APPENDIX A

BYLAW NO. 1897

A BYLAW OF THE MUNICIPAL DISTRICT OF BONNYVILLE NO. 87, IN THE PROVINCE OF ALBERTA, TO ADOPT THE HIGHWAY 28 AND HIGHWAY 41 AREA STRUCTURE PLAN OF THE MUNICIPAL DISTRICT OF BONNYVILLE NO. 87 HEREBY CITED AS THE HIGHWAY 28 AND HIGHWAY 41 AREA STRUCTURE PLAN BYLAW.

WHEREAS, under the provisions of the Municipal Government Act, R.S.A 2000, Chapter M-26, and amendments thereto, a Council's power to pass a bylaw includes the power to amend or repeal a bylaw;

AND WHEREAS, under the provisions of the Municipal Government Act, R.S.A 2000, Chapter M-26, and amendments thereto, a Council may, by bylaw, adopt an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of an area of land;

AND WHEREAS, notice of the intention of Council to pass a bylaw has been published in a newspaper circulating in the municipality advising of the date for a Public Hearing;

AND WHEREAS, persons claiming to be affected by the proposed bylaw and any other person wishing to make representations were afforded an opportunity to be heard by Council through Public Hearing at a public Meeting of Council prior to the final passing thereof;

NOW THEREFORE, the Council of the Municipal District of Bonnyville No. 87, duly assembled in the Province of Alberta, hereby enacts the following:

1. That this document attached to, and forming part of Bylaw No. 1897, as Schedule "A" be adopted as the Highway 28 and Highway 41 Area Structure Plan, insofar as it affects lands within the Municipal District of Bonnyville No. 87 as shown in Figure 3: Community Boundary of Schedule "A".

2. Upon third reading of Bylaw No. 1897, Bylaw No. 1693 and all amendments thereto are hereby repealed.

3. That this Bylaw shall come into force and have effect from and after the date of third and final reading thereof.

READ A FIRST TIME IN COUNCIL THIS 13th DAY OF MAY, 2025.

READ A SECOND TIME IN COUNCIL THIS _____ DAY OF _____, 2025.

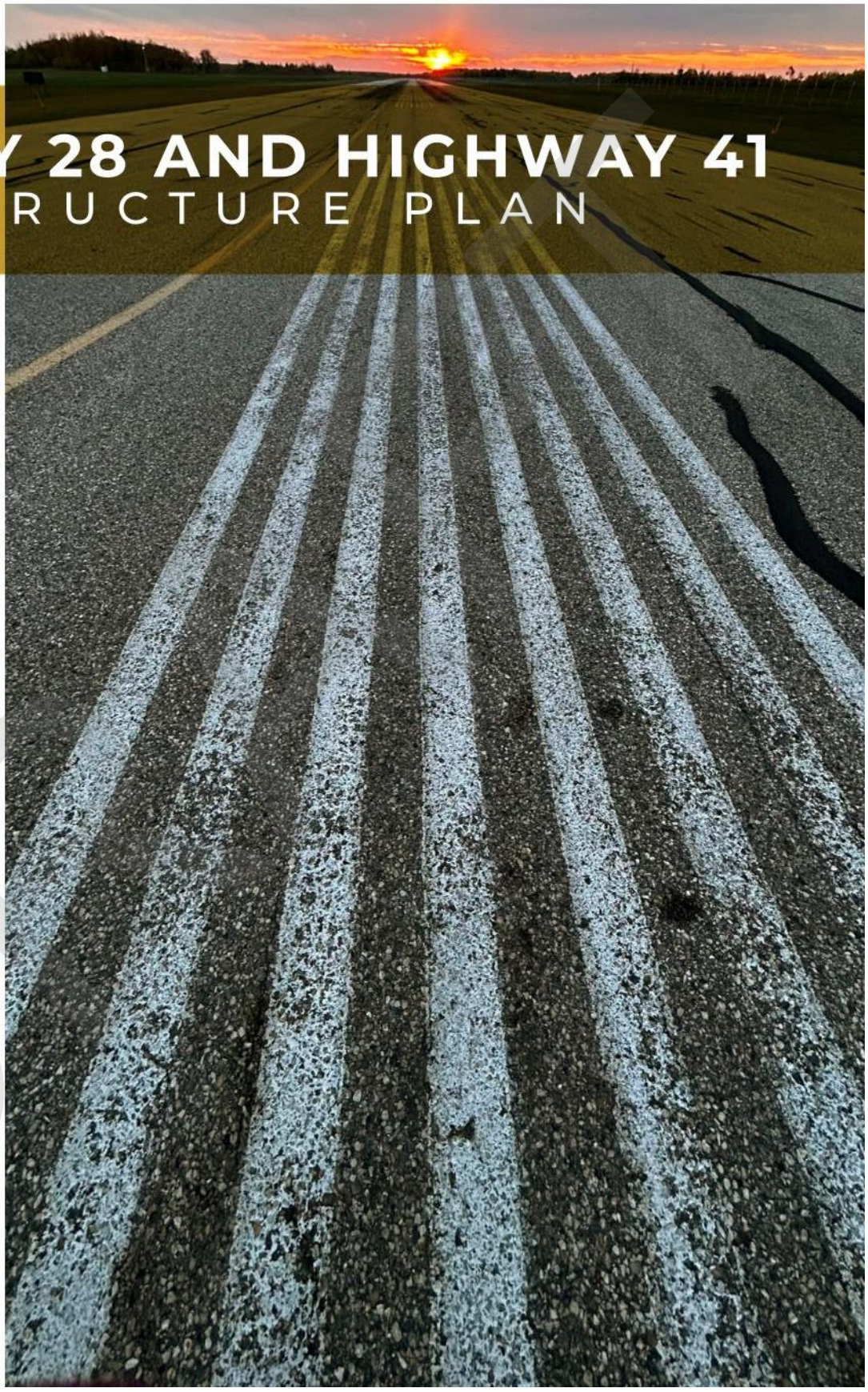
READ A THIRD TIME IN COUNCIL THIS _____ DAY OF _____, 2025.

_____
REEVE

_____
CHIEF ADMINISTRATIVE OFFICER

2025

HIGHWAY 28 AND HIGHWAY 41
AREA STRUCTURE PLAN



MUNICIPAL DISTRICT
BONNYVILLE NO. 87

CONTENTS

MUNICIPAL DISTRICT
BONNYVILLE NO. 87

PREPARED FOR:

Municipal District of Bonnyville No. 87
4905 50 Avenue
Bag 1010
Bonnyville, AB T9N 2J7

1.0 INTRODUCTION

The important transportation corridors of Highway 28 and Highway 41, in proximity to the Town of Bonnyville, were identified for more detailed planning in the Intermunicipal Development Plan (IDP) prepared collaboratively between the M.D. of Bonnyville and the Town of Bonnyville in 2017. Development adjacent to these corridors must be well considered and ensure an appropriate interface with the Town of Bonnyville. Proposed development should also ensure compatibility with existing land uses within the area, protection of environmental features, as well as access and traffic implications on the highways.

The Highway 28 and Highway 41 Area Structure Plan (ASP) encompasses approximately 97.4 km^2 or 9737.4 ha. The plan area includes approximately 1.6 km on each side of Highway 28 from the Town of Bonnyville's west boundary to Township Road 610, northeast from the Town of Bonnyville to the Hamlet of Fort Kent, and Highway 41 from the Town of Bonnyville's north boundary to Highway 55 as shown in **Figure 1: Location and Context.**

PURPOSE OF THE PLAN

The purpose of the Highway 28 and Highway 41 ASP is to provide a statutory framework for land use planning by identifying an appropriate location for development, determine a development pattern, a suitable level of municipal servicing, and proper environmental safeguards.

Implemented in conformance with established planning policies, provincial regulation, and the requirements and desires of the M.D. of Bonnyville. The key elements of the ASP are to provide a future vision for the development of the area, development objectives and policy direction supported by a Future Land Use Development Concept to establish the logical development of the lands adjacent to Highway 28 and Highway 41 within the plan boundary. The ASP will guide development decisions for this area for the next 10 to 20 years.

AUTHORITY TO PREPARE THE PLAN

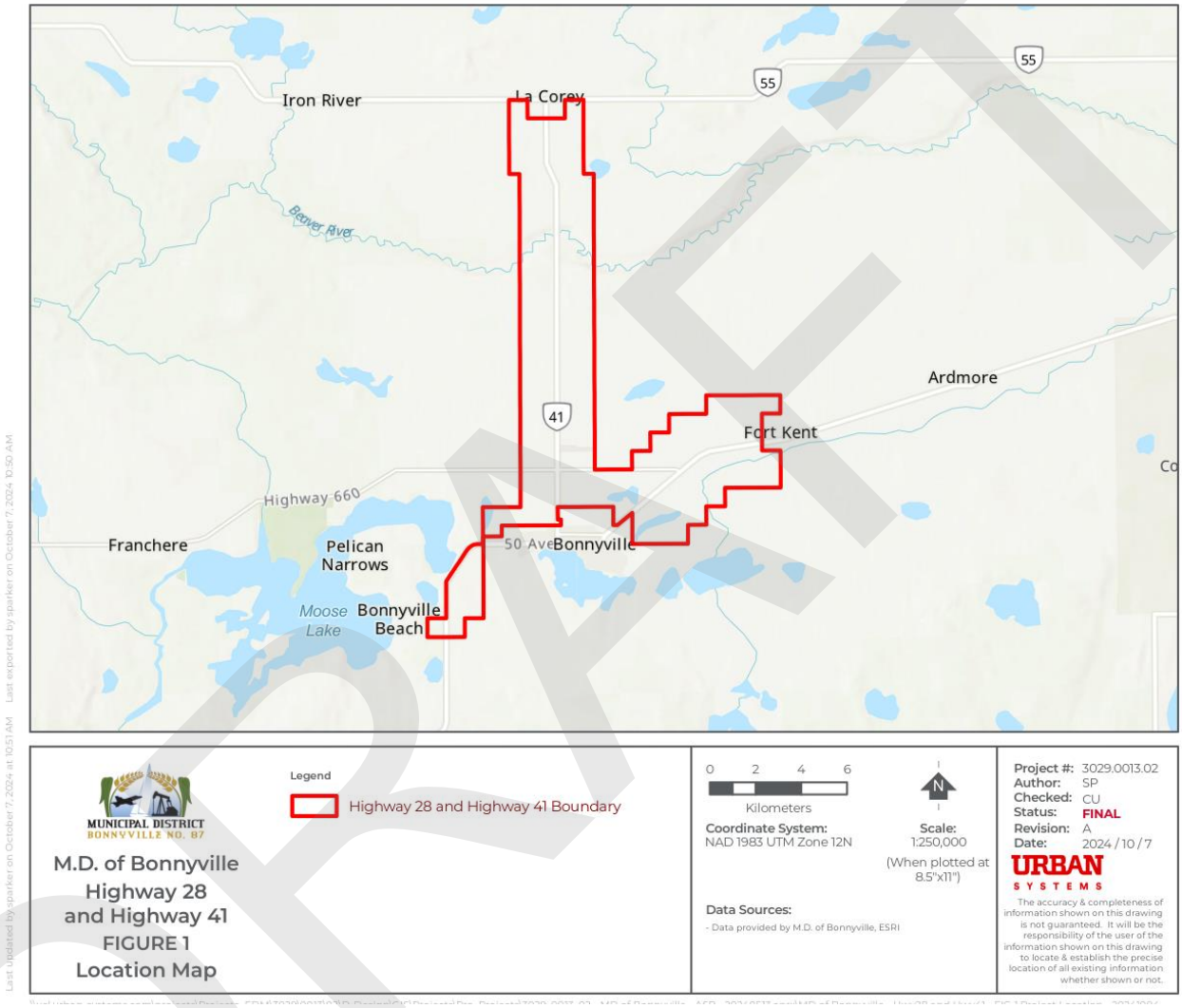
The authority for municipal planning, subdivision, and development control is established in Part 17 of the MGA. Section 633 allows municipalities to adopt Area Structure Plans to establish the following guidelines:

1. General land use pattern
2. Proposed sequence of development in the area
3. Overall density of population
4. Transportation networks
5. General framework for municipal services

The M.D. of Bonnyville has a variety of well-developed policies and planning documents to guide the evolution of the plan area. These documents, combined with a commitment to structured and organized planning, provide a strong base for shaping the updates to the ASP.

The ASP provides a planning framework for land uses and should be interpreted with flexibility regarding its purpose and objectives. Questions related to the interpretation or intent of policy may be presented to Council for their consideration.

Figure 1: Location and Context

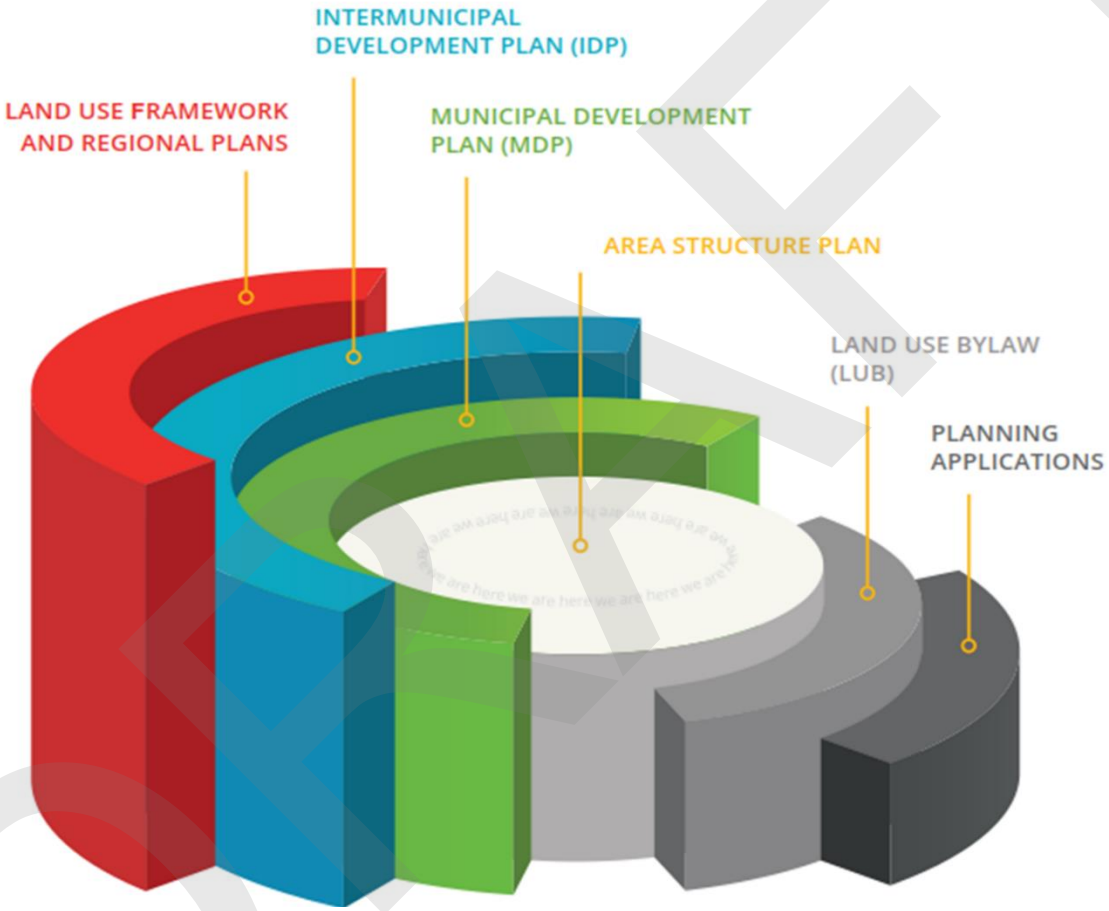


Beyond the guidelines established throughout the ASP, the MGA also outlines the requirement for consistency between the ASP and any Regional Plan, Intermunicipal Development Plan, and Municipal Development Plan. A general overview of the hierarchy of planning documents is illustrated in **Figure 2: Hierarchy of Planning Documents.**

Any information presented outside of specific policy directives are provided for information only. If there is any inconsistency between policy directives or any other text within the ASP, the policy directive will take precedence. Additionally, all boundaries, symbols, and locations are intended as approximations and shall be interpreted as such.

It should be noted that the timing of specific developments may occur faster or slower than anticipated, depending on a variety of external influencing factors. The conditions that contribute to public and private sector decisions to make the necessary investments to facilitate growth and development guide the pace of development. The Plan does not specify timing, but outlines general sequencing of development, relative to priority development nodes.

Figure 2: Hierarchy of Planning Documents



SUMMARY OF THE CURRENT CONTEXT

GEOGRAPHY

The ASP area extends outward from the Town of Bonnyville west toward Moose Lake, north toward the Hamlet of La Corey, and east toward the Hamlet of Fort Kent. The ASP boundary includes a buffer along both sides of Highway 28 from the Town of Bonnyville's west boundary to Township Road 610, northeast from the Town of Bonnyville to the Hamlet of Fort Kent, on each side of Highway 41 from the Town of Bonnyville's north boundary to Highway 55 as identified on **Figure 3: Community Boundary.**

LOCAL CONTEXT

Environmental Constraints

Biophysical attributes of the ASP are characterized below through desktop review. The desktop review consisted of queries of provincial databases for information to identify biophysical elements that could represent constraints to development within the ASP and the three Development Nodes. The provincial databases and reports used to complete the environmental review included:

- Alberta Merged Wetland Inventory and Alberta Wetland Rapid Evaluation Tool - Estimate of Relative Wetland Value by Section
- Environmentally Significant Areas
- Fish and Wildlife Management Information System (FWMIS) layers—Key Wildlife Biodiversity Zones, recorded fish and wildlife, etc.
- Alberta Soil Information Centre
- Important Bird Areas of Canada
- Pipeline and wellsite locations
- Natural Regions and Sub regions of Alberta (2006)

Vegetation and Wetlands

The ASP is within the Dry Mixedwood Subregion, which is part of the Boreal Natural Region. This Subregion is dominated by deciduous and mixed wood forests, with dominant trees being trembling aspen *(Populus tremuloides),* balsam poplar (Populus balsamifera), paper birch *(Betula papyrifera)*, and white spruce *(Picea glauca)*. Common understory shrubs include low-bush cranberry *(Vaccinium vitis-idaea),* prickly rose *(Rosa acris),* red-osier dogwood *(Cornus sericea)*, common snowberry *(Symphoricarpos albus)*, and beaked hazelnut *(Corylus cornuta)*. Common flowering plant communities are variable but often contain pink wintergreen *(Pyrola asarifolia),* twinflower *(Linnaea borealis)*, and feather mosses *(Hylacomium splendens, Pleurozium schreberi, Ptilium crista-castrensis)*. Low lying areas support bog and fen communities that vary in composition according to nutrient levels but are predominantly tree and shrubby fens.

The Alberta Merged Wetland Inventory (AMWI) was used to identify numerous wetland complexes within the ASP. Most of the mapped wetlands are clustered around the areas containing large open water bodies such as Moose Lake or the Beaver River. The Alberta Wetland Rapid Evaluation Tool (ABWRET) estimates relative wetland values was reviewed to provide information about the estimated wetland values for the overall ASP area and within each Development Node. The value categories are based on the Alberta Wetland Policy, which rates wetland value using four categories (A, B, C, D), where A-wetlands have the highest value and D-wetlands have the lowest value. ABWRET revealed a total of approximately 1,446 hectares of wetland within the ASP including 180 hectares of A-value, 136 hectares of C-value and 1,130 hectares of D-value wetlands. The total wetland areas in hectares are a conservative estimate because they are reported according to Section boundaries using the Alberta Township System.

The AMWI and ABWRET estimate of relative wetland values are not considered an exact measurement of wetlands. Prior to development, desktop mapping and field assessments will be required to verify the wetland classification, boundaries, and value categories.

Hydrology

Surface Water within the ASP Boundary has numerous man-made and natural features that affect the drainage patterns. There are several smaller watersheds within the boundaries of the ASP, which is entirely within the larger watershed of Cold Lake Beaver River. Some of the larger natural drainage features within this Cold Lake Beaver River watershed are the Beaver River itself, Moose Lake, Chatwin lake, Barreye Lake, Liza Lake, Murial Creek and a few other unnamed creeks and bodies of water.

The Cold Lake Beaver River Water Management Plan[1] provides direction and strategies to manage long-term quality and quantity of water resources within the area such as protection of riparian ecosystems, education, and management of land use in the context of important water resources.

Most of the approved ASPs within the plan area have a stormwater management facility (SWMF) that handles runoff from within the ¼ section or subdivision and discharges to various downstream drainage paths, water bodies, creeks, or rivers. Due to the flat knob and kettle topography, there are numerous depressions throughout the study area that form wetlands and alter the drainage patterns.

Wildlife

The Fish and Wildlife Management Information System (FWMIS) database was queried for records of wildlife species of management concern occurring within the ASP area. Of the 19 wildlife species recorded the barn swallow (Hirundo rustica) was listed as threatened and the horned grebe was listed as 'Special Concern' under both Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and Species at Risk Act (SARA). The remaining species recorded were either not listed or listed as 'Not at Risk'.

Key Wildlife Biodiversity Zones (KWBZ) are areas designated to protect winter ungulate range. There are no KWBZs within the three Development Nodes, but the ASP does intersect KWBZs associated with Muriel Creek in the southeast portion of the ASP and Beaver River in the north portion of the ASP.

Environmentally Significant Areas

Environmentally Significant Areas (ESAs) are important for promoting the long-term maintenance and conservation of natural features or processes. They are areas that

[1] (Alberta Environment. 2006. Cold Lake Beaver River Basin Water Management Plan. Edmonton, AB. 70 pp.)

contain rare or unique elements in the province or include elements that may require special management considerations due to their conservation needs. ESAs are assigned scores based on 4 criteria (areas with focal species, species groups or their habitats; areas with rare, unique, or focal habitat; areas with ecological integrity; and areas that contribute to water quality and quantity). Each quarter section in Alberta was evaluated for the four criteria and assigned a cumulative ESA score. A cumulative ESA score greater than 0.189 was used to designate areas as ESAs. ESAs do not represent government policy and are not necessarily areas that require legal protection, but instead, their identification on the landscape is intended to be an information tool to inform land use planning and policy at local, regional, and provincial levels.

There are two areas with ESAs within the ASP. The first is area consists of a section located on the south side of the Beaver River NE 24-62-6-W4M and the second area is a wetland complex within SE 6-63-5-W4M.

Groundwater

As of 2002, there were 5,858 water wells listed in the Alberta Water Well Information Database which were situated within the M.D. of Bonnyville. 99.7% were completed in surficial aquifers. Approximately 75% of those surficial water wells were completed at depths less than 50 metres from ground surface. Of all the water wells listed in the database, 94% were recorded as being for domestic use purposes (HCL, 2002)[2].

Some of the water wells within the M.D. of Bonnyville have been completed in near-surface low-permeability soils; however, most have been completed in the deeper sand and gravel deposits. Laboratory analytical results of groundwater collected from surficial deposits within the M.D. of Bonnyville are generally chemically hard (>100 mg/L) and high in dissolved iron (HCL, 2002)[3].

[2] M.D. of Bonnyville, Part of the Churchill and North Saskatchewan River Basins, Parts of Tp 055 to 066, R 01 to 10, W4M, Regional Groundwater Assessment, by Hydrogeological Consultants Ltd., dated September 2002.

[3] M.D. of Bonnyville, Part of the Churchill and North Saskatchewan River Basins, Parts of Tp 055 to 066, R 01 to 10, W4M, Regional Groundwater Assessment, by Hydrogeological Consultants Ltd., dated September 2002.

Figure 3: Community Boundary

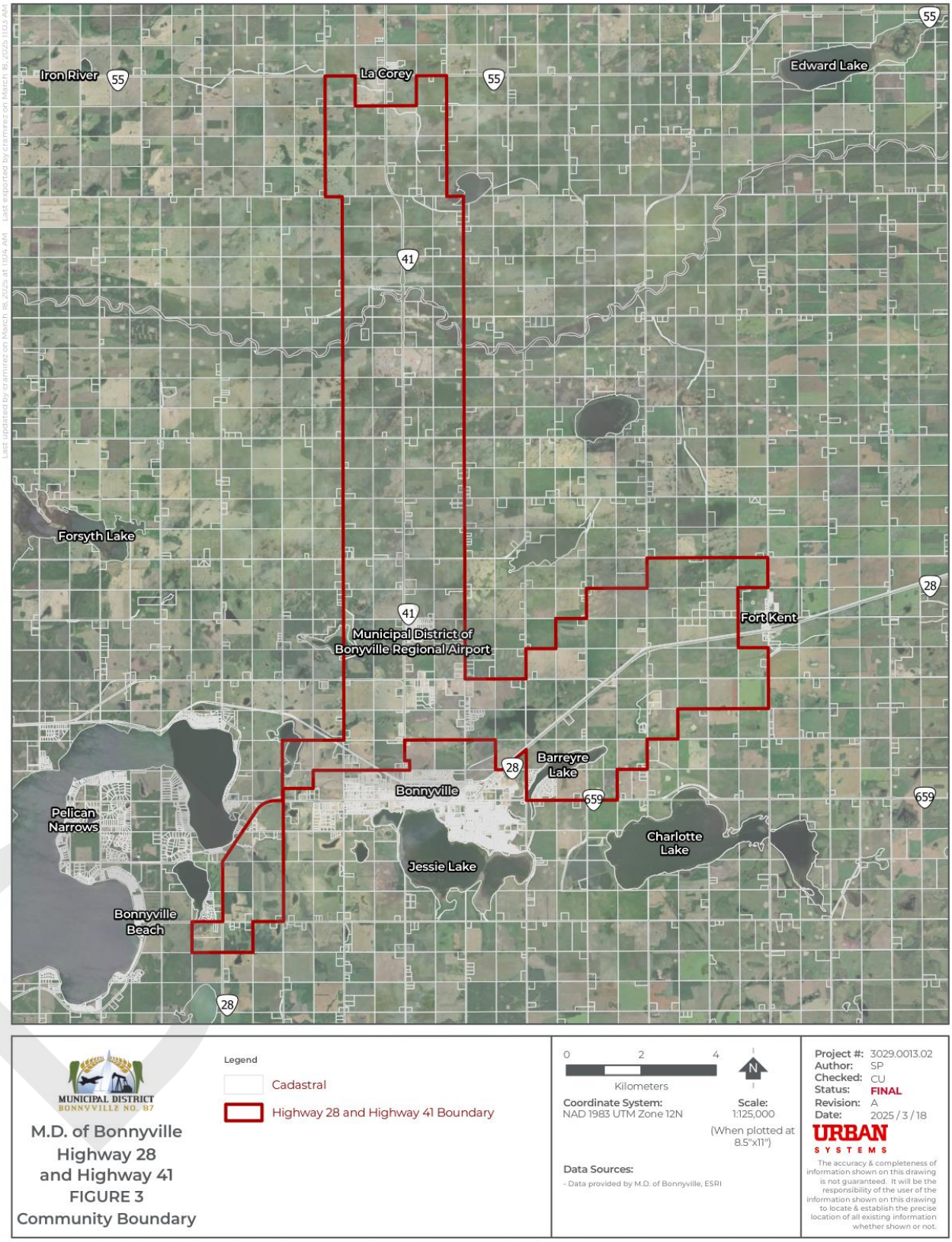
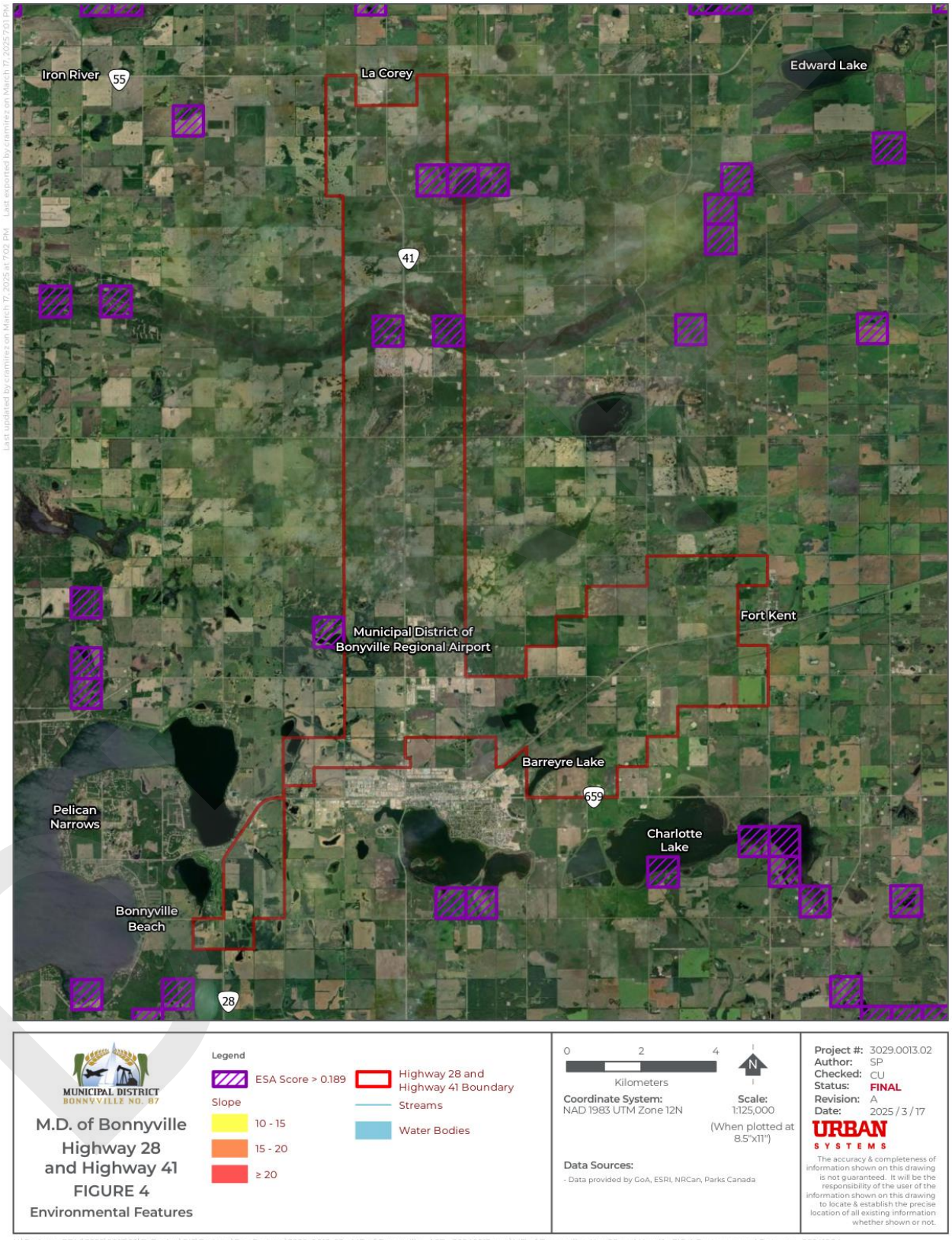


Figure 4: Environmental Features



Built Constraints

Oil and gas activities adjacent to and/or within the area may pose a potential environmental risk. These would include current and former oil and gas well sites, associated facilities, and pipelines. The Highway 28 and Highway 41 ASP area contains various pipelines, well sites, and facilities as depicted on **Figure 5: Constructed Features.**

Pipelines identified pose one of the potential risks to development within the plan area. Land development setbacks and/or development restrictions are common along pipeline rights-of-way and vary based on the type of pipeline.

Oil wells identified within the Development Nodes pose a potential environmental risk to proposed development. Environmental impacts to the subsurface may be present on, or adjacent to, oil well leases. The M.D. of Bonnyville has established development setbacks from all oil wells within the M.D. of Bonnyville boundary. At the time of ASP development or subdivision, the M.D. of Bonnyville will determine the appropriate setback, which may be greater than the setbacks established by the Alberta Energy Regulator (AER).

Existing Land Uses

There are a mix of different rural land uses throughout the plan area, however the majority of land is designated for agricultural uses, which remains a priority throughout the M.D. of Bonnyville. Country Residential uses are clustered in areas around the Town of Bonnyville and there is a concentration of Industrial uses north of the Town of Bonnyville, adjacent to the airport. An overview of the existing land use pattern is illustrated in **Figure 6: Existing Land Use.**

Historical Resources

In Alberta, historical resources are protected under the Alberta Historical Resources Act, and are defined as precontract, historic, and paleontological sites and their contents. Cultural landscapes and traditional use sites may also be associated with historical resources.

The review of the Listing of Historic Resources, which is maintained by Alberta Culture and Tourism (ACT), identified the potential for historic resources along the Beaver River. This area was assigned a Historical Resource Value (HRV) of 5 a,p, which means that there is high potential to contain a historic resource that is archaeological (a) or paleontological (p) in nature. The list for Historical Resources in Alberta is updated twice every year, therefore future development plans within this area should be submitted to ACT for approval prior to construction.

Crown Lands

There are some Crown lands identified within the plan area adjacent to the Beaver River and adjacent to Highway 28, east of the Town of Bonnyville, (SW 21-61-5-W4 and NE 16-61-5-W4). These lands are owned and managed by the Province of Alberta. Development on Crown land is limited, and provincial approval is required.

Figure 5: Constructed Features

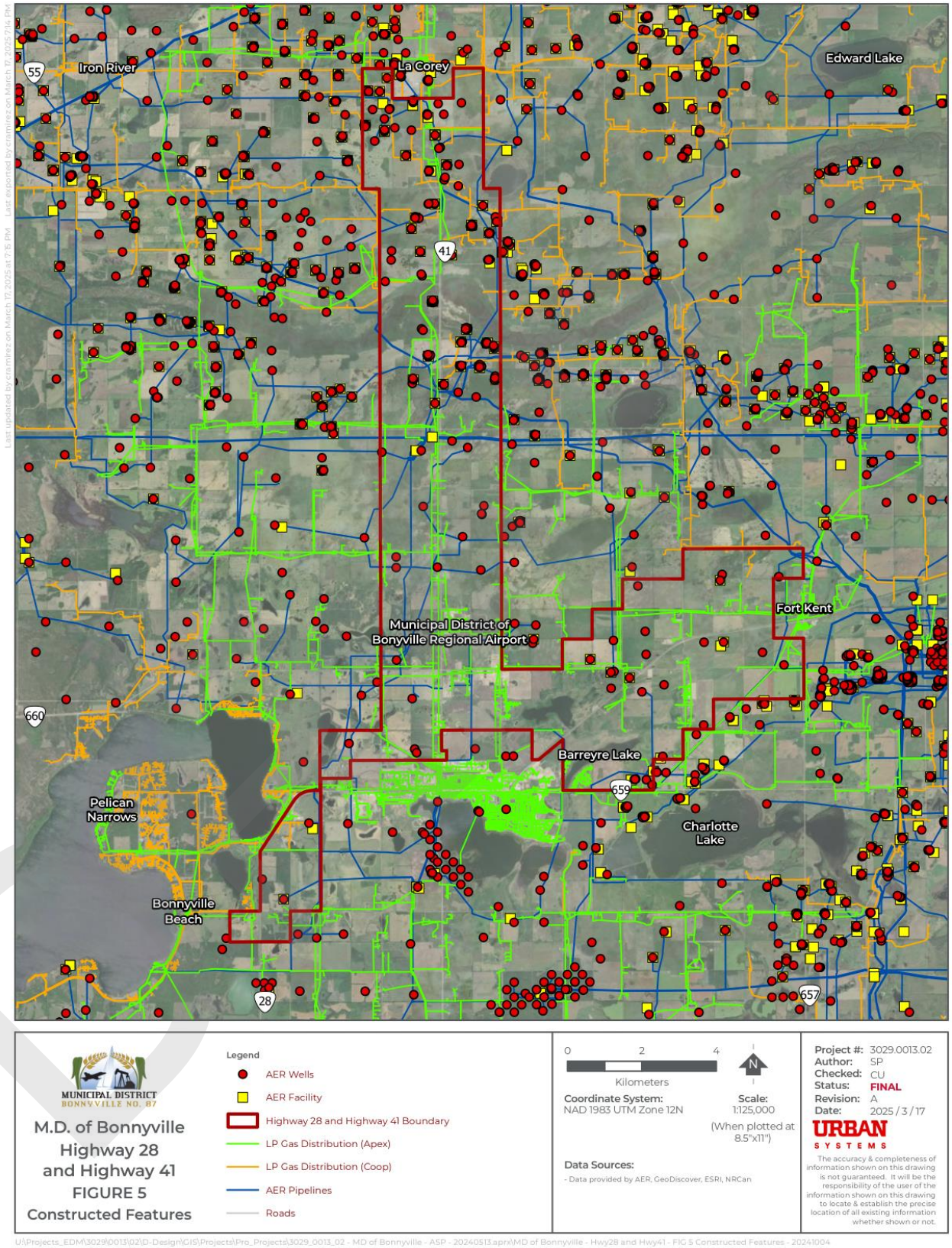
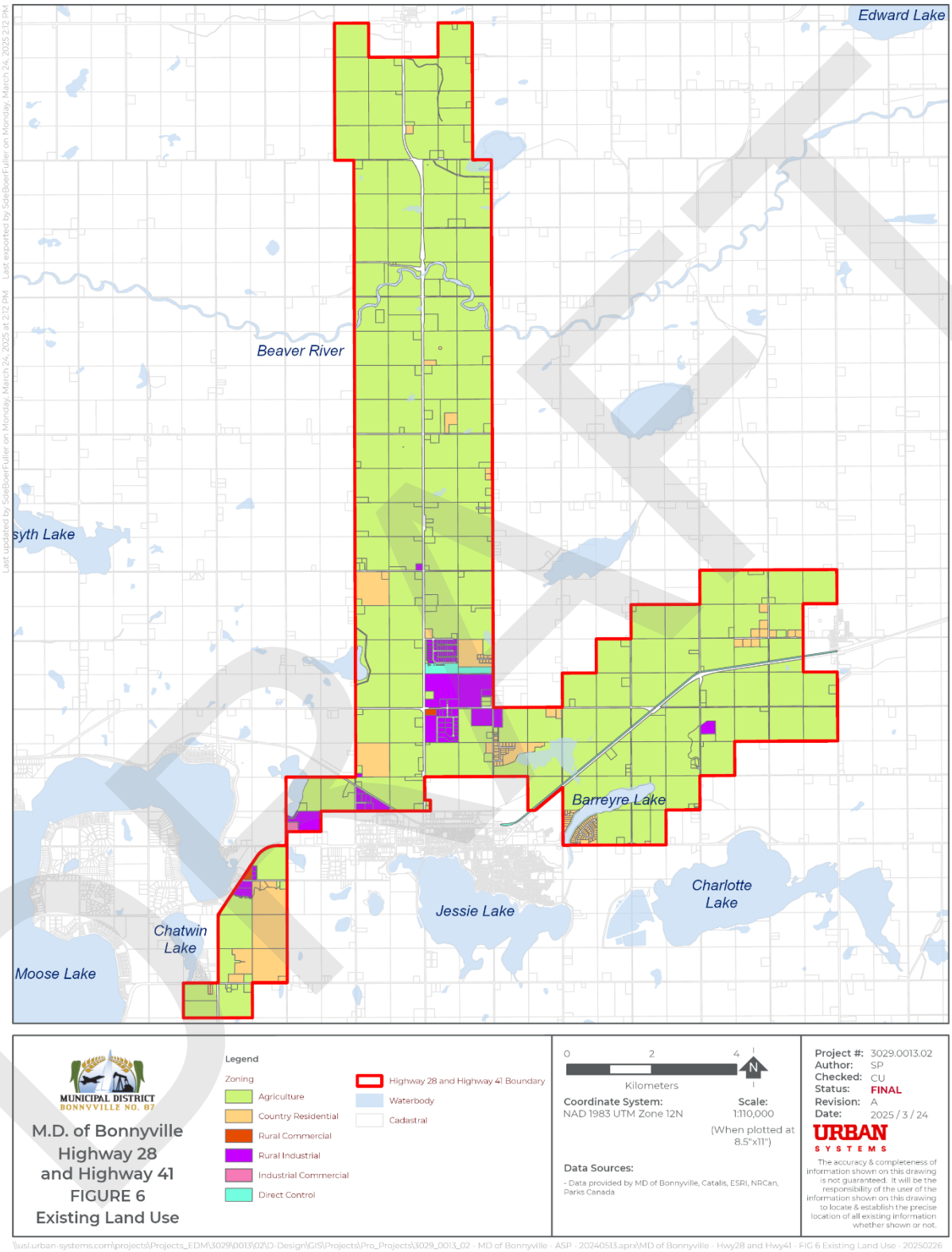


Figure 6: Existing Land Use



Soil Characteristics

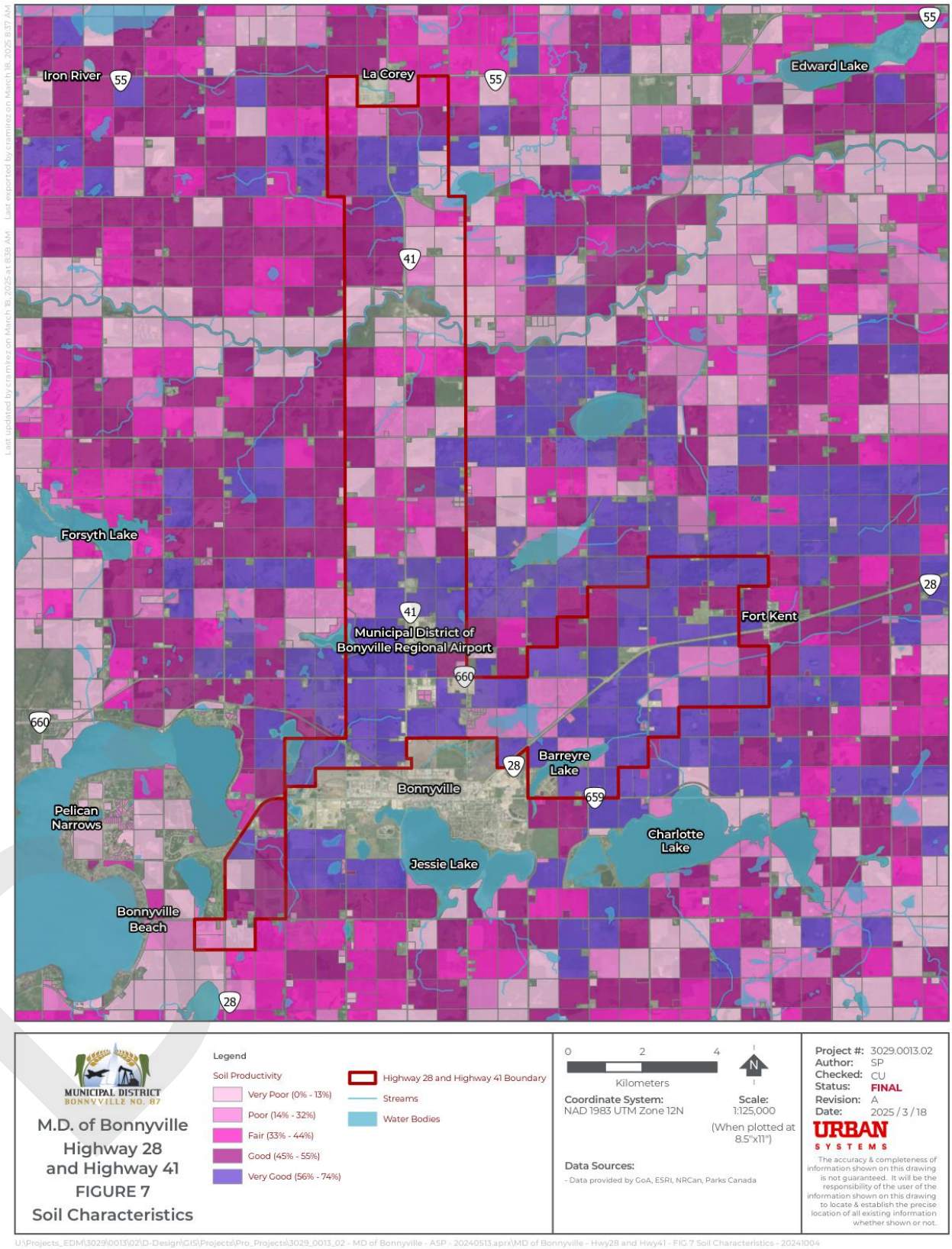
The ASP has an undulating landscape with limited topographic relief. Soils within the ASP are a mixture of Chernozmes, Luvisols and Gleysolics. A brief description for these soil types is provided below. [4]

- Chernozems range from well to imperfectly drained. In particular, Eluviated Chernozems are associated with xerophytic (low moisture) and mesophytic (moderate moisture) grasses and forbs. Black Chernozems can form under mixed tree cover or shrub vegetation.
- Luvisols characteristically develop in well to imperfectly drained sites, in sandy loam to clay and base-saturated parent materials under forest vegetation. The soil formation climate consists of sub-humid to humid and mild to very cold climates; however, these soils can occur outside the characteristic range of formation conditions.
- Gleysols form under prolonged periods of intermittent or continuous saturation. Gleysols are common in areas with poor drainage and are often found in association with Chernozems. Gleysols may also form in areas with rapid to imperfect drainage and may have organic surface horizons derived from grass and sedge, moss, or forest vegetation.

The Canadian Land Inventory was used to interpret the agricultural production potential in the ASP on a scale from Class 1 (areas that have no significant limitations in use for crops) to Class 7 (areas that have no capability for agriculture). Most of the areas within the ASP are identified as Class 3 which pose moderately severe agricultural limitations. Pockets of class 4-6 were observed in areas surrounding large water bodies. Some of these included the Beaver River, Moose Lake and the large wetland complexes identified within the ASP, suggesting that these areas are not suitable for agriculture.[5] Soil classification are illustrated in **Figure 7: Soil Characteristics.**

[4] Agriculture and Agri-Food Canada. 1998. The Canadian system of soil classification. Third edition. National Research Council Research Press, Ottawa, Ontario. 187pp.
[5] Canadian Land Inventory. 1973. Sand River 73L Soil Capability for Agriculture. 1:250,000

Figure 7: Soil Characteristics



2.0 COMMUNITY GUIDE

DIRECTION OF THE PLAN

The following questions were used to guide the development of the Highway 28 and Highway 41 ASP:

Where are we now? Understanding the current reality (municipal policies; existing infrastructure; transportation and land use; natural and man-made constraints), provides answers to this question and establishes the baseline and context to inform the development concepts for the ASP.

Where are we going? Defining the principles and objectives for the ASP provides the opportunity to identify the interrelationships between landowners, stakeholders, industry, the environment, and helps determine the desired outcomes of the plan.

How will we get there? By asking this question, key policy statements can be identified. These policy statements, guided by public and stakeholder engagement, experience, and best practices are intended to fill the gaps between the current state and the desired future for the ASP lands.

COMMUNITY ASPIRATION

While the focus of the plan is on the protection of agricultural land and uses, there remains a recognition of the importance to balance protecting agricultural areas with accommodating complementary development that allows for compatible growth in the area that can enhance the regional economy. The following community aspirations represent a filter to evaluate the contributions of new development to the health of the community:

1. Provide opportunities for development while ensuring agricultural uses and activities can continue.
2. Protect environmentally significant areas and wetlands wherever possible.
3. Provide opportunities for development that maintain accessibility of the Highway corridors.

GUIDING PRINCIPLES

While not intended as detailed requirements, the following guiding principles act to support decisions on future development inquiries and applications in support of the community aspirations:

1. Consistency with the Town of Bonnyville and M.D. of Bonnyville IDP policy objectives.
2. Provide opportunities to expand development for the M.D. of Bonnyville.
3. Ensure compatibility of proposed development with adjacent uses.
4. Determine servicing constraints and requirements.
5. Provide a development framework for the plan area.

3.0 COMMUNITY PLAN

LAND USE CONCEPT

The entire ASP area encompasses approximately 9,737.4 ha. Future development has been focused within three distinct Development Nodes adjacent to the Town of Bonnyville reflecting the unique opportunities each area provides for long term planning and development. These areas are identified in Figures 8-13.

For those lands outside of the identified Development Nodes, uses and activities currently allowable under the M.D. of Bonnyville's Land Use Bylaw and the policies of the MDP can be supported. Changes in land use shall only occur where identified in this ASP.

DEVELOPMENT NODE #1

Development Node #1 is located between the eastern side of Highway 28 and the western boundary of the Town of Bonnyville and extends south to Township Road 610, see **Figure 8: Development Node #1 Future Land Use Concept.** The node encompasses approximately 574 ha of land and includes the Twin Creeks and Lynx Estates residential subdivisions, some country residential development, existing industrial developments, with the remainder of the area used for agricultural purposes.

Environmental Features within Development Node #1

Soils

Soils within Development Node #1 include Orthic Dark Gray Chernozems and Dark Gray Luvisols. The agricultural production potential according to the Canadian Land Inventory in Node #1 is primarily Class 5, which are lands that range from having very severe limitations restricting agricultural capability and undesirable soil structure or low permeability due to adverse relief, to soils that have severe limitations restricting the range of perennial crop production and undesirable soil structure or low permeability. The east portion of Development Node #1 also contains a small portion Class 3 lands which have moderately severe limitations for agricultural capability or require special conservation practices and are lands with adverse climate as a result of cold temperatures. [6]

Wetlands

Development Node #1 is east of Chatwin Lake, southeast of Moose Lake and southwest of Liza Lake. According to ABWRET there are approximately 2.5 ha of wetlands in total, including mainly C-value and D-value wetlands in the quarter sections intersected by Development Node #1.

[6] Canadian Land Inventory. 1973. Sand River 73L Soil Capability for Agriculture. 1:250,000

Groundwater

Environmental records pertaining to soil and groundwater conditions within Development Node #1 were not available. An evaluation of soil and groundwater records for locations in proximity to Development Node #1 indicated that the near-surface surficial deposits generally consisted of low-permeability silty clays with intermittent and discontinuous sand lenses to approximately 7 metres below ground surface (mbgs). The fine-grained low-permeability soils were underlain by coarse-grained sand and sand and gravel deposits. In the records which were reviewed, groundwater was not encountered. Hydraulic conductivity data and information on nearby percolation systems for areas in proximity to Development Node #1 were not available for review.

Pipelines and Well Sites

There are 3 well sites and two abandoned gas well sites identified within Development Node #1. There is also an abandoned natural gas pipeline which intersects parts of Development Node #1, along with other abandoned and operating natural gas pipelines in the west section of Node #1.

Node #1 Development Concept

Guided by the direction given by M.D. of Bonnyville Administration, public and stakeholder input and utilizing best planning practices, the development concept for Node #1 supports development of lands from the Town of Bonnyville west and south along the east side of Highway 28 to and including the intersection with TWP Rd. 610.

The development concept proposes commercial, industrial, and residential use locations as well as lands where agriculture will remain as the long-term use.

Transportation

Within Development Node #1, Highway 28 acts as the spine for the transportation network in the area. The Node is bisected by Township Rd. 611A in the north and Township Road 610 in the south. At the time that an ASP is required to support proposed development or at the time of subdivision, a Traffic Impact Assessment (TIA) would need to be prepared. The TIA would provide an understanding the cumulative impacts of development on the transportation network and would identify any required intersectional improvements and/or upgrades to the roadway network.

Stormwater Drainage

The undeveloped Lands and the approved ASPs within the Node #1 drain to either Moose Lake or Chatwin Lake. As shown on **Figure 9: Development Node #1 Drainage Patterns**. approximate drainage patterns and sub-catchment areas are shown based on the latest LIDAR topographic information for future development conditions within Development Node #1. The proposed drainage paths and sub-catchment boundaries generally match those found for existing conditions; however, some liberty was taken to slightly modify drainage basin boundaries to match with existing quarter section lines because future development often proceeds on a quarter section basis.

There are two previously approved ASPs within this development node that were taken into consideration when determining sub-catchments and drainage patterns: Lynx Estates ASP and Twin Creeks ASP.

- Twin Creeks has two storm water management facilities (SWMFs) which capture runoff from the development to ensure that post-development runoff rates do not exceed pre-development rates. The SWMF's discharge into the creeks and ultimately to Moose Lake.
- Lynx Estates has on SWMF which captures runoff from the development to ensure that post-development runoff rates do not exceed pre-development rates. The SWMF discharges into a drainage channel that flows west to Highway 28 and Highway 41 ditches and ultimately to Moose Lake.

There is a significant drainage course/creek that is flowing through the northern part of this development node. It is coming out of a natural body of water (Lake B) and flows into Moose Lake. This drainage channel is mentioned in the Twin Creeks ASP and is capturing runoff from a significant area upstream including lands within the Town of Bonnyville and lands associated with Development Node #2.

Figure 8: Development Node #1 Future Land Use Concept

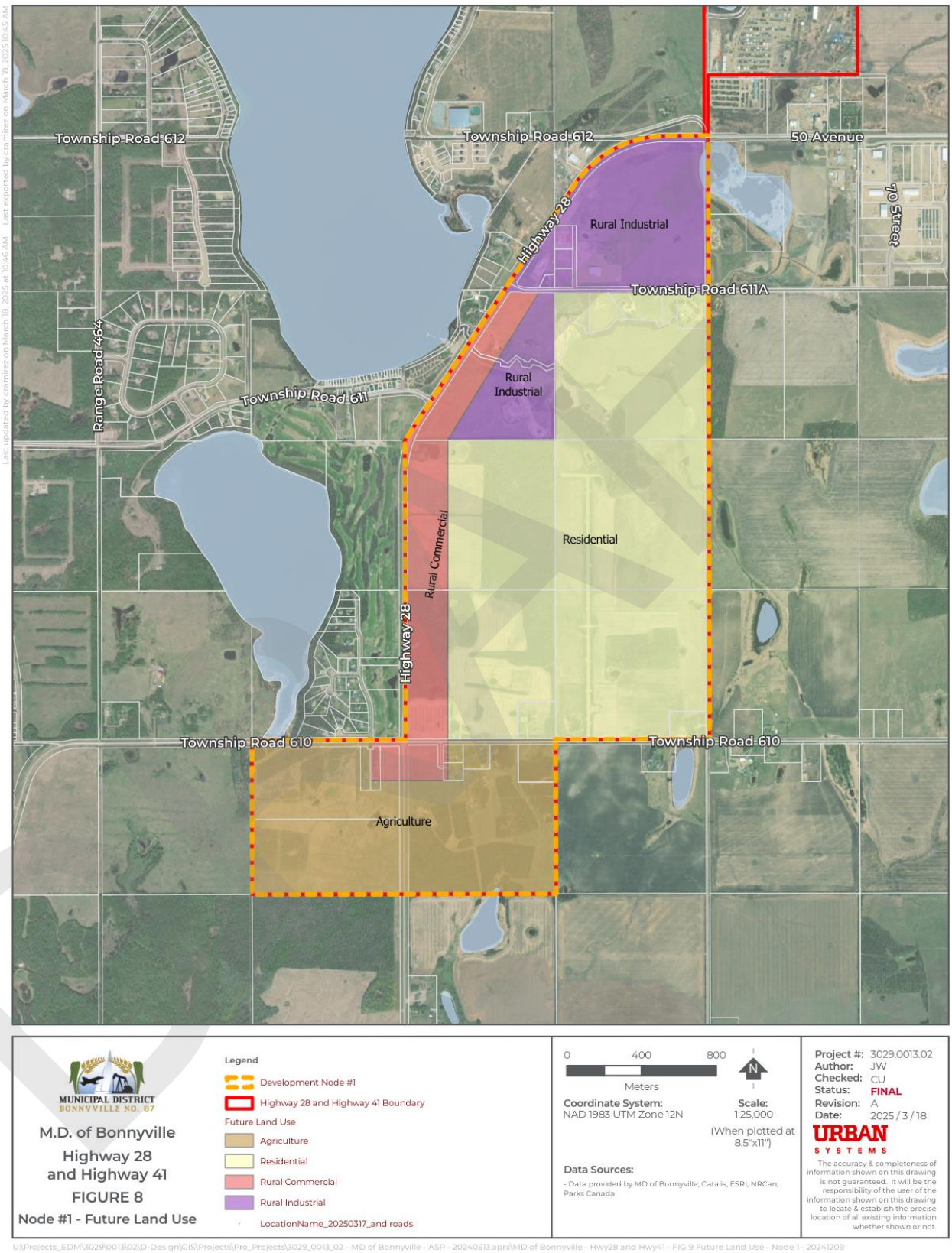
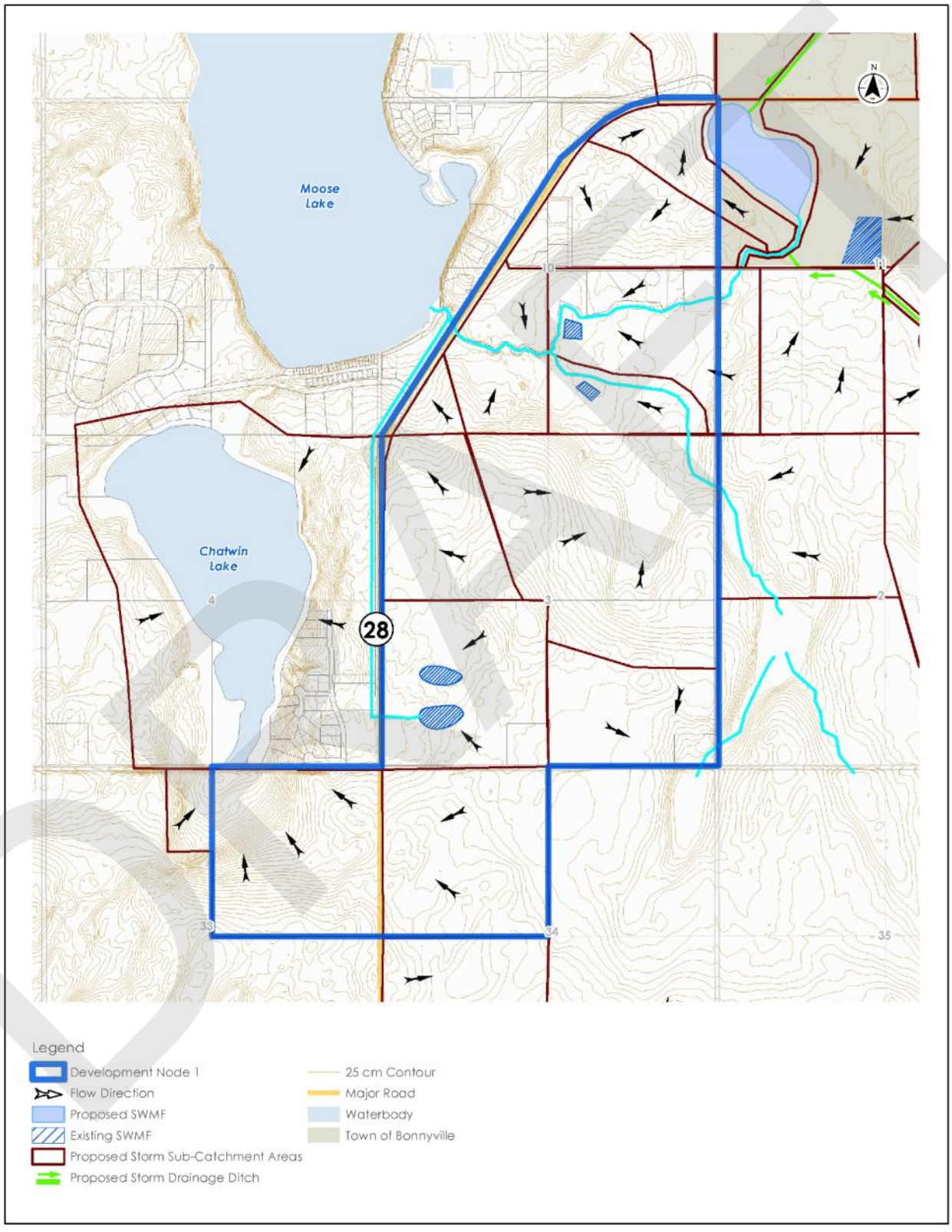


Figure 9: Development Node #1 Drainage Patterns



Development Node #1 – Land Use Statistics

Table 1: Development Node #1 - Land Use Statistics

Development Node #1 – Land Use Statistics		
	Gross Area (GA)	Gross Developable Area (GDA)
Total (ha)	**573.75**	**501.17**
Agriculture	**122.30**	**115.68**
Highway / Rge & Twp Roads	-3.54	
Waterbodies	-3.08	
Pipelines	0	
Rural Industrial	**94.60**	**78.52**
Highway / Rge & Twp Roads	-3.74	
Waterbodies	-0.4	
Pipelines	-2.48	
10% MR/ER	-9.46	
Residential	**297.45**	**257.29**
Highway / Rge & Twp Roads	-1.04	
Waterbodies	0	
Pipelines	-9.38	
10% MR/ER	-29.74	
Rural Commercial	**59.40**	**49.68**
Highway / Rge & Twp Roads	-3.58	
Waterbodies	-0.2	
Pipelines	0	
10% MR/ER	-5.94	

Node #1 – Development Staging

Staging of development within Development Node #1 will be determined by market demand and appropriate and logical extension of services and infrastructure to support development at the discretion of the M.D. of Bonnyville.

DEVELOPMENT NODE #2

Development Node #2 encompasses approximately 1,249 ha of land extending from the Town of Bonnyville boundary north on Highway 41 to the intersection of Township Road 620. It includes lands within 1.6 km on the east side of Highway 41 and lands within 800 metres on the west side of the Highway and includes the Bonnyville airport, some existing industrial developments, and the White Rose Estates Country Residential subdivision. The remainder of the area, those lands outside of Development Node 2 are designated and intended to remain as agriculture subject to the regulations of the Agricultural District - A of the M.D. of Bonnyville's Land Use Bylaw.

Environmental Features Within Development Node #2

Soils

Soils within Development Node #2 include Dark Gray and Eluviated Black Chernozems and Dark Gray Luvisols. The agricultural production potential according to the Canadian Land Inventory in Node #2 is Class 3 which are lands that have moderately severe limitations for agricultural capability or require special conservation practices and are lands with adverse climate as a result of cold temperatures.

Wetlands

According to ABWRET, there are approximately 100 hectares of wetlands, including mainly C-value and D-value wetlands in the quarter sections intersected by Development Node #2.

Groundwater

Environmental records pertaining to soil and groundwater conditions within Development Node #2 were not available. An evaluation of soil and groundwater records for locations in proximity to Development Node #2 indicated that the near-surface surficial deposits generally consisted of low-permeability silty clays to approximately 7 mbgs. Intermittent and discontinuous sand lenses were present below 3 mbgs. The fine-grained low-permeability soils were underlain by coarse-grained sand and sand and gravel deposits. In the records which were reviewed, groundwater was encountered at depths ranging from 0.4 to 2.0 mbgs, with an average depth of 1.6 mbgs. Hydraulic conductivity data for the near-surface low-permeability soils were recorded as approximately 10-8 metres per second (m/s). Information on nearby percolation systems for areas in proximity to Development Node #2 were not available for review.

Pipelines and Well Sites

There are 5 well sites within Development Node #2: 1 operating gas well site in 10-24-61-06-W4M, 1 suspended gas well site in 10-31-61-05-W4M, and 3 abandoned gas well sites, two in 10-13-61-06-W4M, and one in 09-36-061-06-W4M. There are 1 operating and 1 discontinued natural gas pipeline in the northwest portion of Development Node #2. There are a number of abandoned and operating natural gas pipelines within 30 and 19-61-05-W4M.

Node #2 Development Concept

The development concept for Node #2 proposes the continuation of industrial and agricultural uses. No additional country residential developments will be supported within Development Node #2. Refer to **Figure 10: Development Node #2 Future Land Use Concept.**

Transportation

Highway 41 is the primary north south transportation corridor within Development Node #2. The northern boundary of the Node is Township Road 620, and Highway 660 is the southern boundary of Node #2. At the time that an ASP is prepared to support proposed development or at the time of subdivision, a Traffic Impact Assessment (TIA) would need to be prepared. The TIA would provide an understanding of the cumulative impacts of development on the transportation network and would identify any required intersectional improvements and/or upgrades to the roadway network.

Stormwater Drainage

The undeveloped Lands and the approved ASPs within Node #2 drain southwest to Moose Lake or northeast to unnamed lakes or southeast to Lake A / Barreyre Lake. As shown on **Figure 11: Development Node #2 Drainage Patterns**Error! Reference source not found.; approximate drainage patterns and sub-catchment areas are shown based on the latest LIDAR topographic information for future development conditions within the Node #2 area. The proposed drainage paths and sub-catchment boundaries generally match those found for existing conditions; however, some liberty was taken to slightly modify drainage basin boundaries to match with existing quarter section lines because the phasing of future developments often precedes in quarter section parcels.

There are six previously approved ASPs within this development node that were taken into consideration when determining sub-catchments and drainage patterns. Aurora Borealis ASP, White Rose Estates ASP, Matichuk ASP, Ringuette Industrial ASP, and NW 19-61-5-W4M ASP.

- Aurora Borealis covers parts of two quarter sections with each one having their own SWMF which captures runoff from the development to ensure that post-development runoff rates do not exceed pre-development rates. The SWMF's discharge into the creeks and ultimately to Moose Lake.

Figure 10: Development Node #2 Future Land Use Concept

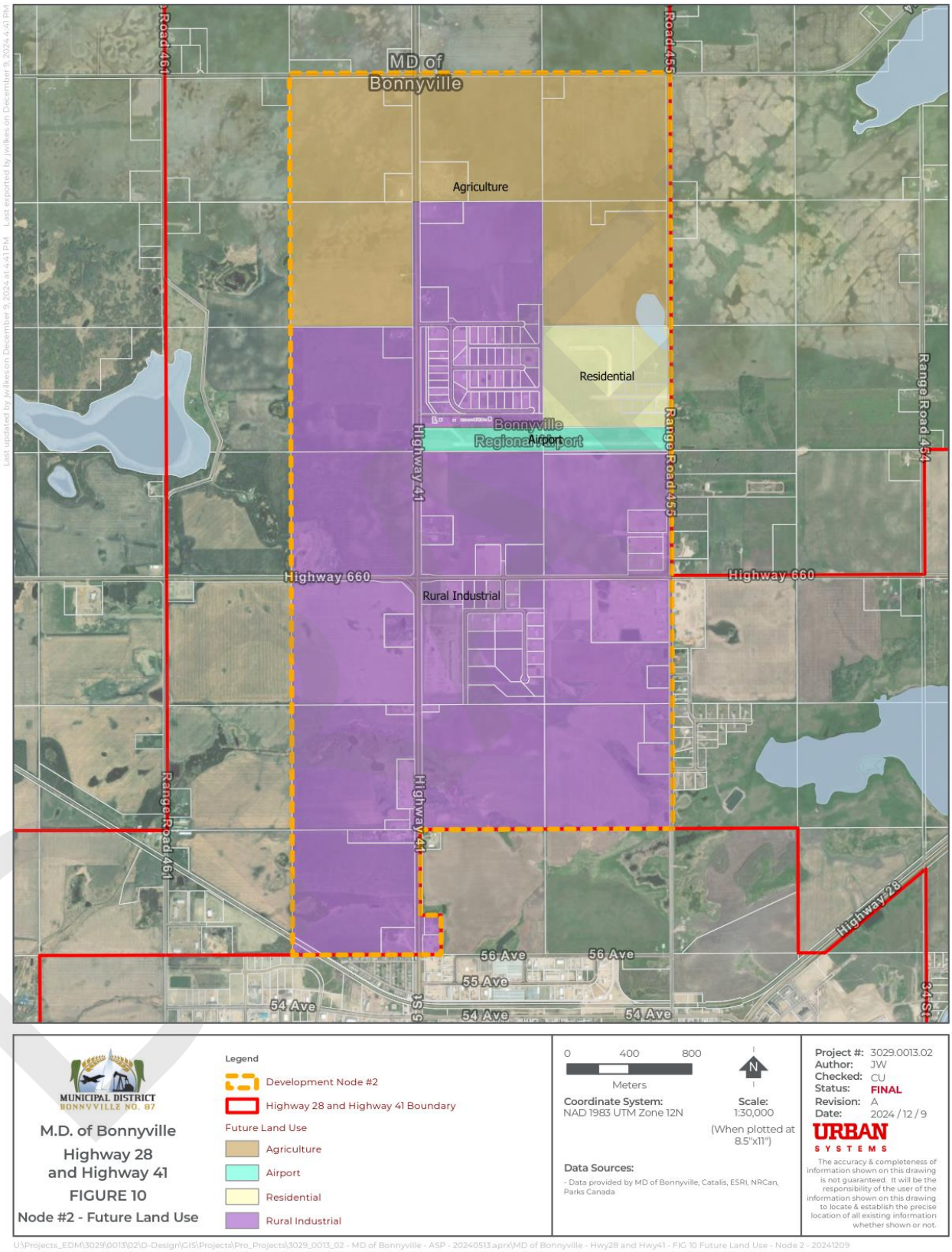
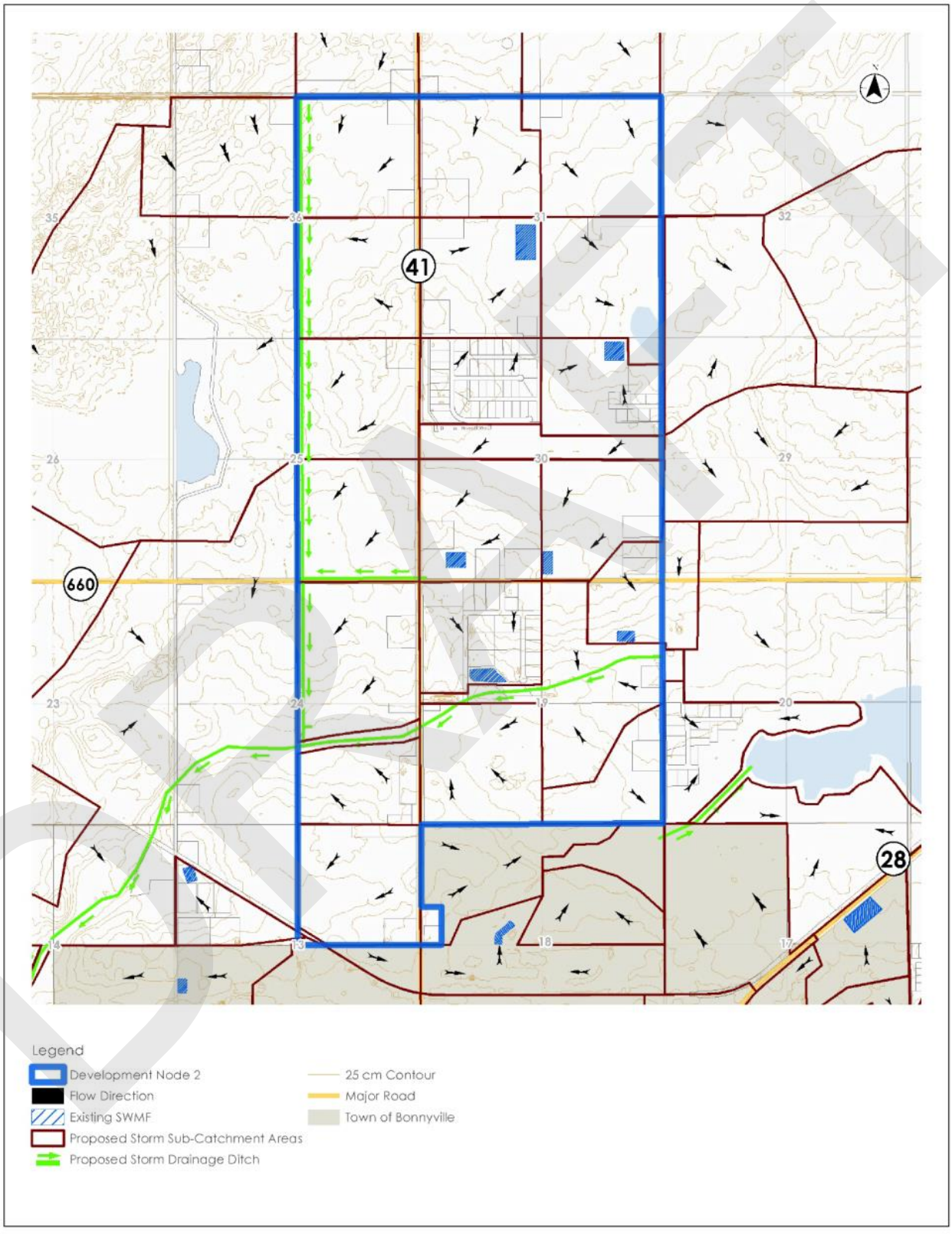


Figure 11: Development Node #2 Drainage Patterns



Development Node #2 – Land Use Statistics

Table 2: Development Node #2 - Land Use Statistics

Development Node #1 – Land Use Statistics		
	Gross Area (GA)	Gross Developable Area (GDA)
Total (ha)	**1248.56**	**1124.93**
Agriculture	**326.60**	**313.04**
Highway / Rge & Twp Roads	-3.2	
Waterbodies	-3.18	
Pipelines	-7.18	
Rural Industrial	**844.86**	**731.09**
Highway / Rge & Twp Roads	-17.82	
Waterbodies	-0.85	
Pipelines	-10.62	
10% MR/ER	-84.48	
Residential	**52.40**	**56.10**
Highway / Rge & Twp Roads	0	
Waterbodies	-1.54	
Pipelines	0	
10% MR/ER	5.24	
Airport	**24.70**	**24.70**

Node #2 – Development Staging

Staging of development within Development Node #2 will be determined by market demand and appropriate and logical extension of services and infrastructure to support development at the discretion of the M.D. of Bonnyville.

DEVELOPMENT NODE #3

Development Node #3 encompasses approximately 211 ha of land. It is located adjacent to the northeast boundary of the Town of Bonnyville extending along both sides of Highway 28 to Range Road 453. The existing land uses within this node include agriculture, crown lands and a portion of the Iron Horse Trail.

Environmental Features Within Development Node #3

Soils

Development Node #3 contains mostly miscellaneous Eluviated Black Chernozems and Gleysolic soils. The agricultural production potential according to the Canadian Land Inventory in Development Node #3 is primarily Class Subclass C, which are lands that have moderately severe limitations for agricultural capability or require special conservation practices and are lands with adverse climate as a result of cold temperatures, with small pockets of Class 5 surrounding the large waterbodies such as Barreyre Lake towards the south of Development Node #3. Class 5 soils have very severe limitations restricting agricultural capability from excess water.

Wetlands

According to ABWRET, there are approximately 23 hectares of wetlands, including some A-value and C-value wetlands, with a majority of D-value wetlands in the quarter sections intersected by Development Node #3.

Groundwater

Environmental records pertaining to groundwater conditions within Development Node #3 were not available. An evaluation of soil and groundwater records for locations in proximity to Development Node #3 indicated that the near-surface surficial deposits generally consisted of low permeability silty clays to approximately 4 to 7 mbgs. The fine-grained low-permeability soils were underlain by coarse-grained sand and sand and gravel deposits. In the records which were reviewed, groundwater was encountered at depths ranging from 1.7 to 5.1 mbgs. Hydraulic conductivity data for the near-surface low-permeability soils generally ranged from 10-6 to 10-8 m/s. Information on nearby percolation systems for areas in proximity to Development Node #3 were not available for review.

Pipelines and Well sites

There are no well sites within Development Node #3 and one operating natural gas pipeline in the west portion of 16-61-05-W4M. There are Consultative Notation (CNT), Protective Notation (PNT) and active Grazing Lease (GRL) dispositions in SW-21-61-05-W4M and NE-16-61-05-W4M.

Node #3 – Development Concept

The development concept for Node #3 proposes the continuation of industrial uses on the northern side of Highway 28 adjacent to the Town of Bonnyville. On the south side of Highway 28 an extension of multi-lot country residential development is proposed as well as the continuation of agricultural uses and lands identified as Crown lands. Refer to **Figure 12: Development Node #3 Future Land Use Concept.**

Transportation

Within Development Node #3, Highway 28 acts as the spine for the transportation network in the area. The southern portion of Node #3 is bound by 34 Street in the Town of Bonnyville on the west and Range Road 53 on the east. At the time that an ASP is prepared to support proposed development or at the time of subdivision, a Traffic Impact Assessment (TIA) would need to be prepared. The TIA would provide an understanding the cumulative impacts of development on the transportation network and would identify any required intersectional improvements and/or upgrades to the roadway network.

Stormwater Drainage

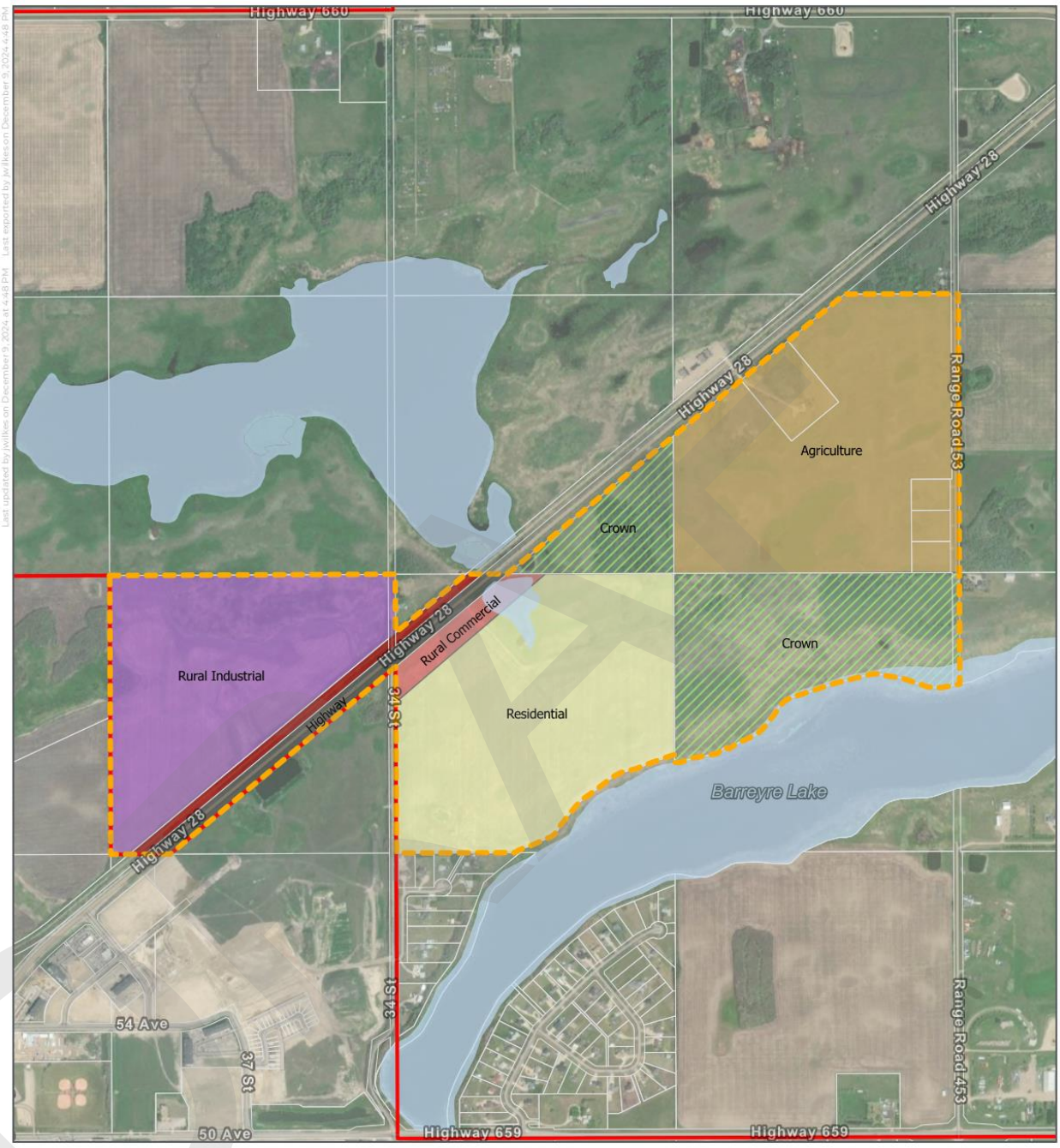
The undeveloped lands within the Node #3 naturally drain north and east. As shown on **Figure 13: Development Node #3 Drainage Patterns**; approximate drainage patterns and sub-catchment areas are shown based on the latest LIDAR topographic information for future development conditions within the Node #3 area. The proposed drainage paths and sub-catchment boundaries generally match those found for existing conditions; however, some liberty was taken to slightly modify drainage basin boundaries to match with existing quarter section lines because the phasing of future developments often precedes in quarter section parcels.

There are no previously approved ASPs within this development node.

The body of water (Lake A) that is located just to the north of this Development Node #3 most likely has an offsite discharge route which drains northeast on the north side of Highway 28, and then crosses under Highway 28 and continues to drain east to a tributary of Beaver River. However, this is a very poorly defined discharge route, and the actual discharge that occurs is believed to be extremely low.

Depending on the amount of future development that occurs around Lake A, it may be necessary that Lake A will need to be provided with a more robust and higher capacity outlet. The Bonnyville Utilities Master Plan proposes an improved storm drainage ditch from the south side of Lake A to the tributary of the Beaver River. This existing tributary is a substantial water body which also serves as the outlet from Charlotte Lake.

Figure 12: Development Node #3 Future Land Use Concept



Development Node #3 – Land Use Statistics

Table 3: Development Node #3 - Land Use Statistics

Development Node #1 – Land Use Statistics		
	Gross Area (GA)	Gross Developable Area (GDA)
Total (ha)	**210.96**	**89.85**
Agriculture	**56.01**	**56.01**
Waterbodies	0	
Pipelines	0	
Rural Industrial	**40.61**	**36.10**
Waterbodies	0	
Pipelines	-0.45	
10% MR/ER	-4.06	
Residential	**51**	**43.07**
Waterbodies	-2.2	
Pipelines	-0.63	
10% MR/ER	-5.1	
Rural Commercial	**6.51**	**4.44**
Waterbodies	-1.2	
Pipelines	-0.22	
10% MR/ER	-0.65	
Crown	**46.62**	**-46.62**
Iron Horse Tail	**3.15**	**-3.15**
Highway	**7.06**	**-7.06**

Node #3 – Development Staging

Staging of development within Development Node #3 will be determined by market demand and appropriate and logical extension of services and infrastructure to support development at the discretion of the M.D. of Bonnyville.

POLICY DIRECTIVES

The Highway 28 and Highway 41 ASP provides policy direction and sound land use planning to support and accommodate future development while ensuring that agricultural uses and activities are safeguarded from premature development. The plan will ensure that required buffers from sensitive areas, oil and gas facilities, and residential developments, are maintained.

General Policies

Policy 9.1.1: All future development shall comply with the Development Concept shown Figures 8, 10, and 12.

Policy 9.1.2: All proposed land uses shall be in conformance with M.D. of Bonnyville's MDP and Land Use Bylaw regulations as well as the policies in this ASP.

Policy 9.1.3: Where not explicitly indicated in the Highway 28 and Highway 41 ASP, the policies and requirements detailed in the M.D. of Bonnyville MDP shall take precedence.

Policy 9.1.4: Development outside of the three development nodes but within the ASP boundary, shall be limited to the current districting and subdivision regulations identified in the M.D. of Bonnyville's Land Use Bylaw and MDP.

Policy 9.1.5: Where development proposals are on lands that contain or are in proximity to pipelines, the pipeline licensees shall be contacted regarding specific setback and/or development restrictions or any environmental concerns associated with the pipeline.

Policy 9.1.6: Where development proposals are on lands that contain oil and gas wells (active and inactive). The oil or gas well licensees shall be contacted regarding specific setbacks and/or development restrictions associated with the oil or gas wells. Further information regarding the historical and status of the wells within the Site should be obtained.

Policy 9.1.7: The M.D. of Bonnyville may require additional studies at the time of ASP preparation, subdivision or development, if there is concern about any environmental contamination on a proposed development site. This may include environmental assessments and possibly remediation, prior to development.

Policy 9.1.8: Setback and/or development restriction requirements from operating and abandoned oil and gas pipelines, well sites, and facilities shall be confirmed at the time of subdivision approval. Subdivision planning must adhere to all relevant Alberta Energy Regulator regulations and M.D. of Bonnyville requirements.

Policy 9.1.9: Emergency service requirements for development proposals shall be addressed in consultation with the appropriate service agencies, and through cooperation with industry, M.D. of Bonnyville, and the Town of Bonnyville.

Policy 9.1.10: Applications for development may be referred to Alberta Culture and Tourism (ACT) to assess potential impacts on historic resources. Proponents may be required to complete Historic Resources Impact Assessments in accordance with relevant Provincial government regulations. Submission of a Statement of Justification (SoJ) for Historical Resources Act Clearance is required by ACT for development of lands within the plan area.

Policy 9.1.11: Extensive agriculture (grazing, cropping) will continue to be permitted within the ASP Development Nodes, as an interim use.

Existing Area Structure Plans

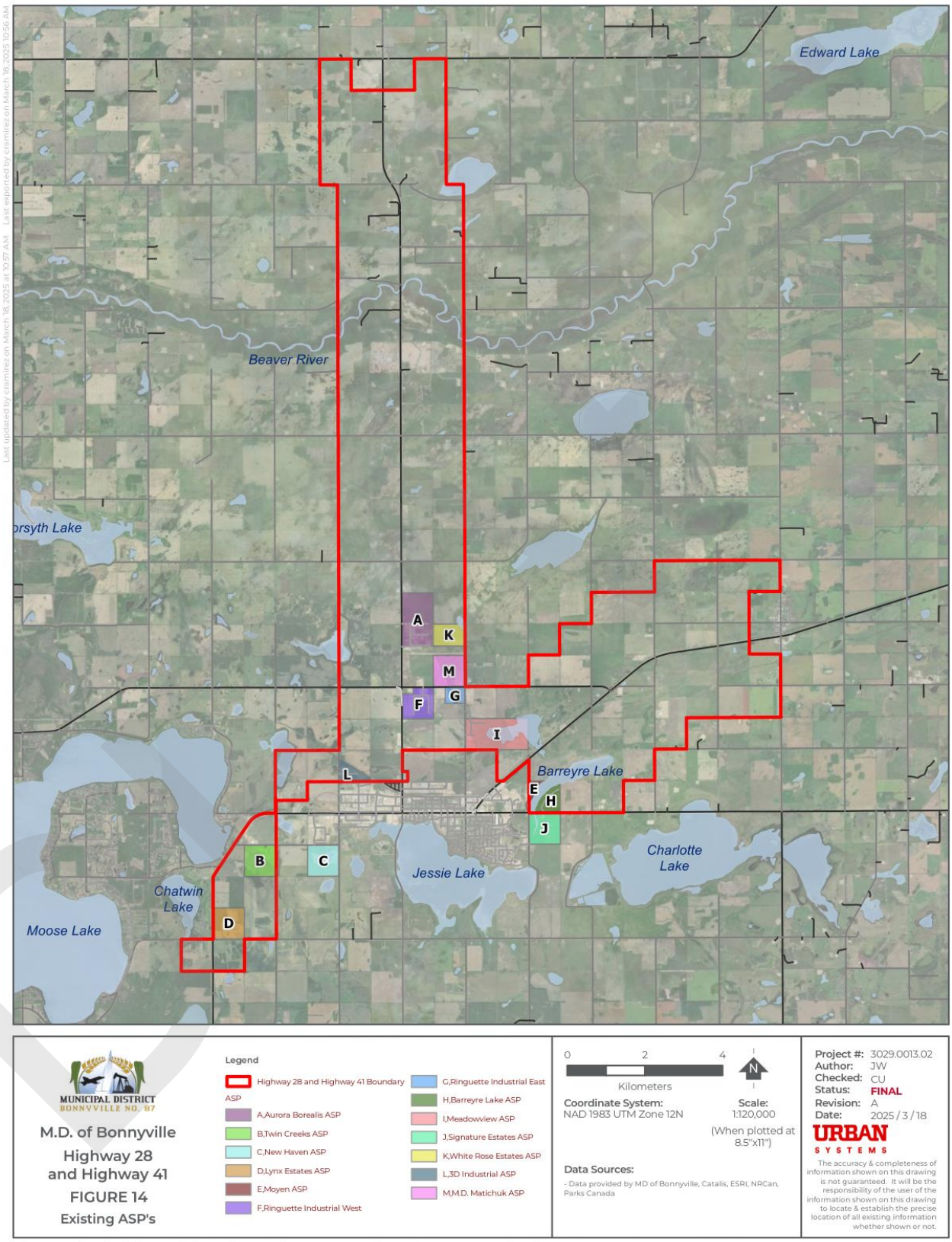
The M.D. of Bonnyville has 11 ASPs adopted and in place for lands entirely or partially within the ASP area, identified on **Figure 14: Existing Area Structure Plans.** These ASPs may provide a more detailed level of planning for these lands and should be referred to for specific policy and development direction.

The relevant ASPs are:

- 3D Industrial ASP, 2010
- Aurora Borealis ASP, SW-31-61-W4M, 2015, NW 30-61-5-W4M, 2008
- Barreyre Lake ASP, 2004
- Lynx ASP, 2016
- Matichuk ASP, 2012
- Meadowview ASP, 2007
- Moyen ASP, 2000
- NW 19-61-5-W4M (Ringuette Industrial) ASP, 2000
- NE 19-61-5-W4M (Ringuette Industrial) ASP, 2009
- Twin Creeks ASP, 2013
- White Rose Estates ASP, 2010

Policy 9.2.1: Where development proposals fall within the boundary of an existing ASP identified on **Figure 14: Existing Area Structure Plans**, the policies and proposed uses of the corresponding ASP takes precedence, with the exception of the Moose Lake ASP.

Figure 14: Existing Area Structure Plans



Existing Uses

The adoption of the Highway 28 and Highway 41 ASP does not change the current Land Use Bylaw designation (zoning) of the lands within the Highway 28 and Highway 41 ASP boundaries.

Policy 9.3.1: Plan area landowners shall continue to use their lands as currently designated by the M.D. of Bonnyville Land Use Bylaw.

Policy 9.3.2: Redesignation to another land use district will only be considered if it is consistent with the land uses identified in this ASP.

Lands Not Within Identified Development Nodes

Policy 9.4.1: For lands not within the identified Development Nodes, the policies of the M.D. of Bonnyville MDP, any approved ASPs and the M.D. of Bonnyville LUB prevail.

Preparation of Area Structure Plans

Policy 9.5.1: The preparation of an ASP may be required to support future development proposals within the Development Nodes. The content requirements for the preparation of these ASPs shall follow the requirements for ASP preparation detailed in the M.D. of Bonnyville's MDP.

Agriculture

The purpose of the Agriculture Policy area is to maintain agriculture as the predominant activity within the ASP boundary. Conversion of agricultural land to non-agricultural uses must be considered carefully to assess the benefit of the proposed use in relation to the loss of agricultural land. Use and subdivision requirements of the Agriculture Policy area must be consistent with the M.D. of Bonnyville's Agriculture - A, Land Use Bylaw district.

Policy 9.6.1: All lands shall be considered agricultural lands unless otherwise designated by this ASP other ASPs within the ASP boundary, and the LUB of the M.D. of Bonnyville or by Provincial or Federal legislation.

Policy 9.6.2: Unless otherwise provided in this plan, the provisions of the M.D. of Bonnyville's MDP, relevant ASPs and consistency with the Land Use Bylaw regarding the subdivision, use and development of agricultural land shall apply to the areas designated as agricultural.

Policy 9.6.3: Premature development of agricultural land should be avoided, and such land should continue to be used for agricultural purposes until such time as the land is needed for other purposes.

Policy 9.6.4 In making decisions on development issues within the ASP boundary, the M.D. of Bonnyville shall respect the right of agricultural operators to pursue normal activities associated with extensive agriculture without interference of restriction based on their impact on adjacent uses.

Policy 9.6.5 Consistent with the direction of Bonnyville's MDP, the M.D. of Bonnyville shall provide input on applications for confined feeding operations within the ASP boundary to the Natural Resources Conservation Board (NRCB) under the Agricultural Operation Practices Act (AOPA). The M.D. of Bonnyville's support shall be subject to the following:

a) No new confined feeding operation shall be permitted less than 1.6 kilometres (1-mile) from the boundary of:
   i. The Town of Bonnyville and the Hamlets of La Corey and Fort Kent
   ii. An area developed or designated for multi-lot residential use
   iii. Any of the development nodes

Residential

The purpose of the Residential Policy area is to provide opportunities for multi-lot country residential uses consistent with the M.D. of Bonnyville's CR Land Use Bylaw districts. Opportunities for Residential developments and subdivisions shall only be allowed where identified within the Development Nodes defined in this ASP and reflecting the following policies:

Policy 9.7.1: Within the ASP boundary, all multi-lot residential developments shall be serviced (water and wastewater) in accordance to the requirements of the M.D. of Bonnyville's MDP, the Land Use Bylaw and Alberta Safety Code requirements.

Policy 9.7.2: Preparation of an ASP shall be required for multi-lot country residential developments, per the requirements outlined for preparing a residential ASP as detailed in the M.D. of Bonnyville's MDP.

Commercial

The purpose of this policy area is to provide sites for businesses desiring highway exposure and access as they serve the travelling public or the regional market consistent with the RC – Rural Commercial District in the Land Use Bylaw. Typical uses include service stations, convenience stores, eating establishments, equipment sales and services, recreational vehicle sales and service, and farm supply and services.

Opportunities for commercial developments and subdivisions shall only be allowed where identified within the Development Nodes, reflecting the following policies:

Policy 9.8.1: Preparation of an ASP shall be required for multi-lot commercial developments, per the requirements outlined for preparing ASPs as detailed in the M.D. of Bonnyville's MDP.

Policy 9.8.2: The site design of the commercial areas shall take account of and create a compatible interface with any adjacent development and the surrounding environment.

Policy 9.8.3: Buffers shall be provided between uses which may be incompatible with adjacent or nearby uses to minimize land use conflict, risk, and nuisance, subject to the satisfaction of the M.D. of Bonnyville. Buffering requirements will be determined by the M.D. of Bonnyville at the subdivision or development permit stage.

Policy 9.8.4: Site Development Guidelines that set out building design, landscaping, signage, and other site requirements may be required for commercial developments.

Industrial

The Industrial Policy Area is intended for the development of industrial uses that may create nuisance factors (i.e., noise, odour, or visual impacts) that extend outside of the principal building and possibly beyond the property boundary. Permitted uses may include, but are not limited to, manufacturing, processing, distribution, or repair services, and may also include unenclosed outdoor storage. Industrial land uses will conform to the RI District of M.D. of Bonnyville's Land Use Bylaw. Opportunities for industrial developments and subdivisions shall only be allowed where identified within the Development Nodes defined in this ASP, reflecting the following policies:

Policy 9.9.1: Preparation of an ASP shall be required for multi-lot Industrial developments. As per the requirements outlined for preparing ASPs as detailed in the M.D. of Bonnyville's MDP.

Policy 9.9.2: Site-specific activities including road traffic, noise, vibration, smoke, dust, odour, fumes, and lighting shall be evaluated at the time of development permit application so that nuisance is mitigated to an appropriate level to the satisfaction of the M.D. of Bonnyville through implementing applicable industry standards, best practices, and regulatory requirements.

Policy 9.9.3: Outdoor storage shall be screened from roadways and adjacent properties through landscaping, berms, and/or fencing.

Policy 9.9.4: Industrial parcel sizes and numbers are not prescribed, but must be shown to be valid, meet required setbacks and function and ensure proper access for the development proposed, to the satisfaction of the M.D. of Bonnyville.

Policy 9.9.5: Through provisions in the Land Use Bylaw, the M.D. of Bonnyville shall ensure that adequate buffers or transitional land uses are maintained between non-industrial and industrial uses where the potential exists for significant land use conflicts with regard to noise, vibration, dust, odour, environmental hazards or other safety risks. For example, agricultural uses may be used as a transitional land use between industry and residential uses. Required buffering will be determined by the M.D. of Bonnyville at the subdivision or development permit stage.

Environmental Protection and Reserve Dedication

The lands within the ASP boundary contain many important environmental features, wooded uplands, wetlands, and drainage courses in addition to essential wildlife, bird, and fish habitat.

Policies within this ASP should ensure that these important landscapes are protected. As the area develops, preserving environmental qualities, and enhancing opportunities for outdoor recreation and nature appreciation will also be important to maintaining a high quality of life for area residents.

Policy 9.10.1: Where any multi-lot development (commercial, industrial, or residential) is proposed near natural features, the M.D. of Bonnyville, at their sole discretion, shall require an environmental assessment to be conducted by a qualified professional to determine how the features can be preserved and incorporated as part of the development, ensuring that any development impacts are mitigated.

Policy 9.10.2: No incompatible development shall be permitted on unstable slopes or within areas that may be prone to flooding or will adversely impact wetlands and other water bodies.

Policy 9.10.3: Development setbacks will be in accordance with Environmental and Municipal Reserve requirements of the M.D. of Bonnyville.

Policy 9.10.4: At the time of subdivision, Municipal and Environmental Reserves shall be dedicated in accordance with M.D. of Bonnyville policy and the MGA.

Policy 9.10.5: The M.D. of Bonnyville may require the development proponent to supply recommendations, prepared by a qualified professional, regarding establishment of appropriate development setbacks and/or other required mitigation measures.

Policy 9.10.6: Notwithstanding **Policy 9.10.3,** the Subdivision Authority may require a greater setback based on the recommendations of a geotechnical study undertaken by a qualified professional.

Policy 9.10.7: Development on parcels where wetlands, waterbodies, and/or watercourses are located shall be in accordance with Provincial (Public Lands Act and the Water Act) and M.D. of Bonnyville regulations and policies. Field work shall be required to confirm boundaries and value of these features prior to development. Development should first be directed to lands that do not contain these features. When avoidance and minimization of disturbance is not possible, compensation requirements for wetlands that are removed will be enforced through Alberta Sustainable Resource Development and its Water Act.

Policy 9.10.8: Conservation of higher-class wetlands shall be a priority.

Policy 9.10.9: Development should be directed away from environmentally sensitive lands to protect natural features and maintain habitat connectivity, in accordance with the M.D. of Bonnyville's MDP.

Policy 9.10.10: Proponents of development near waterbodies, water courses and or steep slopes should submit a top-of-bank survey and geotechnical study as part of a subdivision and/or development permit application to delineate top-of-bank setbacks at the discretion of the M.D. of Bonnyville.

Policy 9.10.11: Permanent development shall not be permitted within the 1:100 year floodway of a watercourse or drainage channel.

Policy 9.10.12: As a condition of subdivision approval, a minimum Environmental Reserve or Environmental Reserve Easement of 30 metres from the top of bank, (determined by a registered Alberta Land Surveyor) of any river or stream or the high-water mark of a lake shall be dedicated at the time of subdivision.

Policy 9.10.13: A minimum Environmental Reserve of 30 metres from the top or bottom of a valley slope which exceeds a 30 percent grade shall be dedicated at the time of subdivision.

Trails

A portion of the ASP area in Development Node 3 is bisected by the Iron Horse Trail which provides a regional trail connection through the M.D. of Bonnyville.

Policy 9.11.1: The M.D. of Bonnyville will continue to support the Riverland Recreational Trail Society (RRTS) with the ongoing development, maintenance, and operation of the Iron Horse Trail.

Policy 9.11.2: The M.D. of Bonnyville should continue to create an interconnected trail system, focusing on connecting recreation areas and amenities to residential areas.

Servicing Requirements

Water and Wastewater

Policy 9.12.1: All parcels shall provide their own private on-site water and wastewater systems and these systems shall comply with all applicable federal and provincial standards for the construction, operation, and maintenance of these systems.

Policy 9.12.2: Water wells for commercial or industrial uses shall meet the licensing requirements of the Water Act.

Policy 9.12.3: Wastewater shall be managed through privately owned/operated on-site storage which will be emptied periodically and disposed of at designated/accepting treatment facilities.

Policy 9.12.4: Costs associated with the construction, operation and on-going maintenance for on-site private water and sewage systems shall be borne by the land developer.

Policy 9.12.5: New commercial and industrial developments shall prepare a fire protection plan to the satisfaction of the M.D. of Bonnyville outlining how they will provide adequate fire protection services.

Policy 9.12.6: Each commercial and industrial lot owner shall address fire flow and process water supply requirements for their approved development to the satisfaction of the M.D. of Bonnyville.

Policy 9.12.7: Provision of onsite reservoirs for fire protection shall be the responsibility of individual industrial and commercial lot owners.

Policy 9.12.8: Servicing of industrial and commercial uses in proximity to municipal services as identified in the Town of Bonnyville Utilities Master Plan shall be designed in such a way that they are able to tie into water and wastewater infrastructure when it becomes available.

Policy 9.12.9: Any residential, commercial, or industrial lots that have the potential for future connection to municipal water and wastewater servicing will be required to enter into a deferred services agreement indicating that when these services become available the lots will be required to tie into the services at the property owner's expense.

Stormwater Drainage

Policy 9.12.10: Onsite stormwater management will be the responsibility of the developer, to the satisfaction of the M.D. of Bonnyville.

Policy 9.12.11: A 2 Litres/second/hectare pre-development release rate will be used for all stormwater management facilities.

Policy 9.12.12: Future development shall generally follow the conceptual storm drainage infrastructure for the Development Nodes.

Groundwater

Policy 9.12.13: Developers shall be required to undertake percolation testing in areas identified for septic field placement.

Policy 9.12.14: Ground truthing for the presence and status of nearby domestic use water wells in shallow surficial deposits shall be performed prior to finalizing the locations of septic fields.

Shallow Utilities

Policy 9.12.15: Developers shall be required to determine the requirements for the provision of utilities, such as gas, electricity, and telecommunications, through preparation of an ASP or at the subdivision stage of development, based upon capacities and rights-of-way required. The cost of installation of all utility services shall be borne by the developer.

Policy 9.12.16: All shallow utilities shall be located in areas acceptable to the M.D. of Bonnyville and utility companies. Right-of-way requirements shall be determined and dedicated at the time of subdivision.

Policy 9.12.17: The developer may be required to provide access to or through their lands to accommodate the servicing of adjacent development.

Policy 9.12.18: The extension of all shallow utilities shall be the responsibility of the developer.

Roads and Transportation

Policy 9.12.19: Developers may be required to prepare Traffic Impact Assessments (TIAs), at the time that an ASP is prepared or at the time of subdivision to assess anticipated traffic generation, potential impacts on the overall transportation network, and any improvements that may be necessary to the existing road system.

Policy 9.12.20: Should additional road right-of-way be required for the upgrading of local roads it shall be requested as a condition of subdivision approval.

Policy 9.12.21: Any future upgrades to the road system shall be at the developers cost.

Policy 9.12.22: Access to each development and the internal road system shall be designed in accordance with municipal standards and constructed at the developer's cost. Internal roadway systems should endeavor to make logical connections to adjacent development.

Policy 9.12.23: All proposed road systems must meet the specifications of the M.D. of Bonnyville.

Policy 9.12.24: Subdivision and development permit applications in proximity to a provincial highway must be referred to Alberta Transportation per the requirements of the MGA.

Policy 9.12.25: The costs directly associated with servicing a new development through upgrading the existing road network and the construction of an access network shall be borne by the developer and designed to the satisfaction of the M.D. of Bonnyville. "Endeavour to assist" provisions shall be included in the development agreement to allow the developer to recoup some of these front-end costs from other benefiting developments that may occur later.

Development Standards Adjacent to Highways 28 and 41

Policy 9.13.1: Development proposed directly adjacent to Highway 28 and Highway 41 may be required to implement noise mitigation techniques, such as berms, barriers, setbacks, or additional landscaping at the discretion of the M.D. of Bonnyville. The M.D. of Bonnyville may also require a noise impact study.

Municipal District of Bonnyville Regional Airport

The Airport is located north of the Town of Bonnyville, within the M.D. of Bonnyville adjacent to Highway 41. The M.D. of Bonnyville owns and operates the facility. The airport provides an important amenity for the area as well as an economic benefit to the region.

Policy 9.14.1: The M.D. of Bonnyville shall protect the Municipal District of Bonnyville Regional Airport from incompatible land uses and developments on adjacent lands which may unduly affect airport operations, activities, and the ability to extend the runway to the east in the future.

Policy 9.14.2: Any storm water management facilities required for the expanded airport lands and/or adjacent development areas should be dry bottom facilities to discourage wildlife or waterfowl habitat.

Policy 9.14.3: Wind turbines, cell towers, or tall infrastructure or facilities shall be prohibited if they protrude the upper limit of the 45 m (150 foot) vertical surface above ground level within the entire 4,000 m Obstacle Identification Surface (OIS) area, as outlined in the Bonnyville Airport Assessment and Recommendations Report, (Stantec 2017).

Drainage Evaluation Area

Policy 9.15.1: Development proposals for lands which are partially or entirely contained within the Drainage Evaluation must have regard for and develop lands to support the drainage plan created for this area per the *M.D. of Bonnyville – Drainage Evaluation Report – SE 20-62-5-4 (SE Design and Consulting, 2018).*

4.0 COMMUNITY ACTIONS

ADMINISTERING THE PLAN

The ASP policies contain “shall”, “must”, “will”, “should” and “may” statements.

- **“Shall”, “must”, “will”** mean, within the context of policy, the action is mandatory and must be followed.
- **“Should”** means, within the context of policy, that the action is strongly encouraged but M.D. of Bonnyville Council and Administration have some discretion based on the circumstances of the specific case being presented.
- **“May”** policies indicate that M.D. of Bonnyville Council and Administration determines the level of compliance that is required.

Policy must be implemented as directed. Only an amendment to the ASP can change the interpretation of a policy from “shall” to “should” or “may”. The interpretive clauses within explanatory statements have the same intent as those stated in policies.

Maps within this ASP are conceptual and should not be used to determine precise locations or boundaries. Additional studies and surveys will be required to do so.

All map symbols, locations, and boundaries contained within the Highway 28 and Highway 41 ASP shall be interpreted as approximate unless otherwise specified in the Plan or coincide with clearly recognizable physical features or legal boundaries.

Plan Implementation

Policy 10.2.1: The M.D. of Bonnyville shall ensure that all development decisions are consistent with the policies outlined in this Highway 28 and Highway 41 ASP.

Policy 10.2.2: Approval of development shall not prejudice the further subdivision or any subsequent development consistent with the policies contained within this Highway 28 and Highway 41 ASP.

AMENDING THE PLAN

Amendments to the Highway 28 and Highway 41 ASP shall be carried out in accordance with the MGA, which requires the M.D. of Bonnyville to invite comments from the community and affected stakeholders through a Statutory Public Hearing process before deciding whether to amend the plan.

Policy 10.3.1: Policies, text, and mapping information contained within the Highway 28 and Highway 41 ASP may be amended from time to time in order to remain current in response to broader or more specific issues affecting the plan area.

Policy 10.3.2: Any change to policy, text, or mapping information contained within the Highway 28 and Highway 41 ASP shall be in accordance with the MGA requirements and higher order statutory documents such as the M.D. of Bonnyville's MDP and the IDP with the Town of Bonnyville.