOCAL AREA STRUCTURE PLAN AND THAT BYLAW 37-15 BE REPEALED.

WHEREAS

pursuant to Section 630 of the *Municipal Government Act*, being Chapter M-26, Revised Statutes of Alberta, 2000, and amendments thereto, the Council of Leduc County wishes to adopt a Local Area Structure Plan Bylaw for the purposes of directing the use and development of lands within the County.

NOW THEREFORE

be it resolved that the Council of Leduc County, duly assembled, enacts as follows:

1. That the attached Schedule A, "Royal Cubera Local Area Structure Plan" is hereby adopted.
2. That Bylaw 37-15 be repealed upon this bylaw coming into force.
3. This bylaw shall take effect on the date of third reading.

Read a first time this 14th day of November, A.D. 2023.



MAYOR


COUNTY MANAGER

Read a second time this 12 day of December, A.D. 2023.

Read a third time and finally passed this 12 day of December, A.D. 2023.



MAYOR


COUNTY MANAGER



**LEDUC
COUNTY**

Royal Cubera Local Area Structure Plan

Created: April 2017

Last updated: September 2023

Prepared by: Stantec Consulting Ltd

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1 Introduction

1.1 Purpose

The Royal Cubera Local Area Structure Plan (LASP) describes how approximately 160.88 hectares (397.54 acres) of agricultural land located south of Township Road 512 / 41st Avenue SW (TWP 512 / 41st Avenue SW) and east of the Queen Elizabeth II (QE II) Highway in Leduc County will be developed into an efficient and logical business, commercial and light industrial complex. The purpose of this document is to provide a foundation for the development of the LASP lands and to form the basis for an amendment to the North Major Area Structure Plan. This LASP meets the required policies of the Nisku Major Employment Centre Area Structure Plan (Nisku MEC), the Leduc County Municipal Development Plan (MDP), and the Edmonton Metropolitan Region Growth Plan (EMRGP).

Opportunities abound in the vicinity of where the Royal Cubera LASP is situated. The plan area is well positioned to take advantage of the growing demand for business park, light industrial, and commercial land located within proximity to the QE II corridor, Nisku Business Industrial Park, the CP intermodal yard and the Edmonton International Airport. Recent improvements to the regional transportation infrastructure including Anthony Henday Drive, and the 41st Avenue SW interchange, have made this site attractive for diverse development.

1.2 Background

- Geotechnical Report, “Preliminary Geotechnical Report Desktop Study Proposed Royal Cubera LASP 41 Ave SW (Edmonton) & Range Road 243 Part of Section 9-51-24-4 Commercial/Industrial Development Leduc County Alberta”, J.R. Paine and Associates Ltd., November 2012, Report No: 2418-1697
- Environmental Site Assessment, “Phase I Environmental Site Assessment for E ½ 09-051-24 W4M and E ½ SW 09-051-24 W4M Leduc County Alberta”, Stantec Consulting Ltd, November 2012, File 1161-100885
- Transportation Impact Assessment, “Royal Cubera LASP Transportation Impact Assessment”, Stantec Consulting Ltd, February 23, 2015
- Biophysical Assessment, “Royal Cubera LASP Biophysical Assessment, within NE-9-51-24-W4M, SE-9-51-24-W4M and E ½ SW-9-51-24-W4M, Leduc County, Alberta”, Stantec Consulting Ltd, December 2012, File 1161-100885
- The LASP, adopted in 2017, was previously contained within the North Major Area Structure Plan which was replaced with the Nisku Major Employment Area Structure Plan in 2021.

1.3 Location and Boundaries

The Royal Cubera LASP is composed of eight individually owned parcels and encompasses approximately 160.88 hectares (397.54 acres) of land. It is located immediately south of the City of



Edmonton and approximately 4.02 kilometres (2.5 miles), by roadway, west from the City of Beaumont.

The LASP area is defined by the following boundaries, see Figure 1 – Regional Context:

- North – Leduc County boundary (TWP 512) / City of Edmonton boundary (41st Avenue SW)
- East – Range Road 243 / 66th Street (within the City of Edmonton)
- South – South Boundary of SE ¼ 9-51-24-4
- West – West Boundary of SW ¼ 9-51-24-4 and East Boundary of NW ¼ 9-51-24-4

These boundaries provide a logical division between the LASP, and the adjacent land uses set out in the Nisku MEC and in south Edmonton. With the exception of the western boundary, the plan area is bordered by roadways: TWP 512 / 41st Avenue SW; Range Road 243 / 66th Street (RR 243 / 66th Street); and a collector road that runs east-west connecting RR 243 / 66th Street to Border Business Park (as required by the WAM Area Structure Plan). The western boundary of the LASP is contiguous with Border Business Park.

Cawes Lake is located approximately 1.6 Kilometres (1 mile) east of the LASP lands. Currently there is very little water to be found in the lake and it contains ephemeral wetland vegetation. The Royal Cubera LASP is not dependent on Cawes Lake for stormwater management.

The current use of the LASP lands and the lands to the south and east is agricultural however the future land uses in those areas are non-agricultural. The southern lands are planned for employment uses as they are contained within the Nisku Major Employment Centre Area Structure Plan. The lands to the east are located within the City of Edmonton and are planned for development in accordance with the Intermunicipal Planning Framework and the City Plan. The lands to the west in Border Business Park are planned to be business park and light industrial. The lands to the north of the LASP are planned to be business park and urban residential.

The Royal Cubera LASP has been prepared in response to the current and anticipated market demands in Leduc County and the Capital Region, as well as the aspirations of the landowners in the plan area.

Lands within the Royal Cubera LASP are owned by a number of different landowners, landowner groups, and development groups, please refer to Figure 2 – Ownership Plan. As per Leduc County policy, only those involved in the preparation of the LASP have been identified. All other landowners were notified and invited to participate in the preparation of the LASP. The choice of non-participation does not indicate either support or non-support for the Plan.

The Royal Cubera Local Area Structure Plan (LASP) will provide the framework for a well connected, economically prosperous, and environmentally respectful, business, commercial, and light industrial complex. It will build upon the successes of the Nisku Business Industrial Park and provide a transition to a more urban style of development in Leduc County.

1.4 Plan Objectives



The preparation of the Royal Cubera LASP has been guided by the following principles:

- Provide for land uses that are economically advantageous for Leduc County and the Capital Region.
- Create a strong sense of place with comprehensive design and compatible development that supports and enhances adjacent land uses.
- Provide interconnected, efficient and economically viable infrastructure and transportation networks.
- Plan for social interaction and association with the natural environment by providing multi-use trails and green space that allow both passive recreation and purposeful journeys.
- Maximize advantageous features of the site, acknowledging the Edmonton International Airport, Nisku Business Industrial Park, the CP intermodal yard, the 41st Avenue SW Interchange, and connections to south Edmonton.
- Encourage high quality, energy efficient and environmentally respectful development.

1.5 Public Participation

Public Participation has been conducted through the standard County referral and Legislative Public Hearing processes.

2 Policy Framework

The Royal Cubera LASP has considered applicable legislation and has achieved consistency with the regulations and statutory documents outlined below.

A Local Area Structure Plan holds the same stature as an Area Structure Plan (ASP). As such, it must be consistent with all higher-order plans, including the Municipal Government Act (MGA), the Provincial Land Use Policies, the Edmonton Metropolitan Region Growth Plan, the MDP, and the Nisku MEC.

2.1 Alberta Municipal Government Act

The Royal Cubera LASP has been prepared in accordance with the provisions of the Municipal Government Act (Revised Statutes of Alberta, 2000, Chapter M26). Section 633(1), Part 17, of the MGA provides for a municipality to adopt an ASP as a statutory planning document for the purpose of providing a framework for future land use, subdivision, and development within the Plan area. Section 633 of the MGA also requires that a statutory plan must describe the sequence of development proposed for the area; the land uses proposed for the area; and the general location of major transportation routes and public utilities. Lastly, the MGA also requires that an



area structure plan must be consistent with all higher-order plans, including the Municipal Development Plan and intermunicipal development plans.

As noted previously, Leduc County’s planning hierarchy includes two levels of area structure plans being “Major” and “Local” area structure plans. If an area is identified for significant development, such as the Major Employment Area, then the County will often undertake a high level “Major Area Structure Plan” to provide a holistic view of how the larger area is expected to develop. However, a plan at that level is not able to provide the more specific policies and directions that are necessary for development to proceed, and so they are supported by the creation of “Local Area Structure Plans” that provide specific direction for growth in the smaller areas in accordance with the general direction provided by the overarching plan.

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

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

The purpose of the LUF is to manage growth and sustain Alberta’s economy, while providing a balance with the social and environmental goals of Albertans. Essentially, the framework provides a blueprint for land-use management and decision-making that will address the needs of Alberta. While the North Saskatchewan Regional Plan has yet to be developed and enacted, the Royal Cubera LASP has taken into account the desired outcomes of the LUF, which include: a healthy economy supported by our land and natural resources; a healthy eco-system; and people friendly communities with ample recreational and cultural opportunities.

2.2 Edmonton Metropolitan Region Growth Plan

Compliance with the Edmonton Metropolitan Region Growth Plan (EMRGP) is provincially mandated through the Municipal Government Act. A fundamental requirement of the EMRGP is to intensify development to minimize the development footprint and utilize existing and future infrastructure as efficiently as possible.

The Plan area is within the boundaries of the EMRGP and is described as a major employment area. Major employment areas are lands with a concentration of industrial, commercial and/or institutional land uses that have regionally significant business, economic activities and high levels of employment.



The LASP conforms to the policies of the EMRGP and, it does not require approval from the EMRB to proceed because it conforms to the higher order Nisku Major Employment Centre Area Structure Plan and was previously approved under the Capital Region Growth Plan.

2.3 Airport Vicinity Protection Area

A very small portion of the LASP is located in the Edmonton International Airport Vicinity Protection Area (AVPA); see Figure 3 – EIA Vicinity Protection Area. The regulation is based on the Noise Exposure Forecast (NEF) system utilized by Transport Canada (TC), which accounts for the noise of aircrafts operating at an airport, based on actual or forecast aircraft movement by runways and the time of night/day of movements. The impacted lands of the LASP are located outside of the 25 to 30 Noise Exposure Forecast (NEF) contour lines and therefore do not have any listed prohibited uses in Section 2(1) of the regulation. Stormwater management facilities included in the Plan are also located outside of the AVPA. That being said, all development within the areas identified in the AVPA regulation will align with the requirements of said regulation.

It is important that these lands develop in a way that is complementary to airport operations. This means that development on these lands must meet certain requirements in addition to standard Leduc County land use policies.

Objective:

To minimize negative impacts on the operations of the Edmonton International Airport (EIA).

Policies:

2.3.1 The Airport Vicinity Protection Regulation and Transport Canada publication TP1247 shall guide all development on the lands identified in Figure 3 – EIA Vicinity Protection Area.

2.3.2 Uses and development within the LASP shall not:

- a) emit smoke, vapour, dust or light in quantities that may, in the opinion of Leduc County or EIA, reduce visibility of airport operations;
- b) obstruct airport operations either by height or location;
- c) interrupt NAVCANADA radar, VHF/UHF communications, and navigational aids; or
- d) have characteristics that increase bird hazards for EIA.

2.3.3 The EIA shall be notified of all development, building permits, land use changes, or building-use changes on the impacted lands (identified in Figure 6 – EIA Vicinity Protection Area) within the Royal Cubera LASP.

2.4 Intermunicipal Planning



The Royal Cubera LASP is intended to maximize the benefits of the new regional planning requirements by providing local employment land uses that will support the growth called for in the Edmonton Metropolitan Region Growth Plan. The land uses proposed support regional prosperity by promoting local economic wellbeing and allowing for business opportunities that support regionally beneficial operations such as the CP intermodal yard and Edmonton International Airport.

The plan has been prepared from a healthy communities perspective by providing infrastructure for active transportation (walking and cycling) and by having local services available in walking or cycling distance from the East Vistas and the communities in south Edmonton. The plan also proposes to preserve and integrate with existing natural environmental features and it encourages the use of renewable energy.

2.5 Municipal Development Plan

Leduc County's Municipal Development Plan (MDP) describes planning objectives and policies for a range of land uses throughout the County. The MDP supports growth and prosperity across all regions of the County by identifying and recognizing unique assets and building upon them.

This LASP is described within the MDP as being a major employment area which aims to provide opportunities for a wide range of business development opportunities including commercial, and light and medium industrial development that can be serviced by transit. This LASP complies with the MDP policies and regulations, therefore, no amendment to the approved MDP is required.

2.6 Nisku Major Employment Area Structure Plan

The Nisku Major Employment Centre (MEC) Area Structure Plan was adopted on September 28, 2021. The purpose of this ASP is to guide and direct development of local area structure plans to accommodate new and future business, while supporting existing industrial land use by outlining objectives, policies, natural areas, transportation, utility networks and staging plans for the next 30 years.

The Royal Cubera LASP is described within the Nisku MEC ASP as being part of the North Nisku area where both primary and secondary developments are envisioned. Warehousing and logistics are primary developments and are highly encouraged to develop within Nisku North. Secondary developments such as, commercial, retail and hospitality are also encouraged along major arterial roads such as the Nisku Spine Road. The Royal Cubera LASP meets the goals, objectives, and policies of the Nisku MEC ASP.

2.7 Land Use Bylaw

The Leduc County Land Use Bylaw 7-08 (LUB) was adopted March 2008 and assigns districts to lands within the County. Districts specify the permitted and discretionary uses, as well as other standards or regulations for the land. Lands located within the Royal Cubera LASP area are

currently zoned AG – Agricultural. The purpose of the AG – Agricultural district is to “provide primarily for larger agricultural operations and limited higher intensity agricultural activities on smaller lots, while at the same time providing for limited residential and other uses having a secondary role to agriculture” (p. 9-1). The lands within the Plan area must be re-zoned to develop Royal Cubera in accordance with the Development Concept for this LASP.

In addition, the Highway 2 Corridor Design Guidelines are applicable to development along TWP 512 / 41st Avenue SW, in the vicinity of the 41 Avenue overpass of the QE II (also known as Highway 2).

Edmonton Metropolitan Region Growth Plan Policy Review		
Section	Policy Statement	How does the plan meet the policy
5.1.1	Consistent with the CRB Regulation, existing area structure plans that were adopted in accordance with the MGA prior to the date this Plan comes into force will remain in effect and will be grandfathered. Substantive amendments to these approved plans will be subject to the Regional Evaluation Framework (REF) evaluation, as established through the REF submission criteria	The LASP is an adopted Statutory Plan under the CRB regulation and therefore is grandfathered.
REF 4.1(a)	All new statutory plans must be referred to the EMRB for approval except for: a) a new sub-area structure plan that is subordinate to and consistent with its higher order area structure plan or area redevelopment plan; Defined as a sub asp by emrb and according to ref do not need to be submitted	The LASP is a “sub-area structure plan” under the Nisku Major Employment Centre Area Structure Plan. As such, it is not required to be submitted to the EMRB.

Municipal Development Plan Policy Review		
Section	Policy Statement	How does the plan meet the policy
3.2.0.1	The development pattern in the Nisku Area shall be contiguous.	Development will be contiguous with servicing drawn from the east once available.
3.2.0.2	The County shall promote an orderly progression and staging of development to prevent the premature conversion of agricultural lands to non-agricultural uses and to minimize land use conflicts with existing agricultural operations.	The LASP is contained with the Nisku Major Employment Centre Area Structure Plan and follows a natural development progression in accordance with that plan
3.2.0.7	Revisions proposed to existing Area Structure Plans and Local Area Structure Plans within the Nisku Area will be subject to the provisions of the Regional Evaluation Framework (REF)	All revisions will be compared against REF and the County will comply with the requirements found therein,
3.4.1.2	A broad range of employment uses are encouraged within the Major Employment Area with a focus on light and medium industrial development and agribusiness.	The LASP focuses on industrial development while still containing the flexibility to adapt to other suitable non-residential uses.

3.4.1.3	Commercial, retail, and institutional uses are encouraged within the Major Employment Area where they meet the needs of the local employment base and are compatible with adjacent land uses.	The LASP allows for flexibility in land uses as needed to meet the needs of the immediate area and the region as a whole.
3.4.1.8	Heavy industrial development is not supported within Major Employment Areas due to its offsite impacts.	Heavy industrial uses are not supported in the LASP
7.2.0.1	Municipal and school reserve shall be provided at no less than 10 per cent in land, money in place of land, or a combination of land and money in accordance with the Municipal Government Act to ensure the educational, recreational and social needs of residents are met.	Reserve dedications in the LASP area shall be conducted in accordance with the provisions of the MGA
8.1.0.2	As part of any land use decision, the County shall consider the safe, efficient, and cost-effective provision of transportation infrastructure services to ensure a sustainable development pattern within the County.	Transportation planning in the LASP is guided by the supporting Transportation Impact Assessment.
8.1.1.1	Development and subdivision adjacent to local and regional roads and over dimensional corridors as identified in Map 8: Transportation Infrastructure shall not impede the existing or future flow of traffic on local and regional roads or over dimensional corridors.	Development within the LASP will be designed to ensure it does not impede area traffic.
8.1.1.10	All development proposals must include information assessing the traffic and intersection implications of the development on road networks to the satisfaction of the County and, where applicable, Alberta Transportation.	The LASP is supported by a suitable Transportation Impact Assessment.
8.1.1.11	A traffic impact assessment, prepared by a qualified engineer, may be required for development proposals, including Area Structure Plans, land use bylaw amendments, subdivision, and development permit applications as deemed necessary by the County.	The LASP is supported by a suitable Transportation Impact Assessment. All development within the LASP will be required to provide suitable supporting studies as deemed necessary by the County.

Nisku MEC Area Structure Plan Policy Review		
Section	Policy Statement	How does the plan meet the policy
4.3.1	The Nisku MEC Area Structure Plan encourages redevelopment and infill of brownfields or under-utilized properties and the reuse of structures. A leapfrog approach of development is not supported	Development within the LASP is contiguous.
4.3.3	No heavy industrial development shall be allowed within the Nisku Major Employment Center Area Structure Plan	The LASP does not enable heavy industrial development.
	Development shall follow architectural and landscape design guidelines along key entrances, roadways and nodes as outlined in policy or in Local Area Structure/Redevelopment Plans	At the time of adoption, these have not yet been developed.
4.3.6	Local Area Structure Plans (LASP's) and Local Area Redevelopment Plans (LARP's) are required prior to development in order to provide more specific and detailed information and a localized vision. LASP's and LARP's should include at minimum: <ul style="list-style-type: none"> o Objectives, o Policies, o Transportation and infrastructure, o Environment Constraints, o Parks and Recreation, o Staging and Development Pattern(s), o Public Engagement, o Outline Plan Requirements and o Other requirements such as floor area ratios to maximize building sites, relevant statistical data and specific background information. 	The LASP is a grandfathered document and met the standard of the day when adopted. Should it see a significant amendment it will be expected to comply with all applicable policy at that time.

3 Plan Area Context

3.1 Topography

A Biophysical Assessment was prepared by Stantec Consulting Ltd. for the lands legally described as E ½ 9-51-24-4 and the east half of SW 9-51-24-4 which encompasses all of the lands located within the LASP and is available under separate cover. The objective of the Biophysical Assessment was to determine the ecological value of natural areas located within the Plan area. The assessment consisted of a desktop review of relevant literature and information databases; a historical aerial photograph review, pre-mapping of all natural features; and a field program to assess natural features within the Plan area.





The topography of the LASP lands is flat to undulating. The Plan area includes a number of farmhouses and outbuildings and landscape features such as agricultural fields of varying size, wetlands, man-made dugouts and a tree farm with the dominant land use being agriculture.

A Statement of Justification (SoJ) for Historical Resources Act requirements of the Plan area has been submitted to Alberta Culture (AC). The SoJ included the following recommendations:

- The project area holds low archaeological potential. No further archaeological assessment is recommended.
- Four of the five currently occupied yards within the project area potentially contain historic structures. Additional research into the yards and recording of the historic structures are recommended.
- The lands within the development area have low paleontological potential. Due to thickness of surficial sediments, bedrock will not be disturbed by construction activities and the potential for impacts to paleontological resources are considered low. No further paleontological work or monitoring is recommended.

Within the Plan area there are four residences with associated out buildings. These residences shall remain until such time as the landowner(s) for each of these parcels of land decides to move forward with the redevelopment of their property, see Figure 4 – Opportunities and Constraints.

3.2 Geotechnical and Hydrology

A Geotechnical Report was prepared by J.R. Payne and Associates Ltd. for the Royal Cubera LASP lands and is provided under separate cover. The purpose of the report was to determine if the LASP lands are developable, with evaluation of geological, soil, and water table characteristics. The report speaks generally to the entire LASP lands, with specific data provided for test-hole drilling that occurred on the north half of SE 09-51-24-4. Further geotechnical investigation will be required at the time of redistricting and/or subdivision for the other LASP lands.

The surficial geology found in the region of the Royal Cubera LASP is glacial draped moraine, which consists of till of uneven thickness with minor amounts of water sorted material and local bedrock exposure. According to the Geological Map of Alberta, the general bedrock geology in the region is identified as the Horseshoe Canyon Formation of the late Cretaceous age. The Horseshoe Canyon Formation is generally comprised of grey feldspathic, clayey sandstone, bentonitic mudstone and carbonaceous shale, with scattered coal and bentonite beds of various thicknesses.

Draped glacial moraine generally contains clay till soils at the surface below the topsoil. The actual soil conditions found in the four test-holes on the north half of the SE 09-51-24-4 had 1.2 to 2.1 metres of lacustrine clay followed by clay till. The topography across the LASP lands is similar so it is expected that these two soil types should dominate the area. Low areas on the site may have deeper organics or moister, softer near surface clays followed by the noted two main soil types. The soils found in the LASP lands can support servicing and surface utilities.



Groundwater level ranged from 1.1 meters below ground surface to dry in the reviewed test holes on the north half of SE 09-51-24-4, which indicates a variable water table level across the site. At the completion of drilling, no significant free water or slough were observed in three of the four test holes. The fourth test hole with higher water table is located in an identified wetland. Water table readings were taken twelve and forty-nine days after drilling.

The probable groundwater flow is estimated to be 0.1 to 0.4 liters/second, with general groundwater movement toward the northwest, in the direction of the North Saskatchewan River.

3.3 Existing Land Uses

The plan area is currently almost exclusively agricultural land uses.

3.4 Existing Infrastructure

3.4.1 Transportation

The Plan area is located approximately 1.6 kilometres (1 mile) east of the QEII and approximately 3.2 kilometres (2 miles) west of Highway 814. Current residential access is gained to the Plan area from RR 243 / 66th St. and TWP 512 / 41st Avenue SW.

3.4.2 Oil & Gas Infrastructure

Three pipelines have been identified as being located within or adjacent to the Plan area; please refer to Figure 5 - Pipelines and Wellheads. Two of these pipelines contain natural gas and are licensed to ATCO Gas and Pipelines Ltd. with the third pipeline transporting crude oil and being licenced to Plains Midstream Canada ULC, see Table 2 – Pipelines within the Royal Cubera LASP. Pipelines containing natural gas, oil and similar products are regulated by the Alberta Energy Resources Conservation Board (ERCB). These regulations include minimum setback distances from high pressure pipelines. As these pipelines are considered to be high pressure, Section 6.11 of the Leduc County Land Use Bylaw, which specifies setback distances for buildings adjacent to pipeline rights-of-way, will apply. No active oil or gas wells were identified in the Plan area, according to ERCB data. However, a land reclamation certificate was issued in 1967 for an oil well lease site located in NE 04-51-24-4.

3.5 Existing Environmental Features

The Royal Cubera LASP is located within the Parkland Natural Region and Central Parkland Subregion. The Parkland Natural Region is a transition vegetation zone, characterized by fescue grassland interspersed with pockets of broad-leaved forest and mixed-wood forest. The Central Parkland Region typically consists of groves of broad leaves intermixed with grasslands dominated by rough fescue.

The LASP lands are a mosaic of cultivated land, woodlots and wetland features. The cultivated lands are dominated by canola crops. The woodlots are predominantly upland communities that



consist of trembling aspen and balsam poplar overstory, with a shrubby understory. Twenty-two wetlands of various classifications (Class 1 - Ephemeral to Class 4 – Semi-permanent) are located in the LASP. Hydrophilic vegetation occurs in the wetlands that have standing water.

There are a number of species associated with the Central Parkland Subregion. Common mammal species include the white-tailed deer, moose, coyote, porcupine, red fox, skunk, snowshoe hare and white-tailed jackrabbit. Assortments of resident and migratory birds are also present within the Central Parkland Subregion. Raptors such as the great horned owl, red-tailed hawk, northern harrier, and falcons are typically common when prey is abundant. Resident and migratory songbirds such as the black-capped chickadee, american robin, red-breasted nuthatch, warblers, and sparrows are abundant across the landscape. Wetlands provide habitat for numerous waterfowl and shorebird species, such as the mallard, Canada goose, northern pintail, northern shoveler, red-winged blackbird and killdeer.

A review was conducted of the Fish and Wildlife Management Information System (FWMIS) for records of rare wildlife species occurrences within five kilometres of the Plan area. Two birds and one amphibian species were identified as having the potential to occur in the Plan area. While not observed during the site visit, the Plan area may support habitat types that these species prefer. The species identified in the FWMIS included the short-eared owl (classified as may be at risk), the swainson's hawk (classified as sensitive), and the northern leopard frog (classified as at risk).

Natural features predominately in the form of wetlands were found throughout the Plan area. Of the wetlands identified, six were determined to be of high ecological value (W5, W12, W14, W17A, W17B, and W22). Woodlots WL1 and WL2 were also identified as being of high ecological value. These wetlands and woodlots are considered of high value for conservation and would be preferentially used by wildlife because of their size, level of hydrological permanence, and potential for floristic and community diversity, see Figure 6 – Natural Features. It should be advised that woodlot WL2 has been significantly disturbed.

Natural features considered of medium value for conservation include W2, W13, W15, W17c, W21 and W23. These features provide some level of environmental value providing a degree of inter – and intra- linkages for wildlife use, are of moderate size, provide a degree of hydrological function and may provide some degree of fauna habitat for resting and foraging.

The remaining wetlands (W1, W3, W4, W6 through W11, W16, W18, and W19) and treed areas observed were considered of low value for conservation. Currently, these features represent low connectivity potential, are relatively small and fragmented, and likely represent low wildlife potential.

3.5.1 Environmental Site Assessments

A Phase I Environmental Site Assessment (ESA) was undertaken by Stantec Consulting Ltd. for the lands located in the LASP and is available under separate cover. The properties are legally described as Plan 892 2964; Lot 1, Plan 2030RS; Lots A through D, the north half of SE 09-51-14-4, the south half of SE 09-051-24-4, and SW 09-51-24-4. The purpose for undertaking the Phase I ESA was to assess if there was evidence of potential or actual environmental contamination existing in



connection with the site, as a result of current or past activities on the site or surrounding properties.

The Phase I ESA consisted of a records review process and a site visit. Access to the north half of SE 09- 51-24-4 was available, while access onto the private lands in the remainder of the Plan area was not. As a result, these properties were viewed from public roadways and from the north half of SE 09-51-24-4. The results of the Phase I ESA noted 12 areas of concern and as a result the following will need to be undertaken:

- Prior to renovations, construction or demolition, a hazardous building materials assessment must be completed on buildings located in the Plan area.
- A Phase I ESA will need to be undertaken for each of the properties not accessed during the preparation of this Plan, these include all properties located within the Plan area other than the north half of SE 09-51-24-4. The Phase I ESA would be required in conjunction with a rezoning application for the property in question.
- A Phase II ESA including a drilling program will need to be completed on the north half of SE 09- 051-24-4 in conjunction with a rezoning application.

4 Land Use Concepts

The Royal Cubera LASP development concept, see Figure 7 – Development Concept, has been designed in accordance with Leduc County policies, statutory plans, and servicing standards, the Capital Region Growth Plan, as well as relevant Provincial and Federal statutes and regulations. The Royal Cubera LASP is grandfathered under the Edmonton Metropolitan Region Growth plan as it was previously approved by the Capital Region Board.

Development staging and extension of infrastructure will be logical, efficient, and economical while having regard for potential environmental and ecological impacts. The LASP development concept recognizes that lands within the Plan area represent a transition from the Nisku Business Industrial Park to surrounding urban residential uses, and therefore developments within the LASP will be subject to a high standard of architectural design and landscaping requirements.

4.1 General Land Use Objectives

The development concept for the Royal Cubera LASP has been designed to support a mix of Business Park, Light Industrial and Commercial uses, see Section 4.2 – Land Use Statistics. The area is intended to capitalize on being adjacent to Nisku Business Industrial Park, the CP intermodal yard, as well as several approved and developing residential neighbourhoods in the City of Edmonton. The Royal Cubera LASP is anticipated to contribute to and diversify the business employment base in Leduc County and promote economic prosperity in the Region.

Objectives:

- To maximize the economically advantageous value of the lands; and

- To provide a seamless transition between the Royal Cubera LASP and adjacent land uses.

Land Use Statistics

	Area (ha)	% of GDA
Plan Area	160.88	
Environmental Reserves	3.28	
Gross Developable Area	157.6	100
Roads – Arterial & Collector	19.23	12.2
Municipal Reserve	1.94	1.2
Stormwater Management PUL's	9.23	5.9
Public Utility Lots	1.5	1
Subtotal Other Land Uses	31.9	
Net Developable Area	125.7	
Commercial	18.91	12
Light Industrial	86.73	55
Business Park	20.06	12.7
Subtotal		





4.2 Commercial and Retail

Approximately 18.91 hectares (46.73 acres) of land have been identified as Commercial. These lands are located on the highly visible and accessible corner of TWP 512 / 41st Avenue SW and Range Road 243/ 66th Street. The intent of the commercial area is to provide for a wide range of goods and services to support the Royal Cubera plan area, adjacent residential developments, Nisku Business Industrial Park, the Business Park Area in South Edmonton, and the travelling public in general. This development is envisioned to include uses such as commercial and convenience retail, food and entertainment establishments, medical clinics, financial services, possibly a gas station, and other related uses. The commercial area will be comprehensively planned with pedestrian-friendly access and connections to adjacent lands.

4.3 Business Park

In order to provide a seamless transition and buffering from the LASP lands to adjacent residential uses, approximately 20.06 hectares (49.57 acres), located along TWP 512 / 41st Avenue SW, RR 243 / 66th Street, and a portion of the southerly east-west collector roadway, have been designated as Business Park. The Business Park area will be characterized by corporate offices, research institutions, financial services, educational institutions, and other similar uses. The Business Park area will incorporate green space, and constructed or modified wetlands that will fulfill a storm water management function. There will be no outdoor storage in the Business Park character area.

It is envisioned that the Business Park will have visually impressive buildings and landscaping that will complement nearby residential uses.

4.4 Industrial Uses

The majority of the Royal Cubera LASP lands, 86.73 hectares (214.31 acres), are identified as Light Industrial. These lands are intended to be flexible in terms of lot size and specific uses. They also will not contain any heavy industrial or uses that create a nuisance beyond the building or the site. It is envisioned that the Light Industrial area will have a mix of uses, including but not limited to, business offices, warehousing and logistics operations, commercial retail, just- in-time (JIT) manufacturing, small-scale outdoor storage (at the discretion of the County), and other similar uses. It is anticipated that many of the uses in the Light Industrial area will take advantage of being in close proximity to the CP intermodal yard, EIA and the QE II.

4.5 Land Use Policies

4.5.1 Land use and development within the Light Industrial Area shall comply with the IB-Industrial Business District and/or LI – Light Industrial District of the Leduc County Land Use Bylaw No. 7- 08.

4.5.2 Land use and development within Business Park Areas shall comply with the IB – Industrial Business District and/or BP - Business Park District of the Leduc County Land Use Bylaw No. 7-08.

- 
- 4.5.3 Land use and development within the Commercial Area shall comply with the UC3 – Urban Commercial 3 District of the Leduc County Land Use Bylaw No. 7-08.
- 4.5.4 Should the above mentioned Districts in 4.6.1, 4.6.2, and 4.6.3, be amended or removed from the Leduc County Land Use Bylaw or the Bylaw is revised, the most suitable Districts to meet the goals and character of this LASP shall apply.
- 4.5.5 There shall be no outdoor storage in the Commercial or Business Park Areas.
- 4.5.6 Any outdoor storage permitted in the Light Industrial area shall be screened from local roadways, trails, and the adjacent Commercial and Business Park Areas.
- 4.5.7 Developments shall endeavour to exceed the requirements of the Highway 2 Corridor Design Guidelines along TWP 512 / 41st Avenue SW.
- 4.5.8 All developments that face onto a roadway that abuts residential uses shall be required to have higher architectural standards and landscaping requirements.
- 4.5.9 Landscaping in all character areas shall be in accordance with the requirements of the Leduc County Land Use Bylaw and the specific land use districts.
- 4.5.10 All developments shall endeavour to incorporate Crime Prevention Through Environmental Design (CPTED) and Dark Skies principles.

5 Natural Areas and Reserves

Parks and open space improve quality of life by providing opportunities for passive recreation and purposeful journeys. The Royal Cubera LASP has been designed to incorporate natural features and to provide connectivity to parks and trails in adjacent developments. Many of the wetlands in the plan area are seasonal and will be enhanced with a shared purpose as a stormwater management facility, see Figure 7 – Development Concept. The lands that surround these wetlands or stormwater management facilities provide a natural location for protective and supportive park space. This park space will be available to residents of Leduc County, those employed in the plan area, and will provide aesthetic value to the development as a whole.

Objectives:

- To provide adequate access and appropriate open space amenity to meet the needs of the Plan area's employee base;
- To provide pedestrian-friendly connectivity from the LASP to adjacent developments; and
- To protect the ecological integrity of natural features deemed to be of high ecological value in the Plan area.

5.1 Reserves

Municipal Reserves

Municipal Reserve will be dedicated through a combination of land and cash in lieu to Leduc County on a stage by stage basis.

Policies:

5.1.1 Municipal Reserve shall be utilized first to provide connective trails, park space, and buffers around natural areas, wetlands and stormwater management facilities.

5.1.2 Where possible, trails and park space should be located to provide logical connectivity between adjacent developments, thereby maximizing park size and trail length.

5.1.3 Stormwater management facilities should be included as part of the park and/or trail system.

5.1.4 Proponents shall work with the County and the pipeline right-of-way owner to determine the location and construction standards for a connective trail through and along the public utility lot.

5.1.5 Lands recommended for retention in Figure 6 – Natural Features should be incorporated into subdivision design where possible. Where incorporation is not feasible, the proponent shall work with Leduc County and Alberta Environment and Sustainable Resource Development (AESRD) for alternative solutions.

5.1.6 Prior to the removal of any wetlands in the plan area, approval shall be received from AESRD.

5.1.7 In accordance with AESRD and Leduc County regulations and policies, certain wetlands recommended for retention in Figure 6 – Natural Features, may be utilized as a stormwater management facilities.

5.2 Historic Resources

Alberta Culture has granted Historical Resources Act clearance for the Royal Cubera LASP; please see Appendix B.

Development within the Royal Cubera LASP should have regard for the preservation of historical, archaeological and paleontological resources. Pursuant to Section 31 of the Historical Resources Act, development proponents and/or their representatives are required to report the discovery of any archaeological, historic period or paleontological resources, which may be encountered during construction. The historic structures located in the farm yards, identified in the SOJ, will need to be recorded prior to clearance and construction of the proposed development.

6 Transportation

The Royal Cubera LASP lands are well positioned for future transportation connectivity to the QEII, one of Alberta's major highways and a central dangerous goods route. The Plan will also have access to the Nisku Spine Road, which will provide an efficient linkage both to the City of Leduc and the City of Edmonton. The Plan area is located approximately 1.6 kilometres (1 mile) east of the QEII and approximately 3.2 kilometres (2 miles) west of Highway 814. Current residential access is gained to the Plan area from RR 243 / 66th St. and TWP 512 / 41st Avenue SW.

Collector roadways for the LASP have been designed to provide for efficient ingress and egress of automobiles, transport trucks, and public transportation, please refer to Figure 8 – Mobility Plan. By utilizing a modified rural roadway cross-section with added multi-use walkways (see Figure 9 – Pedestrian Circulation), Low Impact Development (LID) principles can be implemented, and the County will not need to alter current roadway maintenance practices.

As per the Municipal Government Act, Leduc County shall impose conditions on subdivision approvals and development permits for proportionate contributions, off-site levies, payments and/or Right-of-Way contributions for 41st Avenue SW roadway improvements abutting the LASP. Leduc County will enter into a mutually acceptable agreement with the City of Edmonton to develop a catchment of benefitting lands that will share construction and land costs for the 41st Avenue SW arterial roadway. A Transportation Impact Assessment (TIA) was prepared by Stantec Consulting Ltd. in support of this LASP and has been submitted under separate cover. The primary scope of this assessment was to:

- Examine the proposed development area: land use, roadways, traffic conditions and traffic operations;

- Identify the proposed future roadway network adjacent to the Plan area including access locations;
- Estimate forecasted background traffic conditions;
- Estimate future vehicular trip patterns generated to and from the Plan area;
- Distribute and assign the projected vehicular demands on adjacent corridors based on the proposed roadway network; and
- Conduct intersection capacity analysis to identify intersection and roadway improvement measures.

With proposed improvements, capacity analyses revealed that all study intersections would operate at an overall level of service at 'D' or better at the long-term planning horizon (2035). Notwithstanding the traffic control and lane requirements identified in the TIA report, requirements for gradual improvements should be confirmed through the completion of traffic counts and delay studies. As well, the actual improvement requirements should be confirmed upon build out of the Royal Cubera LASP so that the intersections can continue to operate effectively once the traffic patterns have been firmly established.

The TIA proposes lane configuration and storage lengths on major intersections. This information may be used for initial planning and will require further verification with an actual implementation plan during the design stage. Estimated daily volumes for internal collector roadways are within the range of acceptable urban industrial collector standard and these collector roadways are expected to be designed according to County's standard.

6.1 Off-Site Transportation Infrastructure

The statutory WAM Industrial Park Local Area Structure Plan (WAM LASP) was prepared for a 317 hectare (783 acres) development called Border Business Park. Border Business Park is located immediately to the west of the Royal Cubera LASP and is planned for industrial and business park uses.

The Royal Cubera LASP will connect to and extend the services and the east-west collector roadway (shown on the southern boundary of both plans) as outlined in the WAM LASP. Figure 10 – LASP Context displays the WAM LASP in relation to the Royal Cubera LASP lands.

Range Road 243 / 66th Street (RR 243 / 66th Street) is currently a two-lane rural roadway cross-section running along the east boundary of the Plan area. As part of the development of the Royal Cubera LASP, this roadway will be widened to accommodate a four-lane divided roadway cross-section as shown in Appendix A. This future widening for the roadway will need to occur to the west of the existing road right-of-way due to the presence of a high voltage power line right-of-way located immediately east and parallel to RR 243 / 66th Street.



The proposed roadway cross-section will have a rural drainage system, with ditch drainage. The ditches will drain to the same locations as the current roadway ditches. Access to lots developed as part of the Royal Cubera LASP will be from interior roads, and not from RR 243 / 66th Street.

There are several existing dwellings along RR 243 / 66th Street. The access to these dwellings will remain until such time that the lands are developed.

The TWP 512 / 41st Avenue SW immediately adjacent to the LASP is currently planned to be widened with the ultimate cross-section of the roadway being eight lanes, with additional turning lanes located at the intersection of RR 243 / 66th Street. Road right-of-way will need to be dedicated via subdivision with future development to accommodate the widening of this road.

The Nisku Spine Road (locally known as the 9th Street Extension) is and will be an important north-south transportation corridor through Nisku Industrial Park. It is located to the west of the Royal Cubera LASP and will function as a major arterial roadway connecting important economic nodes in the region, including the Edmonton International Airport, Nisku Industrial Park, the City of Edmonton and the City of Leduc. North from 41 Avenue SW, and into the City of Edmonton, the Spine Road eventually becomes 91st Street. Development in the direct vicinity of the Nisku Spine Road is anticipated to include mainly industrial (general and light) and business park uses. Over time and as development density increases, gradual upgrading of Spine Road will be required. Nisku Spine Road is anticipated to be developed as a six-lane divided arterial.

The Royal Cubera LASP lands are connected to the Nisku Spine Road via a collector roadway on the southern boundary of the plan area. This collector connects west from RR 243 / 66th Street, past the Royal Cubera LASP and Border Business Park, to the Spine Road. This collector road is identified in the statutory WAM LASP. Future dedication and construction of this road (proposed as an extension of 35th Avenue) will be determined as development advances south at the subdivision stage.

6.2 On-Site Transportation Infrastructure

Collector Roads

Collector roadways within the Royal Cubera LASP are proposed to have an adapted rural cross-section (please refer to Appendix A). This roadway cross-section has been adapted from the current Leduc County industrial collector roadway cross-section to allow for a multi-use walkway/ bike path on one side of the road. The collector roadways will drain via roadside ditches to the storm water management facilities located within the Plan area. Some the lots will be served directly by the collector roadway system and others by local roadways within the LASP area.

By utilizing the roadside ditches, there is greater allowance for surface infiltration of water runoff, a key principle in LID. Allowing for more rain water infiltration onsite, rather than piping it away to a treatment facility, is better for the natural environment and less costly in the long-term for the County.

A collector roadway from the Plan area will intersect with TWP 512 / 41st Avenue SW along the northern boundary of the site. This access is expected to align with a proposed access for



industrial lands to the north. Several existing dwellings, located along the south side of TWP 512 / 41st Avenue SW, currently have direct access onto the road. These dwellings will have continued access until such time as development and subdivision occurs on these lands.

Drainage from lands inside the Royal Cubera LASP will be accommodated in the new roadway section, or in a parallel drainage easement.

Local Roads

Local roadways will provide direct access to lots within the Plan area. The locations of these roads are flexible, and will be determined by how the land is subdivided, and the nature of the individual site land use. The roads in the Light Industrial area will be constructed with an adapted rural roadway cross-section, with drainage via roadside ditches. Due to development density, local roadways in the commercial area will be constructed with a curb and gutter along with an adjacent sidewalk. The sidewalk should be considered part of and connect to the overall pedestrian circulation plan for Royal Cubera. The structured drainage system in the commercial area will need to tie into the overall stormwater management system, which flows westward on the south side of TWP 512 / 41st Avenue SW.

Objectives:

- To provide efficient access to the Plan area and mobility within it;
- To connect to and become part of the road network that serves the County and the region;
- To plan a roadway system that is safe for multiple modes of transportation, including automobiles, transport trucks, cyclists, and pedestrians; and
- To implement Low Impact Development principles into roadway design.

Policies:

6.2.1 Local roads within the Royal Cubera LASP shall be developed in accordance with the cross-section designs identified in this plan, and shall meet Leduc County engineering standards.

6.2.2 Supplementary transportation concepts shall incorporate a network of streets that provide a high degree of connectivity and access to lots.

6.2.3 Collector roads will be designed to accommodate future public transit service.

6.2.4 A Leduc County approved Transportation Impact Assessment (TIA) shall determine roadway hierarchy and signalization.

6.2.5 Access to the Business Park and Light Industrial Areas shall be by internal roadways only.

6.2.6 Current residential access onto RR 243 / 66th Street and TWP 512 / 41st Avenue SW shall remain until such time as the lands on which the residences are located are redistricted for development and approved for subdivision.

6.2.7 Road right-of-way (metres in perpendicular width) shall be dedicated by all lands abutting RR 243 / 66th Street upon subdivision. The amount of road widening required shall be determined by Leduc County at the time of subdivision approval.

6.2.8 Road right-of-way (metres in perpendicular width) shall be dedicated by all lands abutting TWP 512 / 41st Avenue SW upon subdivision. The amount of road widening required shall be determined by Leduc County at the time of subdivision approval.

6.2.9 Road right-of-way (metres in perpendicular width) shall be dedicated by all lands abutting the extension of 35th Avenue upon subdivision. The amount of road widening required shall be determined by Leduc County at the time of subdivision approval.

6.2.10 All developments in the LASP shall contribute proportionately to the construction and expansion of new and existing municipal roads, and in particular, any roadways or infrastructure abutting the development in an adjoining municipality. Contribution amounts shall be determined at the time of subdivision and/or development.

6.2.11 Leduc County shall enter into a mutually acceptable agreement with the City of Edmonton to ensure proportionate contributions to the funding of 41st Avenue SW infrastructure adjacent to the plan area prior to development agreements.

6.3 Active Transportation

In the future, and as requirement of the regional growth plan, much of the lands that surround the Royal Cubera LASP will likely be developed as urban-density residential. In recognizing this, connective multi-use walkways/ bike paths and trails have been incorporated into the Plan design to allow for local residents to walk and cycle to their place of employment, see Figure 9 – Pedestrian Circulation. These multi-use walkways will also support pedestrians who use future transit and provide opportunity for passive recreation.

Objective:

- To promote efficient and accessible pedestrian and cycling circulation opportunities in the plan area.

Policies:

6.3.1 All internal roads shall include an asphalt multi-use walkway/bike path on at least one side in accordance with Leduc County standards.

6.3.2 All transportation concepts shall include a system of multi-use walkways / bike paths and trails to facilitate pedestrian movement across the Plan area.

6.3.3 All trails and multi-use walkways shall connect to the main pedestrian circulation network (refer to Figure 9 – Pedestrian Circulation).

7 Utilities

The Royal Cubera LASP will be fully serviced with water, sanitary sewer, and stormwater management, along with utilities that include power, natural gas, phone, and cable. Extensions to municipal water and wastewater for servicing are proposed below. The details of the proposed servicing systems will be further defined through subsequent reports and detailed engineering design in the future.

Proportionate contributions for infrastructure improvement costs will be calculated through an acreage assessment and implemented through subdivision approvals and development agreements for the subject lands.

7.1 Water

Water mains for municipal water will be extended from Border Business Park to the west of the Plan area. Two locations for connection are available, and both locations should be used to ensure that water supply can be looped throughout the Plan area. The water mains are extensions of Capital Region Southwest Water Services Commission system. See Figure 11 – Water Servicing for the layout of the proposed water mains. The water mains will be located primarily within the road right-of-way and will be sized as determined by an appropriate hydraulic network analysis and in accordance with Leduc County municipal standards. Water service will include roadway fire hydrants for fire protection and a future water service stub that will allow further extension to the east.

A municipal utility corridor will need to be secured from the Capital Region Southwest Water Services Commission system to and through the Royal Cubera LASP.

Objective:

- To provide full municipal services to meet the needs of the Royal Cubera LASP, while also considering the needs of future adjacent developments.

Policies:

7.1.1 The utility corridor for water servicing shall be secured by the Developer, in accordance with Figure 11 – Water Servicing, at the time of subdivision approval.

7.1.2 Municipal and private water system infrastructure will be provided in accordance with the approved Water Servicing Plan to the satisfaction of Leduc County.

7.2 Wastewater



The sanitary sewer network for the Royal Cubera LASP will be an extension of the Alberta Capital Region Wastewater Commission (ACRWC) trunk main, and connected to the Southeast Regional Trunk Sewer (SERTS) Line, located upstream of the Nisku metering station.

The trunk sewer connecting to Border Business Park in the southwest corner of the study area will be a 450 mm gravity line connecting to the 450 mm stub provided by WAM. This line will provide service to the LASP lands and to the residential area to the east up to Cawes Lake. The line will reduce in size to 375 mm as shown in the Figure 12 – Sanitary Service as it is expected flow will diminish upstream. The trunk sewer diameter will go down to 300 mm to service the character areas, and further to 200 mm lines to provide local area service. The location and extent of lines smaller than 300 mm are not shown in Figure 12, since the local roadway network and local land uses would have to be designated in order to plan these lines.

The development of the sanitary sewer servicing for the Royal Cubera LASP essentially follows the plan from the WAM LASP Sanitary Basin Boundary Assessment. A future connection point for lands to the east of the Royal Cubera LASP is provided on RR243 / 66th Street, at the intersection of the northernmost collector road. As the Royal Cubera LASP develops, it will be necessary for the County to secure a municipal utility corridor in order to ensure that services will be available to lands east of RR 243 / 66th Street.

Objectives:

- To provide full municipal services to meet the needs of the Royal Cubera LASP, while also considering the needs of future adjacent developments.

Policies:

7.2.1 The utility corridor for sanitary servicing shall be secured by the Developer, in accordance with Figure 12 – Sanitary Servicing, at the time of subdivision approval.

7.2.2 Municipal and private water system infrastructure will be provided in accordance with the approved servicing plan to the satisfaction of Leduc County.

7.3 Stormwater Management

The natural drainage for the Royal Cubera LASP lands flows principally from the south to the north and west. A smaller portion in the south drains southward, eventually reaching Irvine Creek. The stormwater runoff from the LASP site currently collects in a low area located just south of TWP 512 / 41st Avenue SW. The runoff then flows in a westerly direction along the south side of TWP 512 / 41st Avenue SW until it merges with flow from Border Business Park near the location of Range Road 244. The proposed Royal Cubera LASP is located primarily in storm Basin 21.

The entire LASP storm drainage system has been divided into north and south catchment areas. The north portion will drain into the 41st Avenue SW outfall via a pipe in the northwest corner of the plan area. It has been confirmed by the City of Edmonton Drainage department that the



stormwater drainage from Basin 21 has been permitted to discharge into the 41st Avenue SW outfall. The southern portion will drain into the outfall at the southern border of the plan area, towards Irvine Creek. The specific drainage catchment area boundaries and locations for connections to outfalls are to be determined at the engineering design stage.

Development of any portion of the Plan area that is designed to drain southward towards Irvine Creek will require that a watershed drainage study and master plan be completed. Any relevant recommendations from the watershed drainage study and master plan shall be properly reflected in the design and planning for the development.

Major and Minor Storm Events

Development of Border Business Park to the west will direct major overland flow to the north along the west boundary of the Royal Cubera LASP. The low area immediately south of TWP 512 / 41st Avenue SW will receive all the major storm runoff from most of the study area.

Minor storms in the Plan area will be handled by roadway ditch drainage systems. Water quality will be protected by directing flow from the ditches into storm water management facilities, preferably wet detention basins. These basins will manage storm flow peaks to reduce discharge to pre-development levels. The basins will also function to reduce the volume of water released downstream. As shown on Figure 13 – Stormwater Servicing, there are four locations proposed for storm water management facilities in the Plan area.

Low Impact Development

Low Impact Development (LID) provides an innovative stormwater management approach that follows basic principles modeled after the natural hydrologic cycle. The principles support the use of onsite design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Techniques are based on the premise that stormwater management should not be seen as stormwater disposal. Instead of conveying and managing or treating stormwater in large, costly end-of-pipe facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located onsite. These include the use of more permeable surfaces, such as ditches, swales, infiltration trenches, green roofs and rain barrels.

The Royal Cubera LASP is incorporating ditches and wetlands into its storm water management plan in order to lessen the environmental impact of the development and to promote LID. It is also encouraged that other LID strategies be included in subdivision design and the next stages of planning.

Objectives:

- To provide storm water management that safeguards storm water runoff quality and quantity from exceeding predevelopment standards and flows; and

- To incorporate LID principles into the design of all development within the Royal Cubera LASP.
- To ensure that stormwater discharge rates are in accordance with the appropriate provincial regulations.

Policies:

7.3.1 Prior to finalizing the stormwater management concept, an optimum stormwater strategy shall be determined with effort to minimize site grading.

7.3.2 Landscaping of parks, open spaces, and stormwater management facilities shall incorporate indigenous plant species and xeriscaping to minimize landscape irrigation.

7.3.3 Opportunities should be explored for incorporating design elements that support LID into private development, including but not limited to, green roofs, minimizing impermeable surfaces, and rain water collection.

7.3.4 Irvine Creek sub-watershed management goals shall be considered into the stormwater management design for the portions of the Plan discharging into the Irvine Creek Watershed.

7.4 Shallow Utilities

Shallow utilities including power, gas, telephone, and cable are all available for extension into the Plan area. These utilities will be provided within the road right-of-way and through easements on private lands. Proponents are encouraged to explore the potential of renewable energy provision for the LASP lands.

Electric Power

Electric power is supplied in the area by Fortis Alberta. According to the utility, adequate service is available in the area to supply the proposed Royal Cubera LASP. This service can be both three phase and single phase electric power, supplied from overhead or underground lines.

It is proposed that overhead power lines, installed on one side of the County road right-of-way, be utilized for RR243 / 66th Street and the collector roadways. Underground primary lines will be installed on local roadways and in the business park and commercial districts utilizing easements. Any needed power facilities will be located on public utility lots. Further detail on power provision will be provided at the time of subdivision.

Renewable Energy

Renewable energy use is becoming more common and cost effective for new developments. There are a number of examples of solar, geothermal, wind, and biomass energy installations across



Alberta that have proven successful. There is a great opportunity to implement some of these technologies for the developments in Royal Cubera. By incorporating renewables with the regular power supply, thereby creating a hybrid system, there is the ability to build resilience in the power system, making it uninterruptable. An uninterruptable power supply can be of tremendous benefit to light industrial developments.

Gas

ATCO Gas is the local gas utility. According to ATCO, an 80 psi gas main is located on the TWP 512 / 41st Avenue SW alignment. This main can supply the Plan area via an extension located on the east side of Range RR 243 / 66th Street and then westward along new roadways constructed as part of the Plan area.

Telephone and Cable

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

Objectives:

- To provide reliable municipal shallow utilities servicing to all users within the plan area; and
- To enable renewable energy options in the Plan area.

Policies:

7.4.1 All shallow utility infrastructure required to provide service to development shall be located underground, with an exception of power lines on the collector roads in the Light Industrial area.

7.4.2 Aerial power distribution facilities may be installed in the Light Industrial area provided that road crossings are located underground.

7.4.3 Provision of renewable energy technologies such as solar panels, geothermal heating/cooling, or biomass energy production are encouraged.

8 Community Services

Local emergency services will be available to all future developments located in Royal Cubera LASP lands. Ambulance services are supplied by Alberta Health Services, with the closest hospitals located in the City of Leduc and the Grey Nuns Hospital in southeast Edmonton. Police Services in Leduc County are provided by the Royal Canadian Mounted Police (RCMP), whose closest



detachment is located in the City of Leduc. Leduc County also employs Peace Officers who enforce County bylaws and roadway safety. Fire protective services have a fire hall located in Nisku, in close proximity to the LASP lands. Leduc County also maintains mutual-aid firefighting service agreements with all local municipalities.

9 Implementation

9.1 Phasing of Development

The plan has been prepared with the recognition that there is a need to provide flexibility to enable development in fluctuating economic conditions and to allow for innovative technologies.

The Royal Cubera LASP provides a policy framework for future subdivision and development. The Plan is proposed to occur in five stages – see Figure 14 – Development Staging. The first stage of development will include two storm water management facilities. It is proposed that the collector roads be constructed as each phase occurs, with independent TIAs determining required incremental upgrades to RR 243 / 66th Street. The staging provided is conceptual and could change depending on the future development demand. Future stages will require additional biophysical and environmental site assessment analysis.

An amendment to the Land Use Bylaw will occur with each stage of development. These amendments will involve rezoning the current Agricultural District to the respective Districts suitable to the Light Industrial, Business Park and Commercial areas.

Objectives:

- To develop land in accordance with the Leduc County policy framework; and
- To develop the LASP lands in a logical and cost effective manner.

Policies:

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

9.1.2 Order of development shall occur as outlined in Figure 14 – Development Staging.

9.1.3 Development shall generally be in accordance with the land use concept in Figure 7 – Development Concept. Minor Variations of land use boundaries and roadway alignments are expected and will not require amendments to the Plan.

9.1.4 The traffic impact assessment shall be reviewed and updated with each subsequent phase following Phase 1.

9.1.5 A detailed biophysical assessment shall be required for Phases 2, 3, 4, and 5 in order to verify the presence of wetlands and their classifications.



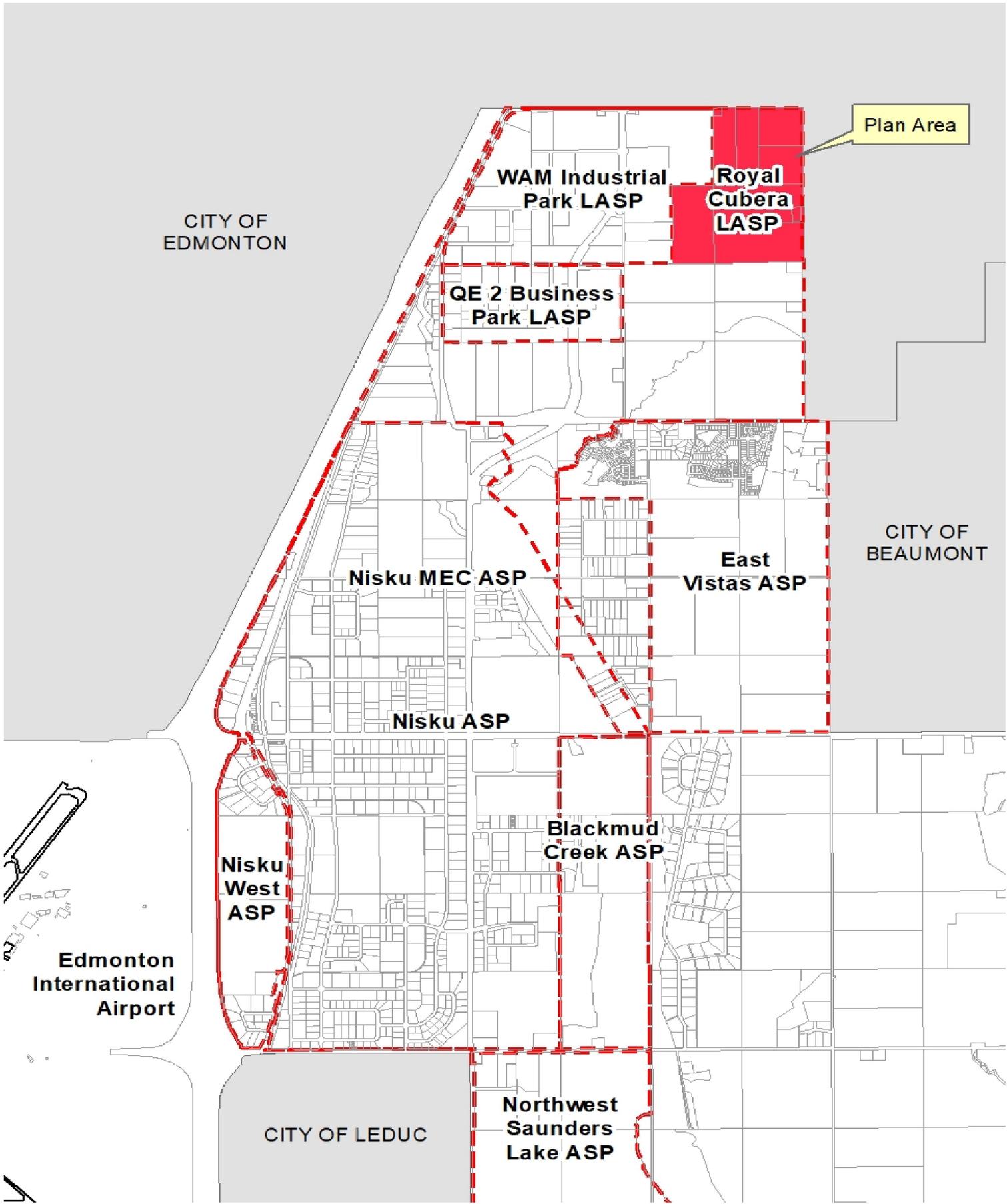
9.1.6 An Environmental Site Assessment shall be required for Phases 2, 3, 4, and 5.

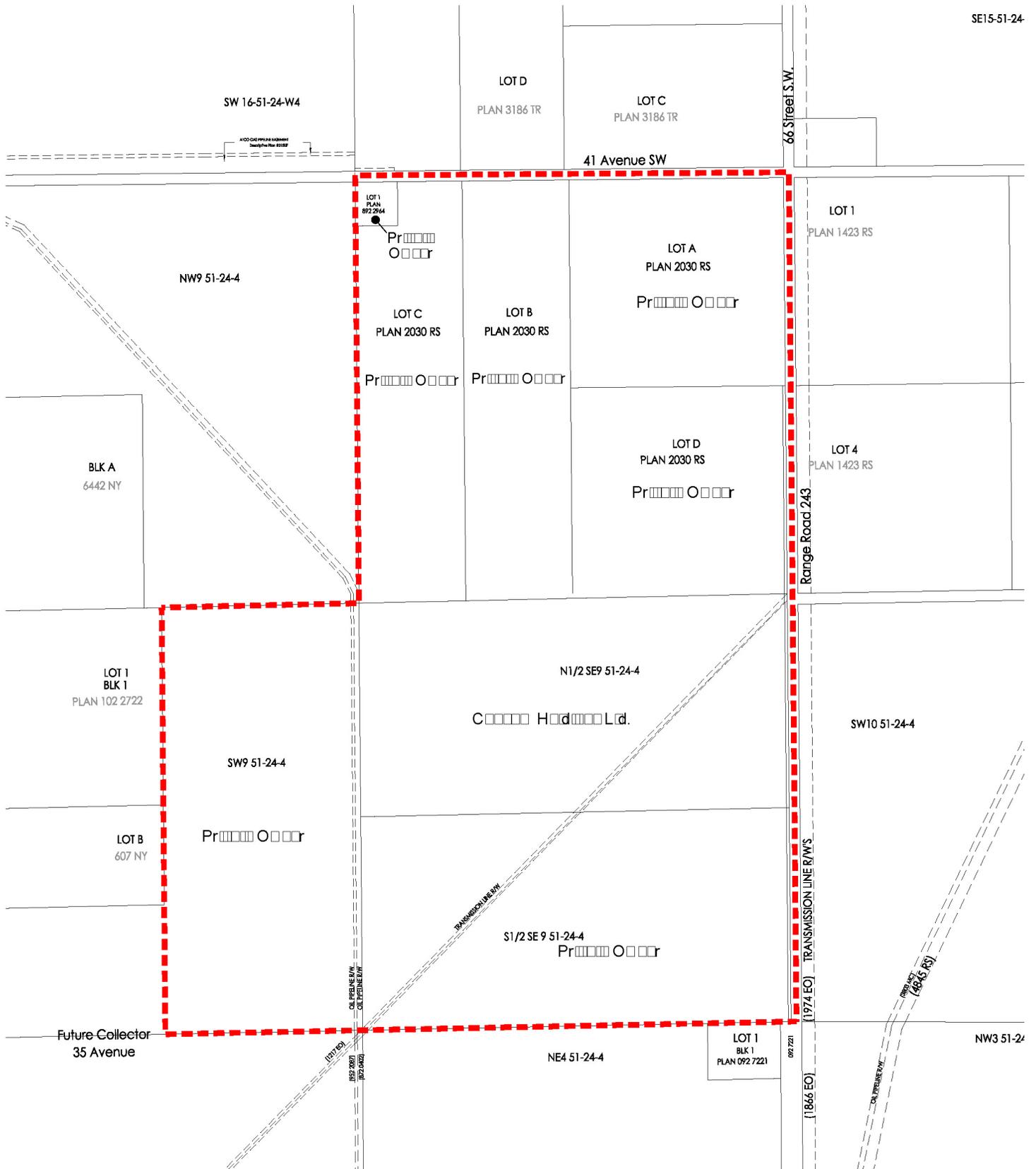
9.1.7 Any historic structures located in the Plan area that were identified in the Statement of Justification for the Historical Resources Act, shall be recorded prior to clearance and construction of proposed developments.

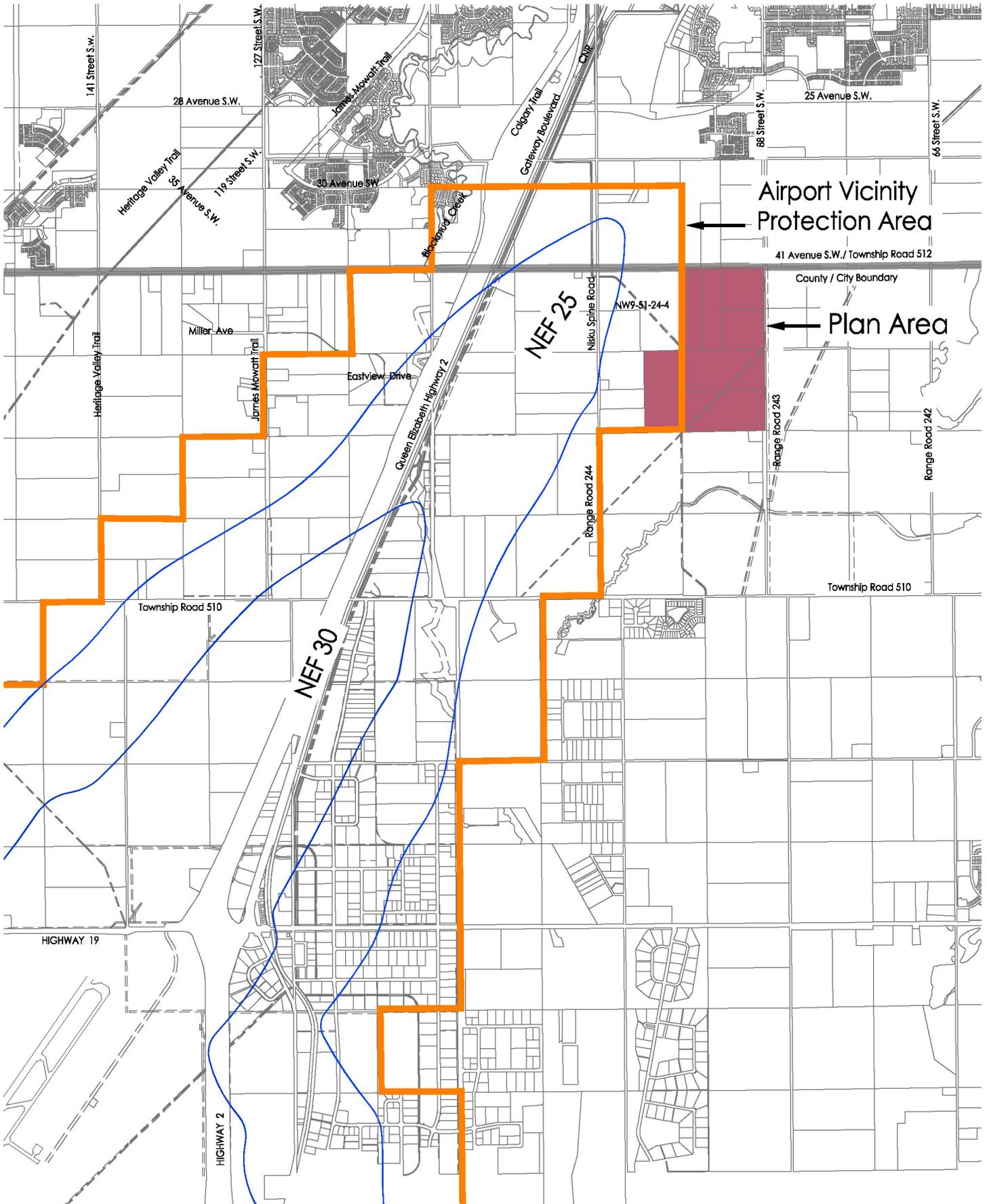
9.1.8 The boundaries between land use areas included in this LASP are general in nature. Specific boundary location between uses shall be determined at the time of Land Use Bylaw amendment.

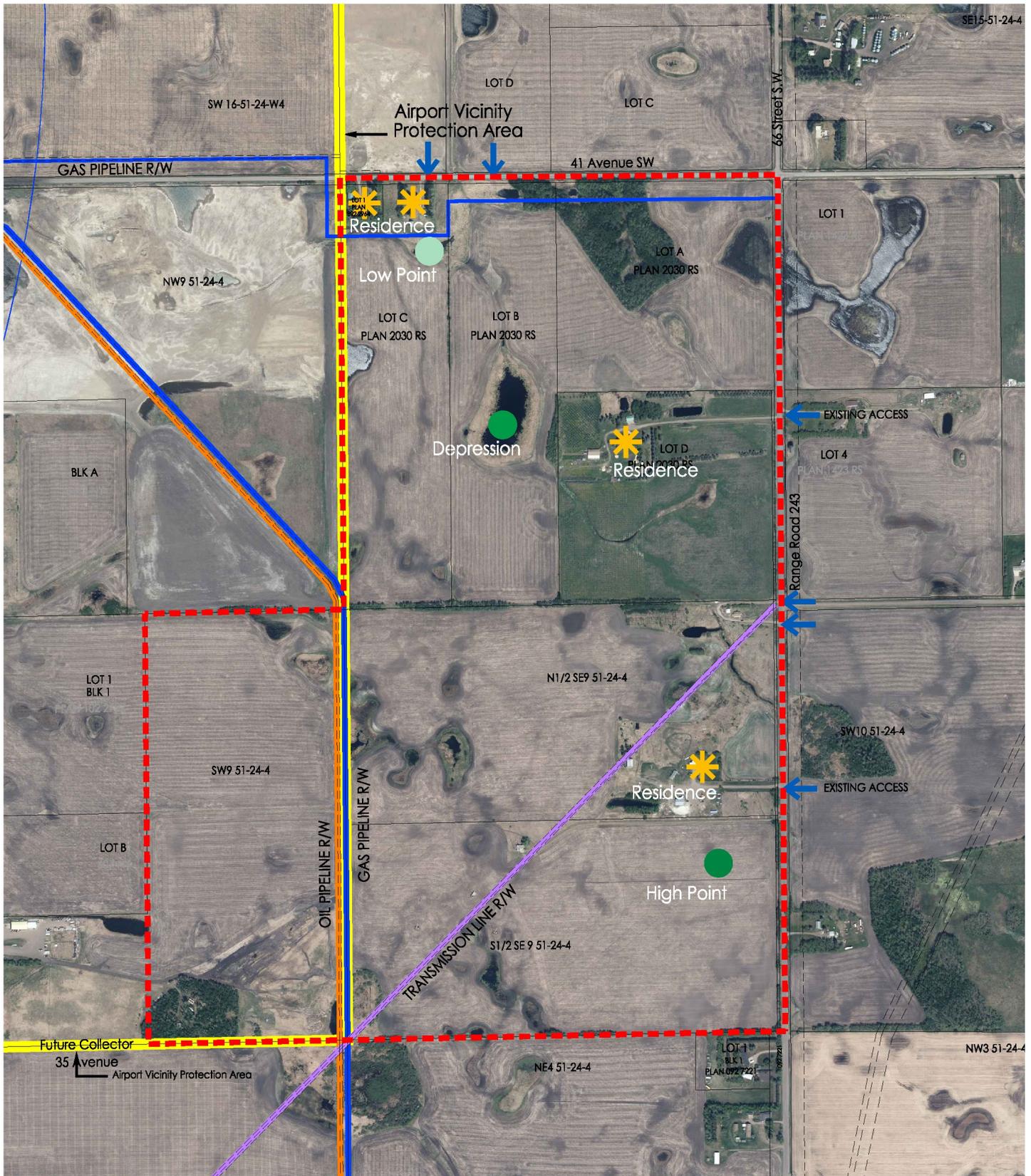
9.1.9 The interim use for all lands located in the Royal Cubera LASP shall remain as agricultural.

9.1.10 Amendments to the Royal Cubera LASP may be initiated by Leduc County Council or any individuals with an interest in the lands.

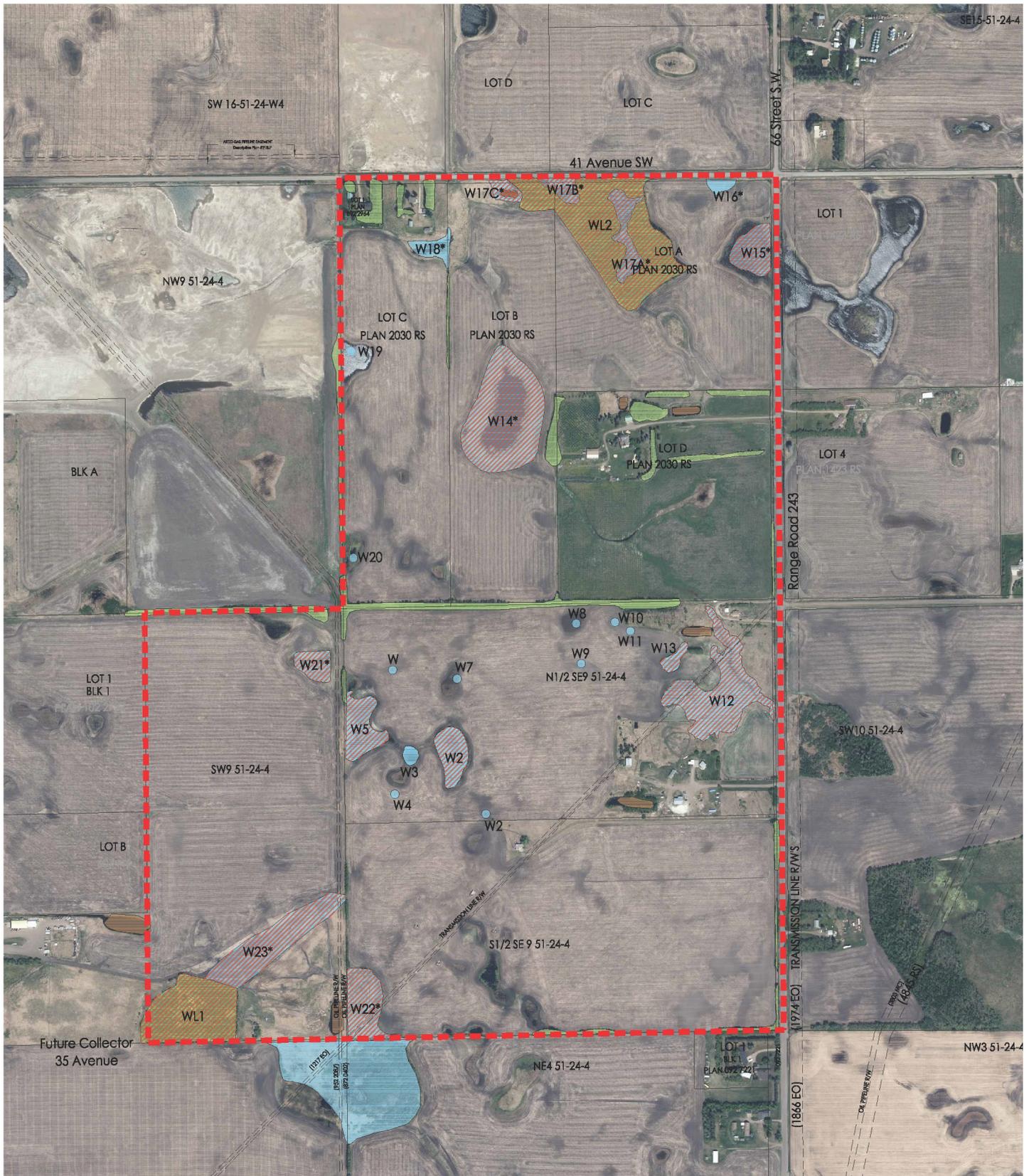








- ★ Existing Residence
- Gas Pipeline
- Oil Pipeline
- Transmission Line

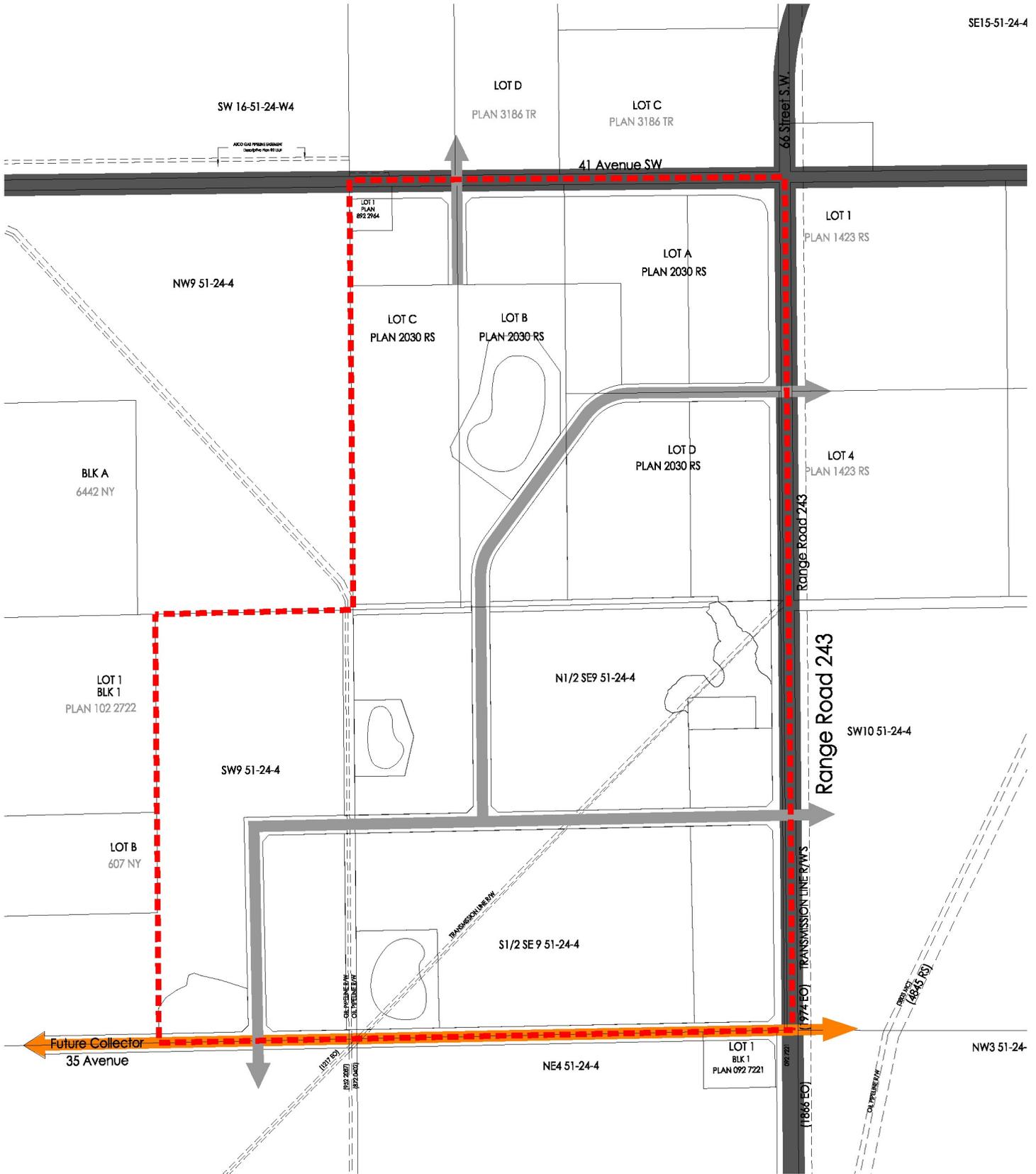


Legend

- Treeed Area
- Wetlands
- Dugout
- Recommended for Retention
- LASP Boundary



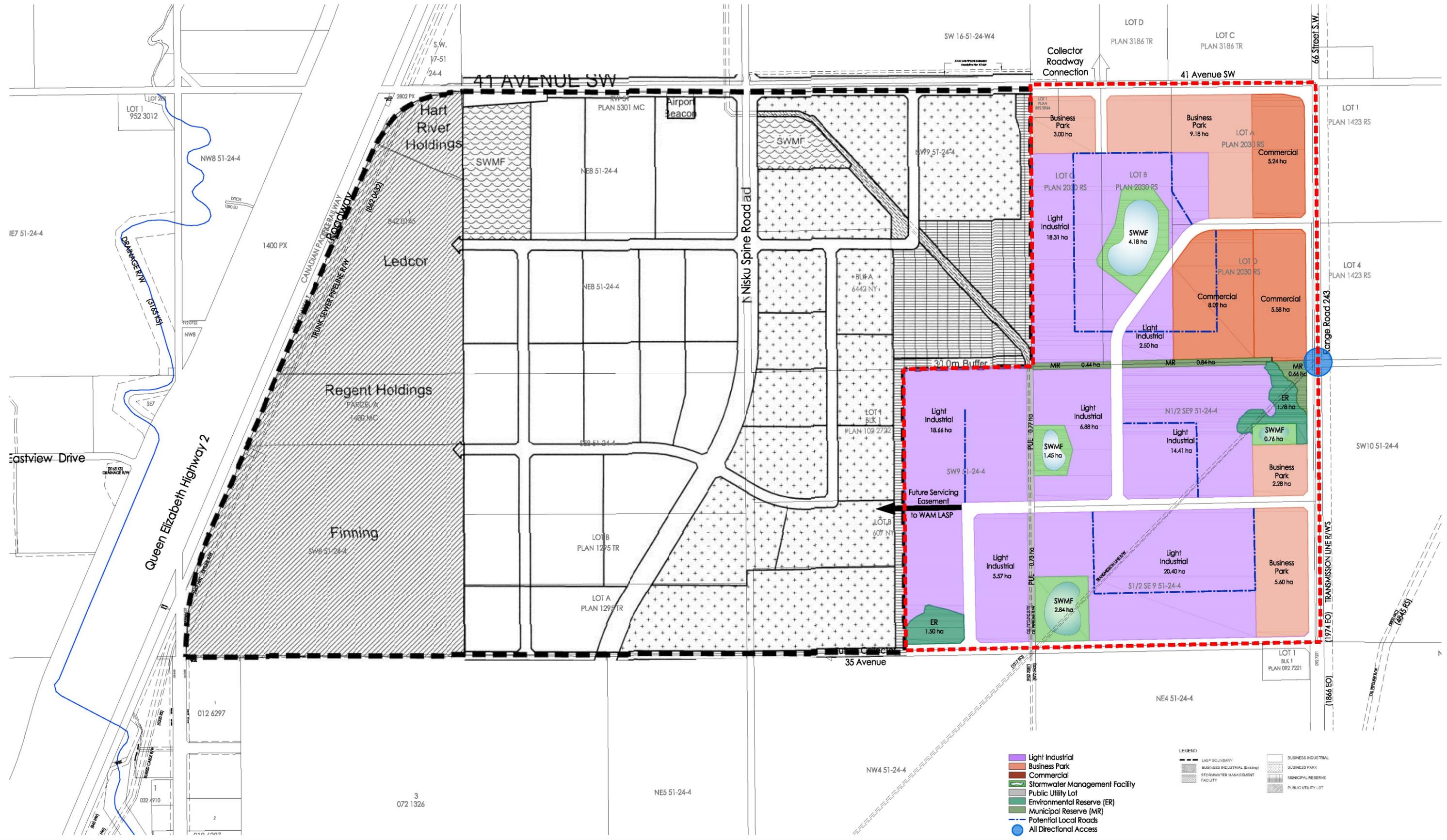
Light Industrial	86.73 ha
Business Park	20.06 ha
Commercial	18.91 ha
Stormwater Management Facility	9.23 ha
Public Utility Lot	1.50 ha
Environmental Reserve (ER)	3.28 ha
Municipal Reserve (MR)	1.94 ha
Potential Local Roads	
All Directional Access	



- Legend
-  Urban Arterial Roadway (42m ROW)
 -  Major Urban Collector Roadway (40m ROW)
 -  Minor Industrial Collector Roadway (34m ROW)



- Legend
- Pedestrian Multi-Use Walkway
 - Storm Pond
 - Municipal Reserve (MR)
 - Environmental Reserve (ER)

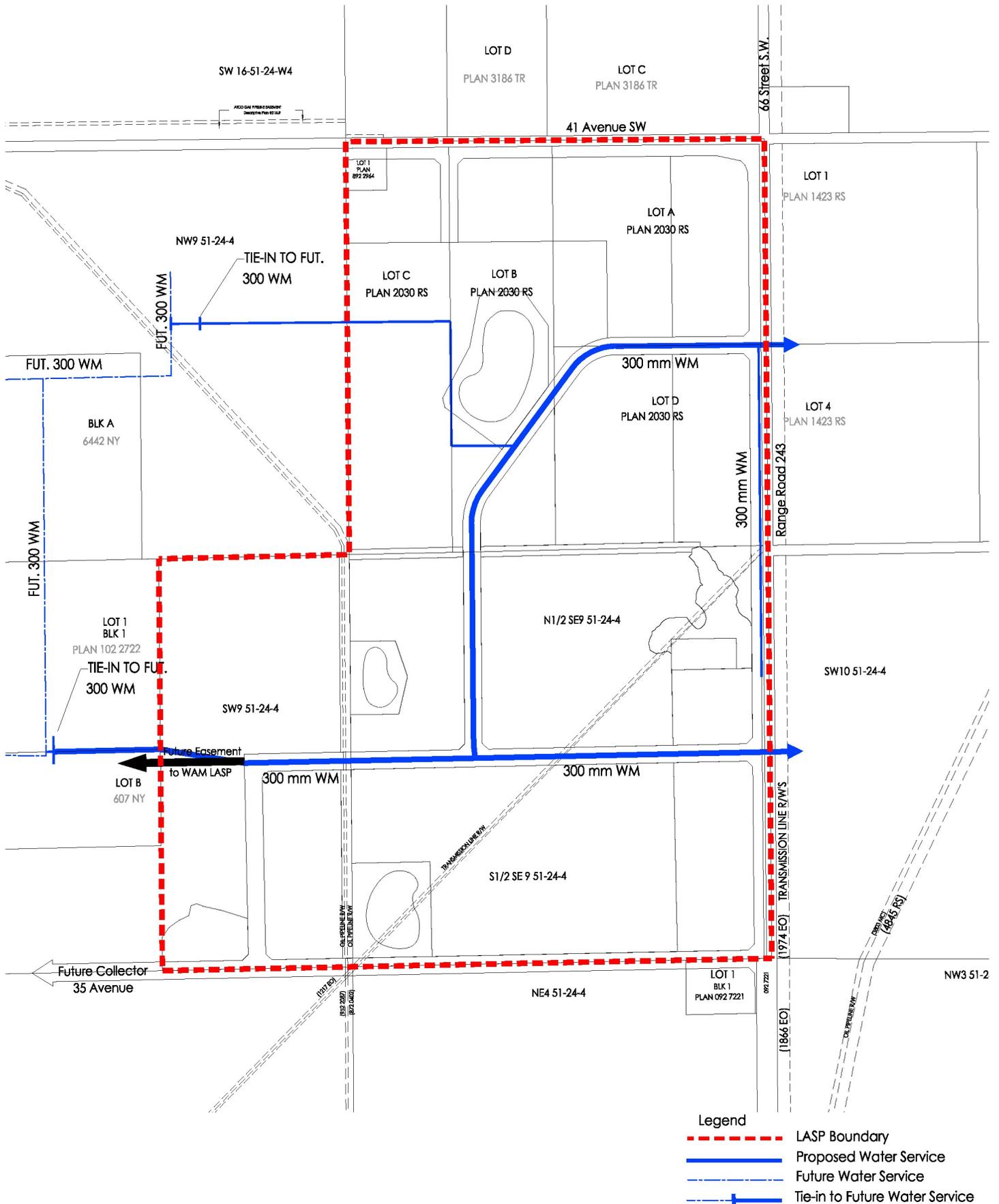


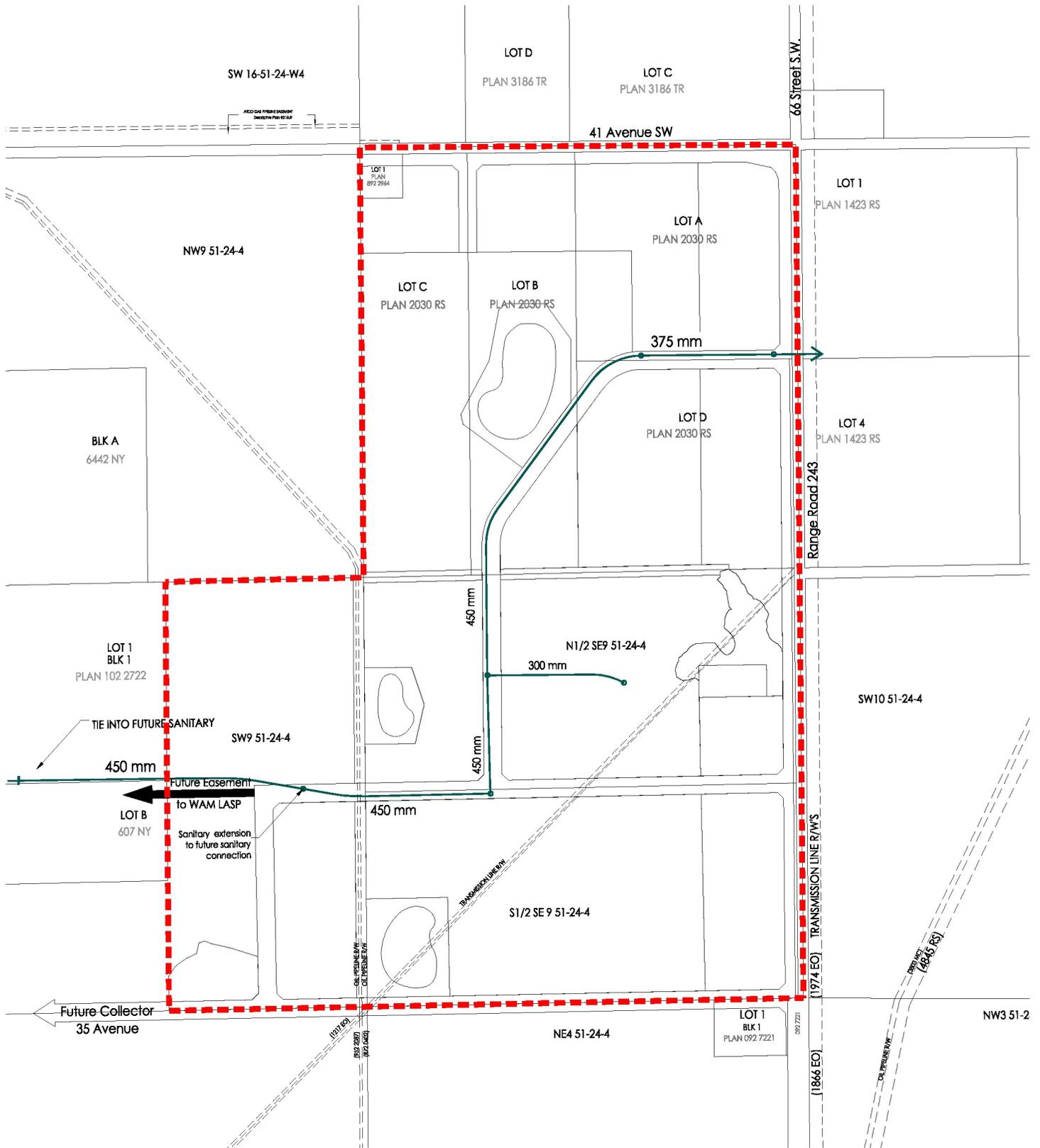
LEGEND

- Light Industrial
- Business Park
- Commercial
- Stormwater Management Facility
- Public Utility Lot
- Environmental Reserve (ER)
- Municipal Reserve (MR)
- Potential Local Roads
- All Directional Access

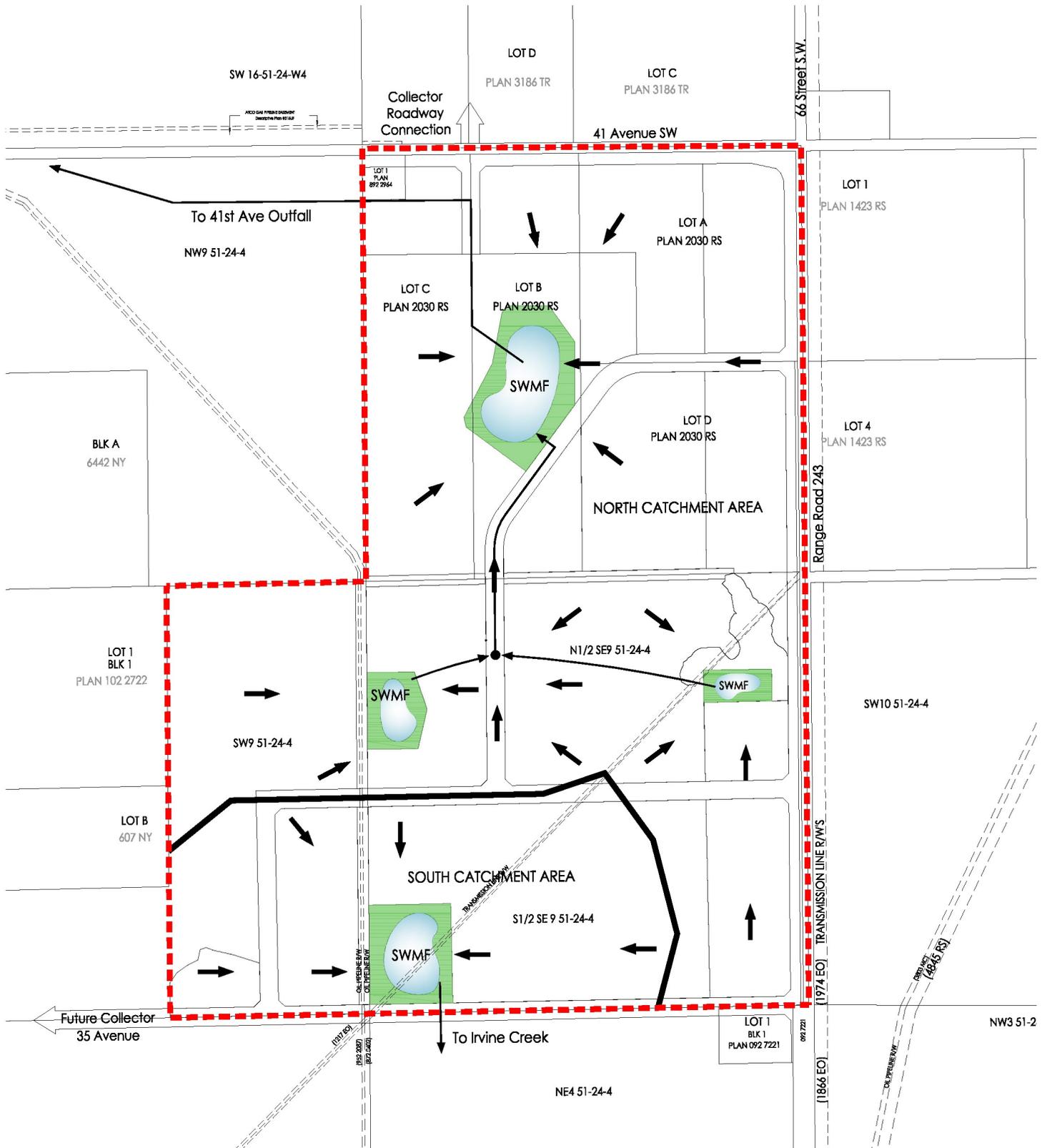
LEGEND

- LASP BOUNDARY
- BUSINESS INDUSTRIAL (Existing)
- STORMWATER MANAGEMENT FACILITY
- BUSINESS INDUSTRIAL
- BUSINESS PARK
- MUNICIPAL RESERVE
- PUBLIC UTILITY LOT





- Legend
- LASP Boundary
 - Proposed Sanitary Service
 - Tie-in to Future Sanitary Service



Legend

- LASP Boundary
- Direction of major flow
- Outflow
- Drainage Boundary
(Subject to detailed design)

