



BOULDER CREEK CONCEPTUAL SCHEME



BYLAW C-5782-2003, ADOPTED SEPTEMBER 30, 2003

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

**MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44
BYLAW C-5782-2003**

A Bylaw of the Municipal District of Rocky View No. 44 to adopt the attached Schedule 'A', the "Conceptual Scheme", pursuant to Divisions 7 and 12 of Part 17 of the Municipal Government Act.

WHEREAS the Council of the Municipal District of Rocky View No. 44 has received an application to adopt a Conceptual Scheme to provide a framework for subsequent redesignation, subdivision and development in a portion of the NW ¼ 14-23-27-W4M and the NE ¼ 14-23-27-W4M;

WHEREAS a notice was published on Tuesday, August 26, 2003 and Tuesday, September 2, 2003 in the Rocky View Five Village Weekly, a newspaper circulating in the Municipal District of Rocky View No. 44, advising of the Public Hearing for Tuesday, September 9, 2003; and

WHEREAS Council held a Public Hearing and have given consideration to the representations made to it in accordance with Section 692, Section 230 and Section 606 of the Municipal Government Act, being Chapter M-26 of the Revised Statutes of Alberta, 2000, and all amendments thereto.

NOW THEREFORE the Council enacts the following:

1. That the Conceptual Scheme be adopted to provide a framework for subsequent redesignation, subdivision and development in a portion of the NW ¼ 14-23-27-W4M and the NE ¼ 14-23-27-W4M; as hereto attached as Schedule 'A'; and
2. This Bylaw shall come into effect upon the date of its third and final reading thereof.

File:3214003/004 – 2002135

First reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on Tuesday, July 29, 2003 on a motion by Councillor Habberfield.

Second reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on Tuesday, September 30, 2003 on a motion by Councillor Habberfield.

Third reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on Tuesday, September 30, 2003 on a motion by Councillor Goode.

REEVE OR DEPUTY REEVE

MUNICIPAL SECRETARY

Langdon Ranch Conceptual Scheme

OFFICE CONSOLIDATION

October 2006

This office consolidation includes the following amending Bylaw(s):

Bylaw	Description	Date
Bylaw 6352-2006	Replace Schedule "A" of Bylaw C5782-2003 Including the change of name from Langdon Ranch to Boulder Creek Conceptual scheme	31 October, 2006
Bylaw 7592-2016	Forty-three (43) amendments throughout Including the re-write of Sections 1.2, 4.3 5.1, 6.1, 6.2, 6.4, 6.5, 6.6, 6.8, 6.9, and 8.2.1 Change of reference from Direct Control Bylaw to Direct Control Bylaw 85 (Bylaw C-5783-2003) Change of reference from Hamlet of Langdon ASP to Langdon ASP. Exhibits 3.02, 4.02, 6.01, 6.03, 6.04, 6.05, 6.06, 6.07, 7.01, and 7.02 replaced with new images.	12 July, 2016

NOTE: *This document is an office consolidation and amendments have been inserted for ease of reference only. The official Bylaw and all amendments thereto are available from the Administration Office of the M.D. of Rocky View No. 44 and should be consulted for all purposes of interpreting and applying this Bylaw.*

**MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44
BYLAW C-6352-2006**

SCHEDULE "A"

A Conceptual Scheme for a portion of NW-14-23-27-W4M and NE-14-23-27-W4M comprising approximately \pm 260.82 acres known as "Boulder Creek Conceptual Scheme".



Municipal District of Rocky View No. 44
Department of Planning and Community Services

BOULDER CREEK CONCEPTUAL SCHEME

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1. INTRODUCTION

1.1 Purpose

This Conceptual Scheme provides the basis for the redesignation and subdivision of lands located at NW-14-23-27-4 and NE-14-23-27-4 in the Hamlet of Langdon, Alberta. In preparation of this Conceptual Scheme, careful attention was paid to the policies and objectives set forth in the Langdon Area Structure Plan (ASP) Bylaw C-7564-2016, adopted May 10, 2016. The Langdon ASP provides comprehensive policy framework for evaluating development proposals within its plan boundaries.

1.2 Vision

This Conceptual Scheme describes how 289.10 acres of ranch and farmland will transform into a well-planned and vibrant residential and recreational community. The proposed development, entitled Boulder Creek, will feature ± 477 residential lots surrounded by an 18 hole public golf course. In addition to the golf course and driving range, Boulder Creek will include other public amenities, such as an extensive linear open space and pathway along the northern boundary of the site, as well as park and open spaces dispersed throughout the development totalling 11.28 acres. Boulder Creek will provide a quality development consistent with the policies and objectives set forth in the Langdon ASP, and meets the existing and future needs of the community.

The Boulder Creek Conceptual Scheme serves as an update and replacement to the Langdon Ranch Conceptual Scheme, which was adopted by Council September 30th, 2003. Planned refinements to the future phases of the development, such as the relocation of the golf club facility to a more functional location, more efficient course routing, and slight boundary changes, has necessitated this update. The Boulder Creek Conceptual Scheme reflects a more refined development layout, which is consistent with the Langdon ASP and the intent of the first Conceptual Scheme, and provides updated servicing and open space network information.



Looking South-West across the plan area

2. CONCEPTUAL SCHEME OBJECTIVES

- 2.01** To establish a Conceptual Scheme that is comprehensive and describes uses, designs, and strategies appropriate for developing a portion of the NW-14-23-27-4 and the entire NE-14-23-27-4.

- 2.02** To create a residential and recreational community that respects the existing built environment and the historical character of the hamlet.
- 2.03** To create a residential and recreational community that contributes to the cultural and civic identity of Langdon and offers opportunities to recreate, gather, and socialize.
- 2.04** To facilitate the development of a residential and recreational community that serves as both a neighbourhood and a public amenity while complementing the existing and future land uses in the area.
- 2.05** To design a residential and recreational community that is safe, comfortable and promotes pedestrian accessibility and mobility throughout the hamlet.
- 2.06** To identify existing physical infrastructure and to establish policies for the provision, upgrade, and expansion of these services that may be required to accommodate or sustain the development within the plan area.
- 2.07** To identify the various constraints affecting lands contained within the plan area and to discuss what impact these constraints will have on the proposed development.

3. CONCEPTUAL SCHEME PLAN AREA AND LAND USE CONTEXT

3.1 Plan Area

The Hamlet of Langdon is located within the MD of Rocky View, roughly 20 km east of the City of Calgary. **Exhibit 3.00** - Location Plan illustrates the area location in context to the entire MD or Rocky View. The plan area is comprised of 289.10 acres located in the NW-14-23-27-4 and NE-14-23-27-4. As **Exhibit 3.01** - Conceptual Scheme Plan Area illustrates, the plan area is situated immediately east of Centre Street (Highway 797) and directly south of Dead Horse Road.

Policy

- 3.1.1 Policies contained within the Boulder Creek Conceptual Scheme shall apply to all lands within the Conceptual Scheme Plan Area as illustrated in **Exhibit 3.01** - Conceptual Scheme Plan Area.

3.2 Current Land Use

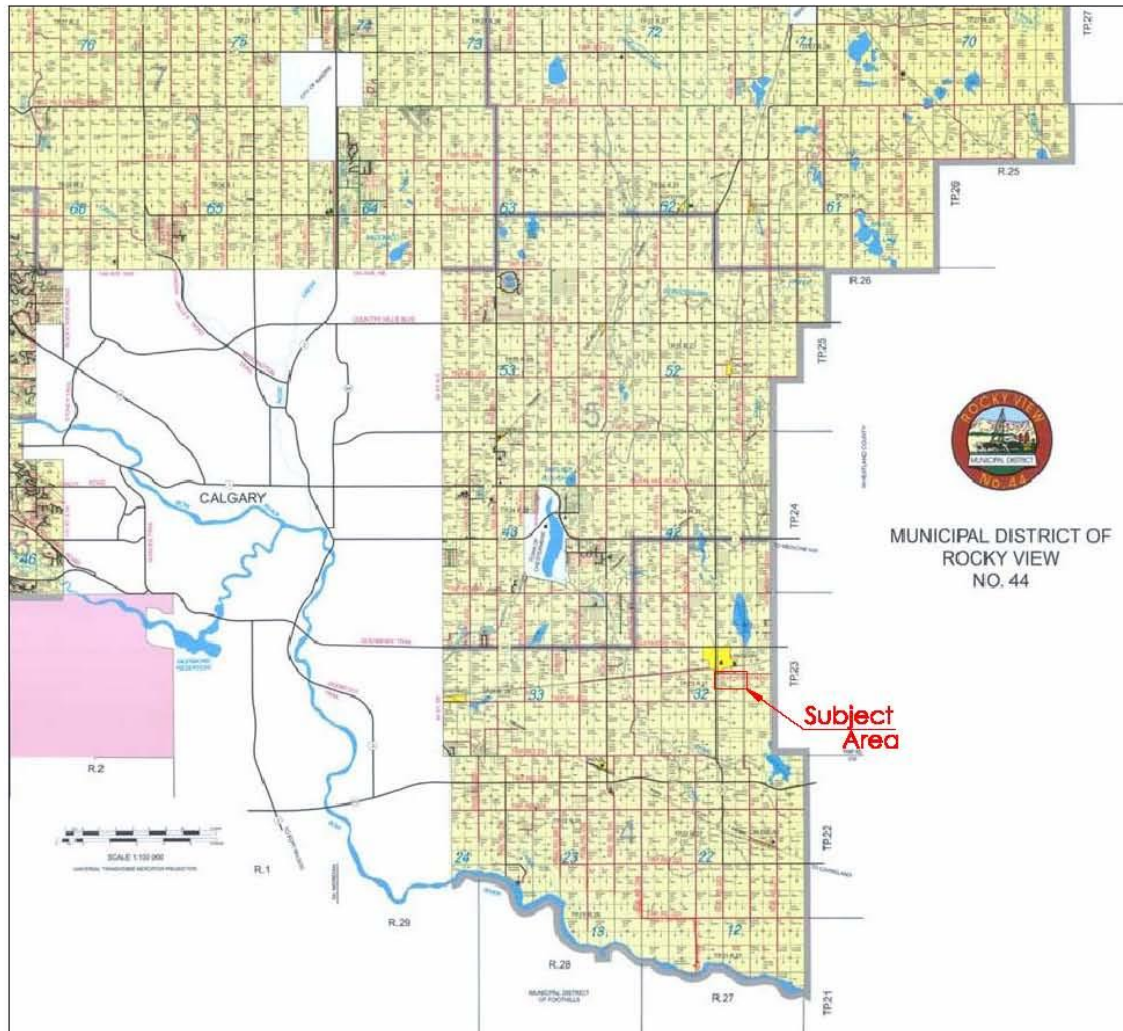
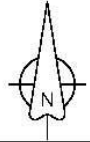
The plan area is currently designated DC under the MD of Rocky View Bylaw C-5783-2003. The DC designation is consistent with the previous Langdon Ranch Conceptual Scheme and accommodates residential and recreational uses.

3.3 Land Use Context

The MD of Rocky View Land Use Bylaw currently designates the adjacent lands to the north, east, south, and west of the plan area for predominantly agricultural uses.

The Langdon ASP includes a Future Land Use Scenario that identifies the plan area for residential and recreational uses as shown on **Exhibit 3.02** – Future Land Use Scenario. The adjacent lands to the north (SW-23-23-27-4 and SE-23-23-27-4) have been identified for residential uses, with the exception of a small parcel located west of the wastewater treatment plant that has been identified for business uses. The adjacent lands to the northwest have also been identified for a central business district.

BOULDER CREEK CONCEPTUAL SCHEME



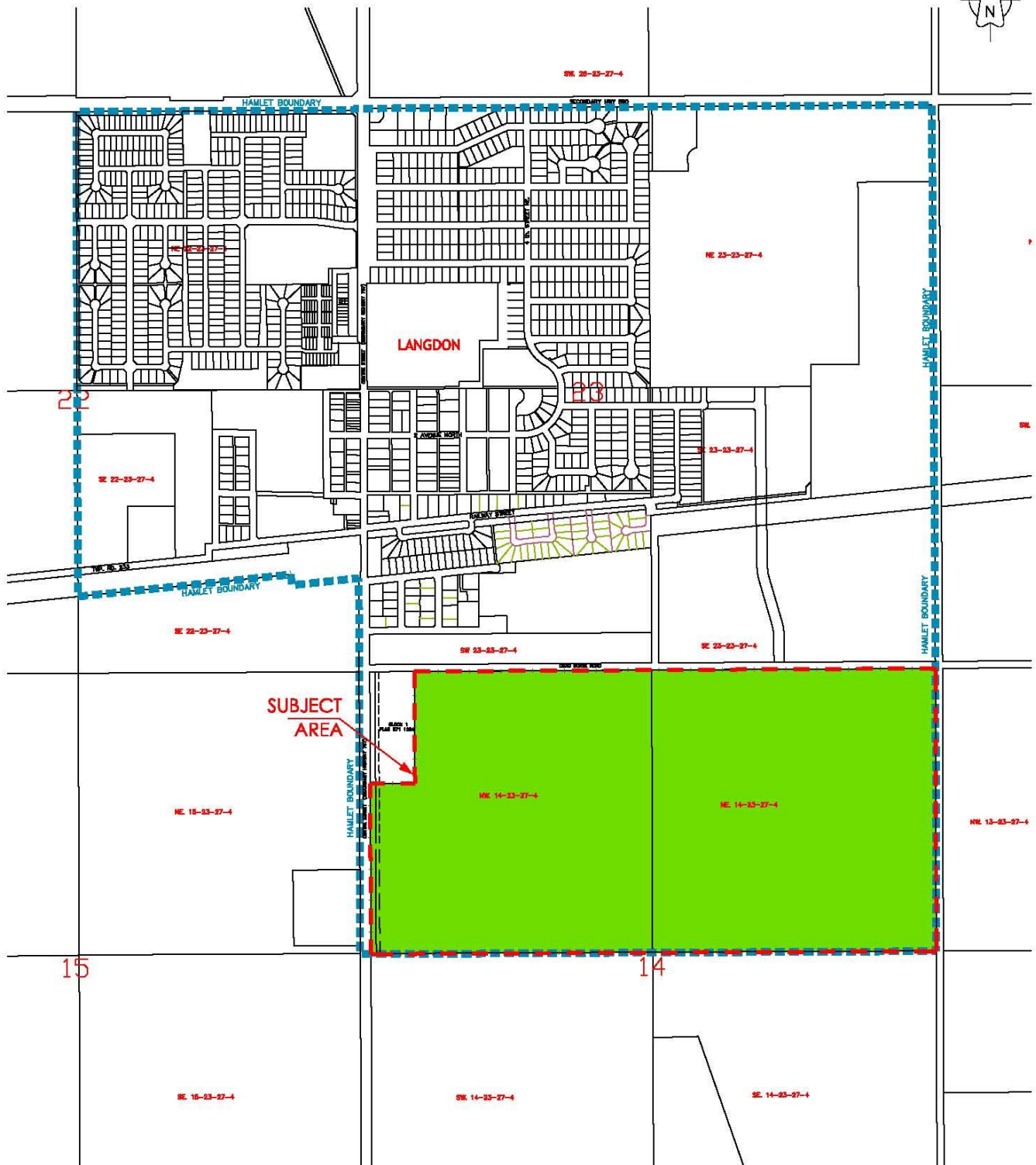
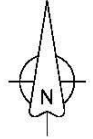
LOCATION PLAN

MARCH 2006

N.T.S.

EXHIBIT 3.00

BOULDER CREEK CONCEPTUAL SCHEME



SITE PLAN

MARCH 2006

SCALE 1:15 000

EXHIBIT 3.01

4. PHYSICAL SITE FEATURES

4.1 Topography

The topography of the plan area is characteristic of the flat prairie that defines the Langdon and surrounding area. As **Exhibit 4.01** - Topography illustrates that the plan area slopes gently eastward.



Looking South-East across Boulder Creek Boulevard (Dead Horse Road)

Policy

- 4.1.1 No alterations of the existing predevelopment topography shall occur prior to approval of a stormwater management plan and overall site-grading plan, to the satisfaction of the MD of Rocky View and Alberta Environment.

4.2 Hydrology

There are no significant drainage courses within the plan area. Nonetheless, drainage generally flows towards the east.

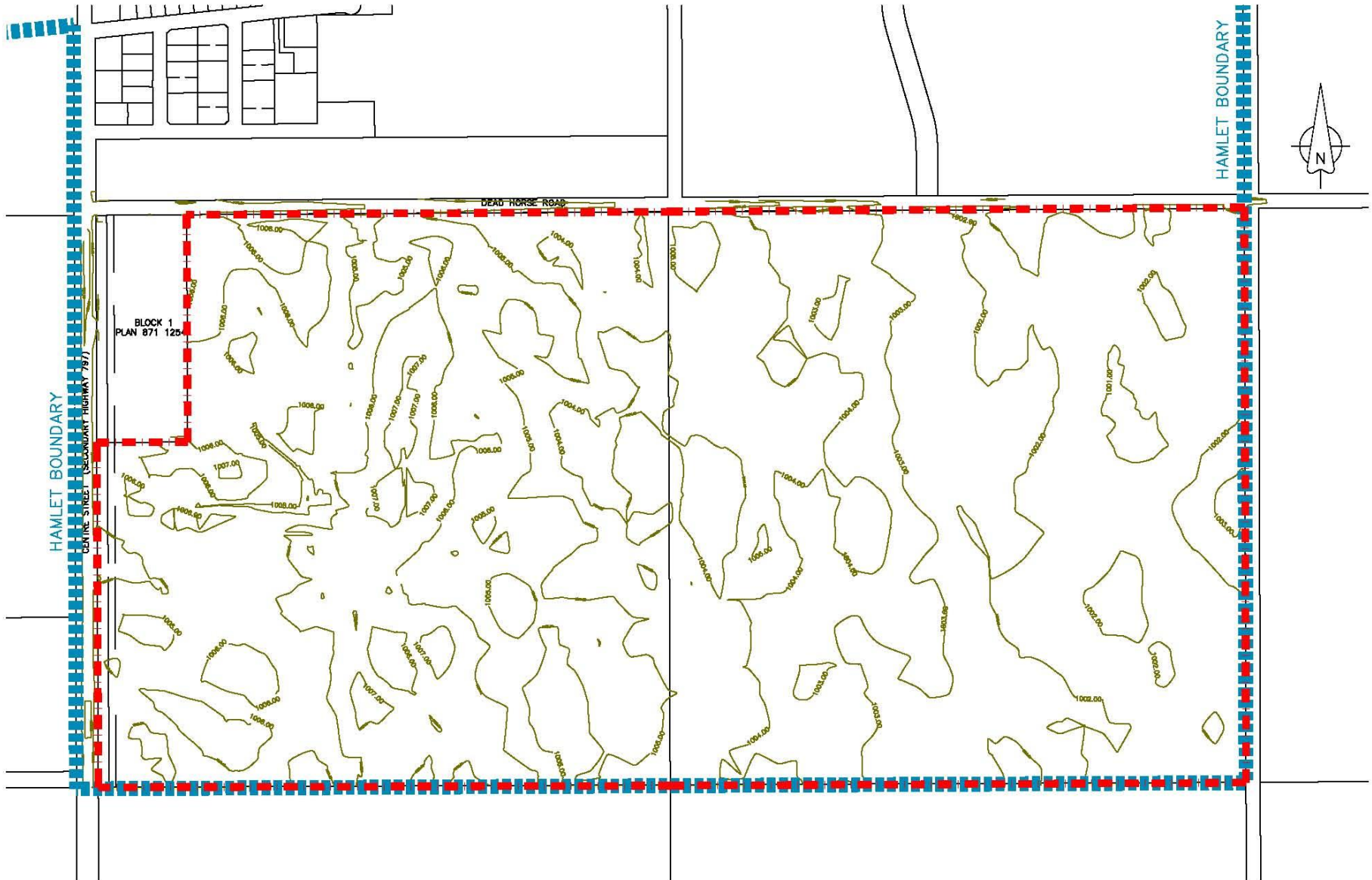
There are four low points around the perimeter of the plan area where water has ponded on the surface. These low points have been transformed into stormwater storage ponds and will serve as an integral part of the Stormwater Management Plan as illustrated in **Exhibit 4.02** - Stormwater Management.

Policy

- 4.2.1 Any existing areas of surface water ponding may be modified as part of the approved Overall Site Grading Plan and Stormwater Management Plan.

4.3 Stormwater Management

Alberta Environment's *Standards and Guidelines for Stormwater Management for the Province of Alberta and the MD of Rocky View's Servicing Standards for Residential Subdivisions and Road Construction* requires that all new developments be responsible for managing any increase in stormwater runoff and deterioration in water quality that may result.



SITE TOPOGRAPHY

The proposed development consists of 3 stormwater storage ponds designed to contain all stormwater runoff up to and including the 1:100 year storm event. The proposed development will not increase the amount of stormwater runoff flowing from the site or deteriorate the water quality. All runoff will be fully contained on-site and will have no impact on water outside the plan area. Discharge from the ponds will be limited to stormwater storage and golf course irrigation only.

The Stormwater Management Plan has been designed in anticipation of the 1:100 year storm event. Under these circumstances, stormwater will be retained in the 3 stormwater storage ponds as illustrated in **Exhibit 4.02 - Stormwater Management**. In the unlikely event, that a storm exceeds the 1:100 year projections, the emergency overflow will protect homes and streets from flooding.

In this emergency situation, stormwater runoff will be released into a drainage ditch immediately adjacent to Dead Horse Road where it will flow by natural drainage course to Weed Lake. The release rate will be relatively insignificant compared to the drainage ditch and the runoff will have a negligible impact on Weed Lake.

Stormwater for minor events will be conveyed underground through storm basins, as per *Alberta Environment's Standards and Guidelines for Stormwater Management for the Province of Alberta*. Surface runoff will also be conveyed to the nearest catch basin via curb and gutter or concrete swales before discharging into one of the 3 stormwater storage ponds. As the following table illustrates, the total surface area of the 3 ponds will be 33.55 acres and the total volume will be 205,317 cubic metres.

Storm Water Storage Pond Statistics

Pond	Surface Area (acres)	Volume (cubic metres)
Pond 1	7.60	43,860
Pond 2	4.27	22,572
Pond 3	21.68	138,885
Total	33.55	205,317

Preliminary analysis indicates that the 3 stormwater storage ponds will be adequate to handle the 1:100 year storm event. The ponds will be connected by an underground pipe to ensure pond volumes remain balanced and the plan area is evenly serviced. Surplus water will be collected and used to irrigate the golf course.

Policy

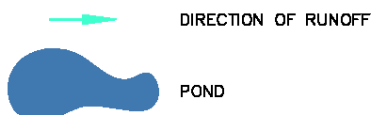
- 4.3.1 Stormwater management within the Conceptual Scheme plan area shall be in accordance with the Servicing Standards for Residential Subdivisions and Road Construction as approved by the MD of Rocky View.
- 4.3.2 A stormwater management plan prepared by a qualified professional shall be approved prior to subdivision approval by the MD of Rocky View and Alberta Environment.
- 4.3.3 A stormwater management plan prepared by a qualified professional that addresses, among other things, the need for sedimentation control, shall be reviewed and accepted by the Weed Lake Partnership Committee prior to subdivision approval where there is any potential for release of stormwater that eventually flows to Weed Lake.
- 4.3.4 Stormwater runoff shall be handled overland via curb and gutters, drainage swales and retention ponds, as described in this Conceptual Scheme.



BOULDER CREEK CONCEPTUAL SCHEME

STORM WATER MANAGEMENT

LEGEND



POND	AREA (ACRES)	VOLUME (CUBIC METERS)
POND 1	7.60	43,860
POND 2	4.27	22,572
POND 3	21.68	138,885
TOTAL	33.55	205,317

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SCALE 1:7500 EXHIBIT 4.02

4.4 Vegetation

Vegetation throughout the plan area consists mainly of non-native grasses consistent with the pasturing of livestock. There are a number of mature coniferous and deciduous trees and shrubs around the farmhouse that will be preserved, where possible, as part of the development process.

Policy

4.4.1 Mature trees and shrubs around the farmhouse should be preserved, where possible, as part of the development process.

4.5 Existing Structures

There is a natural gas compressor station located in the northeast corner of NW 14-23-27-4. The station consists of three small buildings that are completely surrounded by a metal fence and are contained within an existing utility easement.

There are several existing structures scattered throughout the west half of the plan area. These structures are generally associated with the feedlot operation and consist of cattle pens, barns, storage sheds, and small silos.

There are two small farmhouses and two large storage buildings south of the proposed access off Centre Street (Highway 797). The storage buildings will be used to store equipment needed to maintain the golf course, while one of the two farmhouses will serve as the clubhouse until a permanent structure can be built. All other unnecessary structures will be removed from the plan area prior to stripping and grading.



Compressor Station



Maintenance Buildings

4.6 Subsurface Conditions

Almor Engineering Associates conducted a preliminary geotechnical analysis of the plan area to determine whether the subsurface soil conditions and groundwater levels were suitable for development. A total of 20 test holes were drilled throughout the plan area. Analysis of the testholes revealed that the subsurface soil profile does not present any constraints to residential development. The soil profile consists of topsoil underlain by glacial till (ranging from sand to clay) above a bedrock consisting of weathered sandstone and siltstone. The geotechnical report is available under a separate cover.

Policy

- 4.6.1 Subdivision and development shall proceed in accordance with the recommendations of a geotechnical report prepared by a qualified professional engineer in support of a proposal for subdivision and/or development to the satisfaction and approval of the MD of Rocky View.

4.7 Environmental Considerations

Almor Engineering conducted an Environmental Site Assessment (ESA) to evaluate potential environmental liabilities associated with past and present activities within the plan area. A total of 3 test holes were drilled throughout the plan area with 2 being located within the feedlot pen. Analysis of the test hole samples, combined with an historical records review and a site reconnaissance, revealed that some environmental impairment exists within the plan area. The report describes how salts and coliforms have impacted the soil and shallow groundwater as a result of the feedlot operation. Further environmental investigation is required to ensure adequate measures are taken to match future land use with existing soil and groundwater conditions on the site. Since the initial Langdon Ranch Conceptual Scheme was approved, reclamation of the site has been completed to the satisfaction of the Natural Resources Conservation Board and the Calgary Health Region.

Policy

- 4.7.1 Prior to subdivision approval for any phase in accordance with **Exhibit 6.05 Phasing Plan**, that affects identified contaminated lands requiring remediation as identified in an approved Environmental Site Assessment (ESA) conducted by a qualified professional engineer, remediation must be complete to the satisfaction and approval of Natural Resources Conservation Board, Calgary Health Region, Alberta Environment and the Municipality.

5. LAND USE

5.1 Discussion

As per the *Future Land Use Scenario* contained within the Langdon ASP, the plan area will be redesignated from an agricultural use to a residential and recreational use as shown in **Exhibit 3.02 - Future Land Use Scenario**.

The proposed development site is currently designated for Hamlet Residential and Recreation Business under a DC district of the MD of Rocky View Land Use Bylaw.

Pursuant to the Langdon ASP, the recommendation to re-designate the 289.10 acres that comprise the plan area to Direct Control District (DC), to enable the development of a vibrant residential and recreational community, has occurred. Direct Control District 85 (DC-85) facilitates the creation of smaller residential lots and restricts recreational uses to golf rather than the wide range of recreational uses permitted under the Recreation Business District (B-4). In addition, multi-family residential will also be integrated into the development to provide housing product diversity and choices for the expanding housing market within the Hamlet of Langdon.

Policy

- 5.1.1 A new Direct Control district is to be prepared and approved by the MD of Rocky View subsequent to the adoption of this Conceptual Scheme. The Direct Control Bylaw shall provide special guidelines for both the recreational and residential development cells.
- 5.1.2 The Direct Control district should restrict the range of uses permitted within the recreational development cell to those uses associated with development of a golf course and associated facilities.

6. SUBDIVISION DESIGN AND DEVELOPMENT CONTEXT

6.1 Subdivision Design

This Conceptual Scheme proposes the creation of ±477 residential units. An 18 hole public golf course is planned on the remainder of the 289.10 acre site. Boulder Creek was designed with the following objectives in mind:

- Establish an internal road network that complements the existing road network that physically defines the Hamlet of Langdon;
- Maximize public exposure to the golf course by clustering residential lots in the middle of the plan area; and
- Create parks and open spaces, separate from the golf course, which will function as tot lots and neighbourhood parks for local residents to enjoy.

As the following table illustrates, the residential component of Boulder Creek will encompass 90.80 acres of land while the recreational component will cover 160.03 acres. Similarly, 11.28 acres of land will be used to create parks and open spaces. As a result, ~60% of the plan area will consist of parks and open spaces and recreational uses.

Proposed Use	Area (acres)	Area (%)
Recreational (Golf Course)	160.03	55.35
Residential	90.80	31.41
Parks and Open Spaces	11.28	3.90
Roads	26.99	9.34
Total	289.10	100.00

Policy

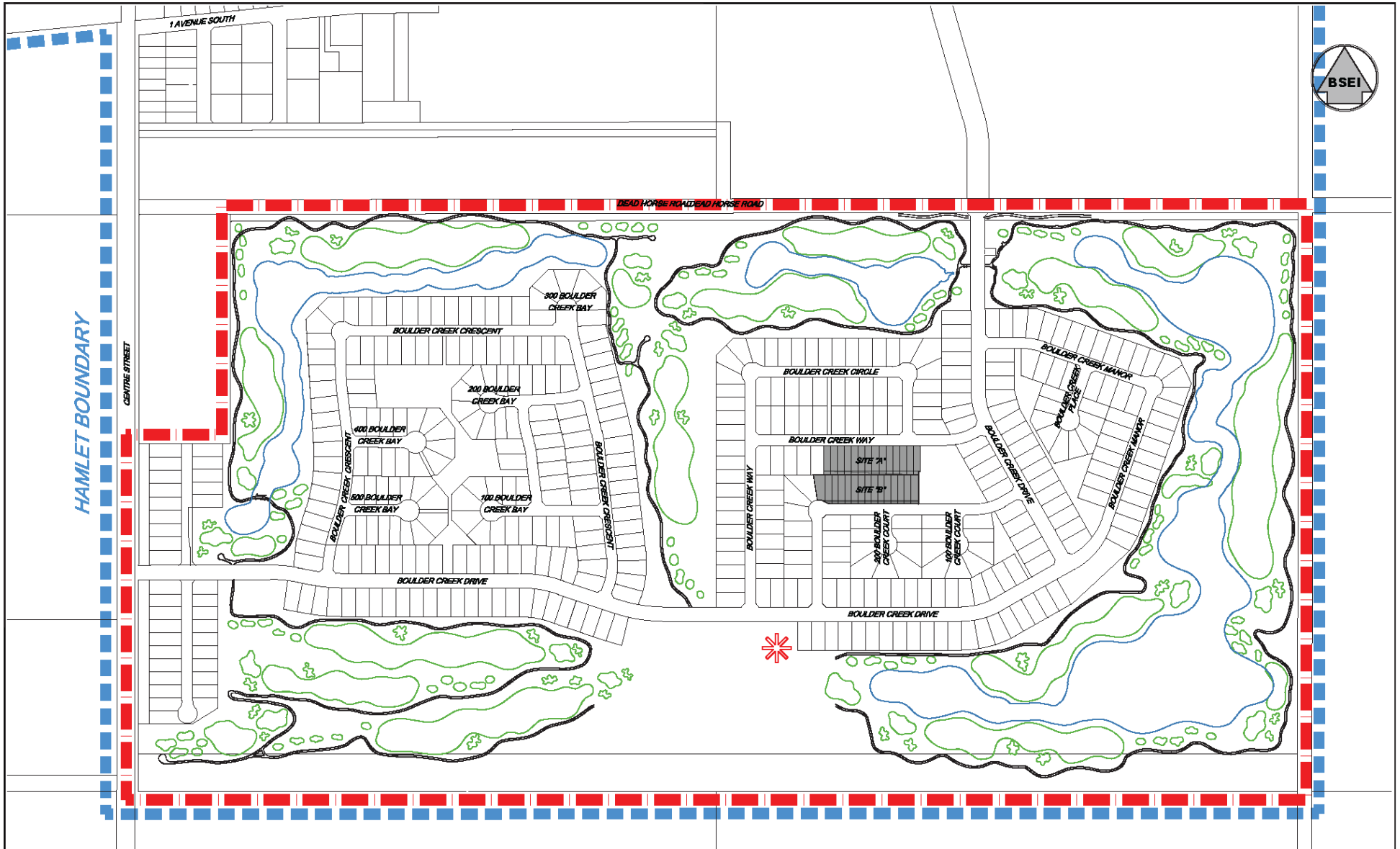
- 6.1.1 Lot layouts as shown in **Exhibit 6.01 – Subdivision Design** are conceptual only and may not reflect the final design, number or size of lots that may be proposed in future tentative plans of subdivision determined at the detailed engineering stage.
- 6.1.2 A Roadside Development Permit shall be obtained from Alberta Infrastructure and Transportation prior to any development of the lands within 800 metres of a secondary highway under the jurisdiction of Alberta Transportation, until such time as the direction, management, and control of Hwy 797 has been transferred to the MD.
- 6.1.3 Land that is identified as surplus to the golf course and related facilities may be subdivided to facilitate transfer of the surplus land into a separate title. Alternative land uses can be explored on the remnant parcels via future DC district guidelines. Approval of the future DC district will be to the satisfaction of the development authority and the MD, and be consistent with other policy documents to be generated.

6.2 Residential Component

The residential component consists of ±477 residential lots clustered in the centre of the plan area. As **Exhibit 6.01 - Subdivision Design** illustrates, the lots are positioned to maximize public exposure to the golf course and other recreational amenities such as the linear parks and open spaces. In all cases, the lots either front or flank onto the internal roads which follow a modified grid pattern. This grid pattern has enabled the creation of sub-neighbourhoods that provide additional privacy, calmer streets, and safer places for children to play.

This Conceptual Scheme proposes the creation of two residential product types. The first being single family hamlet residential lots that are only slightly smaller than those commonly found throughout the Hamlet of Langdon. On average, these residential lots will measure 743 square meters (8,000 square feet) or 19 m in width and 40 m in length. ±454 single family detached residential lots are anticipated. The second residential product type will be medium-density residential units consistent to other medium density development in the Hamlet of Langdon. Approximately 23 medium density residential lots are anticipated.





The overall anticipated density is approximately 1.65 units per acre, which is significantly lower than the 4.00 units per acre accepted by the Langdon ASP. The smaller parcels are adequate given the extensive recreational and public amenity space that will encircle them and the fact that the overall density of the plan area is less than half of what is permitted by the ASP.



BOULDER CREEK CONCEPTUAL SCHEME

SUBDIVISION DESIGN

LEGEND

-  SITE BOUNDARY
-  CLUBHOUSE LOCATION
-  SITE "A"
-  MULTI-FAMILY SITE

PROPOSED USE	AREA
GOLF COURSE	160.03 ac
RESIDENTIAL	90.80 ac
PARKS & OPEN SPACE	11.28 ac
ROADS	26.99 ac
TOTAL	289.10 ac

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SCALE 1:7500 EXHIBIT 6.01

6.2.1 SINGLE FAMILY RESIDENTIAL

Discussion

Single-family development is proposed for the plan area. Average single family dwelling lot sizes may be less than 0.25 acres to accommodate innovative subdivision design, as facilitated by the Langdon ASP. The anticipated density will be well less than 4.0 units per acre and less than 4.5 units per acre including medium density residential units.

Conceptual Scheme Policy – Single Family Residential

Policy

- 6.2.1.1 Subdivision shall conform to the Hamlet Residential Single Family District (HR-1) with the exception of parcel size, which shall be 743 square metres or 8,000 square feet.

6.2.2 MEDIUM DENSITY RESIDENTIAL

Discussion

The Concept provides for ± 2.43 acres (± 0.98 hectares) for the development of medium residential development. Medium density residential areas are planned to accommodate approximately 10 units per acre in accordance with the provisions of the Langdon ASP. Access to the medium density residential sites will be from internal roads. The medium density residential sites are planned to accommodate 23 dwelling units.

Specific site planning and architectural standards proposed for the medium density residential areas identified in the Concept are planned to develop in accordance with the provisions of the Langdon ASP. DC-85 will be used to regulate the development of the medium density residential areas. Medium density residential units expand the housing choices in this new community within Langdon.

Conceptual Scheme Policy – Medium Density Residential

Policy

- 6.2.2.1 Specific site planning and the architectural standards proposed for developments proposed within the medium density residential areas as identified in **Exhibit 6.01, Subdivision Design**, shall be in accordance with the provisions of the Langdon Area Structure Plan.
- 6.2.2.2 A “Direct Control District (with special guidelines)” of the Land Use Bylaw should be applied to the medium density residential areas as identified in **Exhibit 6.01, Subdivision Design**. The “Direct Control District (with special guidelines)” should regulate land use and contain development regulations in accordance with the provisions of the Langdon Area Structure Plan.
- 6.2.2.3 The maximum number of medium density residential units permitted in the planning area identified in Phase 2 through 5 on **Exhibit 6.06** is twenty-three (23). The anticipated overall density for medium density residential units will be determined through other policy initiatives and future land use amendments.

6.3 Architecture and Massing Scheme

The Langdon ASP describes how the municipality supports neighbourhood design that retains and integrates existing design patterns found within the developed neighbourhoods of the community and encourages developers and landowners to maintain common design elements from one neighbourhood to the next.

In accordance with this policy, the proposed residential development cell will reflect the Hamlet Residential Single Family District (HR-1), with exceptions, as per the DC Control bylaw, and feature architecture and massing elements that are similar to the built form that has become characteristic of the hamlet.

The architectural style shall be managed through an approved set of architectural control guidelines, which will be complimentary to the built heritage of Langdon and embody a high quality of architecture and construction that appropriately addresses the local vernacular.

Policy

- 6.3.1 New homes within the plan area shall be of a scale appropriate to the surrounding buildings and to the Hamlet of Langdon as a whole.
- 6.3.2 Minimal setbacks and front patios are encouraged to promote a sense of community and enhance front yard aesthetics.

6.4 Recreational Component

Boulder Creek will feature a number of recreational amenities including an 18-hole golf course, driving range, and clubhouse.

The clubhouse, which will provide food and beverages for sale, will operate out of the existing farmhouse until a permanent facility can be built. The clubhouse will be centrally located to service the Golf course routing. Parking facilities will be provided immediately adjacent to the clubhouse. The driving range will be located south of the clubhouse (Refer to **Exhibit 6.02- Concept Rendering**).

The golf course consists of 18 holes that surround the cluster of residential lots. Hole 1 begins north of the clubhouse while holes 9 and 18 return to the clubhouse. All of the holes are located at least 30 m from the residential lots. A transmission right-of-way forms the southern boundary of the golf course. AltaLink, who has approved the design and location of the golf course, maintains the right-of-way.

The golf course also features 3 stormwater storage ponds, with a combined surface area of 33.55 acres that form part of a stormwater management system. The ponds will provide visual interest, habitat for aquatic waterfowl, and opportunities for wildlife viewing. The golf course will be irrigated with groundwater and stormwater drawn from the ponds.

Policy

- 6.4.1 No development shall occur to extend the golf course within the transmission right-of-way (T.A.U. Transmission R/W 801 1073) without the consent and approval of AltaLink Management Ltd. or their successors.
- 6.4.2 Prior to the use or conversion of any existing building as a public facility, an assessment may be required for regulated hazardous materials to ensure the suitability for public use, to the satisfaction of the Development Authority and Calgary Health Region.
- 6.4.3 No development shall occur in close proximity to high-pressure pipelines without the consent and approval of the pipeline owner.

6.5 Direct Control Bylaw

Cell 1 & 3:

DC-85 divides the plan area into three residential development cells and a recreation business development cell. Two residential cells will reflect the Hamlet Residential Single Family District (HR-1) with the following exceptions:

- The minimum parcel size for fully serviced lots shall be 743 sq. m. (8,000 sq. ft.);
- The maximum site coverage of all buildings shall not exceed 35% and accessory buildings are not to exceed a maximum site coverage of 10%;
- Proposed side yards shall be no less than 1.50 meters (5.00 ft.) and remain unobstructed from cantilever extensions or accessory buildings.

Cell 2:

Cell 2 will be Medium Density Residential Districts consistent with the medium density residential development requirements within the Langdon ASP (Section 8). Cell 2 consists of four (4) small pods, which will allow the development of medium density residential development at no more than 10 units per gross acre.

Cell 4:

The recreation business development cell will reflect the Recreation Business District (B-4) with the following exceptions:

- The uses will be restricted to a pro shop, golf course, mini golf, clubhouse, driving range, restaurant and lounge, health club and spa, daycare, catering facility, private club and organization, accessory buildings, and signs.

DC-85 enables the development of a vibrant residential community and recreational amenity that achieves the objectives of the Langdon ASP and this Conceptual Scheme. The bylaw also establishes a set of regulations that will effectively guide the development of lands within the plan area.

Policy

- 6.5.1 Lands redesignated under the Direct Control District (DC) within the Conceptual Scheme Plan Area shall conform to the General Regulations set forth in the MD of Rocky View Land Use Bylaw and the corresponding Direct Control District Bylaw that will be prepared and approved by the MD of Rocky View subsequent to the adoption of this Conceptual Scheme.

6.6 Open Space and Pathways

In addition to the golf course and driving range, Boulder Creek will also include an extensive linear open space and pathway along the northern boundary of the site, as well as 11.28 acres of park and open space dispersed throughout the plan area.

The pathway will be landscaped and paved with asphaltic concrete. A sustainable and low maintenance form of landscaping is encouraged and should consist of natural prairie grasses and drought resistant foliage suitable for the local environment. The pathway is intended to serve as an integral component of a much larger regional trail network that will enable local residents to access community landmarks such as Langdon Park and the central business district by foot or bicycle. The pathway will also provide community residents with an alternative and walkable access to the golf course as shown on **Exhibit 6.04 – Pedestrian Connections**.

The internal roads will be equipped with sidewalks that will create a safe and relaxing pedestrian environment for local residents traveling towards the linear pathway and further into the community. This system of pedestrian friendly streets combined with the internal linear pathways will also enable community residents to safely travel from the northern entrance to the clubhouse and driving range in the southwest corner of the plan area.

This system of pedestrian corridors will enable local and community residents alike to travel efficiently between the open spaces distributed throughout the neighborhood and greatly enhance the walkability of the Langdon community as a whole.

The parks and open spaces identified on **Exhibit 6.02 - Concept Rendering** will provide opportunities for both active and passive recreational activities. Boulder Creek features an open space that looks out over the golf course and several others that will function well as tot lots and neighborhood parks. All of the parks and open spaces are intended for public use, and will be equipped with the appropriate park furniture, play structures, and site lighting for safety and security. A linear pathway has been dedicated along the north edge of the plan area and will be a separate path system to the golf course, and will meander and navigate around the north side of compressor station that exists along the north boundary of the site. **Exhibit 6.05 – Open Space System**, provides an illustration of the entire open space system within the plan area. **Exhibit 6.03 – Community Context**, shows how the conceptual scheme area is positioned within the overall community of the Langdon.

Policy

- 6.6.1 Pathways shall be constructed to municipal standards and to the satisfaction of the MD.

6.7 Crime Prevention Through Environmental Design (CPTED)

A CPTED strategy shall be submitted and reviewed at the tentative plan stage prior to subdivision approval for the residential development cell, and should address the following: awareness of the environment, visibility of others, community context, and finding help.

The CPTED strategy should anticipate problematic places and situations where offences may occur within the plan area and establish guidelines designed to evaluate and mitigate the potential for crime.

The CPTED strategy will include a plan demonstrating that adequate lighting will be provided along the streets and the pathway along the northern boundary of the site to create a sense of security and to ensure a safe pedestrian environment.

Policy

- 6.7.1 A CPTED strategy shall be submitted and reviewed at the tentative plan stage prior to subdivision approval for the residential development cell.

6.8 Municipal Reserves

The *Municipal Government Act* and the *Municipal Development Plan* require that 10% of the site be dedicated as municipal reserve and/or municipal school reserve.

This Conceptual Scheme proposes that 11.28 acres of land be dedicated as municipal reserve. The reserve will consist of a 3.61 acre linear open space and pathway along the northern boundary of the site as well as 6.84 acres of park and open space dispersed throughout the plan area.

Exhibit 6.05-Open Space System, provides an illustration of the entire open space system within the plan area.

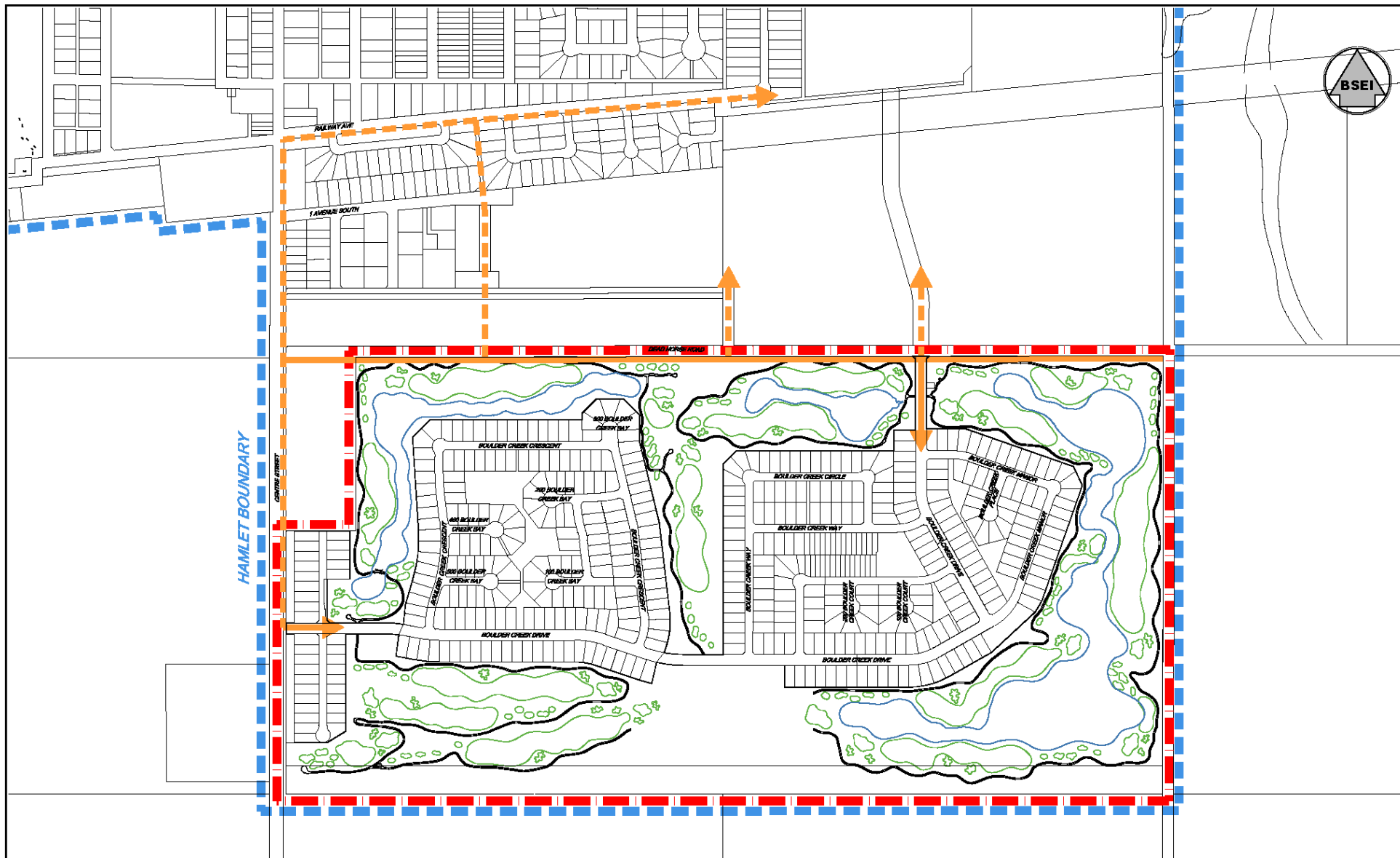


CONCEPT RENDERING

MARCH 2006

N.T.S.

EXHIBIT 6.02



BOULDER CREEK CONCEPTUAL SCHEME

PEDESTRIAN CONNECTIONS

LEGEND

- PROPOSED EXTERNAL PEDESTRIAN WALKWAYS
- PROPOSED INTERNAL PEDESTRIAN WALKWAYS
- SITE BOUNDARY

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BOULDER CREEK CONCEPTUAL SCHEME

OPEN SPACE PLAN

LEGEND

- PROPOSED EXTERNAL PEDESTRIAN WALKWAYS
- PROPOSED INTERNAL PEDESTRIAN WALKWAYS
- SITE BOUNDARY

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The residential component of Boulder Creek encompasses 114.13 acres (including all roads), which translates into 11.28 acres of reserve land. This Conceptual Scheme recommends that the reserve lands be accepted as proposed for the following reasons:

- The proposed 11.28 acres of reserve land represents nearly 10% of the developed portion of the plan area (including roads); and
- The residential component of Boulder Creek is surrounded by a golf course that encompasses 160.03 acres of land and serves as a public and recreational open space amenity.

The golf course and driving range are intended for public use and will be landscaped with a mix of coniferous and deciduous trees and shrubs that will complement the 3 stormwater storage ponds and enhance the aesthetic value of the community.

Policy

- 6.8.1 Municipal reserve shall be dedicated in accordance with the proposed plan of subdivision to a maximum of 10% of that portion of the plan area identified for residential development.
- 6.8.2 The provision of Municipal Reserves on account of the recreation commercial development cell (golf course) shall be by payment of cash-in-lieu of municipal reserve, school reserve or municipal and school reserve and based on a market value appraisal determined at the time of subdivision in accordance with the Municipal Government Act.

6.9 Phasing

This Conceptual Scheme proposes Boulder Creek be developed in 6 phases as follows:

- Phase 1: Development will begin south of Dead Horse Road (where water and sewer services will be brought on-site) and along the proposed hamlet collector. Phase 1 will consist of 88 residential lots and 1 park and related open space.
- Phase 2: Will be comprised of an additional 67 residential lots, 11 medium density residential units, and 1 park and open space, to the west of phase 1.
- Phase 3: Development will move south of phase 2 as water and sewer services are extended further west into the plan area. Phase 3 will contain 68 residential lots, 12 medium density residential units and open space.
- Phase 4: Development will then shift to the western half of the plan area just north of the internal hamlet collector. Phase 4 will consist of 71 residential lots, and 1 park and related open spaces.
- Phase 5: This phase of development will include 125 residential lots and open space links.
- Phase 6: The last phase of development will accommodate 35 residential units.

Phase	Single Family Lots Anticipated	Medium Density Units Anticipated	Area of Medium Density Parcels (acres)
1	88	-	-
2	67	11	1.14
3	68	12	1.29
4	71	0	0.00
5	125	0	0.00
6	35	0	0.00
Total	454	23	2.43

Policy

- 6.9.1 Phasing shall generally be in accordance with **Exhibit 6.06 - Phasing**.
- 6.9.2 Independent phases may be combined at the discretion of the developer.
- 6.9.3 Subdivision after Phase 4 will require construction of the hamlet collector. An interim gravel standard may be permitted, which meets the MD emergency access requirements.
- 6.9.4 The golf course may develop independently of residential development within the plan area.

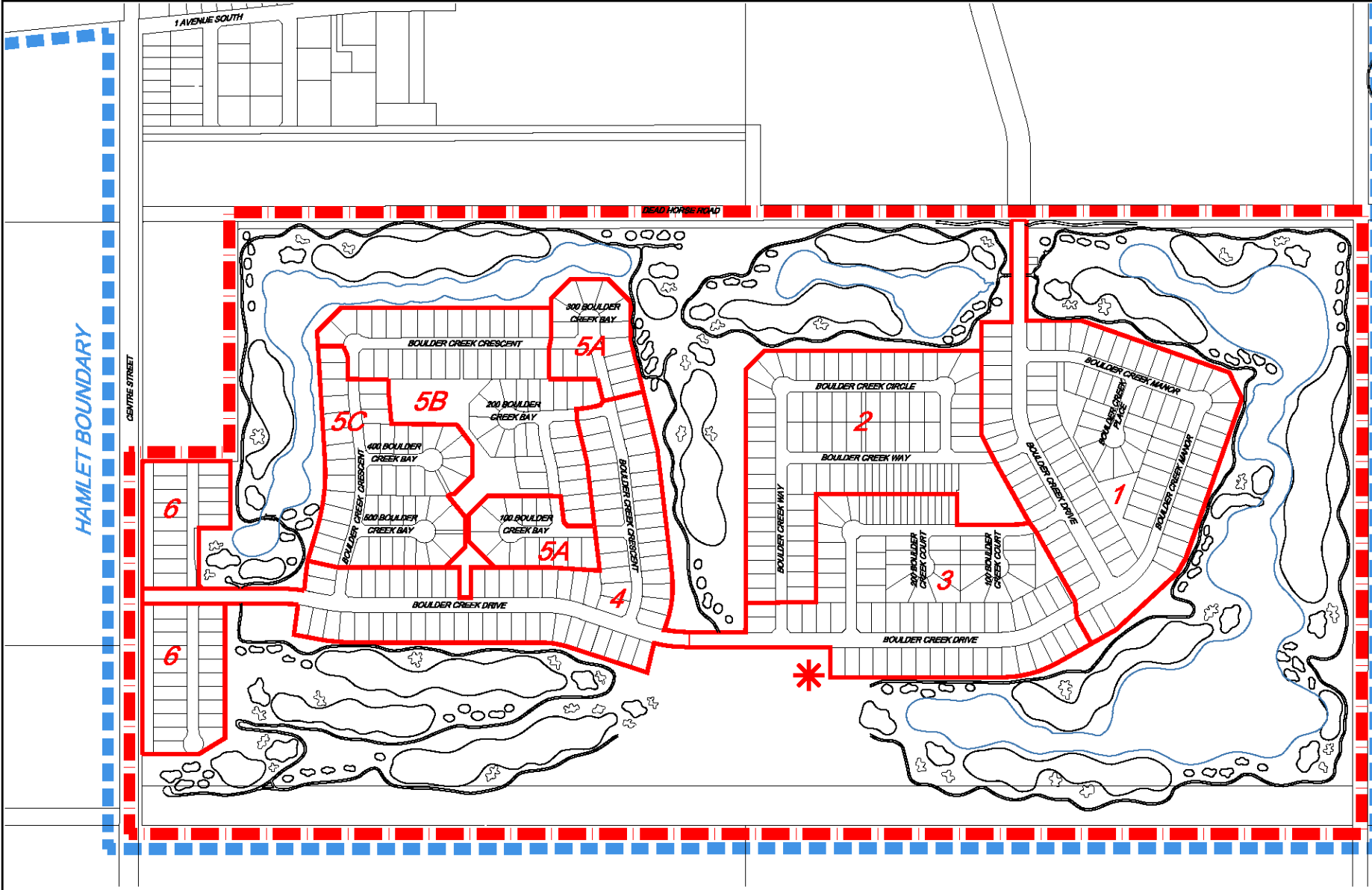
6.10 Road Network

The plan area will have access from Dead Horse Road to the north and Centre Street (Highway 797) to the west. Centre Street (Highway 797) currently has a right-of-way width of approximately 30 m and will require a minimum right of way of 60 m adjacent to the plan area. This will entail the eventual acquisition of 15 m on either side of the road. A 15 m strip of land has been identified for future highway improvements along the east side of Highway 797 as shown in **Exhibit 6.07 - Road Classifications**.

A hamlet collector will loop through the subdivision facilitating the efficient movement of vehicles in and out of the plan area. Internal roads will be paved with an asphaltic concrete and designed with rolled curbs and gutters. The roads will also have sidewalks along one side and be lined with the appropriate street lighting to enhance traffic safety and resident security. Dead Horse Road will also be upgraded to municipal standards from Centre Street (Highway 797) to the northeast intersection of the proposed hamlet collector accessing the plan area. All roads will facilitate emergency vehicle access and acceptable turnarounds where required.

Policy

- 6.10.1 All roads shall be constructed in conformance with the MD of Rocky View's *Servicing Standards for Residential Subdivisions and Road Construction*.



**BOULDER CREEK
CONCEPTUAL SCHEME**

PHASING PLAN

- LEGEND**
- ■ ■ ■ ■ SITE BOUNDARY
 - PHASE BOUNDARY
 - 5 PHASE NUMBER

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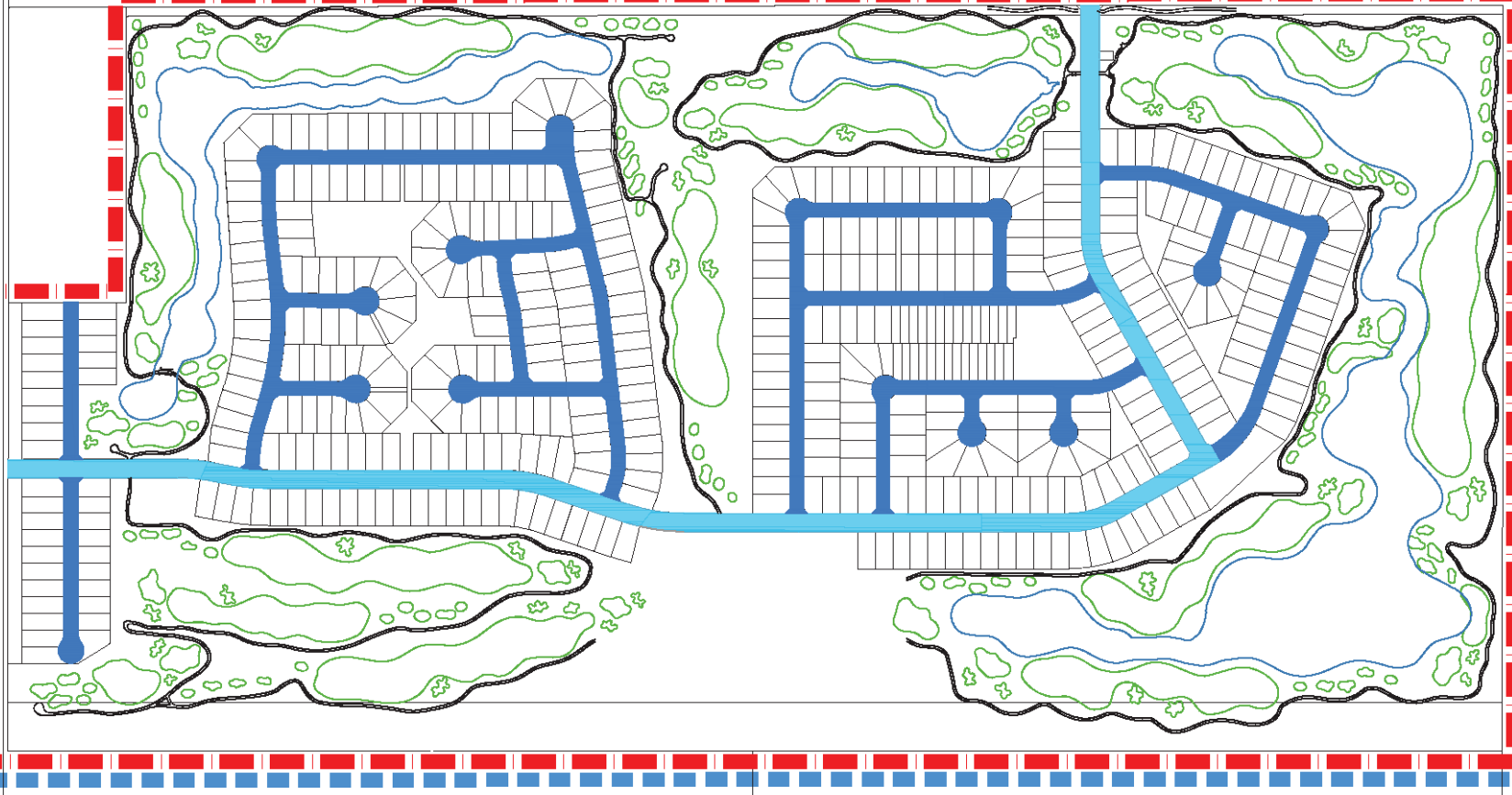
SCALE 1:7500 EXHIBIT 6.06



DEAD HORSE ROAD

CENTRE STREET

HAMLET BOUNDARY



BOULDER CREEK CONCEPTUAL SCHEME

ROAD CLASSIFICATIONS

LEGEND

-  COLLECTOR ROAD
-  RESIDENTIAL ROAD

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SCALE 1:7500 EXHIBIT 6.07

- 6.10.2 A 15 m strip of land shall be identified for future highway improvements along the east side of Centre Street (Highway 797).
- 6.10.3 Road standards shall conform to the classifications shown in **Exhibit 6.07 - Road Classifications**.
- 6.10.4 Dead Horse Road shall be upgraded to municipal standards from Centre Street (Highway 797) to the northeast intersection of the proposed hamlet collector accessing the plan area.
- 6.10.5 Street lighting shall be provided to the satisfaction of the MD of Rocky View.
- 6.10.6 A comprehensive Traffic Impact Assessment with recommendation shall be reviewed and endorsed by Alberta Transportation and the MD of Rocky View.

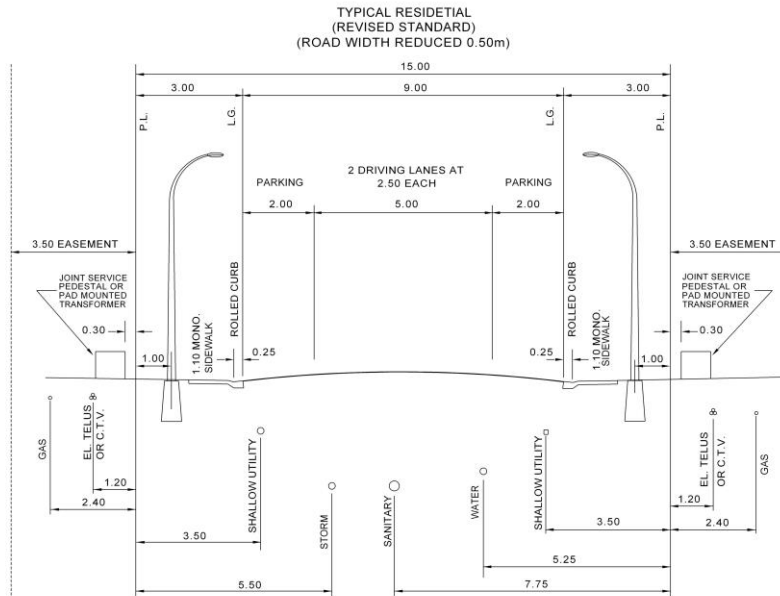


Figure 6.10a Typical Internal Road Cross Section – NTS

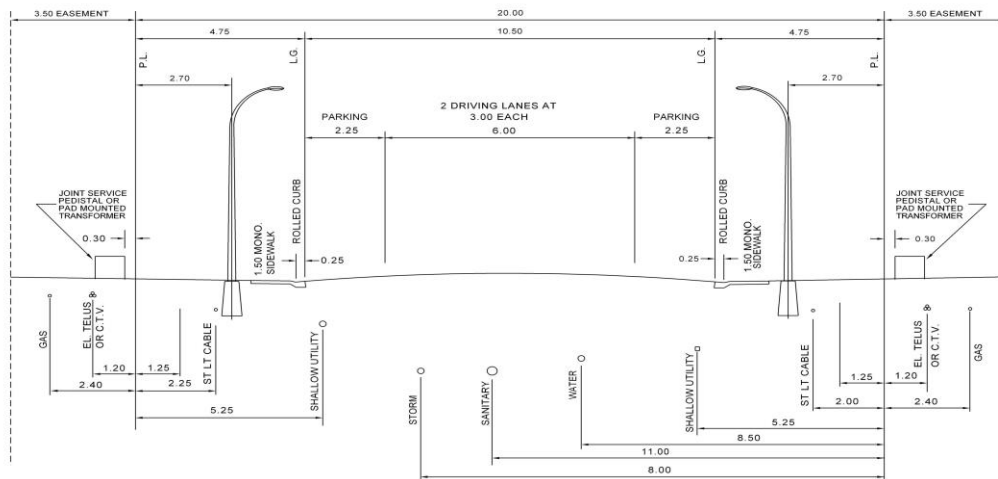


Figure 6.10b Typical Hamlet Collector Road Cross Section – N.T.S.

6.11 Traffic Impact Assessment

Using ITE trip rates, the residential component will generate approx. 4,100 daily trips, of which, 321 trips will occur during the morning peak hour, and 432 trips will occur during the afternoon peak hour. The recreational component will generate approx. 640 daily trips with 40 trips occurring in the morning peak hour and 50 trips occurring in the afternoon peak hour.

Study Intersections

The plan area contains 4 intersections, which were identified through discussions with the MD of Rocky View and Alberta Transportation. The intersections are as follows:

- Highway 797 and Highway 560;
- Highway 797 and Dead Horse Road;
- Highway 797 and the west site access; and
- Dead Horse Road and the north site access.

Highway 797 and Highway 560 are classified as major two lane highways according to Alberta Transportation's *Highway Classification for Roadside Management*.

Trip Distribution

Trip distribution will differ for the two land uses. The following assumptions were made with regard to the traffic generated by the residential component: a) there would be no internal trips within Boulder Creek; b) approx. 5 percent of the trips would either be to or from Langdon's central business district and the remaining 95 percent of the trips would be external to the Hamlet of Langdon; and c) 40 percent of the trips would use the north access to Dead Horse Road and the remaining 60 percent would use the west access to Centre Street (Highway 797).

Similarly, the following assumptions were made with regard to the recreational component: a) approx. 10 percent of the traffic generated by the golf course would be internal to Boulder Creek; b) approx. 20 percent of the trips would be internal to the Hamlet of Langdon and the remaining 70 percent would be external; and c) golf course traffic would only use the west access to Centre Street (Highway 797).

Study Horizons

The road network was analyzed at the following horizons: existing conditions; 2007 and 2012 background conditions; and 2007 and 2012 combined conditions. Traffic counts were conducted in April of 2002 to obtain existing traffic volume information. In order to determine the background traffic volumes for the 2007 and 2012 horizons, the existing traffic volumes were compounded at a rate of 4 percent per year and then added to the traffic generated by approved developments (Langdon Crossing West, Langdon Station and Glenwood Homes) within the Hamlet of Langdon.

It was assumed that 50 percent of Langdon Crossing West, 100 percent of Langdon Station, and 100 percent of Glenwood Homes would be fully constructed by the 5-year horizon. It was also assumed that 100 percent of the approved developments would be completed by the 10-year horizon. Traffic generated by Boulder Creek was then added to the background traffic volumes to estimate the 2007 and 2012 combined traffic volumes. It was assumed that Boulder Creek would be 50 percent developed by 2007 and fully constructed by 2012.

Intersection Operation

For the existing conditions, all study intersections operate with a good level of service. Left turn lanes are not warranted at any of the study intersections. However, right turn warrants indicated the need for an exclusive eastbound to southbound right turn lane at the Highway 797/Highway 560 intersection. Traffic signals are not warranted at any of the study intersections.

At the 2007 horizon, the overall road network was assumed to be the same as the existing road network. The only assumed change was the addition of the exclusive eastbound right turn lane at the Highway 797/Highway 560 intersection. For the background and combined conditions, all study

intersections will continue to operate with a good level of service with minor increases in delays. Left and right turn warrants indicated no improvements were necessary at any of the study intersections. Signal warrant points for all intersections indicated signals were not warranted. In the 2007 combined horizon, signal warrant points total 77 for the Highway 797/Highway 560 intersection approaching the need for signals.

At the 2012 horizon, the overall road network was assumed to be the same as the existing road network. The only assumed change was the addition of the exclusive eastbound right turn lane at the Highway 797/Highway 560 intersection. For background conditions, the Highway 797/Highway 560 intersection will experience a noticeable increase in delay for the northbound movements while the other study intersections will continue to operate with a good level of service with minor increases in delay. Left turn lanes are not warranted at any of the study intersections. Right turn warrants indicated an exclusive right turn lane will be required for westbound to northbound right movement. Signal warrant points total 83 at the Highway 797/Highway 560 intersection indicating that signals will be warranted for the 2012 background conditions. The intersection will operate with a good level of service once it is signalized. Traffic signals will not be warranted at any of the other study intersections.

For the combined 2012 horizon, the overall road network was assumed to be the same as the existing road network. The only assumed change was the addition of the exclusive eastbound and westbound right turn lane at the Highway 797/Highway 560-intersection and traffic signals at the same intersection. Left turn warrants indicate that bypass lanes will be warranted on Highway 797 for the Highway 797/Dead Horse Road intersection and Highway 797/west site access intersection. Type IVa intersections will be required.

Internal Road Network

Access to the plan area is proposed from Dead Horse Road approx. 1,200 m east of Centre Street (Highway 797) and from Centre Street (Highway 797) approx. 500 m south of Dead Horse Road. Alberta Transportation requested that the west access be relocated to the south property line if possible. The west access was not relocated because of design constraints.

The internal road network will be constructed to the following municipal standards:

- The main access road (from the west entrance to the north entrance) will be a Hamlet Collector designed with concrete curbs and gutters. The collector will have 10 m of pavement and a 20 m right-of-way; and
- The remaining internal roads will be Hamlet Residential designed with concrete curbs and gutters. The hamlet residential will have 9 m of pavement and 15 m right-of-ways.

Policy

- 6.11.1 Sufficient intersection and road widening will be provided at the intersection of Centre Street (Highway 797) and the west access road to accommodate future intersection improvements to the satisfaction of Alberta Transportation.
- 6.11.2 Development should be guided by the recommendations of a Traffic Impact Assessment that has been reviewed and endorsed by Alberta Transportation and the MD of Rocky View.

7. SERVICING SCENARIO

7.1 Water Supply

Water will be supplied by the existing water supply and distribution system and will access the new water treatment plant through a 300 mm pipe south across Railway Avenue and Dead Horse Road to the plan area as shown on **Exhibit 7.01 – Water Services**. The water will then loop through the subdivision before tying into the approved Langdon Station development. Langdon Waterworks has confirmed that a sufficient water supply is available to service the first 100 homes and that an aquifer study is currently underway to determine the full extent of servicing capacity. At full build-out, the daily demand for water will be approx. 580,000 L/day (127,000 l Gal/day).

Policy

- 7.1.1 All water lines and services shall be constructed in conformance with the MD of Rocky View's current Servicing Standards for Residential Subdivisions and Road Construction, as approved by the MD of Rocky View and as specified within this Conceptual Scheme.
- 7.1.2 The existing private water system shall supply potable water to Boulder Creek.

7.2 Sanitary Sewer

On-site sanitary sewage will flow through a gravity collection system to a lift station located at the north entrance of the plan area. As **Exhibit 7.02 - Sanitary Sewer Services** illustrates, the sewage will then travel through a 250 mm sanitary force main north to Dead Horse Road where it connects to the regional force main that discharges to the new sanitary sewage treatment plant east of the solid waste transfer station. The lift station and sanitary force main will also service the land located immediately north of the plan area. At full build-out, the daily output of sanitary sewage will be approx. 540,000 L/day (118,000 l Gal/day).

Policy

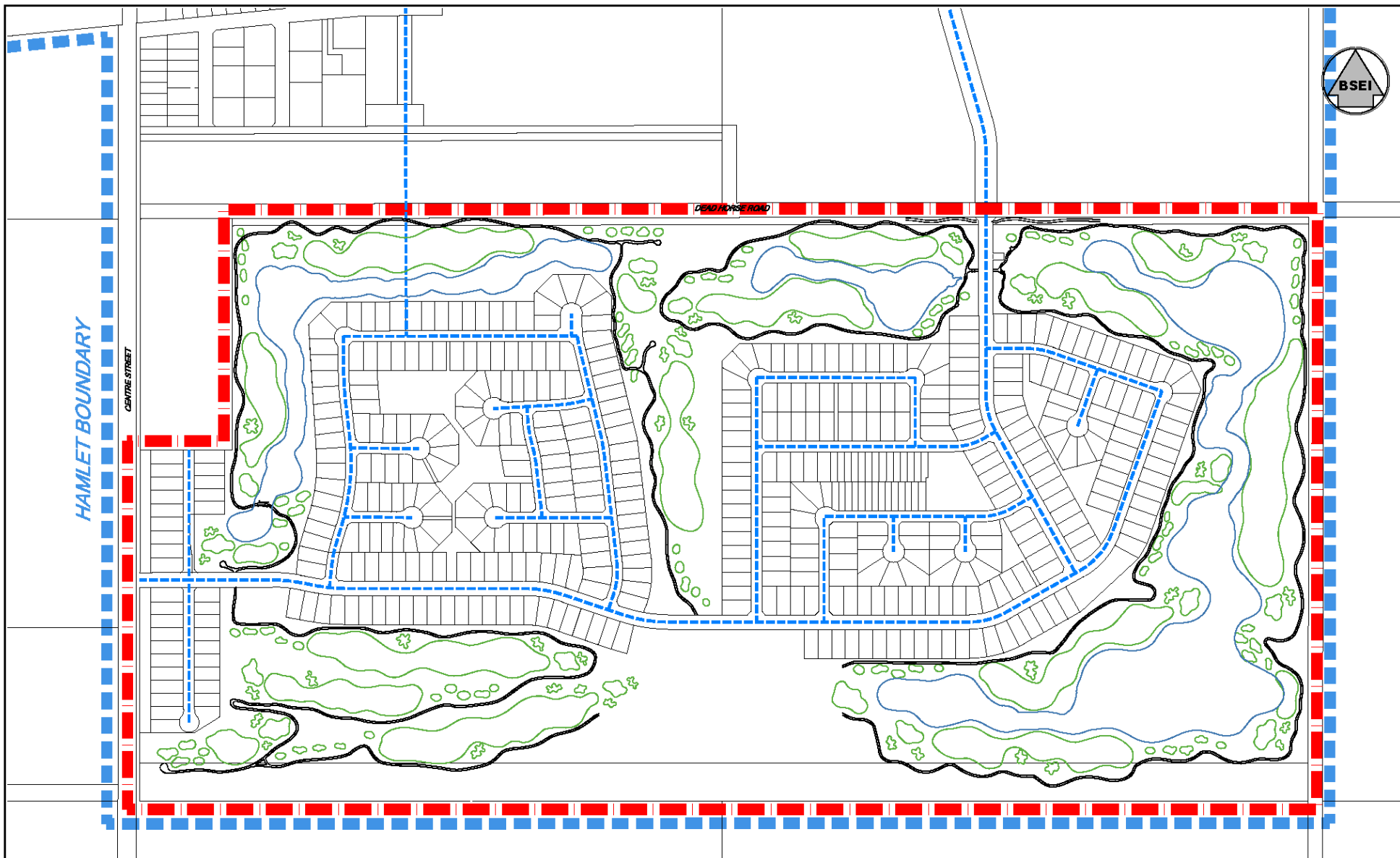
- 7.2.1 All sanitary sewer lines and services shall be constructed in conformance with the MD of *Rocky View's current Servicing Standards for Residential Subdivisions and Road Construction*, as approved by the MD of Rocky View and as specified within this Conceptual Scheme.
- 7.2.2 The MD of Rocky View shall confirm the exact location of the lift station, sizing of mains, service area of the lift station and alignment of off-site mains.

7.3 Off-Site Levies and Recoveries

Improvements made to the municipal sanitary sewer and stormwater management systems will be provided on a per acre basis. It is anticipated that a separate off-site levy bylaw will be generated to deal with the plan area specifically.

Policy

- 7.3.1 The developer shall be required to pay any off-site levies generated by the project as a condition of subdivision approval.
- 7.3.2 The developer shall be eligible for the recovery of an appropriate portion of the costs associated with the over sizing of utilities and upgrading of off-site roadways.



BOULDER CREEK
CONCEPTUAL SCHEME

WATER SERVICES

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SANITARY SERVICES

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7.4 Fire Protection

Fire hydrants will be installed along the water distribution system. The hydrants will be sized and spaced appropriately to allow for an adequate supply of water for firefighting purposes as specified by the MD of Rocky View. The Hamlet of Langdon has a volunteer fire department that responds to emergencies within the hamlet and surrounding area.

Policy

7.4.1 All fire hydrants and services shall be constructed in conformance with the MD of Rocky View's current standards and as approved by the MD of Rocky View Fire Chief.

7.5 Golf Course Irrigation

The golf course will be irrigated with a combination of groundwater and stormwater runoff drawn from the 3 stormwater storage ponds described in Section 4.03.

Policy

7.5.1 The withdrawal of water from a groundwater source for the purpose of golf course irrigation may be permitted subject to approval from Alberta Environment.

7.6 Surface Improvements

Internal roads will be paved with an asphaltic concrete and designed with rolled curbs and gutters. The collector road will have a sidewalk on both sides. The residential road will have sidewalks along one side and be constructed to the standards outlined in the MD of Rocky View's *Servicing Standards for Residential Subdivisions and Road Construction*.

Pathways will similarly be paved with an asphaltic concrete and be constructed to the standards outlined in the MD of Rocky View's *Servicing Standards for Residential Subdivisions and Road Construction*.

Policy

7.6.1 All surface improvements and thoroughfares shall be constructed in conformance with the MD of Rocky View's *Servicing Standards for Residential Subdivisions and Road Construction*, as approved by the MD of Rocky View and as specified within this Conceptual Scheme.

7.7 Shallow Utilities

Gas, power, telephone and cable television services will be provided by the respective utility companies and aligned as shown on Figures 6.10a and 6.10b - Typical Local Road Cross Section and Typical Hamlet Collector Road Cross Section. The subdivision approval process will confirm the degree to which the plan area will be serviced.

Policy

7.7.1 Shallow utilities shall be provided adjacent to the right-of-way of internal roads within the appropriate easement.

7.8 Construction Access

Construction vehicle access will be facilitated separate from the designated main access for the new residents. An interim road standard for construction traffic is permitted along future roadway alignments during the early phases of the development, as long as separate residents' access is provided.

8. IMPLEMENTATION

8.1 Discussion

This Conceptual Scheme puts forward policies and objectives for the development of a vibrant residential and recreational community. Boulder Creek will provide a high quality development that is consistent with the Langdon ASP and meets the existing and future needs of the community.

Subdivision and redesignation of the Conceptual Scheme Plan Area shall be guided by the policies and objectives herein, and implemented through conditions of redesignation and subdivision approval by the MD of Rocky View.

Policy

- 8.1.1 The MD of Rocky View shall implement this Conceptual Scheme through the redesignation and subdivision approval processes.

8.2 Area Structure Plan Amendment

This Conceptual Scheme is consistent with the current Langdon Area Structure Plan. However, Council may consider an amendment to the Langdon Area Structure Plan to include additional lands and expand the Central Business District in accordance with Section 13 of the Municipal Development Plan. As the proposed land use changes contemplated by this Conceptual Scheme is consistent with the existing Langdon ASP, a land use amendment can proceed prior to or concurrently with the adoption of a new Area Structure Plan amendment. The ultimate land use for Phase 6 of the Conceptual Scheme plan area will be determined in conjunction with the update to the Langdon ASP.

Policy

- 8.2.1 Any redesignation contemplated by this Conceptual Scheme may occur prior to the completion to the update of the Langdon Area Structure Plan.