



Willow Creek Conceptual Scheme



Bylaw C-6515-2007, Adopted July 31, 2007

MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44
Department of Planning and Community Services

Acknowledgements



UMA Engineering Ltd. would like to thank its client, Encore Prime Development Ltd., for their foresight and vision in preparing rural land for residential development in a more sustainable manner. We would also like to express our appreciation to the Municipal District of Rocky View for their support and input.

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The Willow Creek Vision

The Willow Creek Conceptual Scheme envisions the creation of a prestigious country residential community with a subdivision design based on providing open space in conjunction with lot sizes of 2 acres and larger.

The Willow Creek subdivision pattern is characterized by an abundance of public open space containing a centrally-located linear water feature, an internal pedestrian and interpretive trail network and naturalized landscaping. The central open space spine provides opportunity for passive recreation activities for area residents located both within and adjacent to the Plan area. Willow Creek is a high quality community that is pedestrian and environmentally sensitive.

The key components of Willow Creek are:

- Creation of a central public open space area that provides for local and regional stormwater management, habitat biodiversity and opportunity for passive recreation;
- Implementation of a Low Impact Ecosystem approach to stormwater management concept that addresses stormwater issues within the Plan Area, improves existing stormwater concerns affecting adjacent lands, and provides for the restoration and creation of several engineered wetlands and related interpretive facilities;
- Implementation of significant landscaping improvements, particularly the planting of native/naturalized vegetation within the open space areas;
- Implementation of advanced wastewater management to effectively reduce the footprint for septic tile fields;
- Creation of a pedestrian network located throughout the central portion of the site with full public access available to adjacent landowners; and
- Implementation of a development scenario within the SW 36-25-2-W5 that enhances the subdivision potential of two areas of relatively larger land holdings (in that vicinity) located immediately to the north and south of the Willow Creek area.

Development within the Plan Area complements the surrounding community and maintains and enhances the rural ambience of the Foothills landscape. The quality of this subdivision increases the visual amenity for homeowners within the Plan area as well as the surrounding communities.

Subdivision within the Plan Area consists of parcel sizes of 2 acres and larger. Architectural controls established by the Developer create and maintain a high quality aesthetic for local housing that supports implementation of “green” building technologies thereby encouraging the new development to be sensitively integrated with the site’s natural environment and adjacent subdivisions.

Transportation and servicing infrastructure developed as part of the Willow Creek area increases the subdivision potential of the surrounding lands located immediately to the north and south.

Overall, the Plan responds to the Developer’s intent to maintain and enhance the site. The deliberate creation of open spaces, made possible by providing full MR dedication with additional land for a stormwater stream and open areas allows the Developer to create more open space amenities in addition to enabling a solution for stormwater challenges/issues presently affecting adjacent lands.

1.0 Introduction

1.1 Purpose

This Conceptual Scheme is a non-statutory planning document adopted via bylaw by the Council of the Municipal District of Rocky View No. 44. It addresses planning and development issues such as generalized land uses, provision of infrastructure, environmental issues, traffic, and the impact of the development on surrounding land uses. This Conceptual Scheme and its supplementary information provide concise policy direction regarding the development of all lands within the Plan area.

The overall goal of the Willow Creek Conceptual Scheme is to enable the creation of a comprehensively planned community that incorporates enhanced design, aesthetic and environmental standards in accordance with the provisions of the Bears paw Area Structure Plan and the June 12, 2007 motion of Council.

1.2 Background

Encore Prime Development Inc. (Encore) plans to develop a new subdivision within the SW 36-25-3-W5M (approximately 160 acres). At the discretion of MD Council, the Conceptual Scheme boundary was expanded to include two pockets of larger land holdings located directly north and south of the SW 36 within portions of NW 36-25-3-W5M (approximately 35 acres) and NW 25-25-3-W5M (approximately 54 acres). The resulting Conceptual Scheme area covers approximately 249 acres.

Encore determined the individual owners with interests on the periphery of the SW 36-25-3-W5M are not interested in immediately pursuing further subdivision and development of their properties at this time. However, several owners indicated they may wish to pursue additional development in the near future.

The Conceptual Scheme establishes a policy framework and a general development strategy to enable Encore to create a new country residential subdivision within the SW 36-25-3-W5M (referred to as the “Willow Creek area”). Additionally, the Conceptual Scheme creates expectations for anticipated development within the lands immediately adjacent to the Willow Creek area (herein referred to as “Future Development Cell A” - Part of NW 36-25-3-W5M and “Future Development Cell B” - Part of NW 25-25-3-W5M including 54 ac), as shown on **Figure 1** – Location Plan and Development Cells. The Conceptual Scheme includes policy provisions that require the Developer of the Willow Creek area to provide transportation and servicing connections as part of their subdivision designed to enhance the subdivision potential for Future Development Cells A & B.

1.3 The Council Motion

Council directed the preparation of a Conceptual Scheme in support of a planned residential community anticipated within the subject land. On June 12, 2007 Council indicated that the Conceptual Scheme should include, but not be limited to a description and assessment of the following items:

1. Existing Situation - A baseline description and evaluation of the impacts on development of the following matters within the Conceptual Scheme area:
 - existing land use, ownership and development;
 - topography, soil, vegetation and geotechnical conditions;
 - existing utilities and transportation routes;
 - archaeological and historical consideration;
 - adjacent land uses;
 - environmental sensitivity and significance;

- Phase 1 Environmental Assessment and implementation of any recommendations from that report; and
- any other matters the Municipality requires to be investigated.

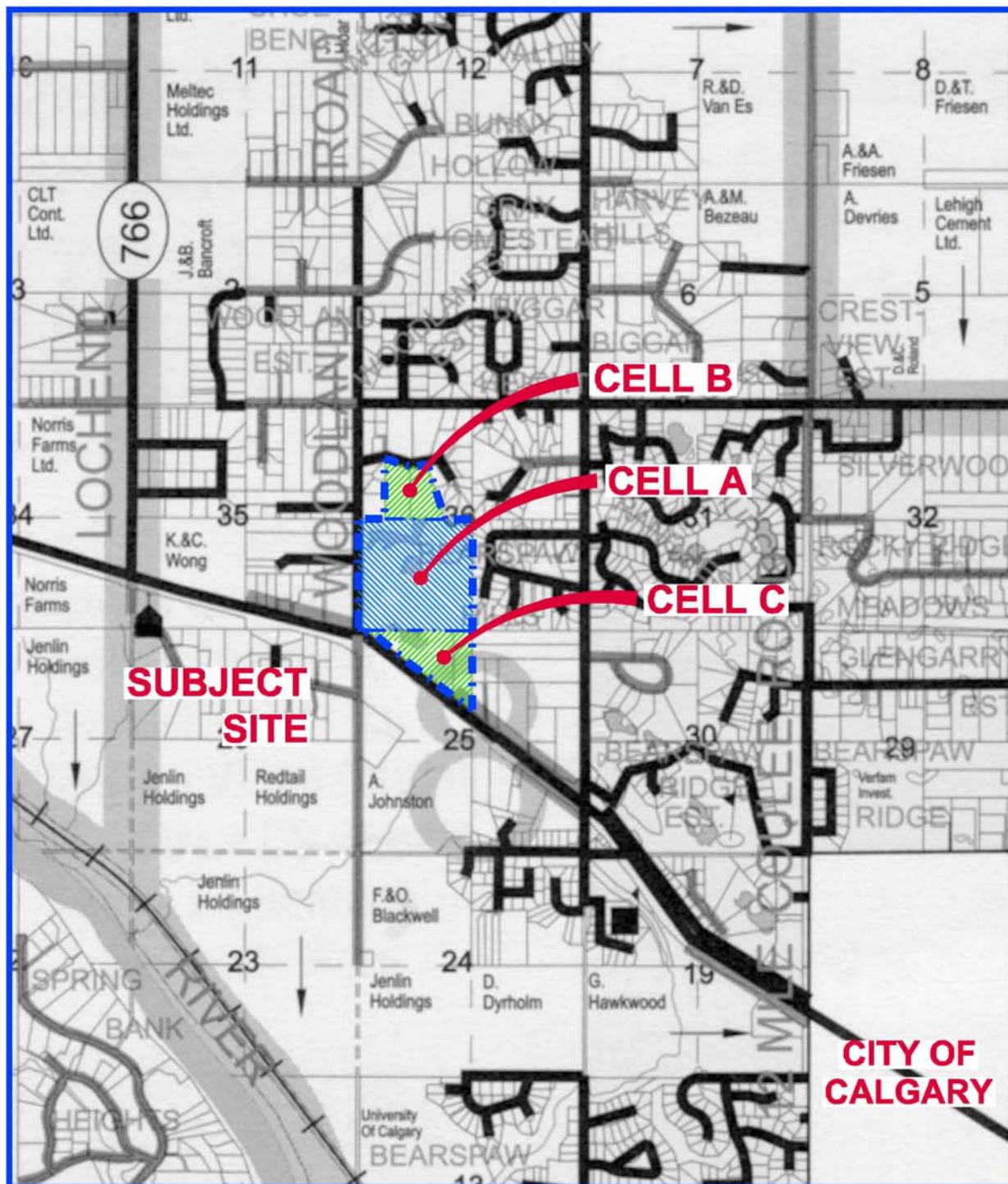
2. Regional Matters

- analysis of the regional transportation network including the access to Woodland Road, Woodland Lane, Burma Road and Highway 1A.;
- an assessment of the existing community service levels in the region including, but not limited to, policing, fire protection and ambulance and the cumulative impact of proposed development on the existing Municipal capabilities;
- ensure that the local stormwater management plan complies with the Regional Stormwater Management Plan for the Bears paw area;
- ensure that the development conforms with and meets the requirements of the Bears paw Area Structure Plan;
- the impacts of development on the surrounding residential areas; and
- any other matters the Municipality requires to be investigated.

3. Local Development Matters - A description and evaluation of the following matters describing development within the Conceptual Scheme area:

- a future land use scenario that results in an innovative development and an efficient use of the land base. The design scenario will detail lot design and configuration, parcel size and intended use at phased and full build out. The study should provide a rationale for the type of proposed use and timing within the context of the existing Bears paw Area Structure Plan;
- a description of the development concept that includes discussion on landscaping and architecture;
- an indication of involvement or non-involvement with the Voluntary Recreation Levy program as part of the future Development Agreement process;
- proposed open space including active and passive recreational areas;
- dedicated lands including, but not limited to, conservation easements, public utility lots, Municipal/school reserves; and if necessary, environmental reserves;
- measures to ensure the integration of the proposed development with existing and adjacent development in a manner that ensures compatibility with adjacent land uses;
- a Storm Water Management Plan that implements low impact development and Best Management Practices;
- a Utility Servicing Strategy that clearly demonstrates the required servicing levels and how these will be satisfied;
- innovative measures to provide for water conservation, water recycling and re-use;
- a Traffic Impact Assessment that addresses the location of existing and future transportation networks detailing traffic generation and its cumulative impacts on the road network, including necessary improvements;
- an Implementation Plan that addresses phasing and provides for a Construction Management Plan and a Weed Management Plan that implements controls to impede and remove weed growth control during the pre-build, build and post-build stages of development; thereby, maintaining a clean and orderly area for the duration of development;
- input from all directly and indirectly affected landowners, including both surface and mineral rights, within and adjacent to the Conceptual Scheme area throughout the preparation of the conceptual scheme, including a minimum of two (2) open house to gain feedback on the proposal; and
- any other matter the Municipality deems necessary.

The Willow Creek Conceptual Scheme has been prepared to respond to these above-referenced Council directives in accordance with the provisions of the Bears paw Area Structure Plan.



Map Source:
Municipal District of Rocky View No. 44 - 2005

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Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5

Location Plan
and Development Cells

Figure - 1

2.0 Conceptual Scheme Objectives

The Willow Creek Conceptual Scheme includes a policy framework to guide the implementation of a comprehensively-planned residential community that incorporates a high design, aesthetic and environmental standards. The following is a list of objectives for the Willow Creek Conceptual Scheme:

- To undertake a technical assessment of existing conditions within the Plan Area to identify development issues and establish appropriate and comprehensive solutions for addressing these issues.
- To implement a Public Engagement process intended to explore local landowner's preferences for conventional subdivision design.
- To establish a site-specific land use and subdivision development strategy and subdivision concept that is compatible with adjacent land uses and adds value to the surrounding community.
- To establish a Utility Servicing Strategy, with supporting infrastructure, that is appropriate for the development anticipated within the Willow Creek subdivision area.
- To establish a Stormwater Management strategy to respond to the surface drainage requirements within the Plan Area in addition to assisting with the mitigation of existing drainage issues that affect adjacent land.
- To establish a Transportation Network, with supporting infrastructure, that is appropriate for the development anticipated within the Plan Area.
- To establish an Open Space Network within the Plan Area with supporting infrastructure including a summary of expectations regarding ownership of open spaces and responsibilities for construction and on-going maintenance of improvements therein.
- To establish expectations regarding anticipated phasing of development within the Willow Creek subdivision area.
- To provide specific opportunities to extend transportation, utility and open space connections between the Willow Creek area and Future Development Cells A & B.

3.0 Site Features

3.1 Land Use Designation

As shown on **Figure 2 – Existing Parcel Designation**, the Willow Creek area is currently designated Ranch and Farm District (RF). Lands within Future Development Cell A are designated Residential One District (R1) and Residential Two District (R2) and lands within Future Development Cell B are designated as Agricultural Holdings (AH) and Ranch and Farm District (RF).

3.2 Adjacent Land Use

The Conceptual Scheme area is surrounded to the north, east and west by residential land uses (R1 and R2). Adjacent subdivision patterns include lots that range in size from two (2) acres and four (4) acres. The quarter section to the south is divided by Highway 1A and includes both Agricultural (AH) and Ranch and Farm (RF) districts.

3.3 Vegetation and Wildlife

Historically, the Willow Creek area was used for agricultural purposes with limited cultivation and, more recently, primarily for pasture land with a few trees located around the site's various farm buildings. Lands within Future Development Cell A include larger lot residential properties with several areas of mature tree stands. Lands within Future Development Cell B remained mostly as pasture with some natural low-lying areas that collect seasonal surface drainage.

3.4 Existing Development

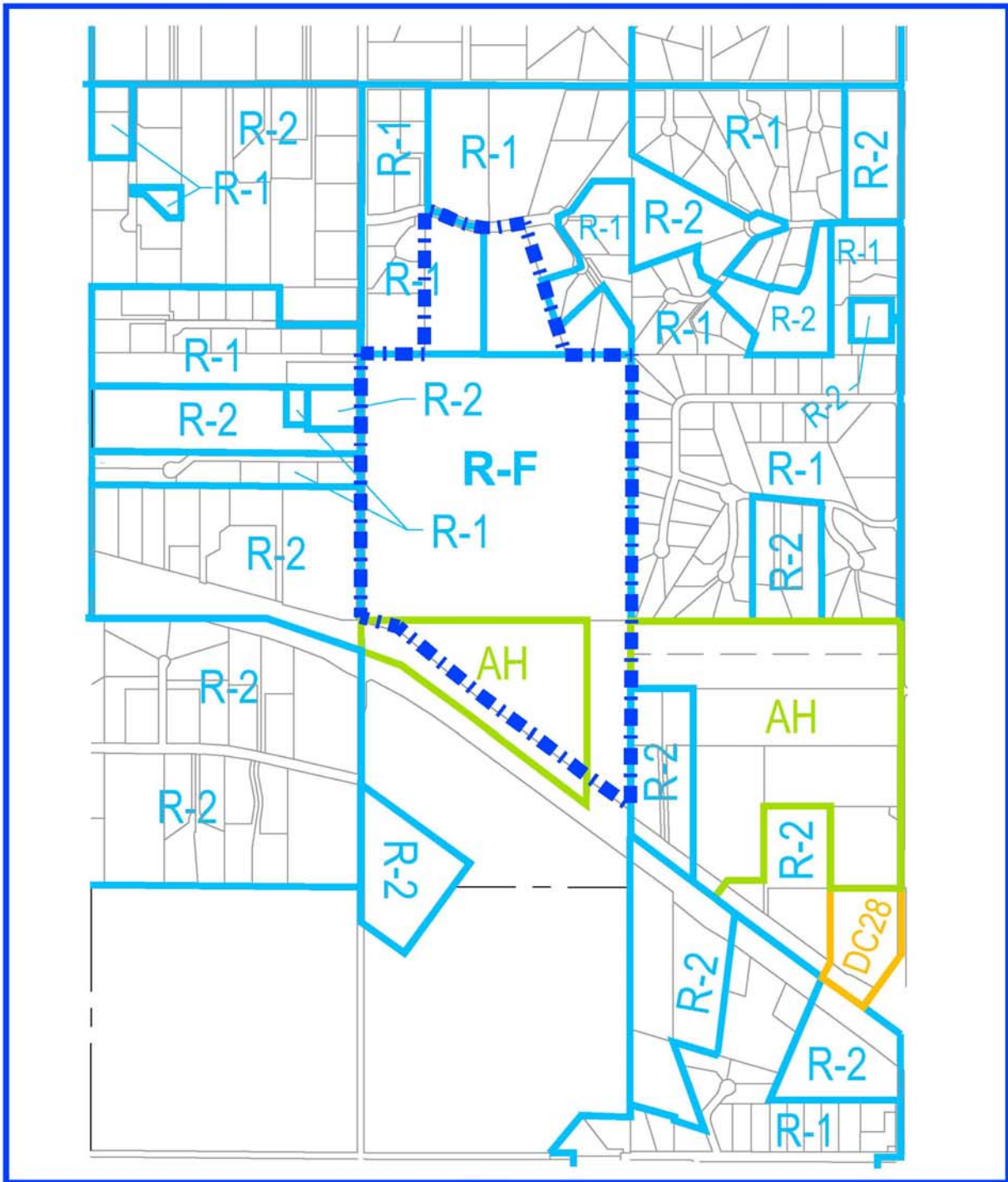
The Willow Creek area contains three single detached units, a barn, and numerous outbuildings. Future Development Cell A contains two residential parcels, each of which contains individual residences. Future Development Cell B contains two parcels, one is undeveloped and the other includes a single residence and related outbuildings.

3.5 Topography and Views

Generally, topography within the Willow Creek area consists of rolling terrain and varying slopes with elevation ranging from 1278 m in the southwest to 1310 m in the north. This area has some seasonal wet areas, generally in the north, with a stream in the southwest corner that widens into a shallow seasonal pond as shown on **Figure 3 - Topographical Map**. Currently, the sightlines allow for clear westerly views to the Rocky Mountains from most locations in the Willow Creek subdivision. Views occur southwards along the sloping terrain across Highway 1A toward the Bow River. The views from the east and directly west are country residential communities which also have the backdrop of the mountains.

The northern portion of Future Development Cell A contains more rolling topography compared to the south portion of the site, where the land is noticeably flatter. Future Development Cell B contains generally lower-lying lands including a drainage course that slopes towards the southeast.

The Plan Area generally enjoys outstanding views to the west and the Rocky Mountains beyond, refer to **Figure 4 – Proposed Concept Plan**.

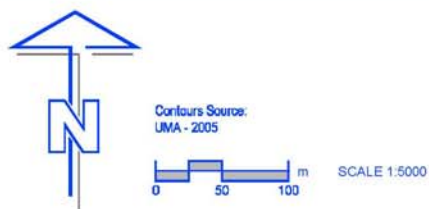
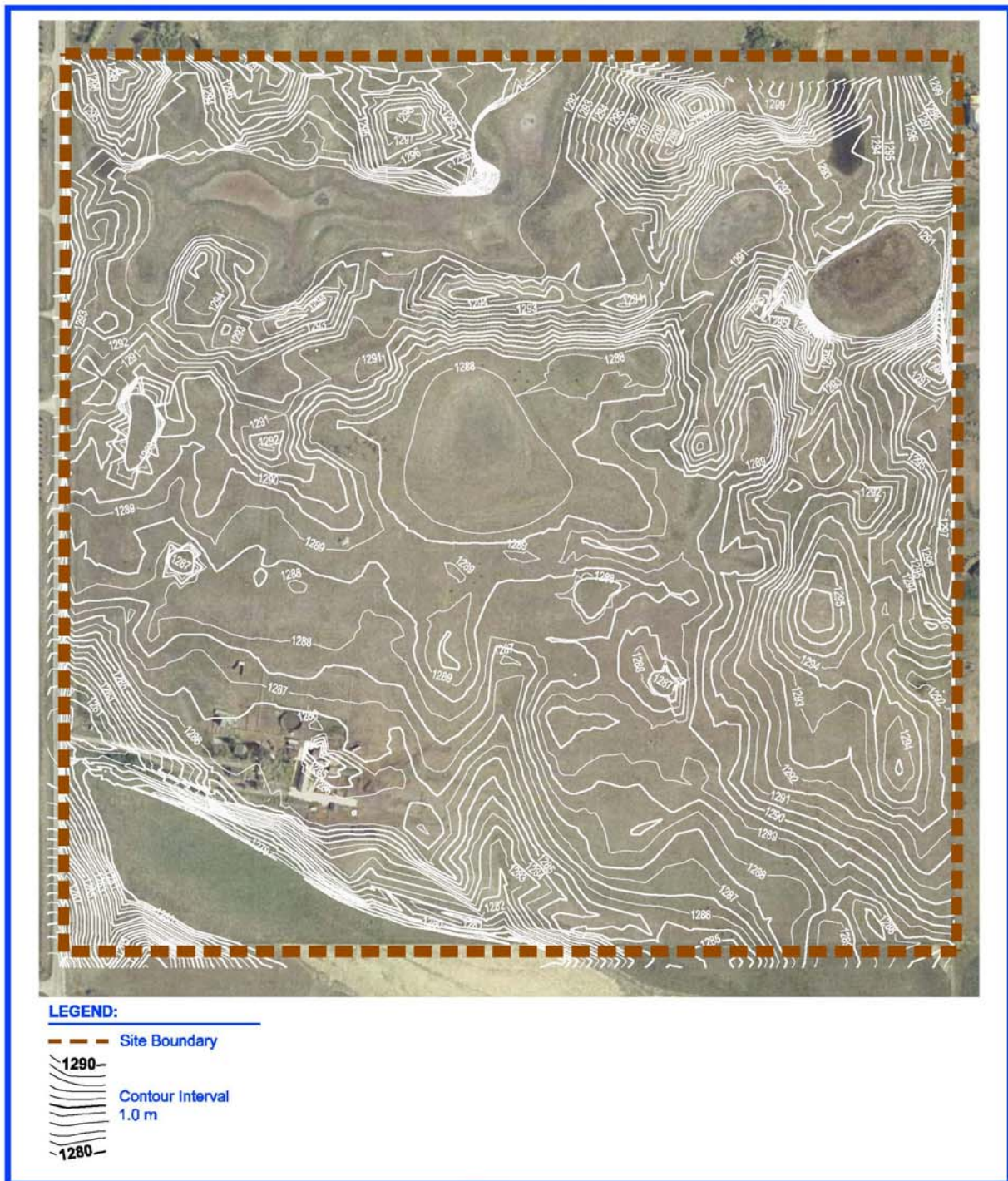


Zoning Designations Current
as of September 14, 2006

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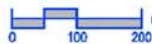
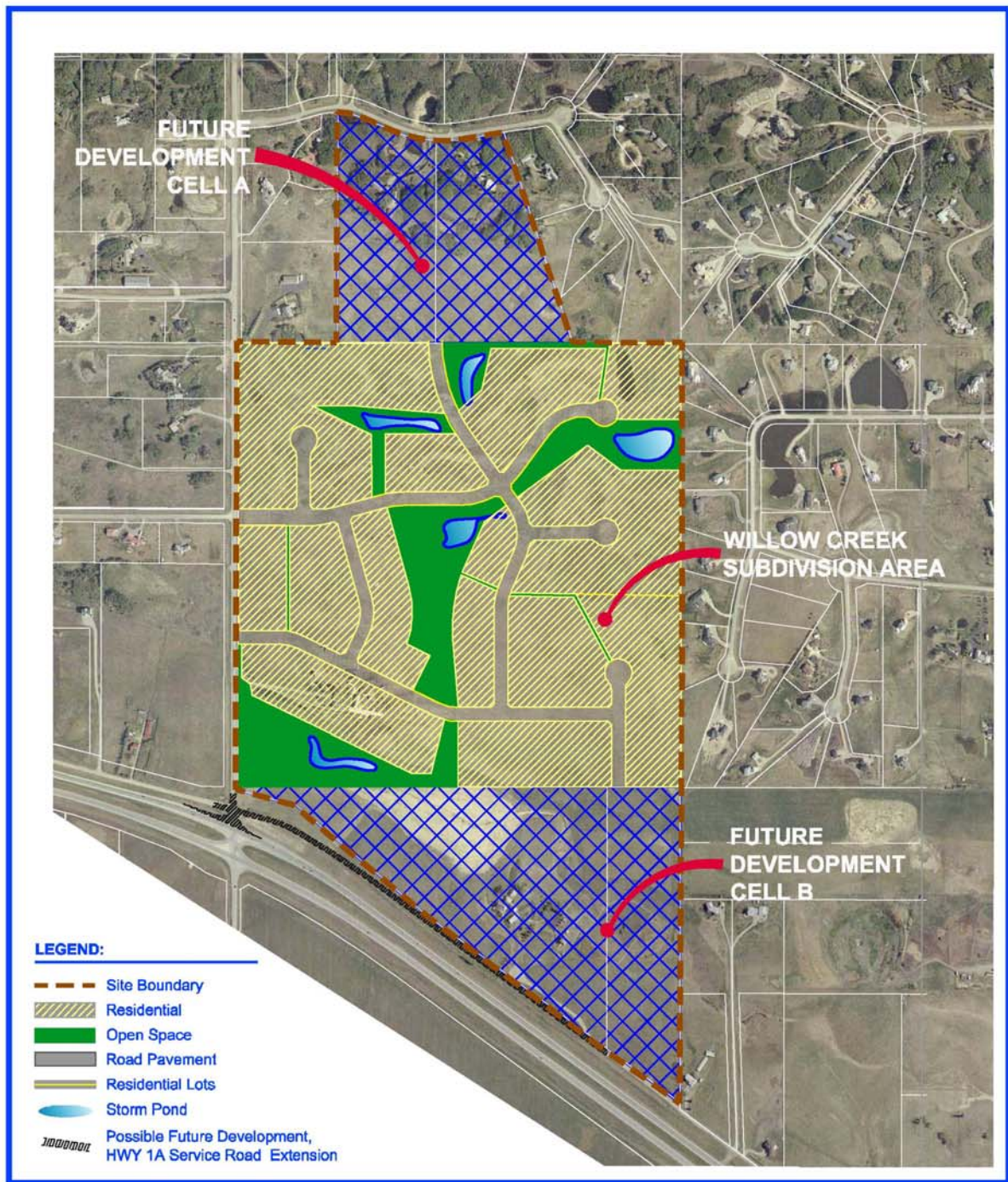
Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Existing Parcel Designation

Figure - 2



Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Topographical Map

Figure - 3



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Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Proposed Concept Plan

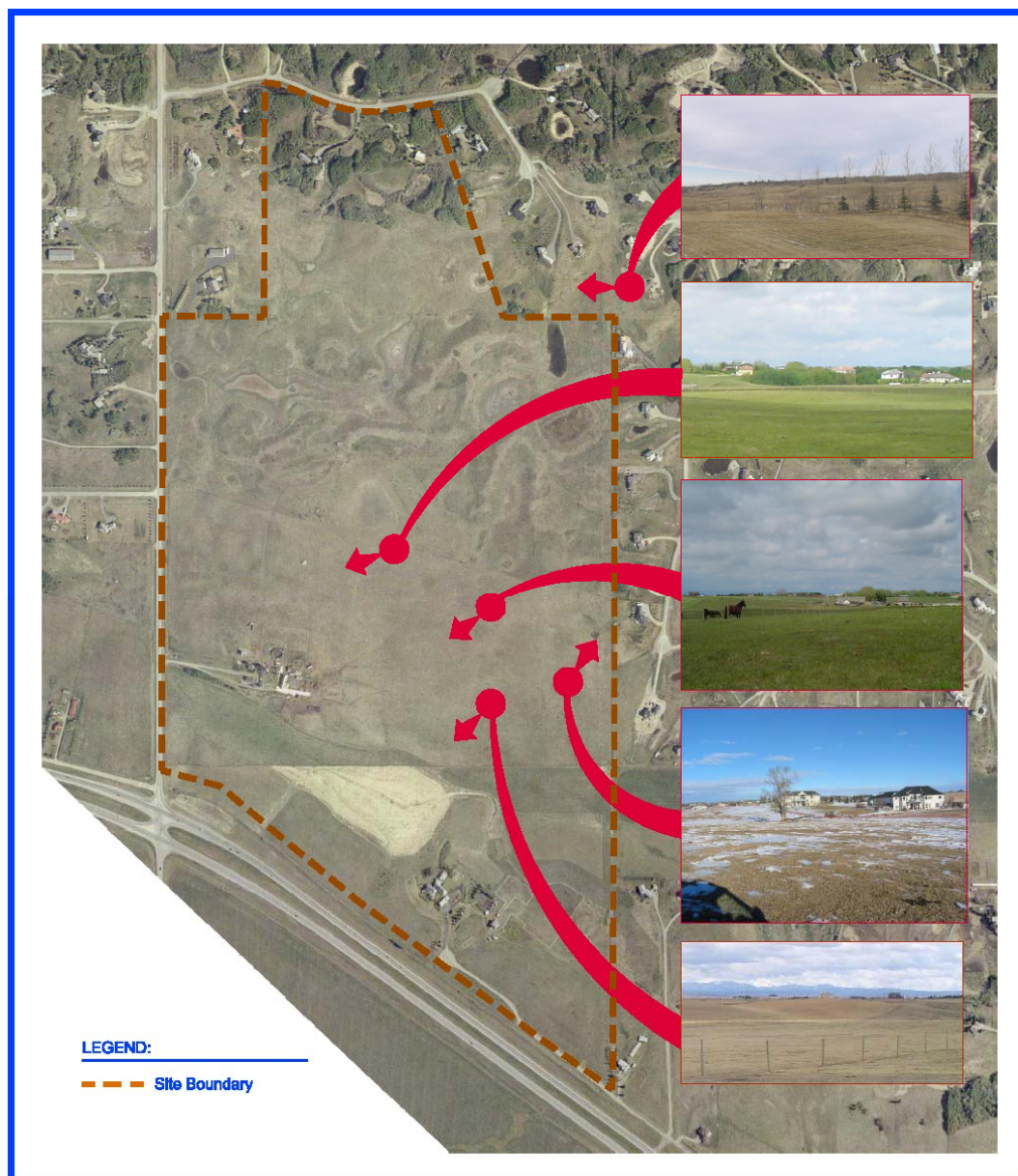
Figure - 4

The Willow Creek area contains 160 acres of open pastureland with expansive views in all directions including the country residential developments to the east, and the panoramic mountains to the south and west. Adjacent residential development consists primarily of two-acre lots, most with open manicured lawns.

Future Development Cell A contains two 18-acre residential parcels that include a mixture of open grassland with areas of mature tree stands.

Future Development Cell B contains a 54-acre agricultural parcel lot with direct, unobstructed views of the mountains from most locations.

Subdivision located to the west of the Plan Area (immediately west of Woodland Road) contains a mixture of two-acre and larger country residential lots with open areas and scattered treed areas.



3.6 Surface Drainage Considerations

As shown on **Figure 5 - Drainage and Stormwater Management**, surface drainage enters the Willow Creek area from the west at two locations, from the north at three locations, and from the east at one location. The Willow Creek area generally slopes from the northeast to the southwest with several areas of seasonal water bodies with standing pools.

The Willow Creek area also receives surface drainage from the north (Future Development Cell A) and eventually discharges to the south into a low area affecting the SW portion of the site and a portion of Future Development Cell B. Surface drainage eventually exits from Future Development Cell B and continues east into the Bears paw Golf Course ponds and, ultimately, discharges into the Bow River.

Recent storm events from June, 2005 have created drainage problems within some properties located directly east and north of the Plan area. Encore has allowed substantial amounts of water from these areas to be pumped onto the Willow Creek site on a temporary basis. This has resulted in excessive ponding throughout the site and flooding of the existing farm buildings. The stormwater concept envisioned by this Plan aims to alleviate these offsite and resulting onsite drainage concerns.

3.7 Geotechnical Considerations

A geotechnical investigation was completed within the Willow Creek area in September 2005 by UMA Engineering.¹ The investigation assessed percolation rates, sodium absorption ratios and groundwater levels at various locations. The results of this investigation indicate surficial geology consists of clay till with local conditions appearing suitable for installation of septic wastewater treatment systems (subject to detailed analysis for each lot).

Although no testing has been undertaken at this time, similar geotechnical conditions are expected in Future Development Cells A and B.

3.8 Biophysical Considerations

Much of the Willow Creek area has been previously disturbed in support of agricultural activities (grazing). The overall site is sparsely vegetated with grasses across the central and southern portion of the Willow Creek area. Some mature tree stands remain within Future Development Cell A with numerous trap-lows that collect seasonal surface drainage throughout the entire Plan area.

In November 2005, a Biophysical Impact Assessment was completed by Ghostpine Environmental Services Ltd. within the Willow Creek area with a supplementary investigation completed in August, 2006 concluding the site does not contain any environmentally significant areas. The study also indicates that no listed species were identified that would require a mitigation plan.

Similar conditions are expected in Future Development Cells A and B.

3.9 Environmental Considerations

A Phase 1 Environmental Site Assessment was prepared by UMA Engineering within Willow Creek area which concluded that no potential environmental issues are present within the site.²

¹ UMA Engineering Ltd., Geotechnical Report, 2005 for the Willow Creek development.

² UMA Engineering Ltd., Phase 1 Environmental Site Assessment, 2005 for the Willow Creek development.

It is anticipated that similar conditions exist in Future Development Cells A and B.

3.10 Historical Considerations

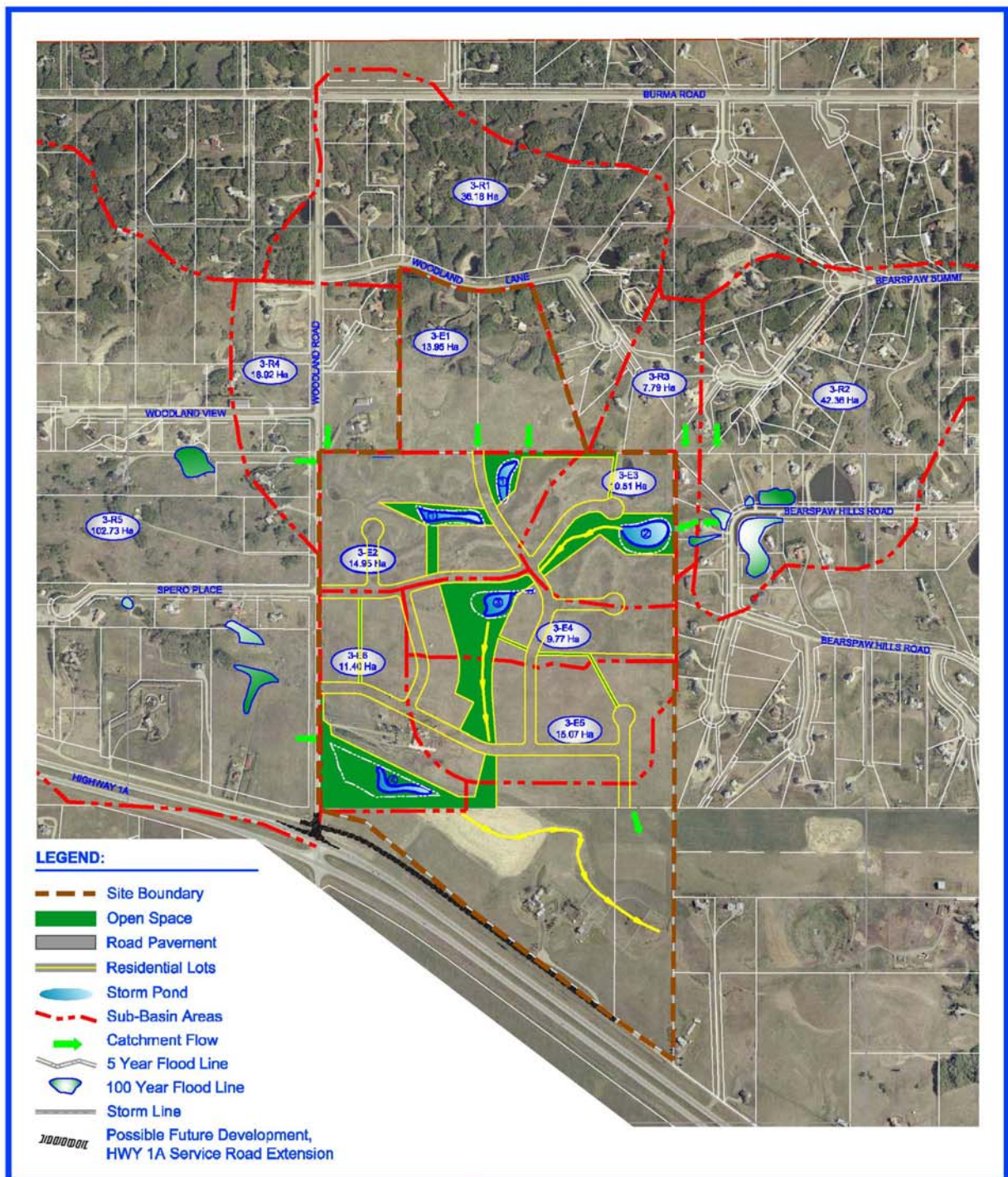
The original farm buildings within the Willow Creek area generally date to the 1920's. In December 2005, one of the early buildings (Teacherage) was moved to a historic site in Bearspaw. Other existing buildings and associated additions within the Willow Creek area date from the 1930's to 1950's, and are in relatively poor condition.

Buildings within Future Development Cells A & B include single family residences and related accessory buildings dating from the 1970's and 1980's.

According to Alberta Community Development, the Plan area is not anticipated to contain any significant archaeological resources that will require mitigation at the subdivision stage. In August, 2006, a Historical Resources Impact Assessment for archaeological resources was completed within the Willow Creek Subdivision Area by FMA.³ The study found that no mitigation of any known historical resources is recommended within the site.

It is anticipated that similar conditions exist in Future Development Cells A and B.

³ FMA Heritage Resources Consultants Inc, Permit 2006-183



0 125 250 m SCALE 1:12500

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Drainage and Stormwater Management

Figure - 5

4.0 Willow Creek Conceptual Scheme - Land Use and Subdivision Strategy

4.1 Development Concept

The goal of the Willow Creek Conceptual Scheme is to create a comprehensively-planned residential community within the SW 36 (Willow Creek area) incorporating a central open space with potential connections to adjacent lands. The Conceptual Scheme also includes a policy framework to enable the efficient and comprehensive subdivision of parcels located immediately to the north and south (Future Development Cells A & B).

The subdivision layout within the Willow Creek area (**Figure 6a**) is oriented around a central public open space that affords direct access from many parcels to an internal pedestrian network and a comprehensive stormwater management system as well as related naturalized landscapes. The centrally-located open space corridor spans the Willow Creek area from northeast to southwest and creates opportunity for passive recreation; enhances local habitat, bio-diversity & natural plantings; and enables the effective management of surface drainage generated by development within the site as well as providing additional stormwater facilities to assist in resolving an existing drainage issue affecting adjacent lands. The central open space is purposefully designed to provide full public access to recreation amenities constructed within the Willow Creek area to all local and adjacent landowners and residents.

Policies:

- 4.1.1 Subdivision of lands within the Willow Creek subdivision area shall proceed generally in accordance with **Figure 6a**.



0 50 100 150 SCALE 1:2000

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Proposed Subdivision Layout

Figure - 6a

Table 1: Land Use Areas for the Willow Creek Subdivision Area

Type of Space	Acres	Hectares
Residential	110.43*	44.69
Road	19.53*	7.9
Open Space (MR)	22.11*	8.95
Public Utility Lots	7.89*	3.19
Total	160*	64.74*

***Approximate**

- The expanded open space within the Willow Creek area will be established with public ownership so that the enhanced recreational, social and environmental amenities can benefit the entire community – not only the landowners specific to the subdivision.
- The expanded open space will contain a comprehensive and contiguous area of native and naturalized vegetation with attendant habitat areas that enhance bio-diversity within the Willow Creek area.
- The expanded open space area can more comprehensively and effectively manage the surface drainage created within the Willow Creek area in addition to helping resolve an existing drainage issue affecting lands directly north and east of the Plan area.\

4.2 Public Open Space – Municipal Reserve (MR) and Public Utility Lots (PUL)

As per the requirements of the Municipal Government Act (MGA), the MD of Rocky View can require the owner of the Willow Creek area to dedicate up to 10% of the gross area as Public Municipal Reserve (MR). In place of land, Municipal Reserves may also be provided via payment of cash-in-lieu of land.

The Rocky View School Division determined that provision of a school site is not required within the Conceptual Scheme Area. In order to achieve the design goal of creating the centrally located open space area, the Conceptual Scheme proposes the maximum dedication of Municipal Reserve (MR) as land as opposed to cash-in-lieu. Additionally, the Developer of the Willow Creek area proposes to “over dedicate” public Municipal Reserve lands in excess of the 10% requirement of the MGA.

The proposed Open Space Plan within the Willow Creek Subdivision Area is shown on Figure 7 – Open Space Plan.

The Public Municipal Reserve (MR) throughout the central area of the Willow Creek site with potential future connections to the surrounding lands will contain the pedestrian system and related recreational amenities (i.e. park benches, naturalized landscapes, habitat areas and interpretive signage). Internal trails will allow access to the central open space system from the rear of many of the lots, to minimize pedestrian contact with traffic.

The Developer proposes to construct public recreational amenities such as playground equipment on the Municipal Reserves, at the discretion of, the Bearspaw-Glendale Recreation Board and the Municipality, in accordance with the Community Recreation Funding Procedure and Community Recreation Funding Policy. Cash contributions to the Voluntary Recreation Program should be considered as part of the Development Agreement.

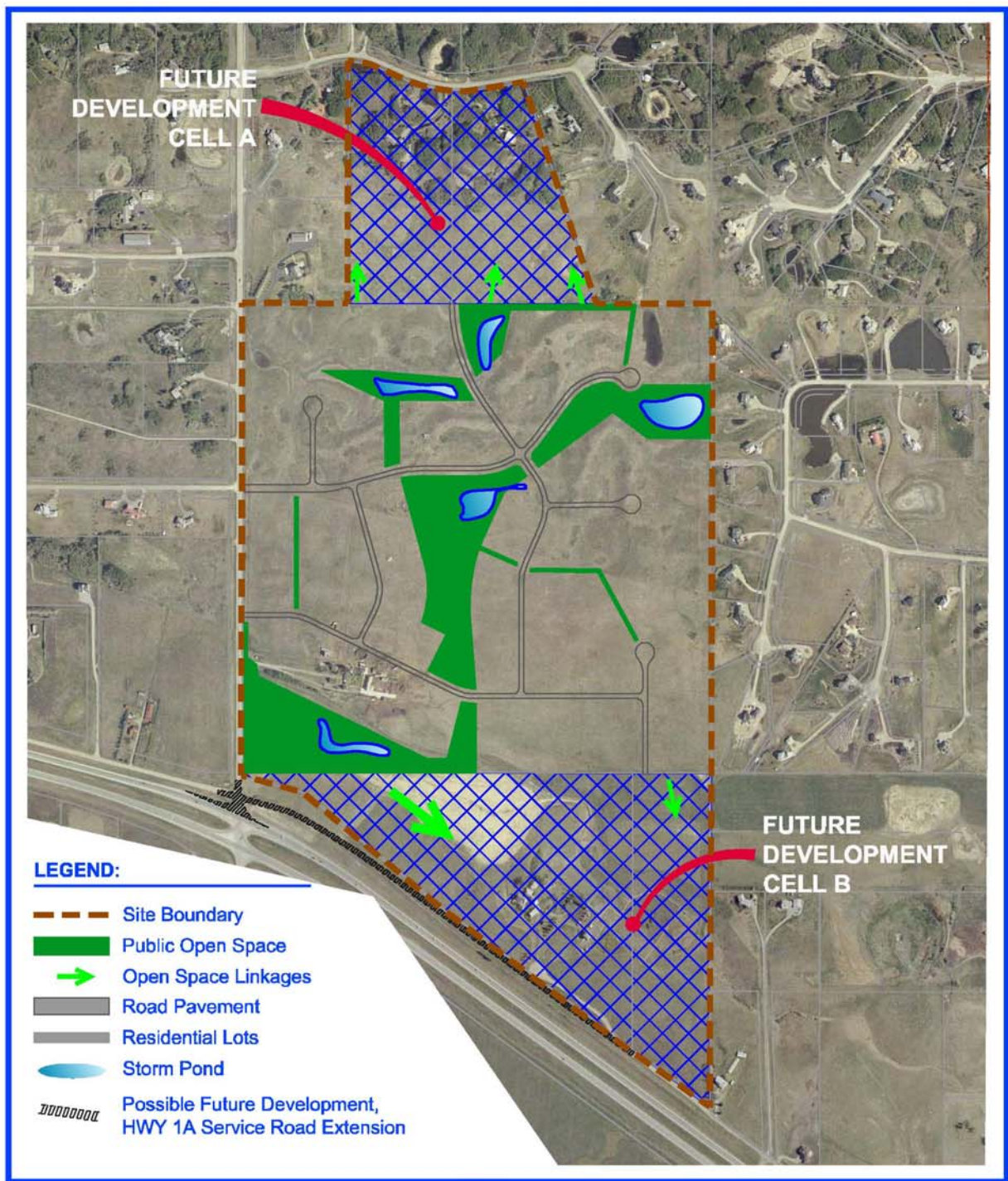
The Willow Creek area contains numerous trap lows containing areas of seasonal surface drainage. As shown on Figure 7, the open space area will include many of these ponds in addition to providing

opportunities for the creation of new ponds. Those portions of the open space plan that provide benefit for the management of stormwater within the Willow Creek area are dedicated as Public Utility Lots (PUL), and where considered appropriate, may be integrated with the adjacent open space system.

The Conceptual Scheme includes a quality recreational component with full public access provided to both local and area residents alike. Improvements constructed by the Developer within the open space system will include a public trail system constructed to respect users with varying levels of mobility, and including park benches and view points, a play area and access to water features.

Policies:

- 4.2.1 Municipal Reserve shall be dedicated at the subdivision stage as generally shown on Figure 7 and Table 1 to the satisfaction of the Municipality.
- 4.2.2 The remaining open space areas within the Willow Creek area shall be dedicated as Municipal Reserves to provide for internal pathways (minimum 6m in width) and related recreational amenities to the satisfaction of the Municipality.
- 4.2.3 All recreation amenities constructed within Willow Creek area shall be constructed by the Developer, in accordance with the Community Recreation Funding Procedure and Community Recreation Funding Policy, and to the satisfaction of the local Recreation Board and the Municipality.
- 4.2.4 Ongoing maintenance of public improvements and any recreation amenities within the Willow Creek area shall be the responsibility of a Homeowner's Association established at the subdivision stage. A Lease Agreement shall be established at the subdivision stage, to the satisfaction of the Municipality.
- 4.2.5 The Developer shall provide a Landscaping Plan at the subdivision stage, prepared by a Landscape Architect and submitted to the Municipality for approval, as a condition of subdivision, detailing the alignment of the pathway system, related improvements and naturalized plantings within the Willow Creek area. The use of native plantings that provide for protection of riparian habitats is encouraged.
- 4.2.6 The Stormwater Management Ponds and related improvements shall be included within Public Utility Lots (PUL). No stormwater facilities may be permitted within Municipal Reserve (MR).
- 4.2.7 The Developer shall construct an all-weather access to each stormwater pond to provide access for maintenance/emergency service vehicles.
- 4.2.8 Recreation amenities may be constructed within a PUL, to the satisfaction of the Municipality provided they do not compromise the function of stormwater facilities.
- 4.2.9 Public access to all recreation amenities constructed within MR and PUL shall be provided within the Willow Creek area.



SCALE: N.T.S.

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Open Space Plan

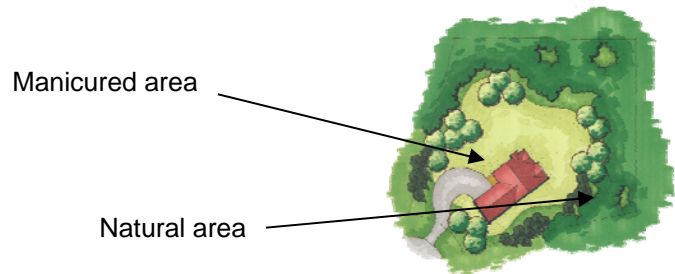
Figure - 7

4.3 Habitat and Biodiversity

Landscaping within the open space areas encourages the use of native/naturalized species of grasses, shrubs and trees. These plantings will be detailed within a Landscaping Plan established at the subdivision stage and implemented within the public MR by the Developer as a condition of subdivision.

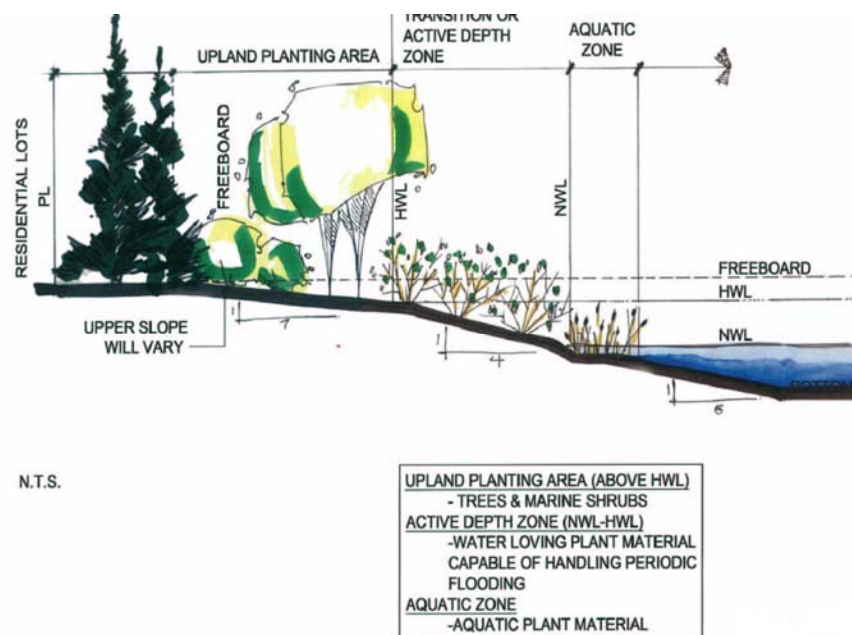
As shown on **Figure 8**, private residential properties will also include natural areas that surround a more “manicured area” where buildings will be allowed. These natural areas around the properties are designed to provide a habitat linkage to the surrounding open space areas and architectural controls will require that all storm runoff be directed to these areas on each lot. The creation of the natural/manicured area relationship shall be established by the Developer through implementation of Architectural Controls.

Figure 8: Illustrative Example: Building location to be developed within the manicured area surrounded by the natural areas.



As shown on **Figure 9**, as part of the stormwater management and open space system, native/naturalized vegetation should be encouraged and enhanced, where possible, to assist in the re-establishment of some of the native wildlife. As well, Riparian zones adjacent to constructed water features in select areas can be created as part of the Landscape Plan.

Figure 9: Illustrative Example: Cross Section of a Suggested Riparian Zone.



Policies:

- 4.3.1 Individual residential properties will include designated manicured areas (including the building envelope) to be surrounded by natural areas, as detailed by Architectural Controls established by the Developer at the subdivision stage to the satisfaction of the Municipality.
- 4.3.2 Except where required by stormwater management facilities and other utility infrastructure, no fencing shall be permitted within the Willow Creek area outside the manicured area referenced by **Figure 8**.
- 4.3.3 When proposed in proximity to stormwater management facilities within the Willow Creek area, implementation of plantings that establish/enhance riparian habitat is encouraged.

4.4 Residential Form

The architectural vision for the subdivision within the Willow Creek area encourages western farm-style homes where verandas and porches dominate the front façade, with garages to the side or rear.

Figure 10: Example of Western Farm-Style Home



4.5 Community Lifestyle

Subdivision within the Willow Creek area creates a family-oriented community designed with extensive open space and trail linkages to many lots, providing safe play areas for children. The community design encourages an active lifestyle, including such amenities as walking, jogging and cycling trails/pathways. More passive recreation options are available and focused around the water features.

4.6 Range of Housing Types

Architectural Controls are included for the purpose of creating a community sensitive to its site, adjacent landowners and its surroundings. While a western/farm theme is encouraged, other housing types may be allowed subject to architectural review, including the scale of the structures and materials appropriate to the site.

4.7 Architectural Controls

Considering the high standard for residential development anticipated within the Willow Creek area, and the lot configurations within the subdivision, the following development-specific Architectural Controls shall be implemented by the Developer as noted below.

The Architectural Controls will be enforced through Restrictive Covenants by the Developer (and subsequently by the Homeowner's Association) registered against each parcel created within the Willow Creek area.

Policies:

- 4.7.1 Architectural Controls shall be established within the Willow Creek area to maintain positive aesthetics, ensure a consistent standard of design, encourage western farm-style homes where verandas and porches predominate and garages are to the side or rear, preserve sightlines between new and existing residential development where possible and establish certain use restrictions outside of the provisions of the MD's Land Use Bylaw.
- 4.7.2 The Architectural Controls will be enforced within the Willow Creek area by the Developer until such time that the enforcement of the architectural control is transferred to a Homeowner's Association, to be legally established at the subdivision stage.
- 4.7.3 The Developer shall prepare a Building Envelope Plan detailing specific locations of all building envelopes within each residential parcel to the satisfaction of the Municipality.
- 4.7.4 The Developer shall register a Restrictive Covenant against title to each new lot created within the Willow Creek area, to detail the requirements of the Architectural Controls, as condition of subdivision, to the satisfaction of the Municipality.
- 4.7.5 As a component of the Architectural Controls, the use of appropriate environmental technologies is encouraged to promote energy efficiency and low impact construction practices.

4.8 Landscaping Guidelines

The landscaping guidelines within the Willow Creek area promote an attractive, high quality visual standard. The use of native/naturalized trees species and other natural plantings within the public open space in addition to specific areas within each individual residential parcel is encouraged.

The Developer shall submit a Landscaping Plan, at the subdivision stage, detailing the landscaping treatments and related improvements to be implemented within the Willow Creek area. This Landscaping Plan shall be prepared in accordance with the following:

Policies:

- 4.8.1 The Developer shall provide a Landscaping Plan at the subdivision stage, prepared by a Landscape Architect and submitted to the Municipality for approval, as a condition of subdivision, detailing the alignment of the pathway system, related improvements and naturalized plantings within the Willow Creek area. The use of native plantings that provide for protection of riparian habitats is encouraged.
- 4.8.2 The reintroduction of native/naturalized prairie landscape will be provided by the Developer within all public open space, and where possible through architectural controls, within the “naturalized areas” of each residential parcel as per **Figure 8**, to the satisfaction of the Municipality.

4.9 Range of Parcel Sizes

The proposed parcel sizes for the Willow Creek subdivision area will consist of a minimum of two (2) acres. The minimum parcel size for residential subdivision permitted within the Land Use Bylaw is 2 acres; therefore the proposed zoning of Residential (R1) will remain consistent with existing adjacent developments.

4.10 Environmentally Sensitive Construction Practices

Architectural Controls should require the use of high quality natural exterior construction materials. The controls should also encourage the use of similar materials on the interior of the home. Programs such as Built Green® will provide guidance to builders with respect to the construction of high quality environmentally sensitive and energy efficient housing and LEED® (Leadership in Energy and Environmental Design) which contains standards for construction and operations from neighbourhood development through building construction.

The location of a home and its orientation will be determined within the “manicured area” of each lot through the Architectural Controls. This can assist in encouraging the use of passive and active solar gain for each home, as well as maximizing the orientation of the home towards the open space.

Policies:

- 4.10.1 Architectural Controls will require the use of high quality natural exterior construction materials. The use of these materials will be monitored and enforced by the Developer and Home Owner’s Association.
- 4.10.2 Energy efficiency and proven environmentally-appropriate building materials will be encouraged through Architectural Controls, using programs such as LEED and Built Green® as examples.
- 4.10.3 Low consumption plumbing fixtures and dual flush toilets will be required by Architectural Controls to reduce water consumption and the amount of water to the septic fields.

4.11 Population Projections

As noted in Table 2 below, the estimated total population within the Conceptual Scheme area is 211 at full build-out (assuming Future Development Cells A & B are each developed with 2 acre parcels).

Table 2: Estimated Population Projections:

Development Area	# Units	Population
Willow Creek Area	52*	161
Future Development Cell A	8**	25
Future Development Cell B	8**	25
TOTAL	90	211

* Based on 3.1 persons per unit, 2001 Municipal Census

** Estimated

4.12 Subdivision Transitioning, Linkages and Connectivity

4.12.1 Within the Conceptual Scheme Area

The Willow Creek subdivision area shall encourage connectivity with each Future Development Cell – including provision for an efficient extension of all infrastructures related to water, shallow utilities, roads, trails, and stormwater in addition to the public open space system. Sufficient capacity to extend all utility connections to Future Development Cells shall be provided, including looping of these systems wherever possible.

4.12.2 With Existing Adjacent Developments

A design goal of the subdivision pattern within the Willow Creek area is to reduce the potential negative impacts to adjacent subdivisions. A landscaped berm will be constructed along the west side of the development to provide privacy to the landowners on the west side of Woodland Rd. As shown on **Figure 11**, the subdivision pattern generally matches adjacent residential parcels.

Policies:

- 4.12.1 Properties adjacent to Woodland Road will have a landscaped berm within the rear or side yards to help minimize the impact on landowners to the west.

4.13 Community Services

Residents of the Willow Creek area may utilize a variety of existing community services such as schools and other public amenities for both active and passive recreational opportunities. For example, the Bearspaw School (kindergarten to grade 8) and the Bearspaw Lifestyle Centre are in close proximity to the Willow Creek area. Other natural amenities and trails are nearby which provide opportunities for passive recreation.

Protective services or policing will be provided by the Royal Canadian Mounted Police and the MD of Rocky View Community Peace Officers. Fire protection will be provided by Rocky View Fire Services with the support of other municipal fire departments particularly the City of Calgary as the closest station is Fire Station No. 34 located at 1 Royal Birch Hill in northwest Calgary. Fire hydrants will be installed in the Willow Creek area with the construction of the servicing infrastructure. This may occur in one or more phases consistent with the logical progression of servicing infrastructure. Emergency medical services will be provided by the City of Calgary.

Policies

4.13.1 The development will provide fire hydrants for fire suppression purposes.



0 20 100 m SCALE 1:7500

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Existing Adjacent Development

Figure - 11

5.0 Utilities Servicing

5.1 Wastewater Treatment

Treatment of household wastewater within the Willow Creek area utilizes an enhanced private sewage disposal system (PSDS) within each lot.

A conventional PSDS typically consists of two components: a septic tank and a disposal field. Household wastewater is drained to the septic tank where solids, oils and grit are separated from the effluent. This solid material remains in a separate compartment of the septic tank and must be removed periodically. At regular intervals, the remaining effluent is then pumped, or flows by gravity into a series of pipes buried within the disposal field and dissipates into the soil. The ability of the soil to absorb the effluent determines the size of the disposal field.

A third component in the effluent treatment process will be added to the PSDS within the Willow Creek area, consisting of a biofilter/textile or anaerobic system between the septic tank and the disposal field to further treat the effluent prior to dissipation into the soil. This increased level of treatment results in a substantially smaller footprint for the PSDS. Several systems were reviewed as part of the planning and preliminary engineering process of this development. They have been successfully installed in Alberta and are suitable for colder climates. These systems permit lots to be as small as $\frac{3}{4}$ acres or less. All systems meet Alberta's required (NSF) 40 Standard for Residential Wastewater Treatment Systems. Using these systems results in a higher quality of effluent that can potentially be used as part of a subsurface irrigation system. Further treatment using a UV system allows surface irrigation. Use of the UV system would be subject to Alberta Environment approval and further review by each homeowner at the time of septic sewage system installation.

The soil parameters determined through a preliminary geotechnical analysis found within the Willow Creek area were provided to various septic sewage system suppliers who use the latest on site private sewage disposal systems for wastewater treatment. These systems are a generation beyond standard septic systems as they incorporate actuated sewage treatment. A preliminary field design report was prepared by UMA Engineering to assess the capacity of the site's poorest quality soils to accommodate drainage fields⁴. This report demonstrated that lots under $\frac{3}{4}$ acre can be serviced using these systems.

Field percolation testing and near-surface water table testing will be required at the subdivision stage to properly design the PSDS for each lot. A qualified professional shall prepare a report to confirm that the soils on each lot are acceptable for installation of a PSDS in accordance with Alberta Environment guidelines and the Alberta Private Sewage Systems Standard of Practice 1999 Handbook.

Policies:

- 5.1.1 Each lot will treat household wastewater using a private sewage disposal system designed by a qualified professional in accordance with Alberta Environment guidelines, the Alberta Private Sewage Systems Standard of Practice 1999 Handbook and the Municipality's Servicing Standards.
- 5.1.2 Architectural Controls, established by the Developer at the subdivision stage, will require that all PSDS installed within the Willow Creek area shall include a biofilter/textile or anaerobic system component that meets Alberta's (NSF) 40 Standard for Residential Wastewater Treatment Systems.

⁴ UMA Engineering Ltd. Geotechnical Report, completed 2005 for the Willow Creek Area

- 5.1.3 The Developer shall conduct percolation testing and near-surface water table testing, as a condition of subdivision, to properly design the sewage disposal system for each lot, to the satisfaction of Alberta Environment and the Municipal District.
- 5.1.4 The Developer shall provide a detailed Geotechnical Evaluation, as a condition of subdivision, which shall show that each residential parcel within the Willow Creek area contains a minimum of one (1) contiguous developable acre in accordance with the Municipality's Servicing Standards.
- 5.1.5 Under no circumstances will septic pump out systems, lagoons or open discharge from septic tanks be permitted within the Willow Creek area.

5.2 Water Supply and Distribution

The Rocky View Water Co-op provides a main line within the right-of-way along Woodland Road. The Co-op has stated they have capacity and intend to service residential development within the Willow Creek area. Extension of potable water infrastructure will be provided by the Developer who shall construct all necessary infrastructures within the Willow Creek area, including all water distribution lines and individual services to each lot.

It is expected that Future Development Cells A & B will be similarly serviced with potable water from the Water Co-op. At such time additional development is planned within each Future Development Cell, the respective Developer will be required to secure additional capacity and intent from the Co-op to provide service. In the interim, the Developer of the Willow Creek area shall stub the water main infrastructure at two locations (as shown on **Figure 12**) in order to facilitate ease of service extension from the Willow Creek area into Future Development Cells A and B. The preference will be to secure the looping of water mains wherever possible.

Implementation of water conservation practices within the Willow Creek area is achieved through implementation of low-flow plumbing fixtures, metering and use of drought-resistant natural landscaping materials.

Policies:

- 5.2.1 Provision of potable water within the Willow Creek area shall be from the Rocky View Water Co-op.
- 5.2.2 All necessary infrastructure required to provide potable water to each lot will be constructed by the Developer as a condition of subdivision to the satisfaction of Alberta Environment and the Municipal District.
- 5.2.3 The Developer shall provide main line stubs to facilitate extension of potable water infrastructure from the Willow Creek area into Future Development Cells A and B, to the satisfaction of the Municipal District.
- 5.2.4 Water wells will not be permitted as the water supply to any lot.
- 5.2.5 As part of the Architectural Controls established by the Developer at the subdivision stage, use of Low Flow Plumbing Fixtures, metering and use of native drought-resistant landscaping will be required within the Willow Creek area to reduce water consumption.

5.3 Stormwater Management

The goal of managing stormwater within the Willow Creek area is to maintain as much of the natural drainage characteristics as possible, while providing beneficial enhancements to the development. Figure 5 illustrates the existing catchment and sub-catchment areas affecting the subject and surrounding lands. More than 250 acres of land to the north and west impacts the Willow Creek lands. Surface drainage traverses through the Willow Creek area generally from north to south, ultimately flowing towards the Bow River. The concept to manage stormwater within the site proposes to positively maintain the pre-development stormwater characteristics of the site. The central open space area contains sufficient areas to include a stormwater management system that enhances existing stormwater ponds within the site as well as creating new water features, as shown on Figure 13. Wherever possible, water features are created as natural wetlands to provide habitat and bio-diversity for local wildlife.

A low-impact ecosystem approach to stormwater management is encouraged for this site. The goal is to maintain as much of the natural drainage characteristics as possible, while providing beneficial enhancements to adjacent lands as part of this development. A preliminary Stormwater Management Study prepared by UMA has identified external drainage basins and developed an internal drainage system with streams and ponds, based upon review of present and seasonal pond areas.⁵ This has also been incorporated into the open space system (Figure 13).

Adjacent lands directly to the east of the Willow Creek area have recently encountered excess surface water problems stemming from flood events occurring in 2005. Subject to relevant approvals from Alberta Environment, the stormwater management concept within the Willow Creek area could receive surface drainage from these and other adjacent lands, thereby assisting to resolve this external drainage concern.

Policies:

- 5.3.1 A Stormwater Management Plan shall be prepared by a qualified professional at the subdivision stage, to the satisfaction of Alberta Environment and the Municipal District which shall conform to the Bearspaw Master Drainage Plan.
- 5.3.2 The Stormwater Management Plan shall ensure that post-development flows and runoff volumes remain consistent with pre-development flows and runoff volumes within the Willow Creek area to the satisfaction of the Municipality.
- 5.3.3 Subject to approval of the Stormwater Management Plan, the Developer shall construct a meandering creek within the public open space within the Willow Creek subdivision to connect each of the water features with the eventual discharge point located in the southwest portion of the site. All water bodies associated with the Stormwater Management Plan are to be dedicated as Public Utility Lots (PUL).
- 5.3.4 Drainage features within the Willow Creek area shall be located within Public Utility Lots dedicated at the subdivision stage. No stormwater facilities shall be located within Municipal Reserve (MR).
- 5.3.5 The Stormwater Management Plan within the Willow Creek area shall be designed with excess capacity to receive additional stormwater flow through from Future Development Cell A and areas to the northeast and northwest.

⁵ UMA Engineering, Stormwater Management Plan Report, 2005 prepared for the Willow Creek area

- 5.3.6 As much as possible, the management of surface drainage within the Willow Creek area shall use existing drainage courses, ponds and wetlands.
- 5.3.7 The Stormwater Management Plan shall provide post development flood protection and water quality enhancements within the Willow Creek area in accordance with Municipality and Alberta Environment guidelines.
- 5.3.8 The stormwater management system within the Willow Creek area will be incorporated with existing drainage features and a stream system to create natural open spaces that promote riparian habitat and natural vegetation to attract wildlife and create recreational opportunities for area residents.
- 5.3.9 Subject to approval from Alberta Environment and the Municipality, the Stormwater Management Plan within the Willow Creek area will assist in solving existing drainage issues affecting the existing subdivision directly to the east.

5.4 Shallow Utility Services

Existing power, telecommunication and gas utilities are located along Woodland Road. These utilities can be extended into the Willow Creek area at the sole cost of the Developer.

Policies:

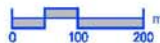
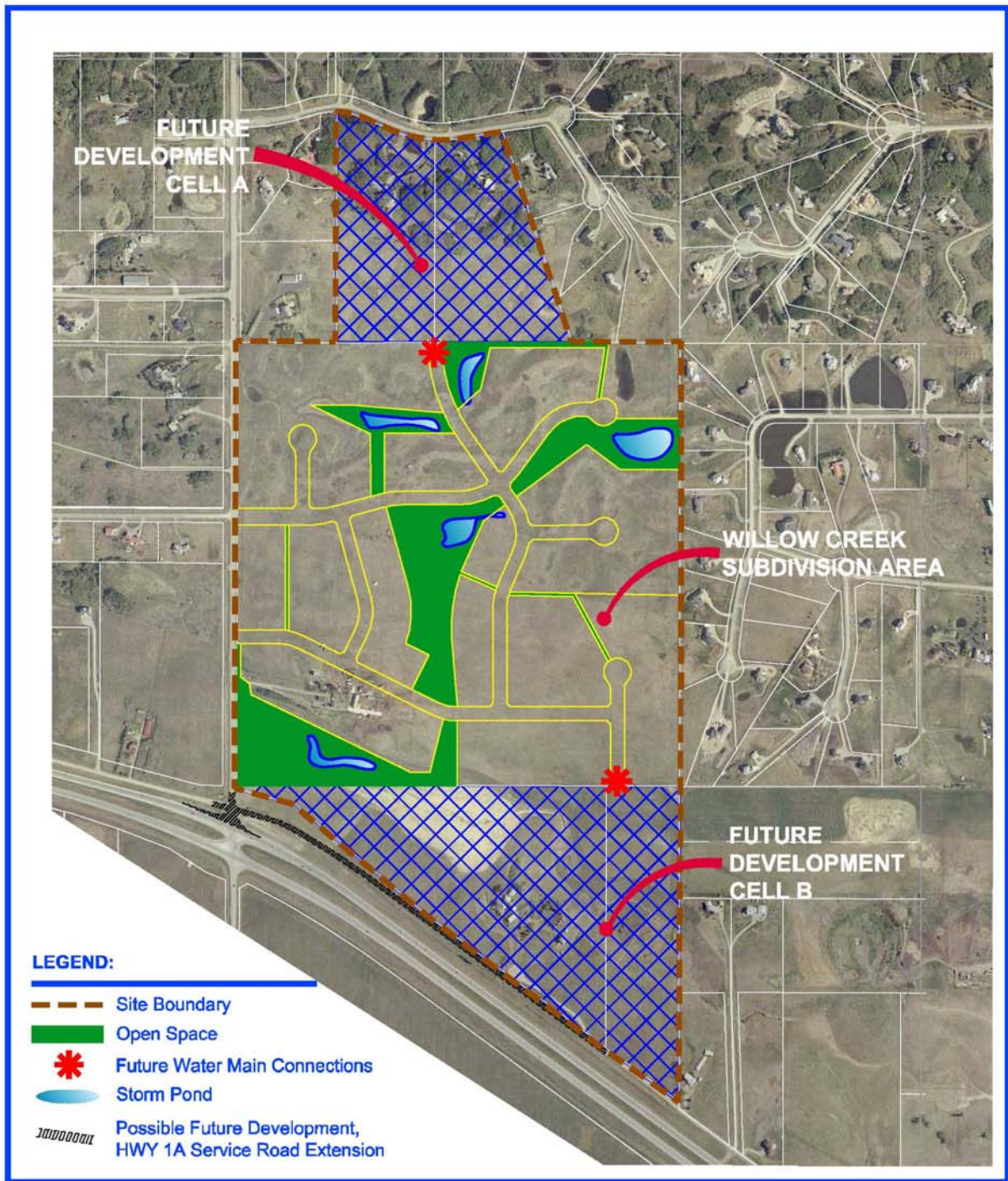
- 5.4.1 The provision of power, telecommunication and gas service within the Willow Creek area shall be provided by the Developer, to the satisfaction of the Municipality.
- 5.4.2 Any utility services shall be placed underground.

5.5 Solid Waste Management

Provision of solid waste management within the Willow Creek area shall be provided by the Homeowner's Association through a contract with a Solid Waste contractor. The implementation of a local recycling program to redirect materials such as paper, plastics and glass away from local landfills is encouraged.

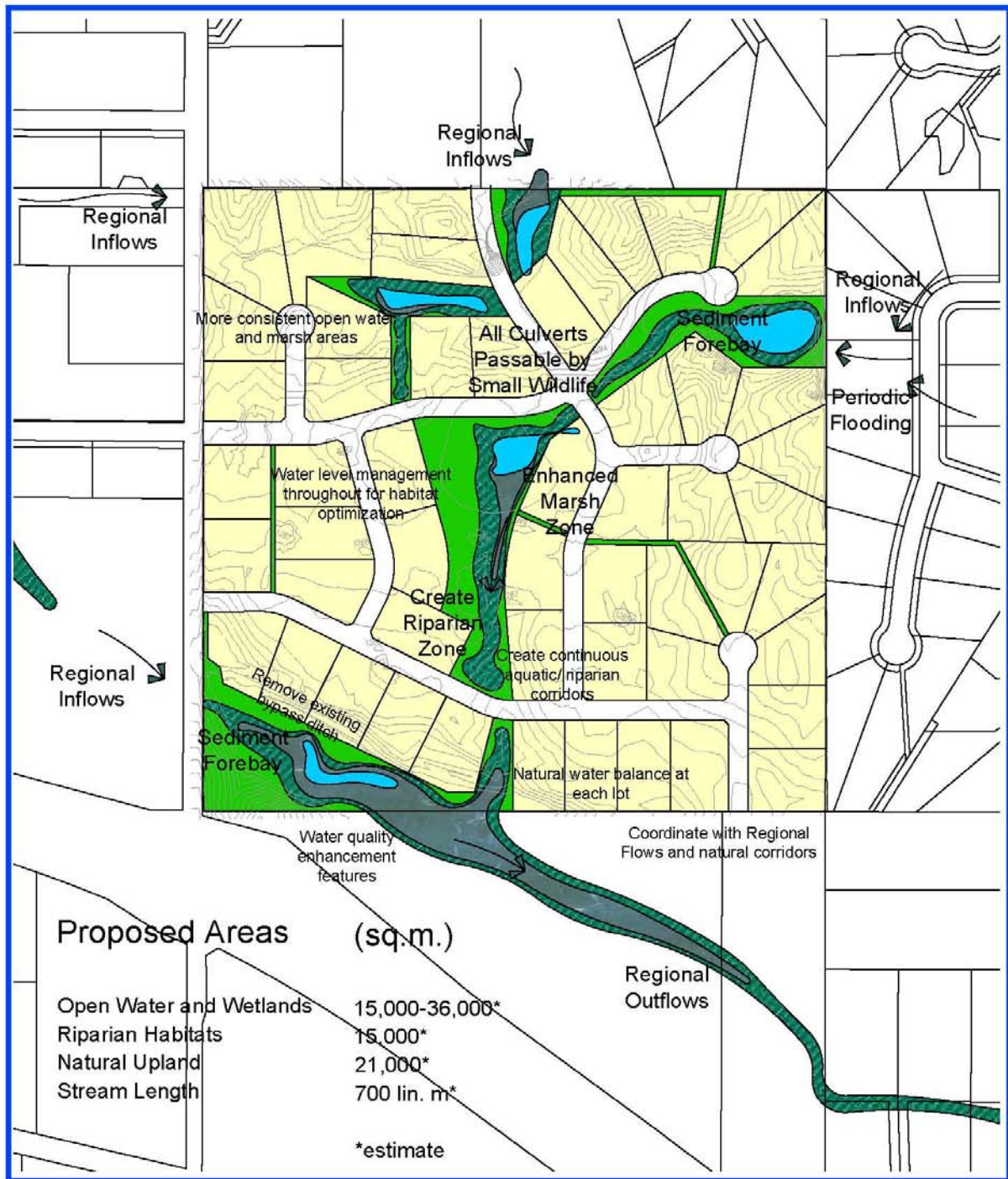
Policies:

- 5.5.1 Collection of solid waste material within the Willow Creek area will be contracted to a Waste Management Company under the direction of the Homeowners' Association.



SCALE 1:10000

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Future Water Main
Connections
Figure - 12



SCALE - n.t.s.

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Environmental Design Concept

Figure - 13

5.6 Potential for Environmental Initiatives and Technologies

5.6.1 Solar Energy

Architectural Controls will be implemented by the Developer to site buildings within the Willow Creek area to enhance solar gain within each lot and to encourage the use of additional glass and relaxing the roof overhang requirements on southern exposures for passive solar gain.

Solar panels for both water and electricity should be considered on south facing surfaces where they are incorporated into the structure.

5.6.2 Geothermal Heating/Cooling

Architectural Controls will be implemented by the Developer within the Willow Creek area to encourage the use of geothermal energy for heating. Appropriate studies and approvals for each property will be required by architectural controls to confirm that sufficient water supply and recharge of the groundwater can be achieved.

Policies:

- 5.6.3 Implementation of appropriate and proven environmental technologies that enhance energy efficiency will be encouraged within the Willow Creek area through implementation of Architectural Controls established by the Developer at the subdivision stage.

5.7 Site Grading

Large-scale site grading operations are not anticipated within the Willow Creek area. The intent is to preserve as much of the site's existing topography, vegetation and natural features as possible. The primary areas within the Willow Creek area where grading is required is within the road right-of-ways. Ditches will be excavated and the material used to build up the road crown. Additional excavation around water features may be required to provide sufficient stormwater storage. Grades will be set and an earth balance done to minimize surplus material or import fill. The stripping operation will generate surplus loam to be used during the landscaping process. A temporary stockpile of loam may be created and erosion and sediment control measures will be required to minimize the environmental impact of site grading on existing water courses, keep existing roads free of debris, and minimize dust.

Policies:

- 5.7.1 Large-scale site grading operations shall not be permitted within the Willow Creek area to preserve as much of the site's existing topography, vegetation and natural features as possible, to the satisfaction of the Municipality.
- 5.7.2 Prior to commencing stripping and site grading, a Stormwater Management Plan, and an Erosion and Sediment Control Report shall be prepared by a qualified professional in accordance with guidelines and to the satisfaction of Alberta Environment and the Municipality.

6.0 Transportation

6.1 Regional Transportation Considerations

Three major roadways provide access to the Willow Creek area. As shown on the Bears paw Area Structure Plan, these roads include: Highway 1A, a multi-lane highway under the jurisdiction of Alberta Infrastructure and Transportation (AIT); Burma Road, a major MD collector road; and Woodland Road, a minor MD collector road.

The Willow Creek area proposes two access points on the west side of the development immediately off of Woodland Rd. The only access into Willow Creek will be through a divided entrance as indicated on **Figure 14**. The second access just to the south of the main entrance off of Woodland Road will be used only as an emergency access, and will have knock down bollards to prevent local traffic from accessing the subdivision.

A preliminary Transportation Impact Assessment (TIA) completed by UMA Engineering was based on a number of assumptions, including the development of the Willow Creek area in 2007 and the potential time of development for two additional Cells, A and B, one in 5 years and one in 15 years. In addition, available AIT count data and traffic counts collected in September 2006 were analyzed with the following results: overall with the addition of a Type IIIC intersection there are no other anticipated requirements for the next 20 years at the Woodland Road / Spero Place intersection. The signalized intersection at Woodland Road and Highway 1A by Alberta Infrastructure and Transportation may be required within two years. The Type IIIC intersection is a flared intersection with provision for through and left-turn movements to occur simultaneously, allowing little delay for through traffic when the lead vehicle slows to turn off the main road. Additional right-of-way (ROW) may be required to construct the upgraded intersection. ROW details were not available for review.

The TIA prepared in support of the Conceptual Scheme indicated no concerns and the TIA will be updated at the subdivision stage to the satisfaction of the MD and Alberta Infrastructure and Transportation (AIT).

6.2 Local Transportation Considerations

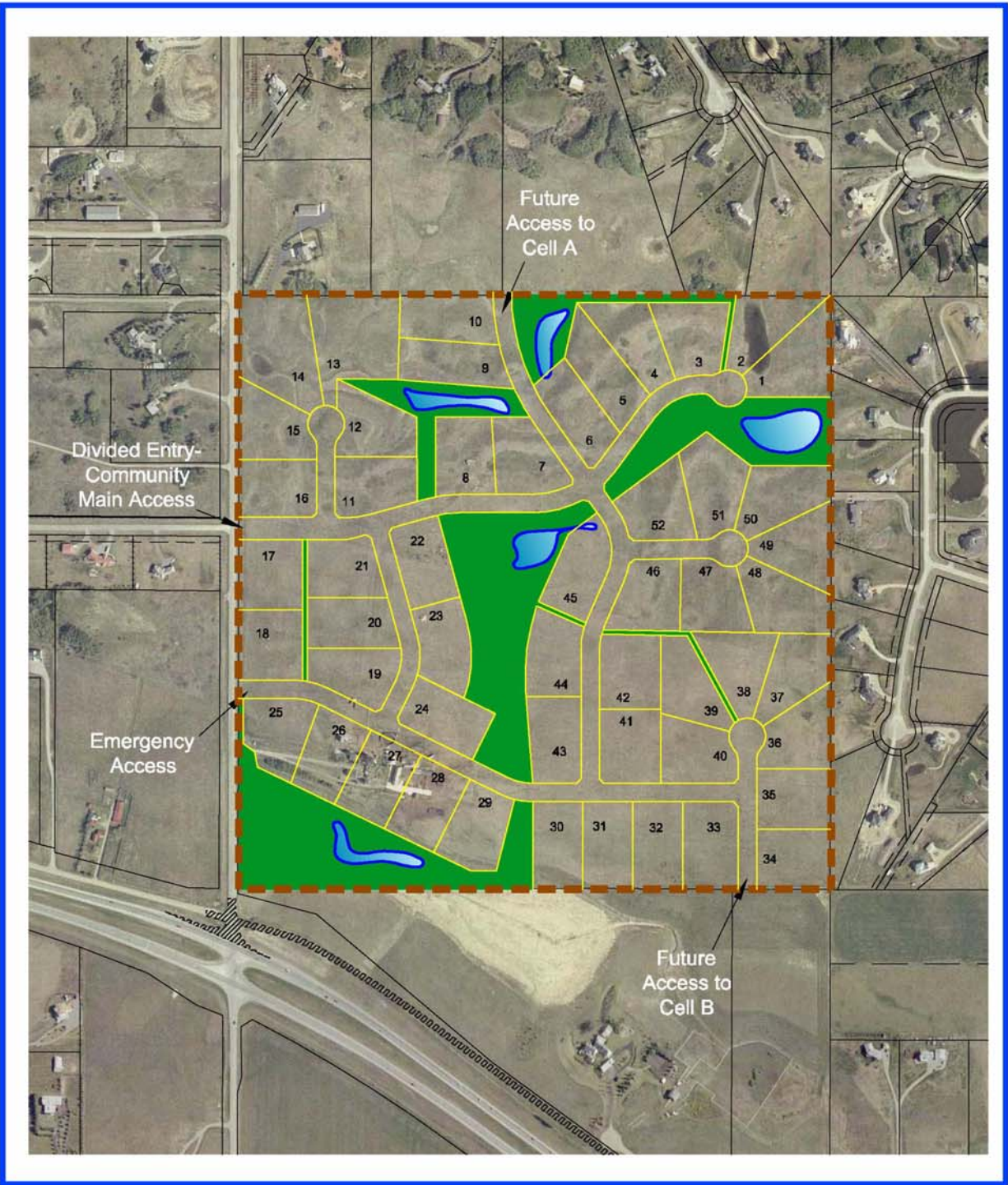
Internal roads will be constructed to the Municipality's Country Residential (CR-50 and CR-60) standards. This consists of a 25.0 m right-of-way, a 7.0 m paved road and ditches on each side. The main entrance road on the west side of this development will consist of a 25.0 m right-of-way, a paved divided entrance street 6.5 m on each side of a 3.5 m median, and ditches on each side, supplemented with appropriate landscaping and signage. To the north there will be a cul-de-sac, which if there is development in the future this will allow for a natural connection to Cell A. The Willow Creek plan is also proposing an access to Cell B. Alternately there is an existing service road from Highway 1A into the Future Development Cell B which will allow for another access point.

Internal roads will be constructed within the Willow Creek area by the Developer in accordance with the Municipality's Servicing Standards. Separate driveway approaches to each lot will also be constructed in accordance with the Municipality's Servicing Standards.

In order to facilitate future access between the Willow Creek area and Future Development Cells A & B, the Developer shall dedicate and construct two appropriate access points (as shown on **Figure 14**).

Policies:

- 6.2.1 A Traffic Impact Assessment shall be prepared by a qualified professional at the subdivision stage to the satisfaction of Alberta Infrastructure and Transportation (AIT) and the Municipal District of Rocky View.
- 6.2.2 All road improvements to the local and regional network required by development within the Willow Creek area shall be constructed by the Developer to the satisfaction of AIT and the Municipality.
- 6.2.3 All internal roads will meet the requirements as stated in the Municipal District's Road Linkage Policy.



0 25 100
SCALE 1:7500

Willow Creek Conceptual Scheme
MD Rocky View
SW 36-25-3-W5, NW 36-25-3-W5 and NW 25-25-3-W5
Transportation Access Points

Figure - 14

7.0 Conformity with Existing Municipal Statutory Plans

7.1 Municipal Development Plan (MDP)

The MDP provides the over-riding philosophical direction to guide residential and other development within the Municipal District of Rocky View. This Conceptual Scheme conforms to the direction provided by the MDP, particularly with respect to the most pertinent sections, including plan goals, residential, natural environment, infrastructure, open space and recreation.

7.2 Bearspaw Area Structure Plan (BASP)

The Bearspaw Area Structure Plan (BASP) provides a land use strategy to guide future growth and development within the Bearspaw Community in accordance with sound land use planning and phasing principles.

7.2.1 Future Land Use

The lands within this Conceptual Scheme are all located in an area identified for future Country Residential land use.

7.2.2 Priority for Development

The Bearspaw Area Structure Plan identifies that the Conceptual Scheme Area is contained within a "Development Priority Area 1". This is a key consideration in determining where new development should be established in Bearspaw.

7.2.3 Parcel Sizes

The proposed parcel sizes for Willow Creek will be composed of two-acre and larger lots. As outlined in the Bearspaw Area Structure Plan under Section 8.1.21 which states,

"... the Municipality may consider redesignation proposals and/or application for subdivision contemplating parcel sizes of less than four (4) acres in size, provided these proposals are supported by a Concept Plan that is prepared and adopted pursuant to the provisions of this Plan".

Within the proposed Conceptual Scheme, the proposed parcel sizes are two acres or larger. Appropriate transportation and utility servicing, and open space shall be provided to the satisfaction of the Approval Authority.

7.2.4 Conceptual Scheme Planning

The Municipal District of Rocky View considers the development of Conceptual Schemes an important part of long range planning within the Municipality. This helps to ensure appropriate land use, identify development issues, facilitate the phasing of subdivision, and promote innovative design to maximize potential yield.

Bearspaw Area Structure Plan, Section 8.1.18: Pursuant to policy 8.1.17, when considering the appropriateness of a plan amendment, the Municipality may require the proponent to submit, in support of the amendment, a Concept Plan and/or other studies deemed appropriate by the Municipality.

8.0 Public Consultation

The consultation process for the Willow Creek area and conceptual scheme consisted of a series of four open houses, numerous personal visits by the developer to interested members of the public, adjacent landowners and the support of a dedicated website between 2005 and 2007. This was followed by two meetings with representatives of adjacent landowners and a round table town hall meeting to present a revised plan incorporating a stormwater plan to assist landowners to the east. Lot sizes were revised to two acres or larger to meet the requests of adjacent landowners and neighbours.

9.0 Implementation

9.1 The Willow Creek Area and Future Development Cells A & B

As directed by the Municipal District of Rocky View Council, the original Conceptual Scheme boundary was expanded to include lands outside the ownership of the Developer (Encore Prime Communities).

The Developer of the Willow Creek area determined the individual owners within Future Development Cells A & B are not interested in immediately pursuing further subdivision and development of their properties at this time. However, several owners indicated they may wish to pursue additional development in the future.

The Conceptual Scheme establishes a policy framework and a general development strategy that enables the creation of a new country residential subdivision within the Willow Creek area without compromising the ability of the landowners within Future Development Cells A & B to develop their lands in the future.

The Conceptual Scheme sets the expectation for the Developer to include specific improvements within Willow Creek area to enhance the potential for efficient and comprehensive subdivision of each Future Development Cells including:

- Provision of transportation and potable water infrastructure to the boundaries between the Willow Creek area and each Future Development Cell.
- Provision of public open space (MR) to the boundaries between the Willow Creek area and each Future Development Cell.
- Provision of a stormwater system within the Willow Creek area designed with capacity to assist with future stormwater management required by anticipated development within each Future Development Cell.

These development requirements are detailed in specific policy statements included within previous sections of this Conceptual Scheme and will be implemented by the Developer at the subdivision stage.

9.2 Criteria to be addressed by anticipated subdivision within Future Development Cells A & B

At such time the Owners within Future Development Cells A & B wish to pursue subdivision within their properties, the following items may require attention as part of a future land use amendment and/or subdivision application:

- Confirmation from the Rocky View Water Co-op (or equivalent) of capacity and intent to provide potable water within each Future Development Cell.
- An Environmental Site Assessment to determine the suitability of each Future Development Cell to provide for residential development, if required by Alberta Environment and/or Calgary Health Region.
- A Historical Resources Impact Assessment to determine whether archaeologically significant resources exist within each Future Development Cell, if required by Alberta Community Development.
- A Geotechnical Investigation to confirm the soil capacities within each Future Development Cell to support private sewage disposal systems.
- A Traffic Impact Assessment to confirm the extent of improvements required to local and regional roads in support of development within each Future Development Cell, as required by Alberta Infrastructure & Transportation and the Municipality.

- A Stormwater Management Plan to confirm the methods of accommodating additional surface drainage within each Future Development Cell, as required by Alberta Environment and the Municipality.
- The subdivision design proposed within each of the Future Development Cells is encouraged to maintain connectivity with the Willow Creek area by matching the dedication of public open spaces (MR and PUL's) and road rights-of-way.
- Internal subdivision roads required to access each Future Development Cell are encouraged to provide connectivity with transportation infrastructure established within the Willow Creek area, to the satisfaction of Alberta Infrastructure & Transportation and the Municipality. Subdivision anticipated within each Development Cell is expected to address Council's Road Linkage Policy.
- Development within Future Development Cell B will require consultation with Alberta Infrastructure & Transportation to determine appropriate setbacks and visual screening adjacent to Hwy 1A.

9.3 Subdivision Phasing

Development of the Willow Creek area may occur in one or more phases matched to the logical progression of transportation and utility service infrastructure.

Future Development Cells A and B of the Conceptual Scheme Area are not anticipated to develop in the near future. However, at such time as these owners may request additional subdivision to proceed in accordance with Council's consideration of a Land Use Bylaw amendment (if required) and a subdivision application.

10.0 Policy Summary

Policies:

- 4.1.1 Subdivision of lands within the Willow Creek subdivision area shall proceed generally in accordance with **Figure 6a**.
- 4.2.1 Municipal Reserve shall be dedicated at the subdivision stage as generally shown on Figure 7 and Table 1 to the satisfaction of the Municipality.
- 4.2.2 The remaining open space areas within the Willow Creek area shall be dedicated as Municipal Reserves to provide for internal pathways (minimum 6m in width) and related recreational amenities to the satisfaction of the Municipality.
- 4.2.3 All recreation amenities constructed within Willow Creek area shall be constructed by the Developer, in accordance with the Community Recreation Funding Procedure and Community Recreation Funding Policy, and to the satisfaction of the local Recreation Board and the Municipality.
- 4.2.4 Ongoing maintenance of public improvements and any recreation amenities within the Willow Creek area shall be the responsibility of a Homeowner's Association established at the subdivision stage. A Lease Agreement shall be established at the subdivision stage, to the satisfaction of the Municipality.
- 4.2.5 The Developer shall provide a Landscaping Plan at the subdivision stage, prepared by a Landscape Architect and submitted to the Municipality for approval, as a condition of subdivision, detailing the alignment of the pathway system, related improvements and naturalized plantings within the Willow Creek area. The use of native plantings that provide for protection of riparian habitats is encouraged.
- 4.2.6 The Stormwater Management Ponds and related improvements shall be included within Public Utility Lots (PUL). No stormwater facilities may be permitted within Municipal Reserve (MR).
- 4.2.7 The Developer shall construct an all-weather access to each stormwater pond to provide access for maintenance/emergency service vehicles.
- 4.2.8 Recreation amenities may be constructed within a PUL, to the satisfaction of the Municipality provided they do not compromise the function of stormwater facilities.
- 4.2.9 Public access to all recreation amenities constructed within MR and PUL shall be provided within the Willow Creek area.
- 4.3.1 Individual residential properties will include designated manicured areas (including the building envelope) to be surrounded by natural areas, as detailed by Architectural Controls established by the Developer at the subdivision stage, to the satisfaction of the Municipality.
- 4.3.2 Except where required by stormwater management facilities and other utility infrastructure, no fencing shall be permitted within the Willow Creek area outside the manicured area referenced by **Figure 8**.
- 4.3.3 When proposed in proximity to stormwater management facilities within the Willow Creek area, implementation of plantings that establish/enhance riparian habitat is encouraged.

- 4.7.1 Architectural Controls shall be established within the Willow Creek area to maintain positive aesthetics, ensure a consistent standard of design, encourage western farm-style homes where verandas and porches predominate and garages are to the side or rear, preserve sightlines between new and existing residential development where possible and establish certain use restrictions outside of the provisions of the MD's Land Use Bylaw.
- 4.7.2 The Architectural Controls will be enforced within the Willow Creek area by the Developer until such time that the enforcement of the architectural control is transferred to a Homeowner's Association, to be legally established at the subdivision stage.
- 4.7.3 The Developer shall prepare a Building Envelope Plan detailing specific locations of all building envelopes within each residential parcel, to the satisfaction of the Municipality.
- 4.7.4 The Developer shall register a Restrictive Covenant against title to each new lot created within the Willow Creek area, to detail the requirements of the Architectural Controls, as condition of subdivision, to the satisfaction of the Municipality.
- 4.7.5 As a component of the Architectural Controls, the use of appropriate environmental technologies is encouraged to promote energy efficiency and low impact construction practices.
- 4.8.1 The Developer shall provide a Landscaping Plan at the subdivision stage, prepared by a Landscape Architect and submitted to the Municipality for approval, as a condition of subdivision, detailing the alignment of the pathway system, related improvements and naturalized plantings within the Willow Creek area. The use of native plantings that provide for protection of riparian habitats is encouraged.
- 4.8.2 The reintroduction of native/naturalized prairie landscape will be provided by the Developer within all public open space, and where possible through architectural controls, within the "naturalized areas" of each residential parcel as per **Figure 8**, to the satisfaction of the Municipality.
- 4.10.1 Architectural Controls will require the use of high quality natural exterior construction materials. The use of these materials will be monitored and enforced by the Developer and Home Owner's Association.
- 4.10.2 Energy efficiency and proven environmentally-appropriate building materials will be encouraged through Architectural Controls, using programs such as LEED and Built Green® as examples.
- 4.10.3 Low consumption plumbing fixtures and dual flush toilets will be required by Architectural Controls to reduce water consumption and the amount of water to the septic fields.
- 4.12.1 Properties adjacent to Woodland Road will have a landscaped berm within the rear or side yards to help minimize the impact on landowners to the west.
- 4.13.1 The development will provide fire hydrants for fire suppression purposes

- 5.1.1 Each lot will treat household wastewater using a private sewage disposal system designed by a qualified professional in accordance with Alberta Environment guidelines, the Alberta Private Sewage Systems Standard of Practice 1999 Handbook and the Municipality's Servicing Standards.
- 5.1.2 Architectural Controls, established by the Developer at the subdivision stage, will require that all PSDS installed within the Willow Creek area shall include a biofilter/textile or anaerobic system component that meets Alberta's (NSF) 40 Standard for Residential Wastewater Treatment Systems.
- 5.1.3 The Developer shall conduct percolation testing and near-surface water table testing, as a condition of subdivision, to properly design the sewage disposal system for each lot, to the satisfaction of Alberta Environment and the Municipal District.
- 5.1.4 The Developer shall provide a detailed Geotechnical Evaluation, as a condition of subdivision, which shall show that each residential parcel within the Willow Creek area contains a minimum of one (1) contiguous developable acre in accordance with the Municipality's Servicing Standards.
- 5.1.5 Under no circumstances will septic pump out systems, lagoons or open discharge from septic tanks be permitted within the Willow Creek area.
- 5.2.1 Provision of potable water within the Willow Creek area shall be from the Rocky View Water Co-op.
- 5.2.2 All necessary infrastructure required to provide potable water to each lot will be constructed by the Developer as a condition of subdivision to the satisfaction of Alberta Environment and the Municipal District.
- 5.2.3 The Developer shall provide main line stubs to facilitate extension of potable water infrastructure from the Willow Creek area into Future Development Cells A and B, to the satisfaction of the Municipal District.
- 5.2.4 Water wells will not be permitted as the water supply to any lot.
- 5.2.5 As part of the Architectural Controls established by the Developer at the subdivision stage, use of Low Flow Plumbing Fixtures, metering and use of native drought-resistant landscaping will be required within the Willow Creek area to reduce water consumption.
- 5.3.1 A Stormwater Management Plan shall be prepared by a qualified professional at the subdivision stage, to the satisfaction of Alberta Environment and the Municipal District which shall conform to the Bearspaw Master Drainage Plan.
- 5.3.2 The Stormwater Management Plan shall ensure that post-development flows and runoff volumes remain consistent with pre-development flows and runoff volumes within the Willow Creek area, to the satisfaction of the Municipality.
- 5.3.3 Subject to approval of the Stormwater Management Plan, the Developer shall construct a meandering creek within the public open space within the Willow Creek subdivision to connect each of the water features with the eventual discharge point located in the southwest portion of the site. All water bodies associated with the Stormwater Management Plan are to be dedicated as Public Utility Lots (PUL).

- 5.3.4 Drainage features within the Willow Creek area shall be located within Public Utility Lots dedicated at the subdivision stage. No stormwater facilities shall be located within Municipal Reserve (MR).
- 5.3.5 The Stormwater Management Plan within the Willow Creek area shall be designed with excess capacity to receive additional stormwater flow through from Future Development Cell A and areas to the northeast and northwest.
- 5.3.6 As much as possible, the management of surface drainage within the Willow Creek area shall use existing drainage courses, ponds and wetlands.
- 5.3.7 The Stormwater Management Plan shall provide post development flood protection and water quality enhancements within the Willow Creek area in accordance with Municipality and Alberta Environment guidelines.
- 5.3.8 The stormwater management system within the Willow Creek area will be incorporated with existing drainage features and a stream system to create natural open spaces that promote riparian habitat and natural vegetation to attract wildlife and create recreational opportunities for area residents.
- 5.3.9 Subject to approval from Alberta Environment and the Municipality, the Stormwater Management Plan within the Willow Creek area will assist in solving existing drainage issues affecting the existing subdivision directly to the east.
- 5.4.1 The provision of power, telecommunication and gas service within the Willow Creek area shall be provided by the Developer, to the satisfaction of the Municipality.
- 5.4.2 Any utility services shall be placed underground.
- 5.5.1 Collection of solid waste material within the Willow Creek area will be contracted to a Waste Management Company under the direction of the Homeowners' Association.
- 5.6.3 Implementation of appropriate and proven environmental technologies that enhance energy efficiency will be encouraged within the Willow Creek area through implementation of Architectural Controls established by the Developer at the subdivision stage.
- 5.7.1 Large-scale site grading operations shall not be permitted within the Willow Creek area to preserve as much of the site's existing topography, vegetation and natural features as possible, to the satisfaction of the Municipality.
- 5.7.2 Prior to commencing stripping and site grading, a Stormwater Management Plan, and an Erosion and Sediment Control Report shall be prepared by a qualified professional in accordance with guidelines and to the satisfaction of Alberta Environment and the Municipality.
- 6.2.1 A Traffic Impact Assessment shall be prepared by a qualified professional at the subdivision stage to the satisfaction of Alberta Infrastructure and Transportation (AIT) and the Municipal District of Rocky View.

- 6.2.2 All road improvements to the local and regional network required by development within the Willow Creek area shall be constructed by the Developer to the satisfaction of AIT and the Municipality.
- 6.2.3 All internal roads will meet the requirements as stated in the Municipal District's Road Linkage Policy.