

Bylaw 3009  
rescinds Bylaw 2729  
April 20. 2015  
#CM20150420.1071

**BY-LAW NO. 3009 OF THE  
COUNTY OF GRANDE PRAIRIE NO. 1**

A by-law of the County of Grande Prairie No. 1 in the Province of Alberta, to adopt the attached Lakeside Area Structure Plan for SW-19-72-05-W6M and Sec. 24-72-06-W6M

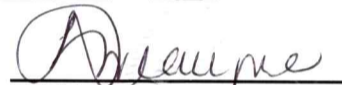
**WHEREAS** the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26, authorizes a Council to provide a framework for the subdivision and development of an area of land within the Municipality; and

**WHEREAS** the Council has properly notified the owners of land within the development area, pursuant to provisions of the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26, and amendments thereto.

**NOW THEREFORE** the Council of the County of Grande Prairie No. 1, duly assembled, enacts as follows:

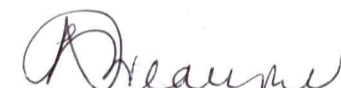
1. That this Bylaw shall be known as the **"LAKESIDE AREA STRUCTURE PLAN BYLAW"**.
2. That the Lakeside Area Structure Plan document is attached to this Bylaw as an appendix and forms part of this Bylaw.
3. That the Lakeside ASP Bylaw 2729 is hereby rescinded.
4. That this by-law shall take effect on the date of its final passage by Council.

READ A FIRST TIME THIS 15<sup>th</sup> DAY OF September, 20 14.

  
REEVE

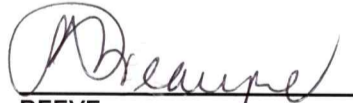
  
COUNTY ADMINISTRATOR

READ A SECOND TIME THIS 15<sup>th</sup> DAY OF September, 20 14.

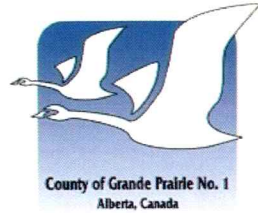
  
REEVE

  
COUNTY ADMINISTRATOR

READ A THIRD AND FINAL TIME AND FINALLY PASSED THIS 20 DAY OF April, 20 15.

  
REEVE

  
COUNTY ADMINISTRATOR



## LAKESIDE AREA STRUCTURE PLAN

### Bylaw No. 3009

Adopted April 20, 2015

Prepared by:



Inspiring sustainable thinking

In association with



August 2014

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## 1.0 INTRODUCTION

### 1.1 Purpose of Plan

The Lakeside Area Structure Plan has been prepared to provide a framework for future development of parts of four quarter sections of land in the County of Grande Prairie No. 1 within the boundaries of the Hamlet of Clairmont.

The primary objective of this Plan is to provide a framework for the future development the subject lands in a manner that is consistent with the goals, objectives and policies of the County of Grande Prairie No. 1. In addition, as the site is located adjacent to Clairmont Lake, the requirements of Alberta Environment also need to be accommodated with respect to shoreline protection and management of runoff. The Plan establishes the future land use and circulation pattern proposed for the site, and provides details respecting proposed servicing for the area.

This Area Structure Plan has been prepared in accordance with the Municipal Government Act, the Subdivision and Development Regulation, and the County of Grande Prairie Municipal Development Plan.

### 1.2 Plan Area

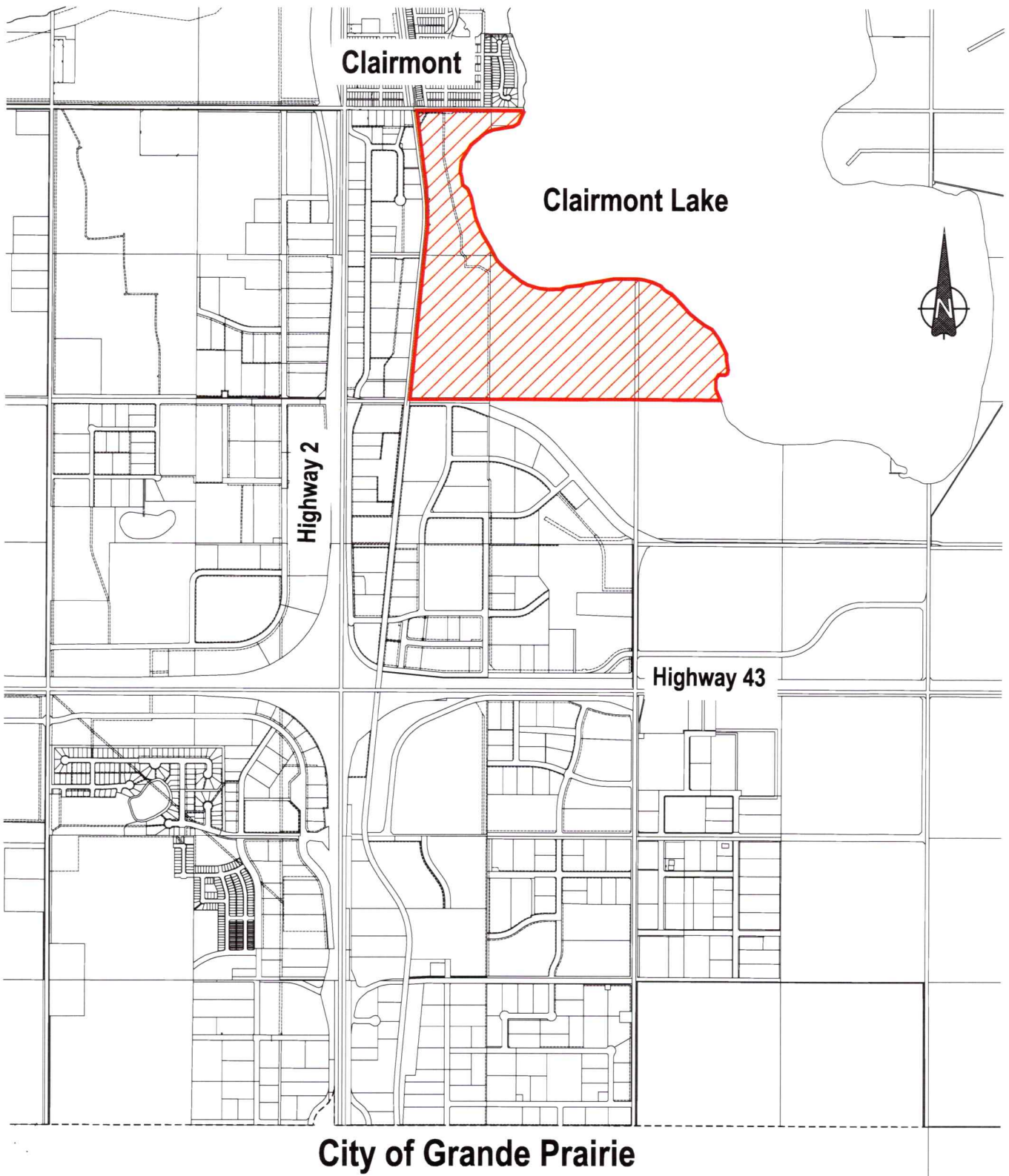
The land affected by this Area Structure Plan is located immediately south of the developed portion of the Hamlet of Clairmont, adjacent to Clairmont Lake and east of the CN Rail line as illustrated in Map 1. The Plan area consists of approximately 134 ha as outlined in Table 1.

*Table 1 – Plan Area Composition*

Legal	Owner	Area (ha)
SW 19-72-5-6	Private Owners	24.80
SE 24-72-6-6	Private Owners	52.00
Pt. SW 24-72-6-6	Private Owners	31.83
Lot 39, Plan 002 3278	Private Owners	23.14
Pt. NE 24-72-6-6	Government of Alberta	0.23
Road Plan 122 1102	County of Grande Prairie No.1	0.44
Road Allowances	County of Grande Prairie No. 1	1.34
<b>Total</b>		<b>133.78</b>

### 1.3 Existing Conditions

Development in the Plan area is limited to residences on the SW19 and Lot 39 (NW 24), and the predominant land use is agriculture as illustrated in Map 2. The majority of land in the Plan area has a Canada Land Inventory (CLI) rating of 100% 2c, which is by definition better agricultural land. The shore areas are rated at 80% 0 20% 5w due to the presence of high water table.



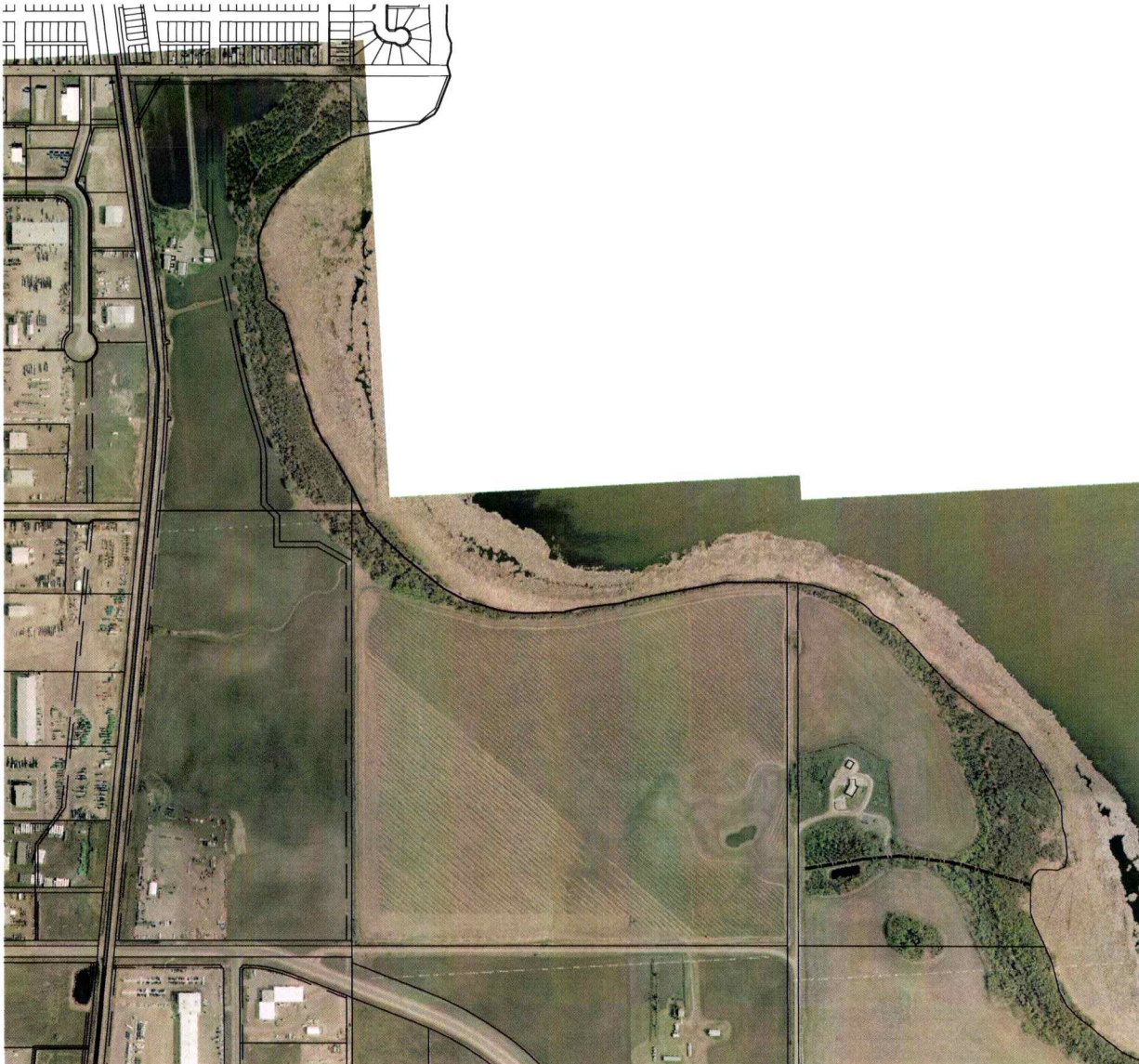
# **LAKESIDE AREA STRUCTURE PLAN**

## **Map 1- Location**






September 2014





## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

-  RESIDENCE
-  RAIL LINE
-  DRAINAGE COURSE

APRIL 2014



## Map 2 Existing Conditions



The Plan area is bounded by the CN Rail line to the west, Clairmont Lake to the north and east, and a paved high-grade road (Bauman Road) and the Crossroads North industrial park to the south. A developed road (Range Road 60) is also located between the SW 19 and SE 24 that serves one of the residences. A regional water transmission line traverses the Plan area between the SE 24 and SW 24, which has been accommodated in the layout of the proposed development concept.

The Plan area is relatively flat and slopes gradually from west to east toward the lake as illustrated in Map 3. Elevations range from 680 m in the southwest corner of the Plan area to 672 m at the lake shore, averaging a 1% grade.

Natural vegetation in the Plan area is limited to thick willow and sedge cover along the lake shore.

## **1.4 Policy Framework**

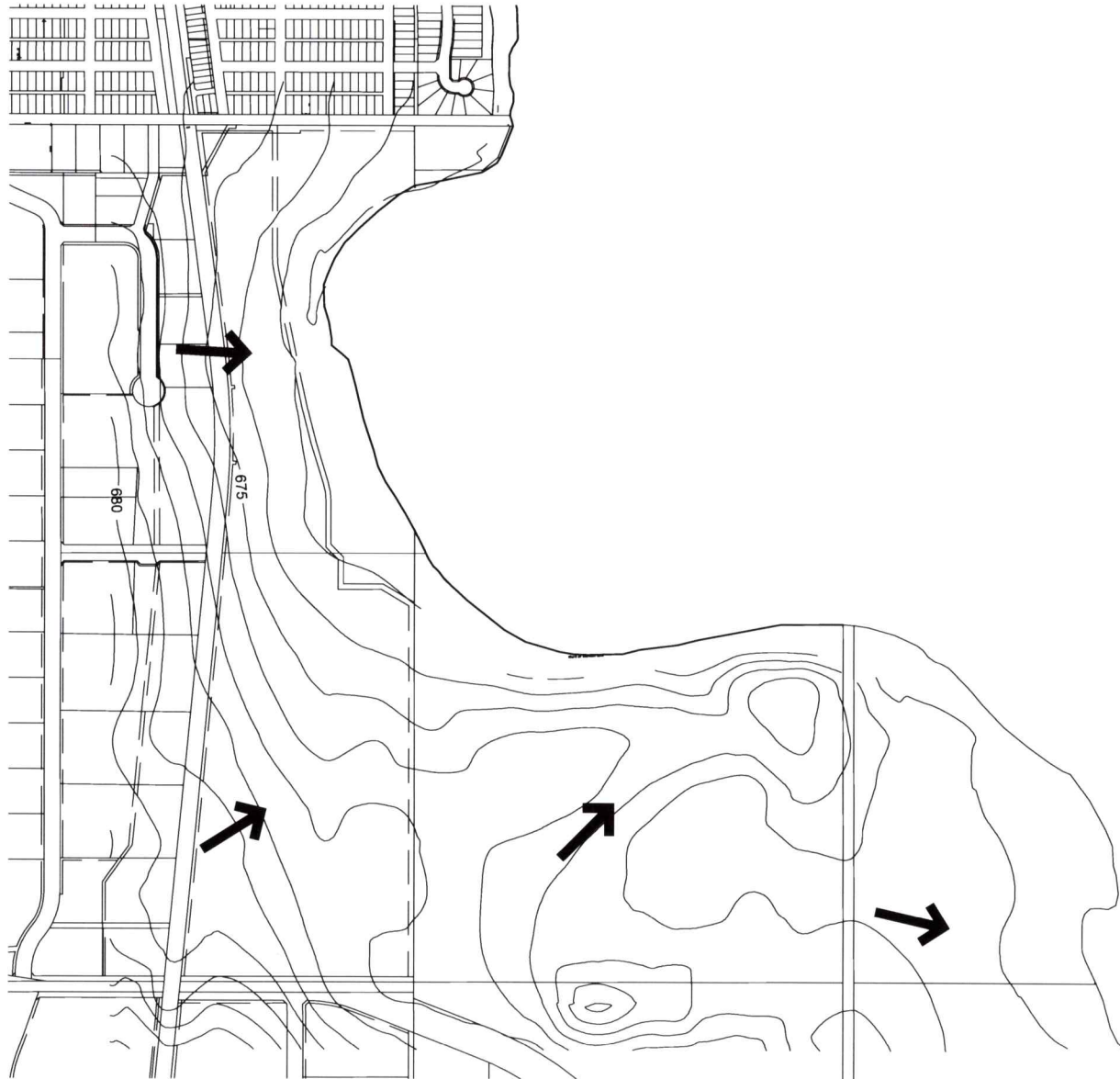
### **1.4.1 County of Grande Prairie Municipal Development Plan**

The County Municipal Development Plan (MDP) provides the general policy framework within which more detailed plans are required to be consistent. Section 13.5 of the Plan indicates that area structure plans are required as a prerequisite for the development of industrial parks, hamlets, highway commercial subdivisions, “or any other major development where such a plan would assist the County in making planning decisions”.

The Lakeside ASP is contained within the 20 year growth boundary of the Clairmont Urban Area as identified in Section 5 of the MDP. The content of this Plan has been prepared in accordance with the requirements of this Section.

### **1.4.2 County of Grande Prairie Land Use Bylaw**

The land in the Plan area is currently designated as a combination of Urban Reserve (Lot 39), Agricultural (NE 13, SW 19, SE 24), and Rural Residential, Rural Light Industrial, and Comprehensive Commercial (SW 24) in the County’s Land Use Bylaw. In order to facilitate the development of these lands for residential and industrial purposes, it is intended that the Plan area be rezoned to the appropriate districts as outlined in Section 4.2 as a prerequisite to subdivision.



## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

680 — 1 m CONTOUR

← DIRECTION OF DRAINAGE

September 2014



Map 3  
Topography

**ISL** Engineering  
and Land Services

**HELIX**  
engineering ltd.

## **2.0 DEVELOPMENT CONCEPT**

### **2.1 Goals of the Plan**

The Lakeside Area Structure Plan has been prepared in accordance with the following goals and objectives.

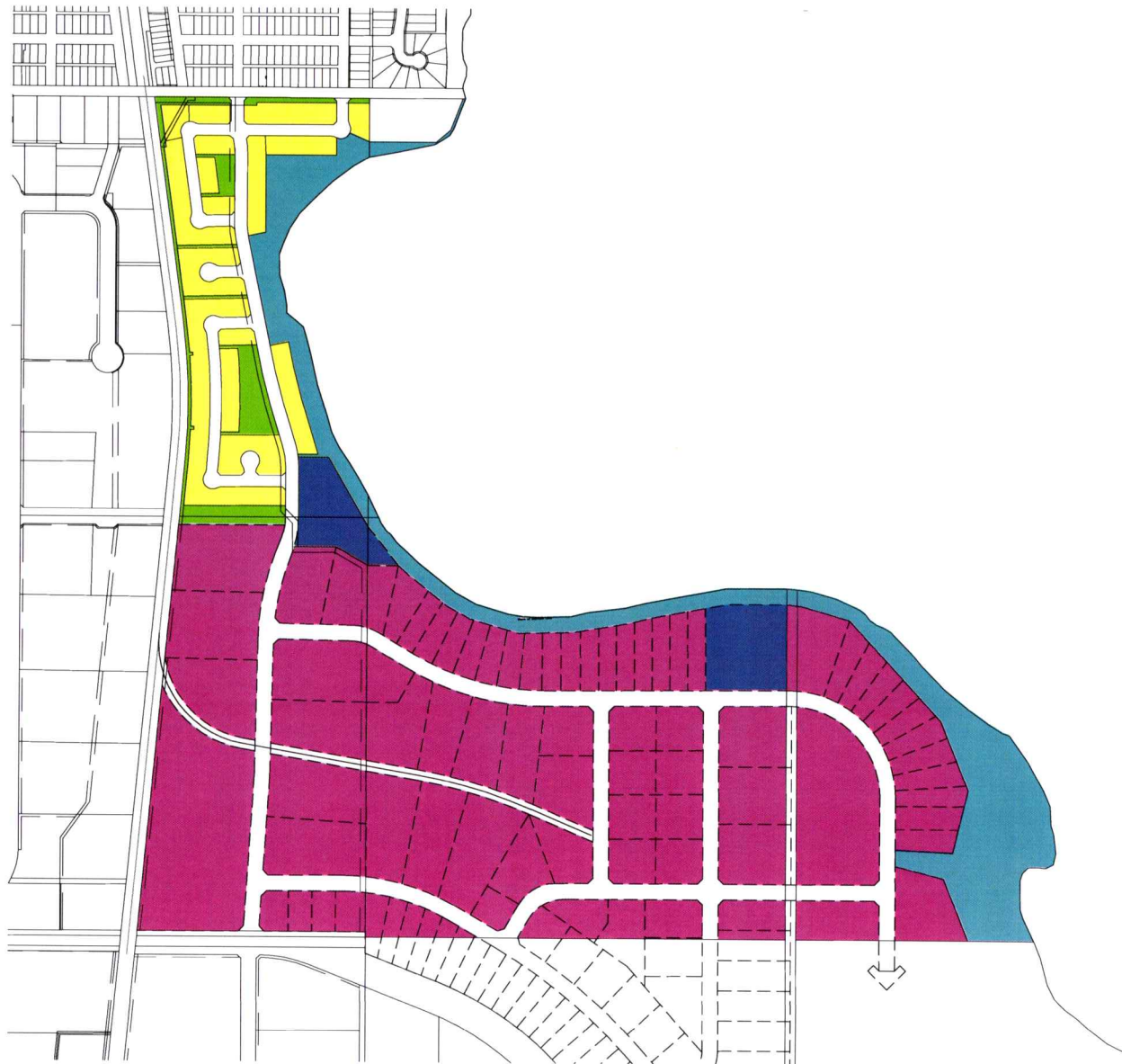
1. To provide a sound planning framework for the future development of the Plan area that is consistent with the goals of the County of Grande Prairie No. 1.
2. To contribute to the continued economic development of the Clairmont area through the development of the Plan area for residential and industrial purposes.
3. To protect and maintain the environmental integrity of Clairmont Lake through the strategic use of open space and the implementation of sustainable development practices.
4. To establish an efficient and economical development and servicing concept for the Plan area.

### **2.2 Land Use Concept**

A breakdown of land uses proposed for the Plan Area is provided in Table 2, with additional detail in Table 3. The overall development concept proposed for the area is illustrated in Map 4. The intent of this plan is to provide a generalized land use plan with a conceptual lot layout that will be subject to further refinement at the time of subdivision and survey.

### **2.3 Industrial Development**

- 2.3.1 Industrial development is the predominant use proposed for the Plan area. As noted in Tables 2 and 3, approximately 67% of the Plan area is to be developed for industrial purposes. The total area proposed for industrial development is approximately 79 ha. Based on the conceptual layout illustrated in Map 5 an average lot size of 1.0 ha is anticipated.
- 2.3.2 A combination of light industrial, general industrial, and highway industrial development is proposed for the Plan area as follows:
- (a) Light industrial development, utilizing RM-1 zoning and totaling approximately 20 ha, is proposed for sites adjacent to Clairmont Lake and the future residential development area. This will ensure that the potential for detrimental impacts on adjacent lands or environmentally sensitive features is minimized;
  - (b) General industrial development, utilizing RM-2 zoning and totaling approximately 49 ha, is proposed for lands in the interior of the Plan area; and
  - (c) Highway industrial development, utilizing RM-4 zoning and totaling approximately 10 ha, is proposed for sites adjacent to Bauman Road. This zoning is oriented to high-visibility sites situated along high traffic corridors.

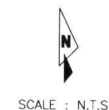


## **LAKESIDE AREA STRUCTURE PLAN**

### **LEGEND**

- RESIDENTIAL
- INDUSTRIAL
- MUNICIPAL RESERVE
- STORM POND
- ENVIRONMENTAL RESERVE
- CONCEPTUAL LOTTING

September 2014



## **Map 4 Land Use Concept**

**ISL** Engineering  
and Land Services

**HELIX**  
engineering ltd.

Table 2 - Land Use Area Estimates

Land Use Category	Total	Percent
<b>Gross Developable Area</b>	<b>132.4</b>	
Add Road Allowances	1.34	
Less Environmental Reserve <sup>1</sup>	(15.99)	
<b>Net Developable Area</b>	<b>117.8</b>	<b>100.0</b>
<b>Industrial</b>	<b>79.1</b>	<b>67.2</b>
Light Industrial	19.5	16.6
General Industrial	49.2	41.8
Highway Industrial	10.4	8.8
<b>Residential</b>	<b>9.8</b>	<b>8.3</b>
<b>Transportation</b>	<b>19.2</b>	<b>16.3</b>
Roads	17.4	14.8
Rail Spur	1.8	1.5
<b>Utilities</b>	<b>7.5</b>	<b>6.3</b>
Public Utility Lots	1.1	1.0
Storm Ponds	6.3	5.3
<b>Municipal Reserve</b>	<b>2.3</b>	<b>2.0</b>
Neighbourhood Parks	1.6	1.3
Other	0.7	0.7

Table 3 - Detailed Land Use Estimates

Land Use Category	Lot 39	NE 24	SW 24	SE 24	SW 19	Total	Percent
<b>Gross Area</b>	<b>23.14</b>	<b>0.23</b>	<b>32.27</b>	<b>52.00</b>	<b>24.80</b>	<b>132.44</b>	
Add Road Allowances	0	0	0	0.67	0.67	1.34	
Less Environmental Reserve <sup>1</sup>	(4.25)	(0.23)	0	(3.13)	(8.38)	(15.99)	
<b>Net Developable Area</b>	<b>18.89</b>	<b>0</b>	<b>32.27</b>	<b>49.54</b>	<b>17.09</b>	<b>117.79</b>	<b>100.0</b>
<b>Industrial</b>	<b>0</b>	<b>0</b>	<b>26.37</b>	<b>39.61</b>	<b>13.14</b>	<b>79.12</b>	<b>67.2</b>
Light Industrial	0	0	4.58	8.25	6.70	19.53	16.6
General Industrial	0	0	12.54	30.22	6.44	49.20	41.8
Highway Industrial	0	0	9.25	1.14	0	10.39	8.8
<b>Residential</b>	<b>9.77</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.77</b>	<b>8.3</b>
<b>Transportation</b>	<b>4.95</b>	<b>0</b>	<b>4.71</b>	<b>6.97</b>	<b>2.57</b>	<b>19.20</b>	<b>16.3</b>
Roads	4.95	0	3.87	6.05	2.57	17.44	14.8
Rail Spur	0	0	0.84	0.92	0	1.76	1.5
<b>Utilities</b>	<b>2.16</b>	<b>0</b>	<b>0.88</b>	<b>2.96</b>	<b>1.38</b>	<b>7.38</b>	<b>6.3</b>
Public Utility Lots	1.12	0	0	0	0	1.12	1.0
Storm Ponds	1.04	0	0.88	2.96	1.38	6.26	5.3
<b>Municipal Reserve</b>	<b>2.01</b>	<b>0</b>	<b>0.31</b>	<b>0</b>	<b>0</b>	<b>2.32</b>	<b>2.0</b>
Neighbourhood Parks	1.58	0	0	0	0	1.58	1.3
Other	0.43	0	0.31	0	0	0.74	0.7

<sup>1</sup> Area required for Environmental Reserve to be confirmed at the time of subdivision.

- 2.3.3 All industrial development in the Plan area shall be the subject of a high level of design and landscaping in accordance with County requirements. This is a result of the high degree of visibility that these locations afford, as well as their close proximity to future residential development.
- 2.3.4 In order to optimize opportunities to access the rail line, provision has been made for the establishment of a rail spur that will serve the central portion of the Plan area. Land has been set aside in the Plan to accommodate a rail spur to be constructed perpendicular to the main CN Rail line. The detailed design of the spur shall be undertaken in accordance with CN standards and guidelines. Should market demands not support the development of the rail spur, the lots adjacent the rail can be expanded and the spur eliminated. Should this be the case, development can occur with no requirement for amendment to this document.

## **2.4 Residential Development**

- 2.4.1 Single family residential development is proposed for the north end of the Plan area. Given that the proposed development is to accommodate densities equivalent to that of the rest of the Hamlet of Clairmont, it is intended that lots in this area be zoned as Rural Residential RR-2 in the Land Use Bylaw. These Districts limit residential development to conventional stick-built housing.
- 2.4.2 The total area proposed for residential development is 9.8 ha, and results in an approximate yield of approximately 200 lots<sup>2</sup>, and a population of 640 assuming a density of 3.2 persons per unit.
- 2.4.3 In order to protect that portion of the residential area that is located in proximity to proposed industrial sites, the lots in question are to be separated by a landscaped municipal reserve lot. In addition, landscaped buffers with screening and berming shall be provided on the abutting industrial lots in accordance with County requirements. The affected residential lots are also to be oriented in such a fashion as to ensure that they do not face the industrial lots in question.
- 2.4.4 Prior to subdivision approval of residential lots adjacent to the rail line, issues relating to noise attenuation shall be addressed, and options including fencing, landscaping and berming will be reviewed with the County.

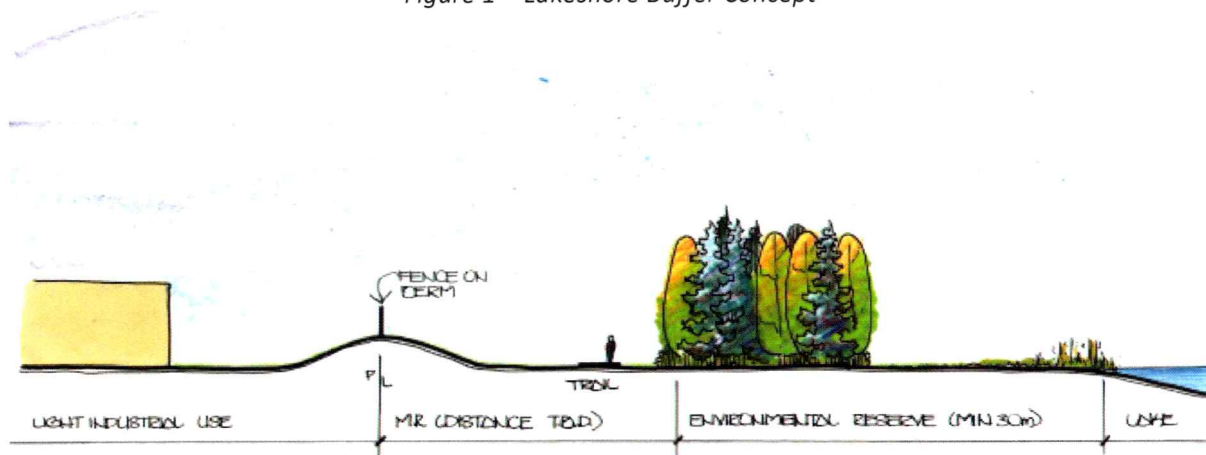
## **2.5 Environmental Protection**

- 2.5.1 In order to ensure that the shoreline of Clairmont Lake is protected from encroaching development, environmental reserve is to be dedicated on private lands along the lake shore. Although subject to confirmation by survey prior to subdivision approval, this buffer will range from a minimum of 30 m to potentially larger setbacks at the east end of the Plan area, corresponding approximately to the existing tree line as illustrated in Figure 1.

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<sup>2</sup> Assumes minimum lot size of 490 m<sup>2</sup> (5,275 ft<sup>2</sup>) as provided in the Rural Residential (RR-2) District of the County Land Use Bylaw.

Figure 1 – Lakeshore Buffer Concept



2.5.2 In accordance with the Municipal Development Plan and the Clairmont Open Space Study (2003), it is proposed that a lakeside trail be developed within the environmental reserve corridor. Such a trail will allow for interpretive and recreational opportunities, as well as provide pedestrian linkages to the developed portion of the Hamlet to the north.

2.5.3 In order to enhance lake water quality, stormwater detention ponds are proposed at two locations adjacent to the shore areas as a means to control runoff and to allow for settlement of pollutants prior to discharge. The ponds are reserved for areas that will have the potential for a pipe conveyance system which has no other means of reducing pollutants. Additional detail regarding the stormwater management strategy is provided in Section 3.4.

2.5.4 It is intended that a small parcel of Crown land, located in proximity to the lake on the NE 24, remain in its natural state.

## 2.6 Municipal Reserve

In accordance with the Municipal Government Act, a maximum of 10% of the Plan area (11.8 ha) may be provided as municipal reserve at the time of subdivision. It is proposed that municipal reserve be allocated in the Plan area as follows:

- A series of neighbourhood parks are to be scattered throughout the residential portion of the Plan area;
- In order to provide buffering between residential and industrial properties, it is proposed that a 30m-wide municipal reserve strip be provided on the south end of Lot 39, shared with the SW 24, west of the north-south collector road (98<sup>th</sup> Street);
- A municipal reserve strip is to be located adjacent to the environmental reserve corridor adjacent to the lake to accommodate a proposed trail. The width shall be determined at the time of subdivision in accordance with the concept illustrated in Figure 1;
- The lands surrounding the stormwater detention ponds may be dedicated as municipal reserve as they contribute to the open space network, and may accommodate trail linkages. The amount of land to accommodate this dedication is to be determined once the pond

sizes have been determined through detailed design. Only those portions of wet ponds that are located above the 1:5 year flood may be eligible for MR credit.

The balance of the municipal reserve owing shall be provided to the County as cash-in-lieu as a condition of subdivision approval.

### 3.0 INFRASTRUCTURE

#### 3.1 Roads

As illustrated in Map 5, the Plan area is to be accessed from three points as follows:

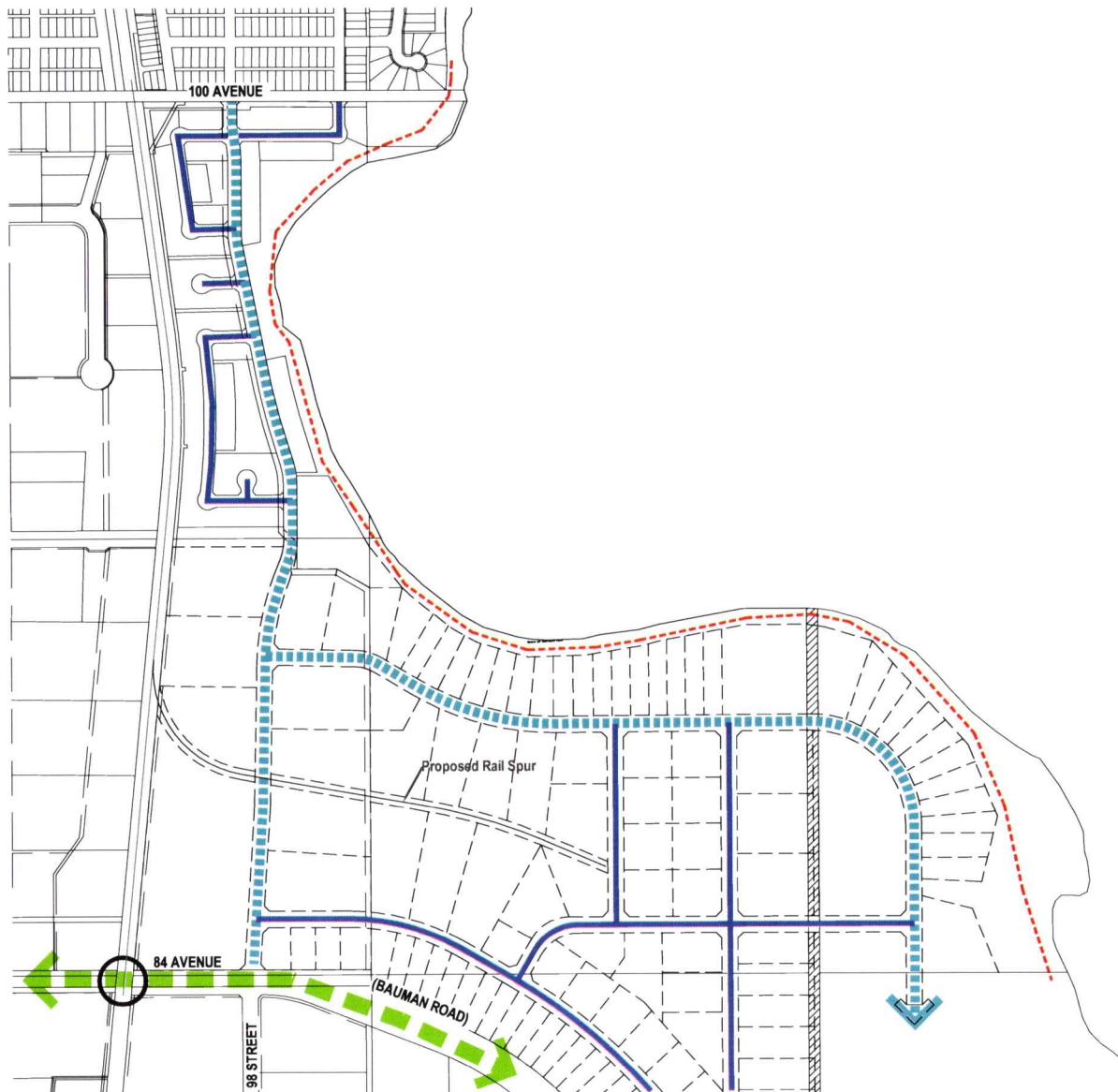
- A connection at the north end from the developed portion of Clairmont (extension of 98<sup>th</sup> Street); and
- Two collector connections to 84<sup>th</sup> Avenue (Bauman Road) at the south end of the Plan area.

Bauman Road is the only arterial roadway proposed for the area, located along the south boundary of the Plan area. This roadway provides a connection to the area's long term regional road network as illustrated on Map 5A.

Internal vehicle circulation is to be accommodated by a road system that has been designed to facilitate a separation of residential and industrial traffic. An analysis of future traffic forecasts concludes that the majority of the roads within the South Clairmont Lakeside development can be built to local standards. The main north-south road (98<sup>th</sup> Street) running through the area will carry enough volume to warrant it be built to a collector standard.

The heaviest traffic volume can be found in the southwest corner of the site where the industrial area is located. That portion of 98<sup>th</sup> Street cutting through the industrial area should be built to an industrial collector standard. Due to the high volume projected on this road, it is recommended that the road have channellization where it intersects Bauman Road. Separate left and right turn bays will be needed, as well as a separate through lane.

- 3.1.1 All roads in the Plan area are to be constructed to a paved standard in accordance with County specifications at the expense of the developer. Residential streets are to be constructed to an urban standard, while industrial roads may be constructed with a rural cross-section.
- 3.1.2 Areas of local topography are not conducive to the installation of an underground storm water system (See Map 8). In these areas, curbs with intermittent breaks to overland flow are required. In the industrial areas, it is proposed that a rural road standard be used to provide a cleansing mechanism for overland flows and to accommodate larger existing upstream flows.
- 3.1.3 Traffic impact assessments shall be prepared to identify potential improvements to all external roadways, including the intersection of Highway 2 and 84<sup>th</sup> Avenue (Bauman Road) if required. The County will cause construction of any improvements to Highway 2 that are required as a result of development in the Plan area to occur to the satisfaction of, and at no cost to, Alberta Transportation.
- 3.1.4 In order to facilitate pedestrian and bicycle movement within the Plan area and provide linkages to adjacent areas, a trail system shall be developed in proximity to the lakeshore.
- 3.1.5 The County may impose a transportation levy in the NW 13 and SW 24 to assist in paying for future upgrades to the Highway 2 – 84<sup>th</sup> Avenue (Bauman Road) intersection.



## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

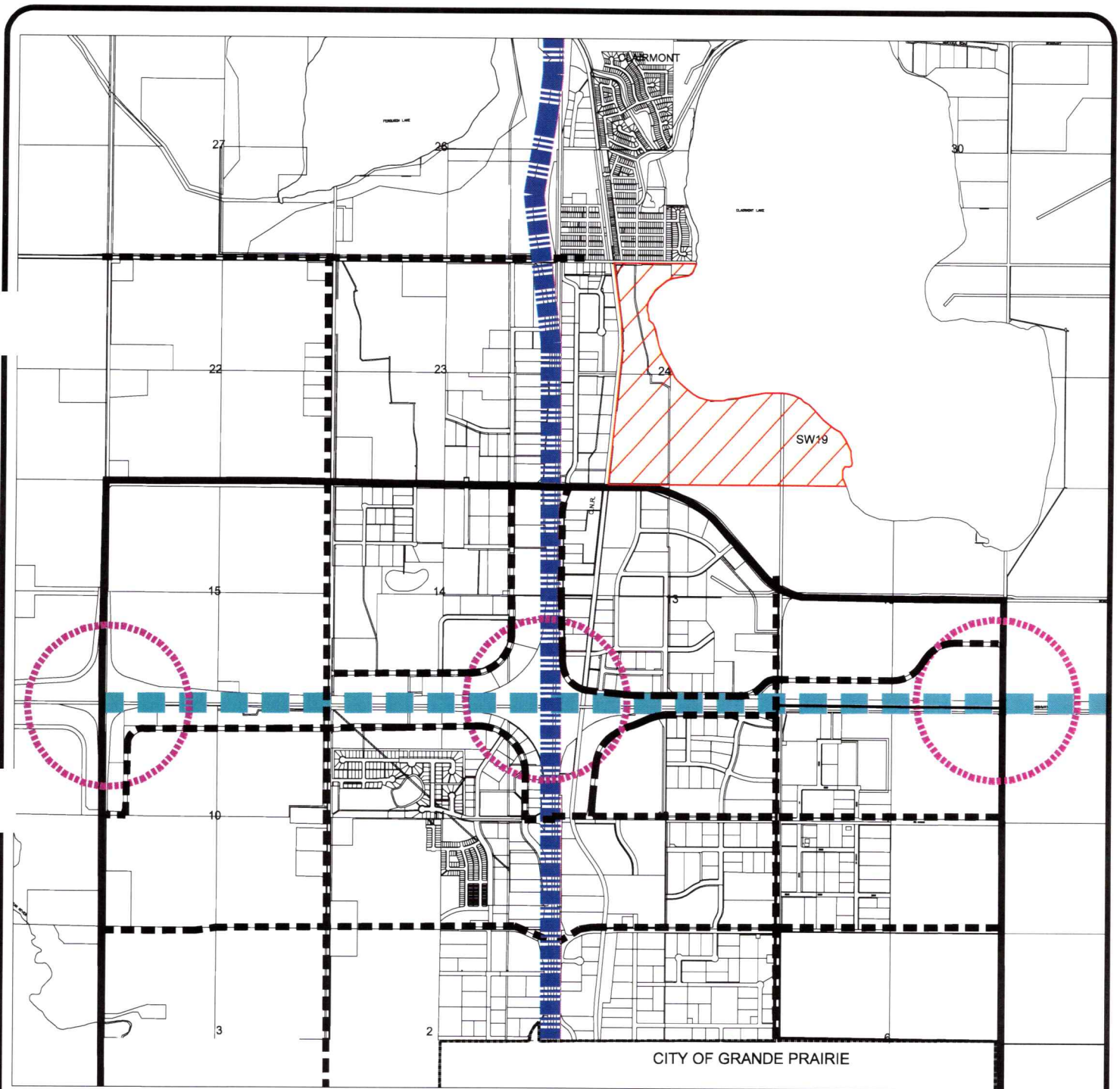
- - - - - ARTERIAL ROAD
- - - - - COLLECTOR ROAD
- LOCAL ROAD
- - - - - ASPHALT TRAIL
- RAIL CROSSING
- ROAD CLOSURE

September 2014



## Map 5 Transportation Network





# LAKESIDE AREA STRUCTURE PLAN MAP 5A - FUTURE REGIONAL TRANSPORTATION NETWORK



PLAN AREA



HIGHWAY 2



HIGHWAY 43



ARTERIAL ROAD



INTERCHANGE



SCALE: N.T.S.

September 2014



- 3.1.6 As the existing road allowance located between SE 24 and SW 19 is not required to accommodate the internal road network, this right-of-way shall be closed at the time of subdivision of the adjacent lands.
- 3.1.7 If the proposed road standards imposed by the County (to a rural standard) are inconsistent with development of the area to an urban standard, the developer may propose for consideration, an urban model that is consistent with generally accepted engineering standards.

### **3.2 Sanitary Sewer**

The sanitary sewer for the Plan area is serviced by two drainage basins. As illustrated in Map 6A, two lift stations are proposed for the Plan area. The proposed Lakeside North lift station located in the NW 24 is to serve the northerly portion of the Plan area via a gravity sanitary system. A second temporary lift station in the SW 24 will service the remainder of the lands via a second gravity sanitary sewer system. The overall sanitary plan, indicating the drainage patterns and which areas benefit from each lift station is defined in Map 6A.

#### ***Lakeside North Lift Station***

The northwest portion of the Plan area will drain into the Lakeside North lift station. The development of this new lift station can occur by one of two methods:

1. Design the lift station to only handle the drainage basin as shown in Map 6A and potentially excess flows from the Crossroads area. Sewage from this area will then pump into an upgraded Clairmont force main which will need to be extended westerly along 100<sup>th</sup> Avenue.
2. Design the lift station so it can be used as a regional lift station to combine the flows of various existing lift stations including Northgate, Lakeside East, Crossroads, the existing Clairmont lift stations and any temporary lift stations. This is consistent with previous sanitary sewage studies.

A final Sanitary Master Plan will provide a recommendation as to which option will be incorporated. Levies will need to be assessed based on the ultimate design that is approved. If the Lakeside North lift station is only designed for the Lakeside and Crossroads ASP areas, a levy of \$2,700/ha would need to be assessed to cover the costs.

Alternatively, development costs for the lift station could be recovered through an endeavour to assist.

If the County chooses to develop a regional lift station then it is recommended that the aforementioned levy of \$2,700/ha still be assessed, as well as those applicable under Bylaw 2657, which covers the costs of regional upgrades.

The Lakeside North Lift Station needs to take into consideration the full impact of flows from Crossroads. Should flows from Crossroads reach design rates it will be necessary to develop a relief line identified as Line A on Map 6A. This would split the flows between Northgate and Lakeside. The major trunk that captures the western flows in the Lakeside Plan has been



## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

- DRAINAGE BOUNDARY
- EXISTING SEWER
- PROPOSED SEWER
- POSSIBLE RELIEF LINES
- TEMPORARY FORCEMAIN
- LOW PRESSURE  
SANITARY SEWER
- PERMANENT LIFT STATION
- TEMPORARY LIFT STATION

A & B - POTENTIAL RELIEF LINE IDENTIFIERS

Note:

All lines are 200mm unless otherwise noted.

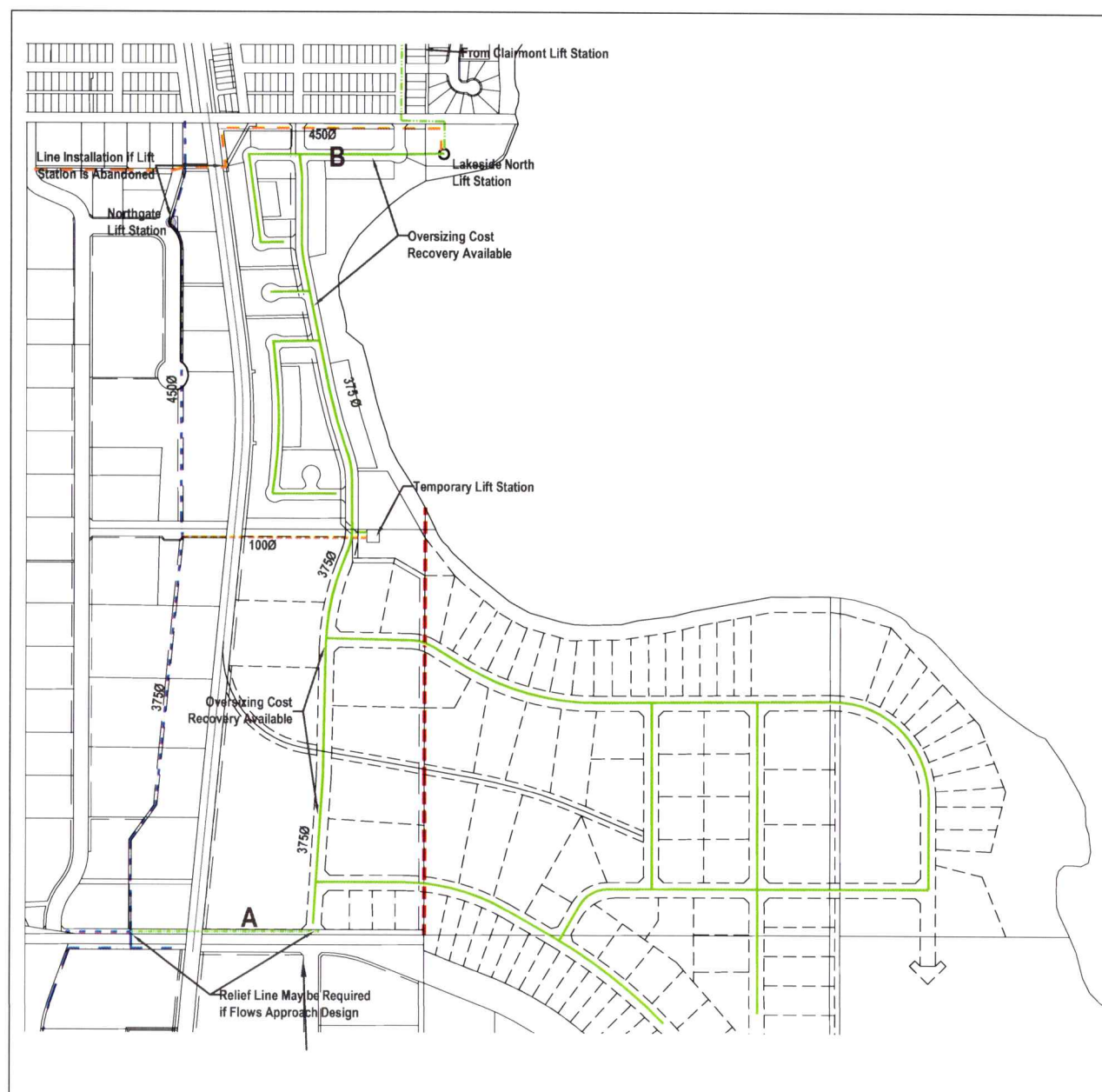


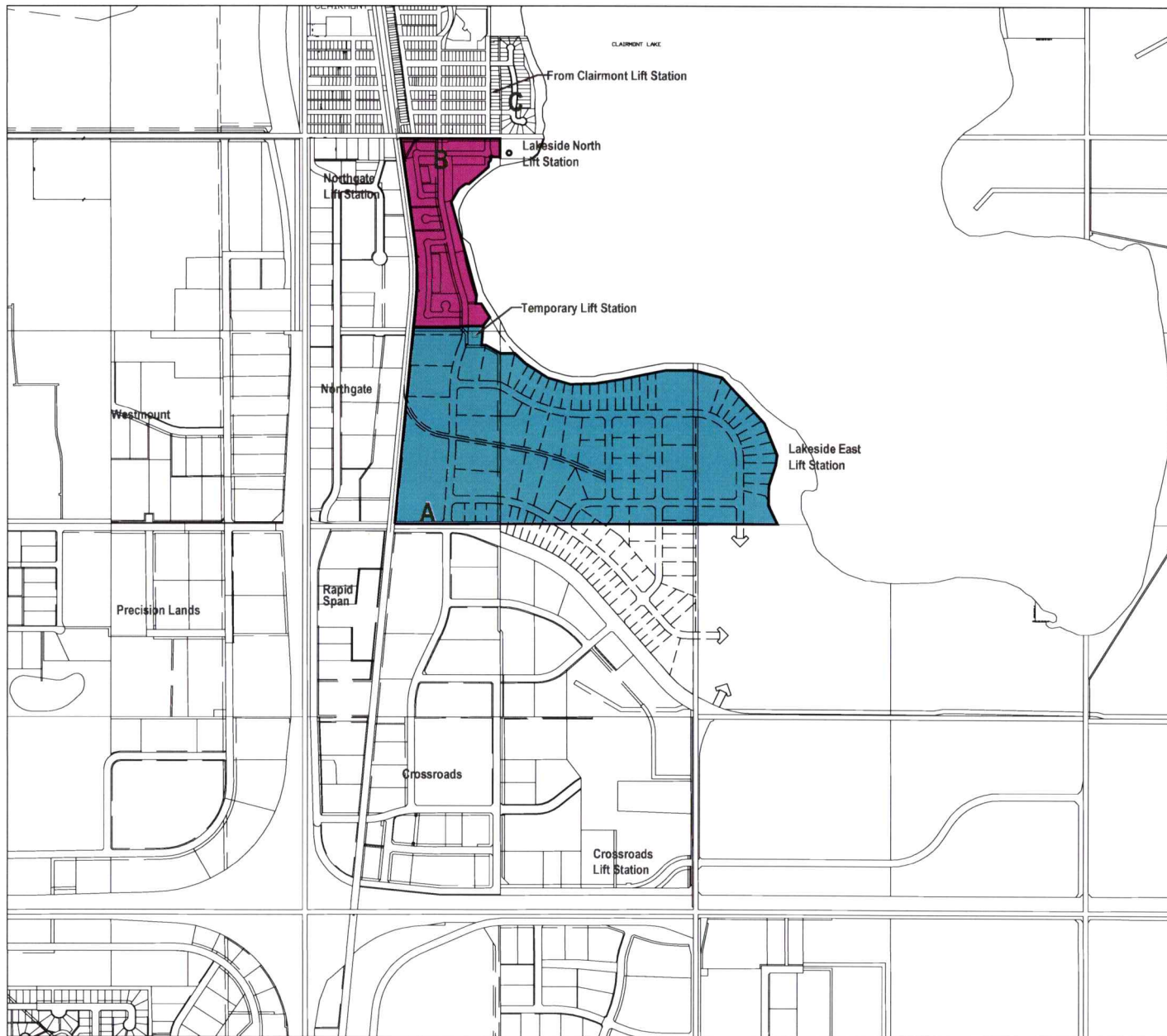
September 2014

SCALE : N.T.S

## Map 6

## Sanitary Servicing Concept





## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

- Contributing to  
Temporary Lift Station if  
Necessary (100.8 ha)
- Contributing to Lakeside  
North Lift Station  
(20.2 ha)

Note:  
Lines B & C, as well as the expansion of the Lakeside North lift  
station beyond local requirements and into a regional lift  
station, would be considered part of the existing Clairmont levy.

All plan area contributes temporary lift station



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SCALE : N.T.S.

## Map 6A Sanitary - Contributing Areas



oversized to accommodate the potential for accepting these excess flows. A cost recovery in favour of the Lakeside developers will need to be recovered from those benefiting lands identified in Map 6A, at a rate of approximately \$250/ha, or through an endeavour to assist.

It is likely that a temporary lift station may need to be constructed in the SW 24 at the Developer's expense if a right-of-way access across the NW 24 cannot be secured. It may also be built if funds are not available to construct a regional system at the Lakeside North Lift Station. Sewage from this temporary lift station would be directed westerly into the Northgate system. The lift station should be designed to handle all the lands draining north from the S½ 24 as well as the lands in this Plan area. Recovery of costs for this temporary lift station would be assessed on an endeavour to assist basis.

Aquatera will monitor flows on a regular basis to determine the need and timing for the infrastructure proposed in this ASP.

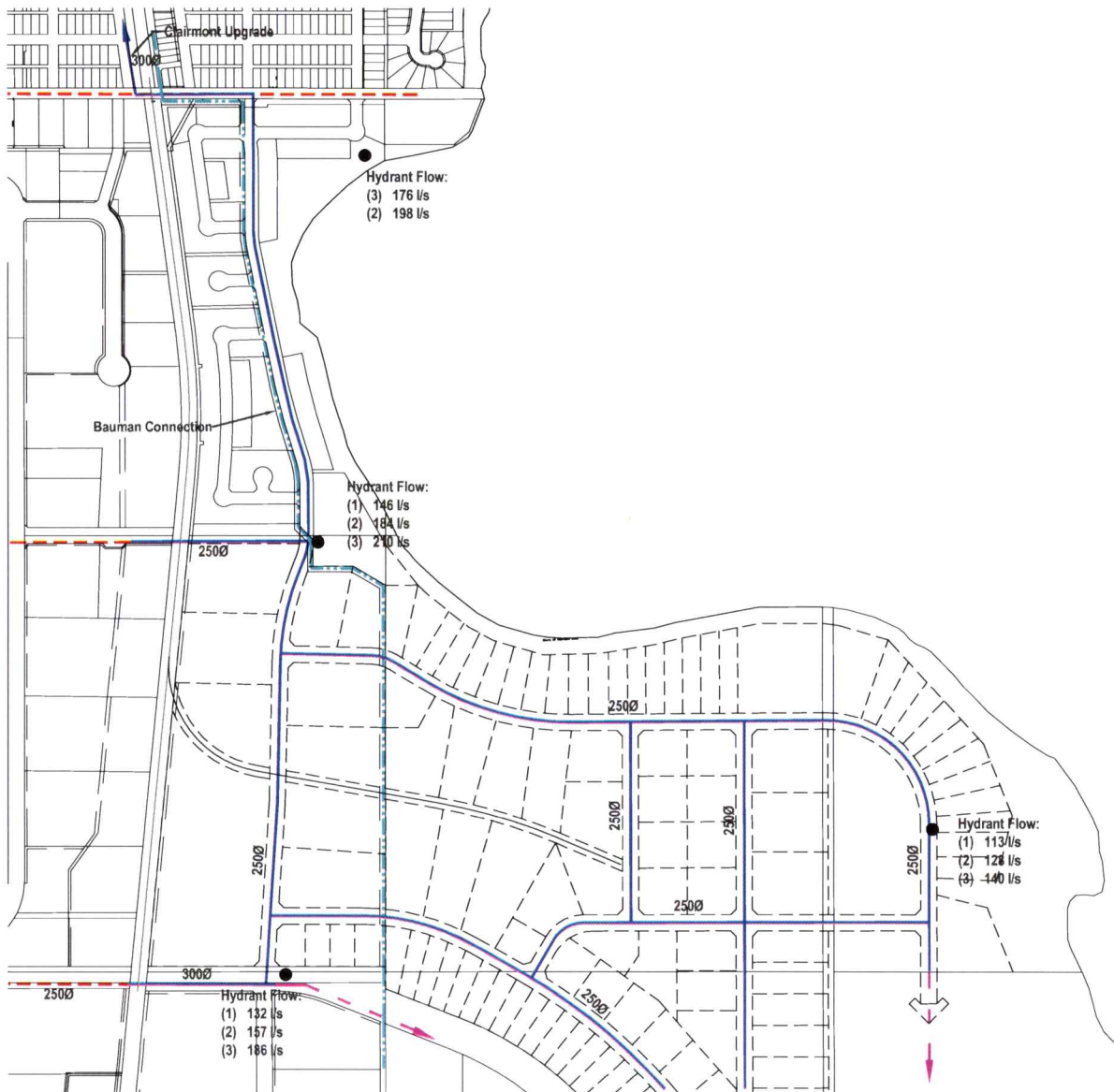
- 3.2.1 All development in the Plan area will be serviced with municipal sanitary sewer as indicated on Map 6. Detailed engineering design shall be provided by the developer for County / Aquatera review and approval at the subdivision review stage.
- 3.2.2 Existing private sewage disposal systems may remain in place until the municipal sanitary sewer system is installed. When these services are available, the existing development must connect to the new system at the owner's expense.
- 3.2.3 The sanitary sewer system will be sized to accommodate the area identified on Map 6.
- 3.2.4 Where the development of an area is contingent upon a servicing system to be developed in another area outside the Plan area, the land may not be developed until the servicing is available.
- 3.2.5 All development is subject to Infrastructure Charges levied by Aquatera Utilities Inc.

### **3.3 Water Supply**

- 3.3.1 Water for this Plan area will come from crossover connections to water access points on the west side of the railroad and from points north in the hamlet of Clairmont.

A preliminary analysis shows there are sufficient flows to accommodate the 1200 IGPM (95 LPS) required by the County. The flows are sufficient on the west end but become progressively weaker as one moves to the east. Looping at a minimum of two locations is required, and should be implemented based on need and phasing requirements. In addition, improvements created by adding a new line from the Clairmont pump house to a location in Northgate would increase flows in the range of another 20 L/s.

Map 7 depicts the proposed location and sizing of the future water system. The Map also indicates the affects of various improvements to the potential flow rates.



## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- AQUATERA TRANSMISSION LINE
- FUTURE EXTENSIONS
- THEORETICAL HYDRANT FLOWS

#### Hydrant Flows:

- (1) Without Bauman Connection.
- (2) With Bauman Connection.
- (3) With Bauman Connection and Clairmont Upgrade.

#### Note:

All lines are 200mm unless otherwise noted.



SCALE : N.T.S.

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## Map 7 Water System



- 3.3.2 If fire flows to industrial or commercial lots are insufficient to meet FUS guidelines or building codes then alternative internal pumps and sprinklers may be needed to mitigate risks.
- 3.3.3 The County may establish an offsite levy to assist in providing infrastructure required to service this development.
- 3.3.4 The County will require benefiting land owners to compensate developers for expenses incurred in providing municipal services to the area.

### **3.4 Stormwater Management**

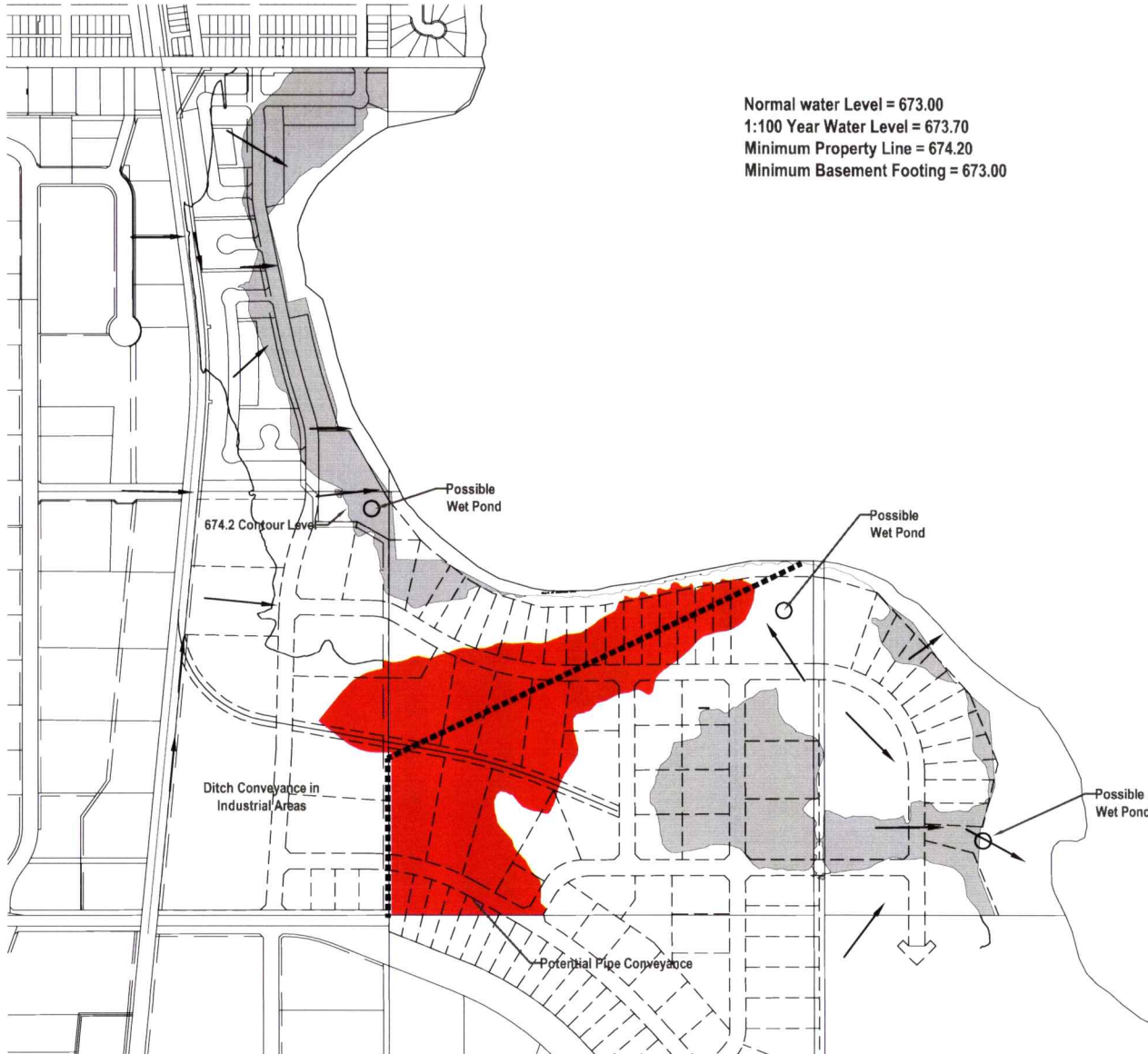
Stormwater management shall be required for quantity and quality control. Quantity control is required to reduce the potential impacts of urban storm water run-off on drainage ditches and watercourses (i.e. higher rates of erosion), and limit the potential for flooding on developed lands during major storm events. Quality control is required to mitigate any potential for environmental contamination of nearby bodies of water.

The stormwater from this area travels in multiple directions but ultimately the water works its way towards the shores of Clairmont Lake. Due to the small topographical differences between the lake and the surrounding lands it is not possible to incorporate a typical urban underground drainage system. Only those areas identified in Map 8 have the potential for such a system. As a result many of these areas, although designed in an urban model with regards to curbing, will require incorporation of overland flows as part of their conveyance system.

When designing in the Lakeside area it will be important to consider the variable water levels in Clairmont Lake. Clairmont Lake is regulated by a weir constructed by Ducks Unlimited. The normal water level is considered to be 673.00m, while the 1:100 year level has been determined to be 673.7m. As a result, no development shall have property line elevations lower than 674.2m. This will allow for 0.5m of freeboard in the event of the largest design storm. This is reasonable based on the size of the lake and nature of the control structure. Geotechnical assessment of soil conditions and water tables should be undertaken to determine footing elevation restrictions adjacent the lake perimeter. To maintain the property line elevations previously described it will be necessary to fill portions of the land near the lake. These areas are defined in Map 9.

The County may implement a review process at the time of development permit to ensure any industrial businesses wishing to locate within the Plan area do not impose any unreasonable environmental risk to the area as part of their normal operations. Based on the nature of the zoning only certain areas will be at elevated risk of this occurring.

- 3.4.1 Stormwater management shall be required for quantity and quality control. Storm drainage will be provided as indicated on Map 8.
- 3.4.2 A storm drainage master plan for the drainage areas will be prepared for the area. This plan will identify development standards for storm ponds and all required drainage passageways that need to be protected and the timing of the required improvements. The improvements must be done no later than the time the land is accepted as Municipal Reserve. This Master Plan will



## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

- PIPE CONVEYANCE
- DITCH AND OVERLAND CONVEYANCE
- 674.2 CONTOUR LEVEL
- FILL REQUIRED (OVERLAND FLOW)
- AREAS WHERE STORM PIPE MAY BE USED
- OVERLAND FLOW
- DRAINAGE BOUNDARY

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## Map 8 Stormwater Management



consider, and provide recommendations for, the entire drainage basins impacted by development in the Plan area and identify how stormwater will be managed within the drainage basins at build-out. This may involve modeling of storm water run-off to ensure that downstream areas will be adequately protected from flooding in later years and recommend levies that will address the costs of downstream improvements.

In addition, development permit applications shall be accompanied by a comprehensive Site Drainage Plan to address the regulation of post-development runoff. Such plans shall utilize a combination of Best Management Practices respecting the control of runoff volume, discharge rates, and stormwater quality to ensure that the water quality of Clairmont Lake is not negatively affected.

- 3.4.3 Throughout the Plan area it is conceivable, based on the topography, that PULs or drainage easements will be required to properly handle overland drainage.
- 3.4.4 Any stormwater pond required for the development will be designated as a Public Utility lot below the 1 in 5 year storm event.

### **3.5 Shallow Utilities**

- 3.5.1 All shallow utilities (natural gas, power, telephone) are to be extended into the Plan area by the individual franchise holders as required.
- 3.5.2 Any overhead power lines located adjacent to residential areas are to be installed underground at the Developer's expense.

### **3.6 Lot Grading**

- 3.6.1 A lot grading plan will be prepared by the Developer in accordance with County standards, with the intent that all future building projects conform to the grading plan.
- 3.6.2 The grading plan is intended to ensure that surface drainage from all lots is directed to the roadside ditches and storm retention ponds as provided in Section 3.4.
- 3.6.3 Special consideration will be needed to avoid lake level variations as described in Section 3.4.

## **4.0 IMPLEMENTATION**

### **4.1 Phasing**

The proposed phasing of development in the Plan area will be dependent on market conditions and the logical extension of municipal services.

As illustrated in Map 9, it is intended that development of the industrial area proceed first. Phasing of residential development is to commence from the northwest and proceed southerly.

### **4.2 Proposed Zoning**

Proposed zoning for the Plan area is identified in Map 10. The areas slated for residential development will be zoned under the Rural Residential RR-2 District of the Land Use Bylaw. The industrial areas will be zoned as Rural Light Industrial (RM-1) and Rural Medium Industrial (RM-2) for the light industrial and general industrial areas respectively. All zoning changes will be made in advance of subdivision approval.

### **4.3 Subdivision and Development**

- 4.3.1 All developers shall be required enter into development agreements with the County as a condition of subdivision approval. The matters to be included in these agreements will include but not be limited to the provision of roads and municipal services, and the payment of off-site levies.
- 4.3.2 Detailed engineering drawings and specifications for roads, water, sanitary sewer, and storm drainage shall be prepared by the developer and approved by the County.
- 4.3.3 The lot sizes and yields identified in this Plan are conceptual and may be altered at the time of subdivision without requiring an amendment to this Plan.
- 4.3.4 The resubdivision of lots in the Plan area may be supported provided that the resulting lot sizes meet the minimum requirements of the Land Use Bylaw, and the capacity of servicing systems is not negatively affected. Where possible, buildings should be sited in a way that allows for the future resubdivision of lots.
- 4.3.5 Where municipal infrastructure is developed that provides a benefit to lands outside of the Plan area, the County will assist in collecting a portion of the costs of the infrastructure from the said lands that benefit from the infrastructure at the time the lands that benefit initiate subdivision or development activities.
- 4.3.6 All levies identified in the plan shall be collected at the time of subdivision.
- 4.3.7 Due to the archaeological resource potential of the subject lands due to its proximity to Clairmont Lake, Alberta Community Development should be consulted in advance of subdivision approval to determine if Historical Resource Impact Assessments are required.

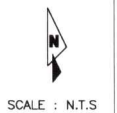


## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

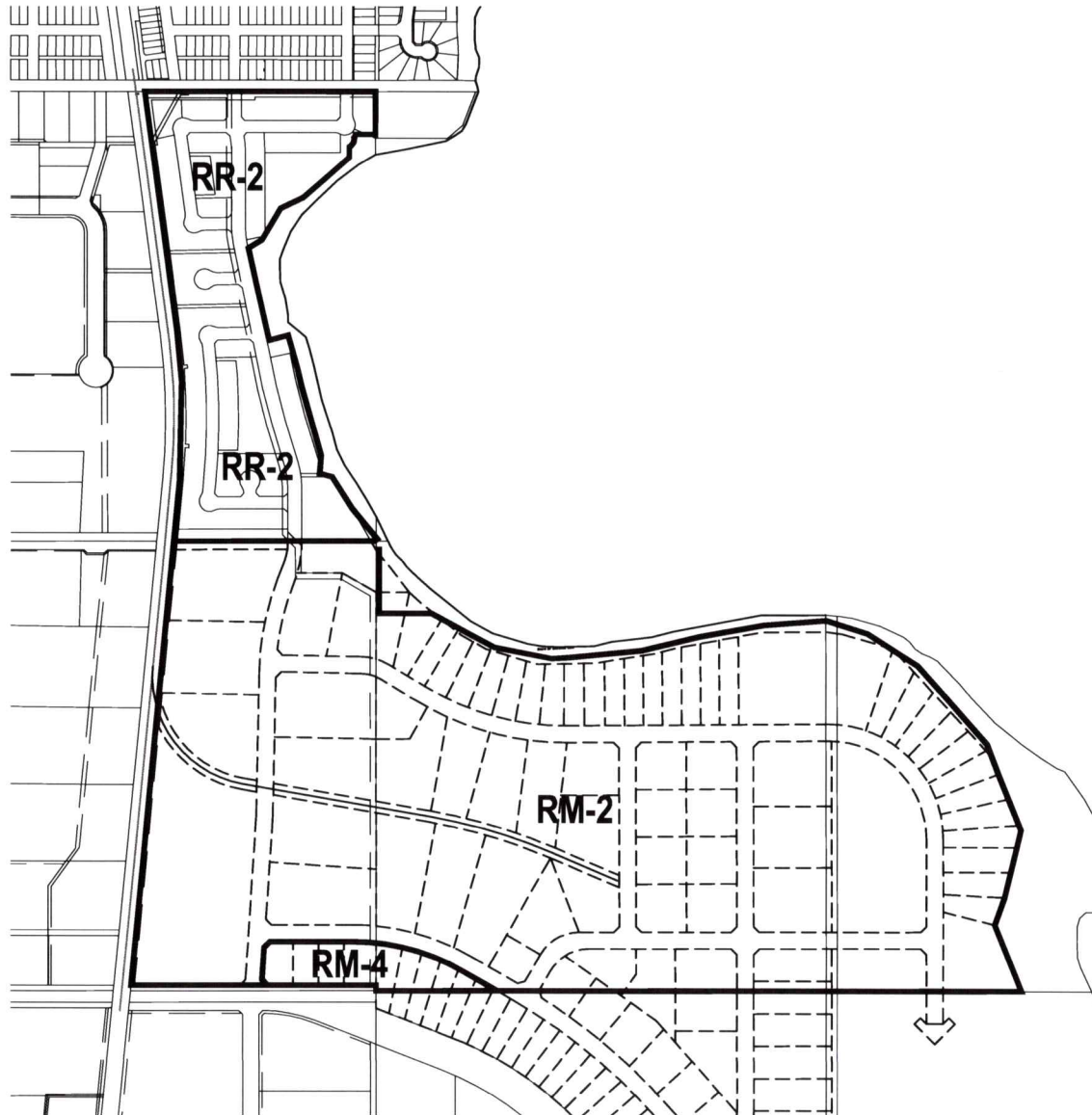
 PHASE BOUNDARIES

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Map 9  
Phasing





## LAKESIDE AREA STRUCTURE PLAN

### LEGEND

- RR-2** RURAL RESIDENTIAL
- RM-2** RURAL MEDIUM INDUSTRIAL
- RM-4** HIGHWAY INDUSTRIAL

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**Map 10**  
**Zoning**



#### **4.4 High-Visibility Sites**

- 4.4.1 Notwithstanding the requirements contained in the County's Land Use Bylaw<sup>3</sup>, the following design guidelines are to be applied to all developments in the Plan area located along arterial roadways and other high-visibility corridors:
- a) That portion of any lot abutting a major roadway identified as a high-visibility corridor is to be landscaped to the satisfaction of the County. The landscaped area is to consist of no less than 5% of the area of the subject lot.
  - b) All development permit applications submitted to the County shall include a landscaping plan in accordance with Section 3.16 of the Land Use Bylaw.
  - c) Any outdoor storage areas that abut a major roadway shall be fenced and/or screened from view to the satisfaction of the County. Screening may take the form of fencing, berming soft landscaping or a combination of these.
  - d) All development permit applications submitted to the County shall include building elevation drawings illustrating proposed finishing materials, colours and signage.
  - e) All principal buildings are to be developed on permanent foundations. In addition no soft-walled structures will be permitted as principal buildings in high-visibility areas, but may be considered for approval as secondary buildings in approved outdoor storage areas.

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<sup>3</sup> As an alternative to these design guidelines, the County may instead develop a high visibility site overlay for inclusion in the Land Use Bylaw.