



## Design Brief

**Tamani**  
COMMUNITIES

Prepared by:  
Brown & Associates Planning Group

In Conjunction with:  
Focus Corp.

May 28, 2010

**7. NEW BUSINESS**

7(c) Riversong Design Brief and Stage 1 Neighbourhood Plan

Resolution #150/06/10 Moved by Councillor Chester that Council adopts by resolution the proposed Riversong Design Brief and Stage 1 Neighbourhood Plan, dated May 28, 2010.

Amendment

Resolution #152/06/10 Moved by Councillor McFadden that Council amend Resolution #150/06/10 by including direction that Administration continue discussions with the Rocky View School Board regarding pathway access to the high school from River Heights Crescent.

Carried Unanimously

Vote on Resolution #150/06/10 as amended

Carried Unanimously

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## 1.0 Introduction

### 1.1 Policy Context and Purpose of the Design Brief

The Town of Cochrane Council adopted its new *Municipal Development Plan* (MDP) in October 2008. Under the policies of the MDP, an Area Structure Plan followed by a Neighbourhood Plan shall be prepared prior to development of new communities within Cochrane.

An Area Structure Plan provides the general policies to direct the community development, while the Neighbourhood Plan provides detailed design information and makes the connection between the Area Structure Plan policies and the built form of the community.

The *South Ridge Area Structure Plan* (SR-ASP) was adopted by Council in 1994 with amendments adopted in 2001 and 2002. Due to its age, the SR-ASP does not adequately address the objectives of the 2008 MDP or the Cochrane Sustainability Plan (CSP).

It was agreed between the Town Administration and Tamani Communities (the Developer) that rather than embarking on a full review of the SR-ASP, a Design Brief could be prepared, as an interim measure, to supplement the SR-ASP and provide an ASP level of direction, as directed by the MDP and CSP, to the already developing community and support the Riversong Stage 1 Neighbourhood Plan (RS1NP).

The purpose of this Riversong Design Brief (R-DB) is to provide general context and design details and an explanation of the key elements of the entire Riversong Community (Riversong), in support of the RS1NP.

Adoption of the Design Brief by resolution of Council will provide planning policy context for the subsequent approval decision of the RS1NP, and for subdivision and development within the boundary of the RS1NP. A revised and adopted SR-ASP is required prior to any further approvals for lands outside of the RS1NP.

### 1.2 Location

Riversong is located in the southwest portion of the Town of Cochrane, east of Highway 22, and immediately south of the Bow River. Figure 1 shows the location of Riversong within the Town of Cochrane. Riversong is bounded by:

- The Bow River to the north;
- An existing and operating gravel extraction operation on the east;
- Agricultural lands and future residential to the south;
- Agricultural lands and Bow Vista residential development to the west, see Figure 1.

The Town of Cochrane is in the early planning stages for the preparation of the River Heights Area Structure Plan (RH-ASP). The RH-ASP will provide policy direction, on the south and west sides of the SR-ASP. See Figure 1 for the RH-ASP area relative to Riversong.

### 1.2.1 Titles and Legal Descriptions

The remaining developable lands in Riversong fall under the two below noted titles:

DESCRIPTIVE PLAN 0412318

BLOCK 9

LOT 1

EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES (ACRES)	MORE OR LESS
SUBDIVISION	0910527	6.820 (16.9)	
SUBDIVISION	0911859	2.02 (5.00)	
SUBDIVISION	0912151	6.245 (15.43)	

EXCEPTING THEREOUT ALL MINES AND MINERALS

MERIDIAN 5 RANGE 4 TOWNSHIP 25 SECTION 35

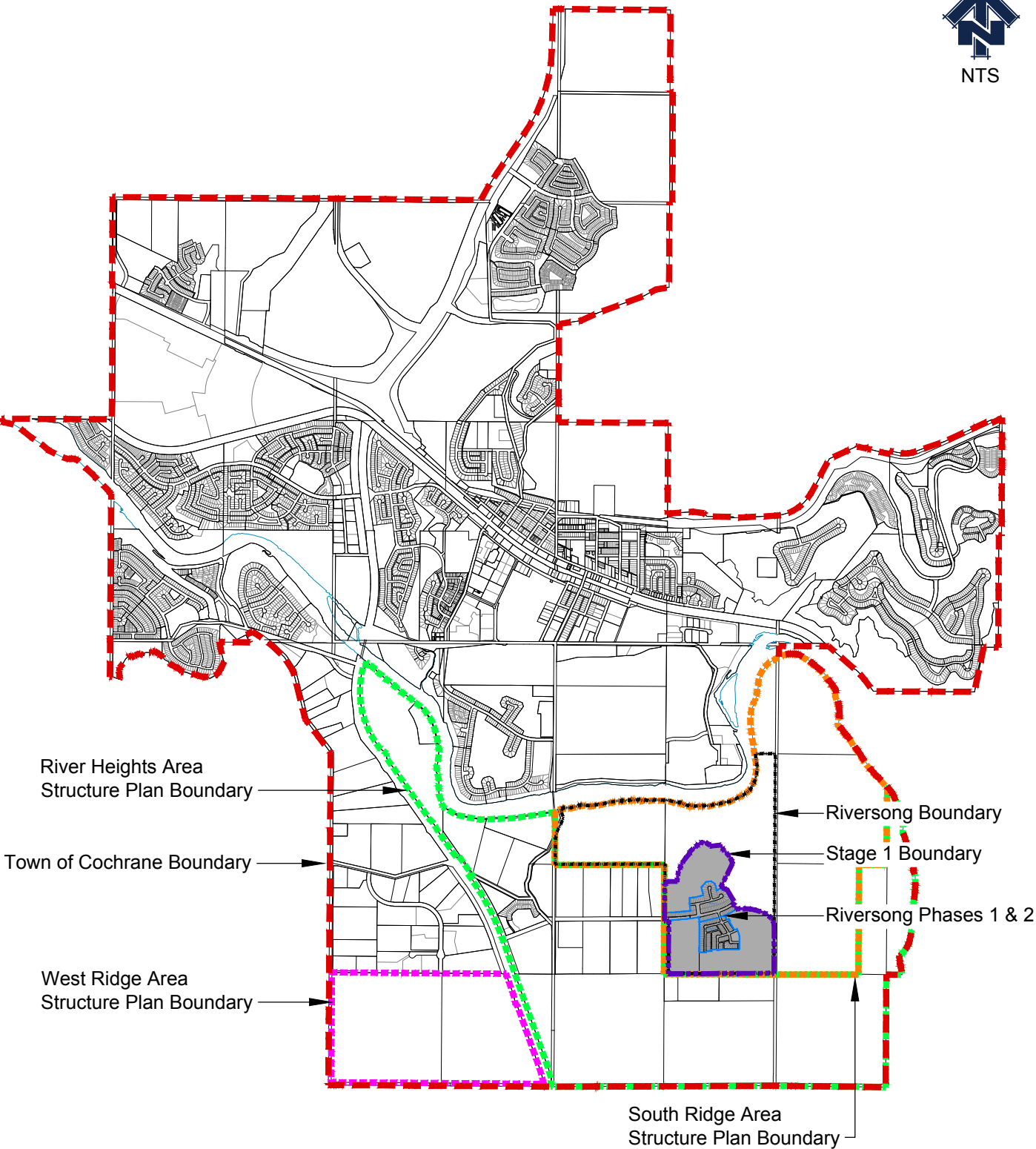
THAT PORTION OF THE SOUTH WEST QUARTER WHICH LIES TO THE SOUTH OF THE BOW RIVER AND EAST OF THE EASTERLY LIMIT OF SAID ROADWAY AS SHOWN ON PLAN 475J CONTAINING 35.6 HECTARES (88.27 ACRES) MORE OR LESS EXCEPTING THEREOUT:

PLAN	NUMBER	ACRES	MORE OR LESS
ROADWAY	4837BM	0.04	

EXCEPTING THEREOUT ALL MINES AND MINERALS AND THE RIGHT TO WORK THE SAME

The other lands forming part of the RS1NP are already developed and fall under the legal descriptions:

- Rocky View School Division - Plan 0911859, Block 8, Lot 1; Area 8.938 hectares (22.09 acres) more or less.
- Town of Cochrane - Plan 0912151, Block 17, Lot 1MR; Area 0.406 hectares (1 acres) more or less.
- Private Resident Ownership - Plan 0912151, Blocks 13-16,
- Private Resident Ownership - Plan 0910527, Blocks 10-11



**Figure 1:**  
Location Plan



### 1.2.2 Ownership

The undeveloped lands within Riversong are owned by 1300534 Alberta Ltd. These lands are managed by Tamani Communities.

## 1.3 *Description of Land*

### 1.3.1 Natural State and Supporting Studies

Riversong consists of generally rolling, hummocky lands with a large escarpment. The southern portion of the lands, referred to as the upper bench lands, are higher and flatter than the rest of the lands. The central portions of the lands consist largely of steep escarpment slopes. North of the escarpment, the lands flatten in the lower bench area.

#### 1.3.1.1 Geotechnical Evaluation

A Geotechnical Evaluation<sup>1</sup> dated August 2000 was prepared by Golder Associates Ltd. for Riversong. The report focused on addressing the Town of Cochrane requirements for developments on terrain with slopes greater than 15% and provided recommendations for:

- 1) the stability of the steep slope along the watermain alignment;
- 2) the development setbacks along the east plateau; and
- 3) the foundation conditions for the road connector between Highway 22 and River Heights Drive.

Recommendations relative to 1 and 3 above have been followed during construction for Phases 1 and 2. The recommendations relative to 2 will be addressed at a future stage.

In addition to the above, investigation of the presence of an alluvial aquifer, and strategies for mitigation should an aquifer be identified, shall be completed at the appropriate development stage for the lower bench lands.

In summary the Geotechnical Evaluation's recommendations for the Riversong have been addressed for areas that concern the RS1NP lands, and other areas will be addressed with the future development.

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<sup>1</sup> Geotechnical Investigation For The Proposed Cochrane Crossing Development, Golder Associates Ltd., August, 2000

### **1.3.1.2 Historical Resource Impact Assessment**

A Historical Resource Impact Assessment<sup>2</sup> (Report 80-181) was prepared for the SR-ASP by Lifeways of Canada Ltd. in 1981. The report identified five prehistoric archaeological sites, one paleontological site, and one historic site. Of these sites, four were stated to require additional investigation. Only one of these four sites (EhPo-49) was located within Riversong's boundary. This site (EhPo-49) was reviewed by Dr. Brian Reeves of Lifeways of Canada in 1998, at which time he concluded that the site was a natural formation and not a cultural feature. Dr. Reeves recommended to Alberta Community Development that mitigation requirements originally recommended be rescinded. This recommendation was approved, and a copy of the letter of approval is provided as Appendix C. No further historical resource investigations are required within Riversong.

### **1.3.1.3 Environmental Site Assessment**

A Phase 1 Environmental Site Assessment<sup>3</sup> (ESA) was completed by Almor Testing Services Ltd. on December 20, 1997 for the Riversong. This report concludes that no environmental contamination exists and no further investigation is required. An updated letter was provided by Almor Testing Services Ltd. dated October 12, 2006 that further supported the findings in the original report; that no further environmental investigation is required. A copy of this letter is provided as Appendix D.

### **1.3.2 Existing State**

The community of Riversong is currently under development with Phases 1 and 2 nearing full build-out and occupancy. Section 1.5 outlines Riversong's history of development.

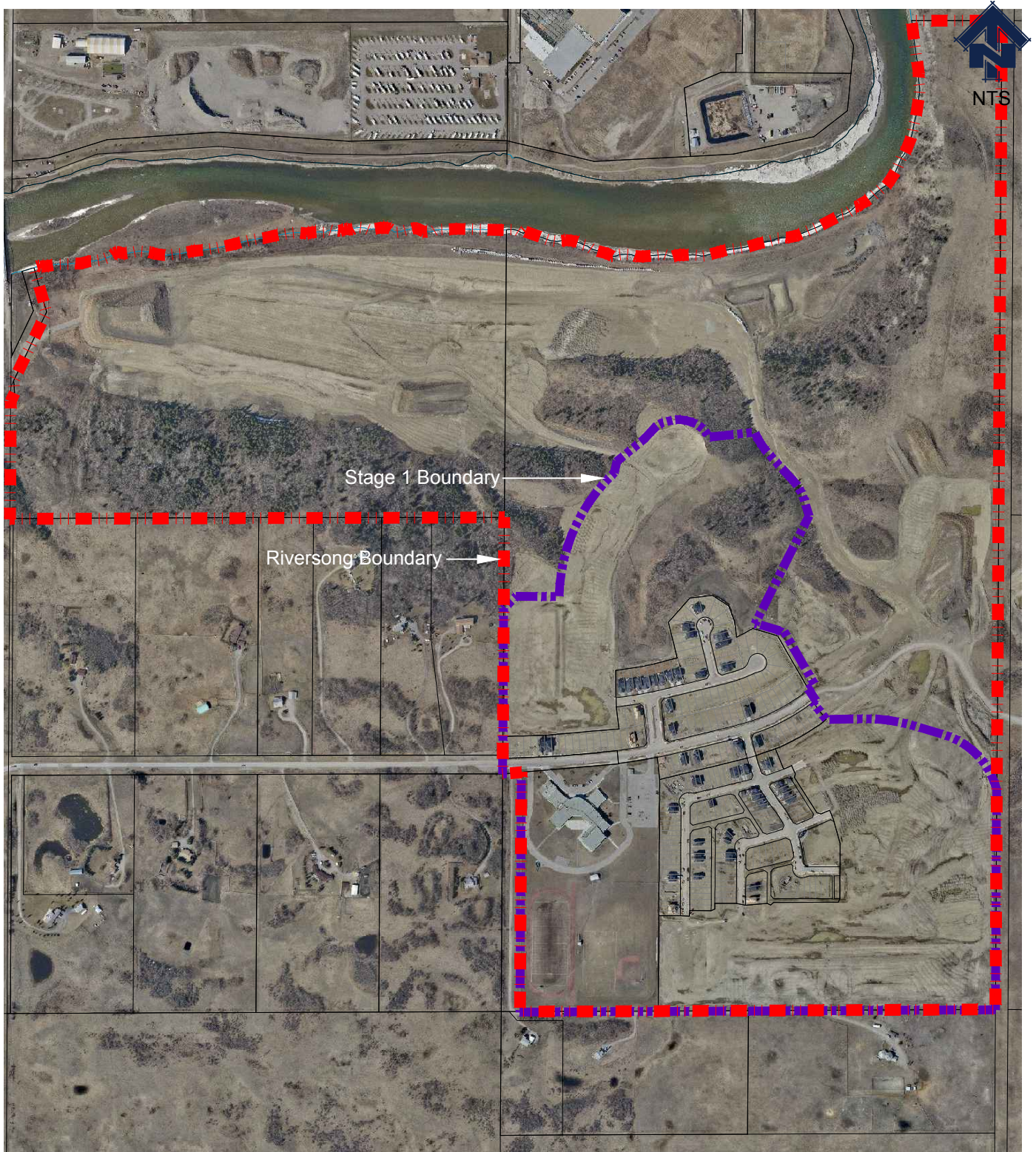
With the development of Riversong Phases 1 and 2, and the anticipated imminent development of the remainder of the upper bench lands, the entire RS1NP area was rough graded by the Developer.

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<sup>2</sup> Historical Resources Impact Assessment Robinson Lands, ASA Permit 80-181, Lifeways of Canada, December, 1980

<sup>3</sup> Level One Environmental Site Assessment for Southland Development Corp., Almor Testing Services Ltd., December 20, 1997





The approval of the 2008 Municipal Development Plan provided new policy directives which have been incorporated into this Design Brief. Figure 2 illustrates the existing state of the land through an aerial photograph.

## **1.4 Site Constraints**

### **1.4.1 Escarpment and Slopes**

As noted in Section 1.3.2 the upper bench lands, on which the remainder of Riversong Stage 1 will be developed, have been rough graded. Therefore, there are no slopes of concern within this area. The Geotechnical Evaluation identifies slopes of 15% or greater within the future Riversong development area. Future subdivision and development will consider and respond to slopes of 15% or greater and in accordance with the policies and guidelines of the South Ridge Area Structure Plan and the Town of Cochrane.

Section 3.10 of the SR-ASP provides twelve policy directives outlining how development must occur on or adjacent to the slopes within the Plan area. These policies are still the guiding policies for development and shall be adhered to as development proceeds.

Each Neighbourhood Plan which includes development with slopes greater than 15% shall provide details of how the development adheres to these policies.

### **1.4.2 Gravel Extraction**

The Gravel Pit adjacent to Riversong's east boundary is currently in operation. River Heights Drive shall accommodate gravel extraction traffic until such time as an alternative access route is provided.

### **1.4.3 Transportation Network**

The existing transportation network places development limitations on the community of Riversong. Improvements to the network, as detailed in Section 5.0, will allow development to continue.



## 1.5 *History of Development*

The development history of Riversong began several years prior to the 2008 MDP requirement of a Neighbourhood Plan to guide subdivision approvals. Prior to the 2008 MDP, development was guided by a Concept Plan approved by Council. Phases 1 and 2 of Riversong are developed, and began development under the direction of a Concept Plan which was conditionally approved in March 7, 2001. The history of development, governing policies and approvals granted in Riversong are detailed below.

December 1994	The South Ridge Area Structure Plan was adopted through Bylaw 14/94;
March 7, 2001	The Crossing Concept Plan (now called Riversong) was conditionally approved;
August 13, 2001	An amendment to the SR-ASP was adopted through Bylaw 18/01;
September 9, 2001	An amendment to the SR-ASP was adopted through Bylaw 25/01;
September 25, 2006	Bylaw 19/2006 was approved and designated Land Use throughout Riversong;
June 27, 2007	An amended portion of the land use Bylaw 19/2006 was approved through Bylaw 17/2007;
Spring, 2008	Construction of Riversong Phases 1 & 2 began;
October 14, 2008	the Cochrane Town Council approved the new Municipal Development Plan;
Fall/Winter, 2008	Riversong Phases 1 & 2 were completed and occupancy began;
May 2009	The Cochrane Sustainability Plan was adopted by Resolution by the Cochrane Town Council;
Summer 2009	Continued construction awaits further subdivision approvals subsequent to Design Brief and Neighbourhood Plan direction.

## 2.0 *Riversong Design Elements*

The topography of Riversong is distinct and will become intertwined with Riversong's identity, as people associate Riversong with its varying topography. The upper bench lands offer future residents along the escarpment views of the Cochrane valley and the Bow River. The lower bench lands have the distinction of being adjacent to the Bow River.

The Bow River acts as the north boundary to Riversong. The land directly adjacent to the Bow River will be protected as environmental reserve. The protection of this area as public open space will allow the river banks to remain accessible to all.

The design of Riversong also allows for protection of much of the escarpment lands as environmental reserve. Pathways within and to this environmental reserve area are intended to provide access while minimizing the impact of random travel through this area.

The built form of Riversong includes developer implemented architectural controls intended to compliment the natural features of the land. The remaining lands in Riversong will continue to include architectural controls to help ensure continuity of the high standards and attention to detail.

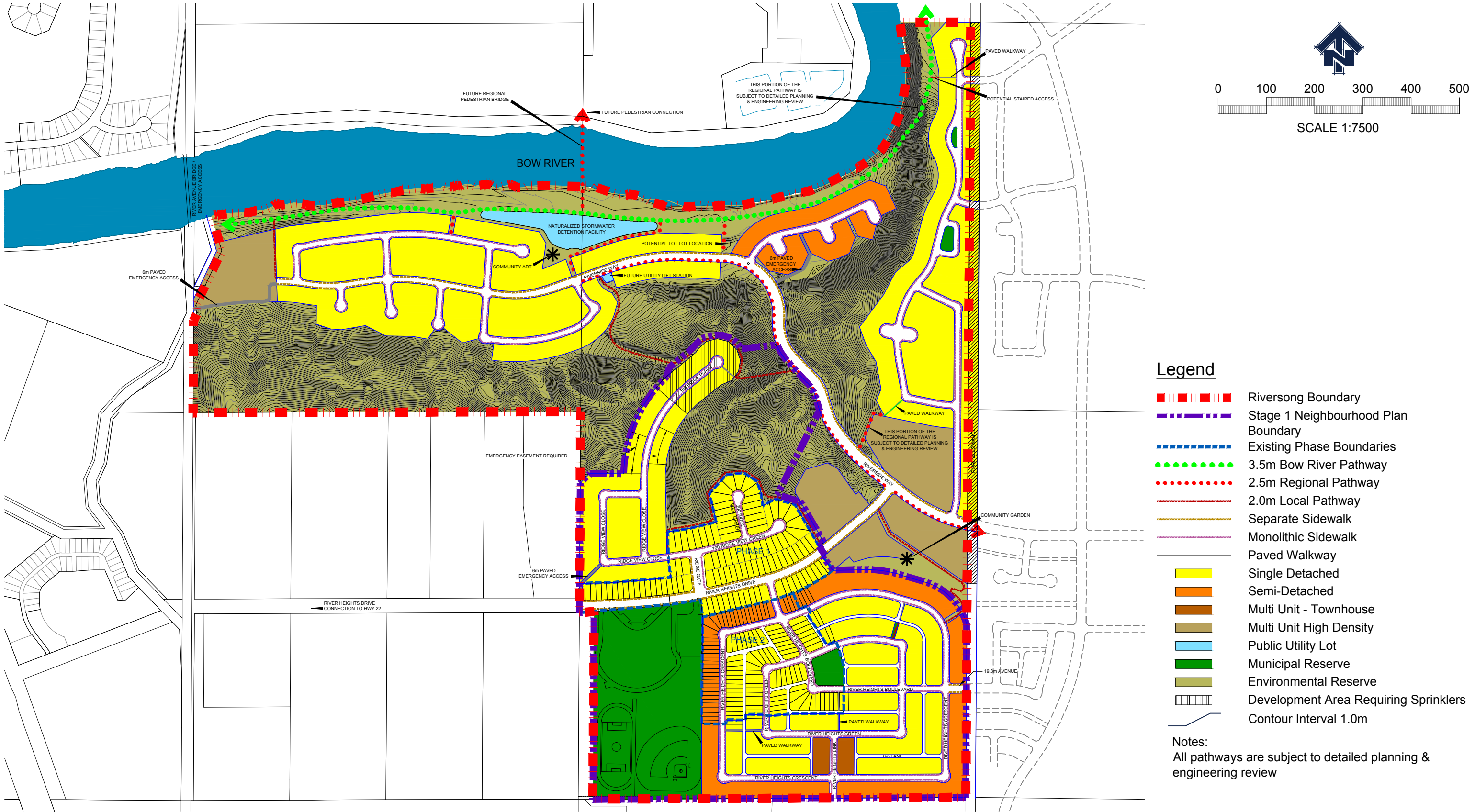
### 2.1 *Pedestrian Connectivity*

Riversong's local pathway network is designed to facilitate the safe enjoyment of the community and connect residents directly to community amenities including the banks of the Bow River, the community greenspaces which will include tot lots and a community garden, and the local school and playfields. See Figure 4.

Linkages throughout the upper and lower bench lands include strategically placed walkways and pathways to connect residents safely and comfortably to all of Riversong's local amenities. Where appropriate, walkways bisect longer blocks to allow residents to gain quicker access to their destination rather than walking around an entire block. Sidewalks will be provided on both sides of all future roads to further aid in the walkability of the community.

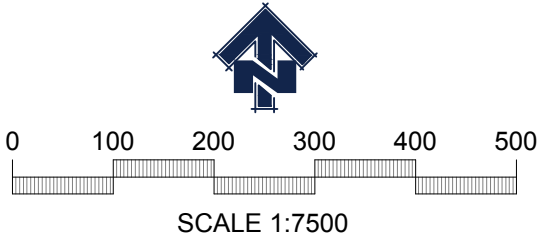
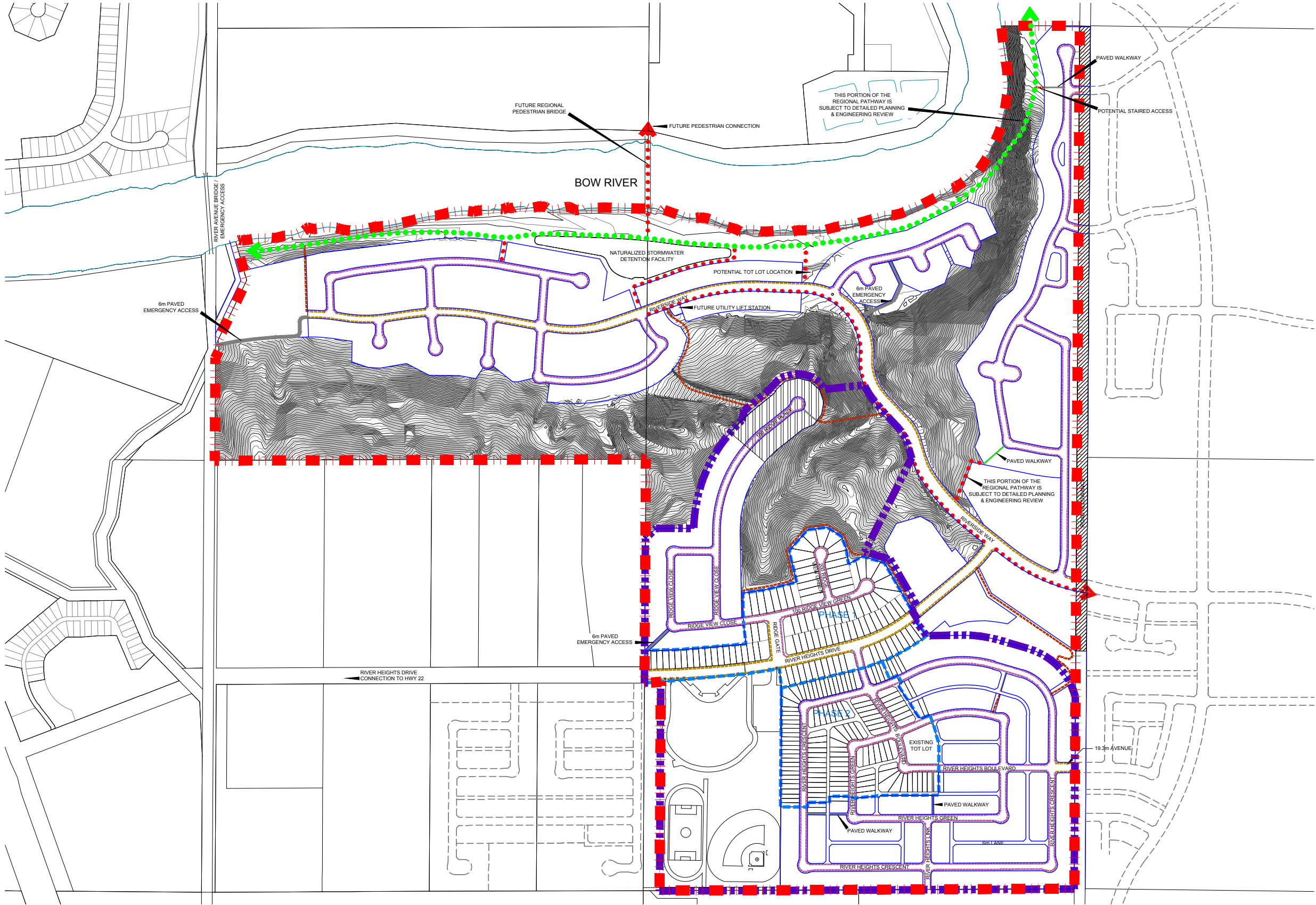
Whether a resident wants to play in the local tot lot, walk through the natural escarpment, enjoy the pathway along the Bow River or stormpond, or walk to the local high school, the linkages are in place to ensure there will be a sidewalk, walkway or pathway for the resident to utilize.

The regional pathway network is discussed in Section 5.5.



**Figure 3:**  
Design Brief Concept Plan





Legend

- Riversong Boundary
- Stage 1 Boundary
- Existing Phase Boundaries
- 3.5m Bow River Pathway
- 2.5m Regional Pathway
- 2.0m Local Pathway
- Separate Sidewalk
- Monolithic Sidewalk
- Paved Walkway
- Contour Interval 1.0m

Notes:  
All pathways are subject to detailed planning & engineering review

**Figure 4:**  
Pedestrian Connectivity





## 2.2 *Local Playground*

Riversong will include two tot lot parks.

The first tot lot park is under construction in Phase 2 of Riversong Stage 1, in the upper bench lands. This 0.40 hectare (1.01 acre) park is located south of River Heights Drive. This park is centrally located within this higher density, southern residential area and is within 500 metre walking distance to all homes in this area of Riversong with the exception of the houses in the cul-de-sac at the top of the escarpment. These homes will be within 500 metre walking distance to the second tot lot park in the lower bench lands.

The second tot lot park will be located near the future storm pond in the lower bench lands. This tot lot will serve all the homes and residents in the lower bench lands. The majority of the homes in the lower bench will be within 500 metre walking distance, including the homes at the north end of the cul-de-sac in Phase 4 which are outside of the 500 metre walking distance of the first tot lot park. The homes that fall outside of the 500 metre walking distance are within a 1 kilometre catchment area.

Further discussion on open space facilities can be found in Section 3.4.

## 2.3 *Community Garden*

Riversong will contain a community garden to allow residents to enjoy the bounty of their own, locally grown produce as well as interact and socialize. By accommodating a community garden, Riversong directly supports the Cochrane Sustainability Plan (CSP) Pathway to the Future 5: We consume the bounty of our local economy.

The community garden is proposed to be located near the future multi-unit sites on the upper bench lands, at the easterly terminus of River Heights Drive. Residents in multi-unit developments often do not have the opportunity to plant a garden to grow their own food due to their lack of private greenspace. By placing the community garden close to the multi-unit developments, these residents will have convenient access to the site. Community gardens also become a social focus and meeting point as residents get to know each other while tending their gardens.

The final location of the community garden will be determined in conjunction with the design of these multi-unit residential sites.

## 2.4 *Public Art*

Riversong will include public art adjacent to the future storm pond, in the lower bench lands. This public art piece will increase the sense of place by creating a familiar icon that becomes associated with the community.

The final form and location of the public art will be determined at the Neighbourhood Plan or subdivision application stage for each phase. The public art will consist of low maintenance materials and be designed to stand up against the elements.

## 2.5 *Local High School*

The existing and operating Bow Valley High School, at Riversong's entrance on River Heights Drive, is a community amenity and will become an important element of the community's identity. The school offers the opportunity for residents to walk to the school for education, recreation, jobs or volunteering. Riversong's social development will grow as families become involved in school activities and meet each other on the school playfields, in the greenspaces, and on the community pathways and sidewalks.

## 2.6 *Crime Prevention Through Environmental Design*

Crime prevention through environmental design (CPTED) is an important component of community design.

CPTED occurs when the built environment helps to reduce the incidence of crime and the fear of crime occurring. The Cochrane MDP provides eight basic criteria for addressing CPTED. Each Riversong Neighbourhood Plan shall address CPTED and provide details of how safety is enhanced.

## 2.7 *Affordable Housing*

Riversong includes a variety of housing forms, sizes and price ranges. To further ensure that housing is available to all income levels, the developer commits to working with the Cochrane Society for Housing Options to determine an appropriate location and form of affordable housing within one of the multi-unit sites on the upper bench lands. Care will be taken to ensure the housing will be integrated seamlessly within the community of Riversong. The form and management will be co-ordinated with the Cochrane Society for Housing Options. Further detail will be provided in the Neighbourhood Plan that addresses these lands.

## 2.8 *Transit Oriented Design*

Transit Oriented Design (TOD) ensures that the connections are in place to allow residents to utilize alternative forms of transportation. Whether residents want to walk or cycle to community amenities or access public transportation, strong pedestrian connections should be in place to facilitate their safety and comfort.

Riversong supports TOD through the incorporation of a future public transit route. See Section 5.4 and Figures 8 and 9 for further information. TOD is further supported in Riversong through the well thought out pedestrian connections, as noted in Section 2.1 and Figure 4. Although the Town of Cochrane does not currently have a public transportation system, it anticipates its future inception as part of its responsible growth management.

## 3.0 *Land Use*

The community of Riversong comprises approximately 140.32 hectares (346.74 acres) of land. The land use within Riversong is primarily residential. Land use amendments are proposed to:

- Amend a portion of existing add two blocks of Residential Multi-Unit Dwelling District (R-3) area to Riversong with the intention to provide townhouse development, and;
- Amend a portion of existing Residential High Density Multi-Unit Dwelling District (R-M) to Residential Single and Two Dwelling District (R-2) with the intent to provide additional semi-detached housing

These land use amendments are discussed in greater detail in the Riversong Stage 1 Neighbourhood Plan, and applied for under a separate Land Use Amendment application.

Aside from the above noted amendments, the Design Brief is consistent with the land use pattern as per the SR-ASP Land Use Concept, and the approved Land Use as per Bylaw 19/2006 and the amendments approved with Bylaw 17/2007. Figure 3 illustrates the general land uses of low density residential, high density multi-unit residential, public service lots (storm pond) and open spaces.

### 3.1 *Residential*

A variety of dwelling units will be available within Riversong including single detached housing, semi-detached, townhouse and multi-dwelling units and affordable housing.

The RS1NP provides a diverse range of housing styles, at varying sizes and affordability levels, within the Residential Single-Detached Dwelling District (R-1). Riversong's topography provides the opportunity for large view-offering estate lots along the escarpments and higher density, single detached laned lots on the relatively flatter lands south of River Heights Drive. Narrow lot, laned lots, front-drive lots and estate lots will be available in Riversong within the R-1 district.

Semi-detached dwellings and townhouses, accommodated within Residential Single and Two Dwelling District (R-2) and Residential Multi-Unit Dwelling District (R-3) respectively, will also be available within Riversong Stage 1. The existing land use provides for a future R-2 development cell in the lower bench area.

Riversong includes several Residential High Density Multi-Unit Dwelling District (R-M) sites. The anticipated density on these sites is 30 units per acre with a maximum density allowed under the *Town of Cochrane Land Use Bylaw 01/2004* (LUB) of 60 units per acre. Given the varying topography and natural features of the land in Riversong, these sites will require further investigation to determine their densities at the time of development.

### 3.2 *Commercial*

During the preparation of this Design Brief and the Riversong Stage 1 Neighbourhood Plan, consideration was given to the feasibility of including commercial development in the continuation of the development of Riversong.

Commercial land use was not included within the 2001 Concept Plan that guided the development of Phases 1 and 2. The Cochrane Planning Commission (CPC) and Town Council endorsed this decision at meetings in 2006, and it was determined commercial development would be more feasible elsewhere within the *South Ridge Area Structure Plan* (SR-ASP) area.

One place commercial development might have been considered is the west entrance to Riversong, close to the Bow Valley High School, along River Heights Drive. However, this area has already been developed as residential. Therefore, alternate nearby commercial locations were identified and evaluated for their proximity and accessibility to Riversong. These areas include commercial locations elsewhere in the eastern portions of the SR-ASP area and in the upcoming River Heights Area Structure Plan (RH-ASP) area.

The Town of Cochrane *Transportation Update Plan 2009*, prepared by Urban Systems identifies a future major north/south arterial road through this area and to eventually connect to downtown Cochrane via a new bridge crossing over the Bow River. See Transportation Network Stage 4 on Figure 6. By design, this road will see a much larger traffic volume than the collector roads in Riversong. Local commercial development would likely be more successful adjacent to this arterial road, while still within close walking distance to much of Riversong.

Commercial needs of Riversong residents will be further met through lands proposed for development for highway commercial uses at the intersection of Highway 22 and River Heights Drive. This proposed commercial site is located less than 1 kilometre to the west of Riversong. Residents will pass this site as they enter and exit Riversong, making it a convenient commercial location. This site is included in the RH-ASP and has the opportunity to become a commercial node offering both highway and local commercial services. Additional opportunities may exist elsewhere in the RH-ASP for the provision of local commercial uses.

### 3.3 *Institutional*

The Riversong community includes a high school site, with associated playfields. Bow Valley High School is currently operating on this site. This school serves the Town of Cochrane and surrounding areas. A school within a community is a valuable amenity. The school provides a social focus for residents and will draw families to the community.

### 3.4 *Open Space*

The SR-ASP identifies that ‘the varied topography and vegetation coupled with the Bow River forming a strong edge on much of the perimeter of the Plan area provides opportunities for open spaces with a wide range of character<sup>4</sup>’. The community of Riversong builds upon the natural features of the topography and protects them as amenities. The floodway lands and the natural escarpment will be protected as environmental reserve. Vegetation and wildlife will be left in their natural state throughout the environmental reserve area.

The open space system will be linked through a pathway and trail network that provides connectivity while minimizing the impact on the environmental reserve. Residents will be able to walk, jog or cycle throughout the community from the higher, southern lands of Riversong to the Bow River through the sidewalks, pathways and trails which will offer multiple route options. A regional pathway will provide access to the Bow River as well as continue along Riverside Way to the west side of the

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<sup>4</sup> South Ridge Area Structure Plan, December 1994, page 8

community. This will allow future urban development on the west side of Riversong to access the regional pathway and the Bow River. Figure 4 illustrates Riversong's pedestrian connectivity.

The table below identifies the Municipal Reserve (MR) dedication requirements and current allocations in Riversong.

Overall Riversong Municipal Reserve (MR) Allocation

	(ha)	(ac)
Overall Riversong Area	140.24	346.53
Environmental Reserve	<u>49.19</u>	<u>121.55</u>
Net Developable Area	91.05	224.98
10% MR Requirement	9.11	22.50
<u>MR Dedications:</u>		
Bow Valley High School Site	8.97	22.16
Phase 2 Tot Lot & Linear Park	<u>0.44</u>	<u>1.09</u>
Total MR Allocated	9.41	23.25
MR Overdedication	0.30	0.75

## 4.0 Density

The SR-ASP identifies a target density of 17.3 units per hectare (7.0 units per acre) with a permitted range of 5 units per hectare (2 units per acre) to 25 units per hectare (10 units per acre). Subsequent to the adoption of the SR-ASP, the 2008 MDP has prescribed a minimum density requirement of 19.8 units per hectare (8.0 units per acre).

Riversong will endeavour to provide a minimum overall density meeting the MDP requirement of 19.8 units per hectare (8.0 units per acre). The community will be developed in stages. Some stages may exceed or fall short of the target density; however the overall community density will target to meet the 2008 MDP requirements. All density calculations are to be calculated on the basis of dwelling units per gross developable area, as per Section 8.3.6(b) of the MDP.

## 5.0 *Transportation*

### 5.1 *Constraints*

#### 5.1.1 **Topography**

The escarpment and natural topography of Riversong put limitations on the transportation network and connectivity. The design of the transportation network respects the topography of the land by minimizing the impact on the escarpment, resulting in limited vehicular connectivity in some areas of Riversong. The Bow River also creates a natural boundary on the north side of the community, impeding access from this direction.

#### 5.1.2 **Ownership**

Separate ownership of the lands on the west and east side of Riversong adds constraint to the transportation network.

Riversong is not directly adjacent to Highway 22, but it relies upon this highway as the permanent access route to and from the community, via River Heights Drive. There are several landowners between the west side of Riversong and Highway 22. This creates challenges on the timing and financing of upgrading River Heights Drive to improve the access into Riversong.

The gravel extraction operation on the east boundary of Riversong also falls under different ownership. River Heights Drive currently accommodates the gravel trucks entering and exiting the site due to the limited transportation connectivity throughout the entire area. Traffic volumes through Riversong must consider the gravel extraction operation.

#### 5.1.3 **Access**

Riversong is situated immediately south of the Bow River, and approximately one kilometre east of Highway 22. The permanent access into Riversong is from Highway 22 via River Heights Drive.

River Heights Drive is identified in the *Transportation Update Plan 2009* as a major collector. As this road currently utilizes ditches rather than curb and gutter for stormwater management, it will be referenced as a rural collector for discussion purposes. River Heights Drive is a rural collector up to Riversong's west boundary. At the entry point into Riversong, River Heights Drive changes to a 21 metre collector standard road.



River Heights Drive terminates at the proposed Riverside Way. Riverside Way, if approved, will provide access into Riversong's lower bench area and to future urban development to the east of Riversong. This future development, to the east of Riversong, will not occur until the existing gravel extraction operation ceases.

The *Transportation Update Plan 2009*<sup>5</sup> identifies a major arterial road running north/south, in the SR-ASP lands to the east of Riversong, which will provide an additional connection to Highway 22, and a potential future second bridge crossing of the Bow River. Each of these will provide improved access to Riversong. Additional discussion of the potential future bridge can be found in Section 5.2.4.2.

## 5.2 *Thresholds*

The existing and future transportation networks are identified in Figures 5 and 6. These Figures are based on the *Transportation Update Plan 2009* prepared by Urban Systems under the direction of the Town of Cochrane.

### 5.2.1 **Current Intersection of Highway 22 and River Heights Drive**

An *Intersection Traffic Study*<sup>6</sup> (ITS) completed by Focus Corporation, determined that the intersection of Highway 22 and River Heights Drive currently operates at an overall Level of Service A. However, the westbound right and left turning movements operate at a Level of Service C.

The ITS has determined that based on existing traffic volumes, the intersection at Highway 22 and River Heights Drive is capable of accommodating the traffic volumes of an additional 50 residential units, or equivalent for commercial/industrial development while maintaining the existing level of service.

With an additional 50 residential units:

- Overall Level of Service: The ITS shows the Highway 22/River Heights Drive intersection, with an additional 50 units would maintain an overall Level of Service A, with individual movements operating at Level of Service C during peak periods.
- Specific Level of Service: The ITS shows that the Highway 22/River Heights Drive intersection can accommodate an

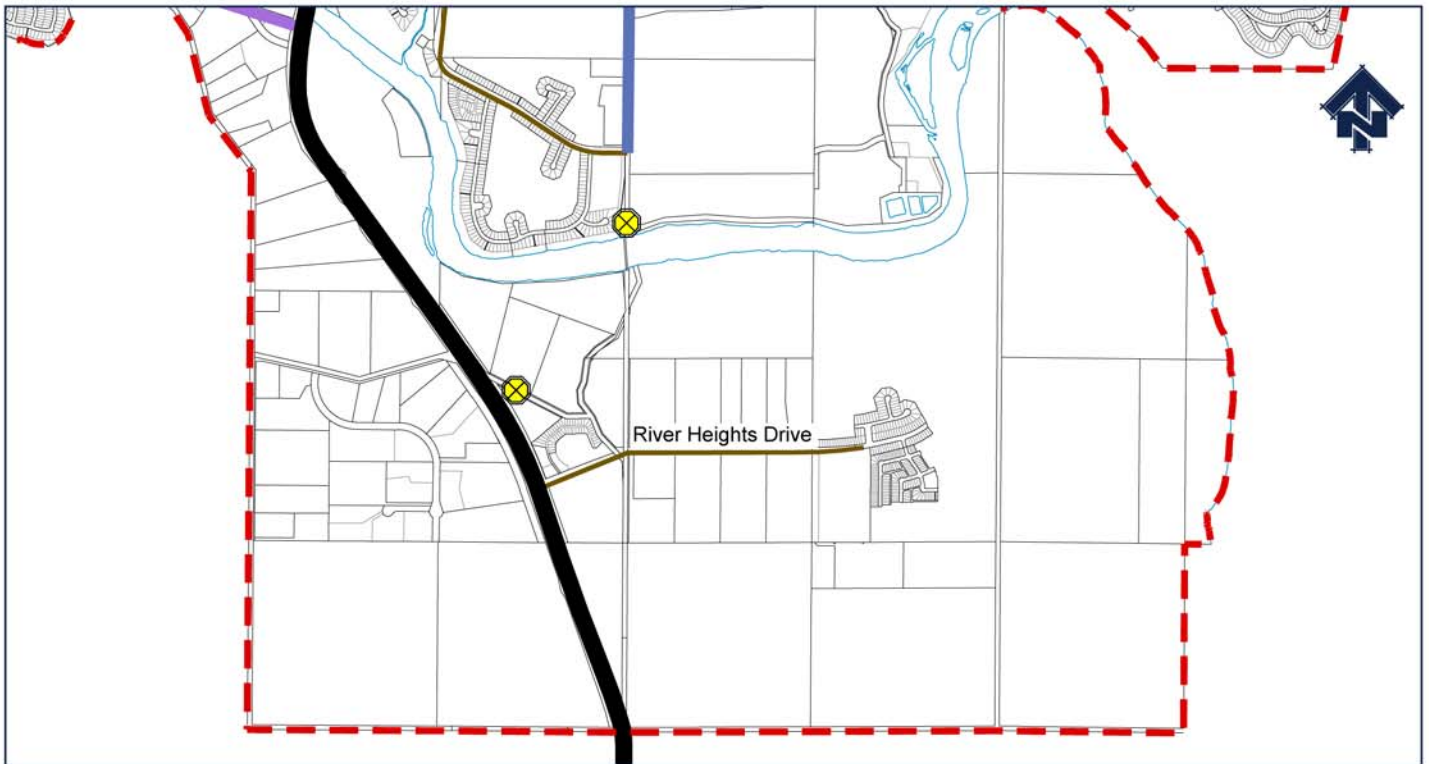
<sup>5</sup> Town of Cochrane Transportation Update Plan 2009, Urban Systems, April 2009

<sup>6</sup> Intersection Traffic Study, Focus Corporation, February 17, 2010



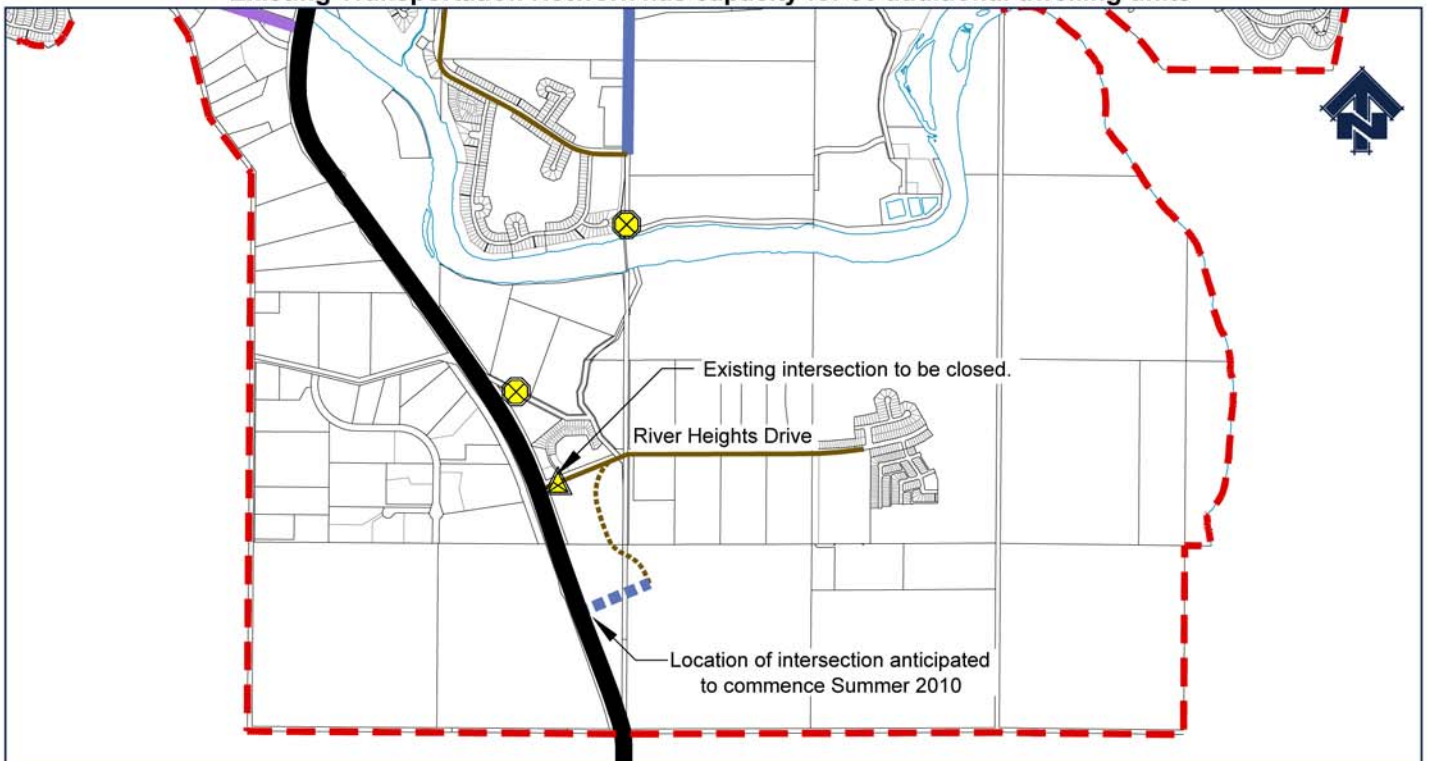
additional 50 residential units and maintain peak period westbound left and right movements at a Level of Service C.

Alberta Transportation has informed the Town of Cochrane Planning Department that a Level of Service less than C would not be acceptable at this intersection.



## Transportation Network Stage 1

Existing Transportation Network has capacity for 50 additional dwelling units



## Transportation Network Stage 2

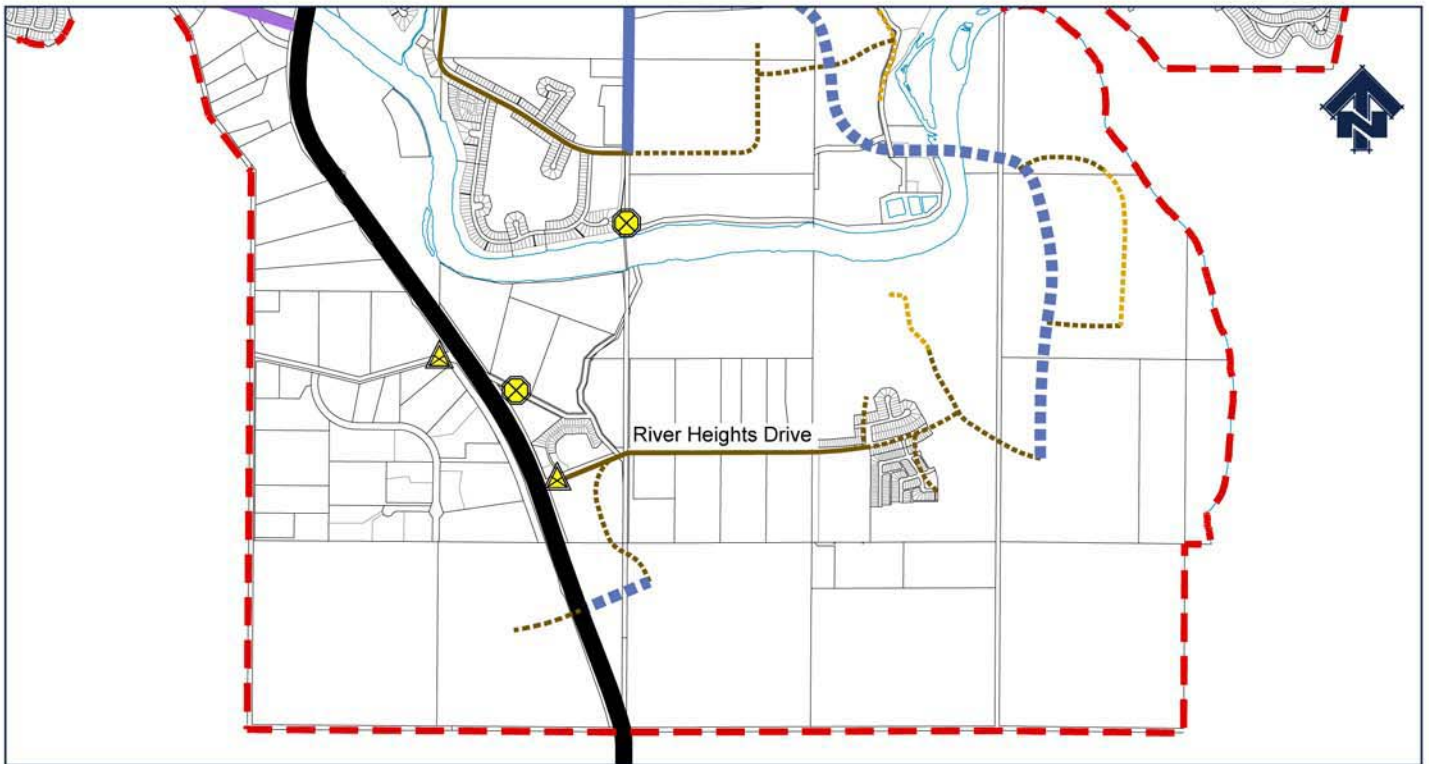
Spring 2010 Construction of new intersection will increase the capacity of the Transportation Network and allow 880 additional dwelling units to be constructed.



Legend:

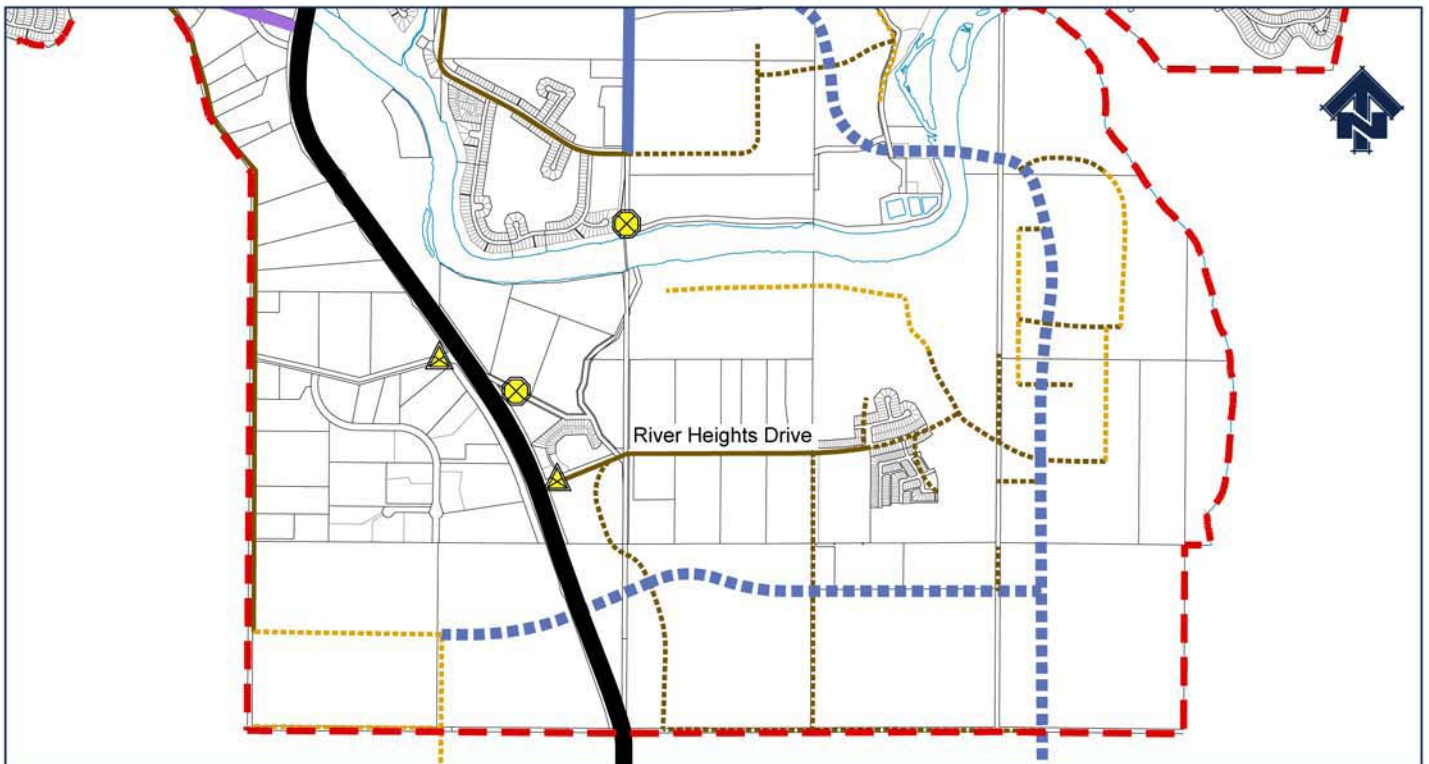
- Provincial Highway (Existing)
- Major Arterial (Existing)
- Minor Arterial (Existing)
- Major Collector (Existing)
- Major Arterial (Future)
- Major Collector (Future)

**Figure 5:**  
Stages 1 & 2 of the  
Transportation Network



**Transportation Network Stage 3**

2016 Recommended Future Road Network as per the Town of Cochrane Transportation Plan update 2009



**Transportation Network Stage 4**

2026 Recommended Future Road Network as per the Town of Cochrane Transportation Plan update 2009

Legend:

- |                               |                          |
|-------------------------------|--------------------------|
| Provincial Highway (Existing) | Major Arterial (Future)  |
| Major Arterial (Existing)     | Minor Arterial (Future)  |
| Minor Arterial (Existing)     | Major Collector (Future) |
| Major Collector (Existing)    | Minor Collector (Future) |
| Minor Collector (Existing)    |                          |

**Figure 6:**

Stages 3 & 4 of the  
Transportation Network

## **5.2.2 Planned Intersection of Highway 22 and River Heights Drive**

A new intersection for Highway 22 and River Heights Drive is planned. This new intersection will be constructed 550± metres south of the existing intersection, and will be fully channelled with future signalization as required. Private land ownership exists between the locations of the existing intersection and proposed intersection. A connection through this private land will be required to connect the new intersection with the existing River Heights Drive. This agreement is currently under discussion and close to resolution. Once this agreement is in place, and the new intersection is constructed, the intersection capacity constraints on the transportation network serving Riversong will be eliminated.

It is anticipated that the new intersection will commence construction during the summer of 2010. The existing Highway 22 and River Heights Drive intersection will either be closed or left intact as an emergency access only. This decision will be made by the Town of Cochrane and Alberta Transportation.

### **5.2.2.1 Planned River Heights Drive Re-Alignment**

As noted in Section 3.2.2, due to the relocation of the existing intersection approximately 550m± south, a portion of River Heights Drive must be re-aligned to access the new intersection. The construction of the re-aligned portion of River Heights Drive will enable development to surpass the 50 additional units that the existing intersection can support.

Registration of subdivision in Riversong, beyond 50 additional units, will not be supported by the Town until such time as an agreement in relation to the River Heights Drive re-alignment is provided to the Town.

## **5.2.3 River Heights Drive**

In accordance with the *Intersection Traffic Study*, River Heights Drive has a capacity to serve up to 10,000 vehicles per day (two way traffic).

The ITS has determined that based on existing traffic volumes, River Heights Drive is capable of accommodating the traffic volumes of an additional 880 residential units, or equivalent for commercial/industrial development.



It is noted that at present, River Heights Drive operates at a Level of Service A. With the traffic volumes of an additional 880 residential units, or equivalent for commercial/industrial development, this level of service will be maintained.

At such time when development surpasses the additional 880 residential units, or equivalent for commercial/industrial development, the Level of Service of River Heights Drive will be reduced. At this time, the development of additional routing or upgrading of River Heights Drive will be required.

While this limitation does not affect the development of the Riversong Stage 1 Neighbourhood Plan area, the Town of Cochrane will not approve the subdivision of any residential parcels, or development permits for any commercial/industrial developments that would exceed the additional 880 residential units, or equivalent for commercial /industrial development, prior to the upgrading of River Heights Drive or the development of an alternate permanent access.

Should improvements to River Heights Drive be required, the first developer requiring it shall front end the improvements while being entitled to 100% recoveries based on frontage obligations from lands adjacent to River Heights Drive. The Town will work with the Developer to set up the recovery mechanism.

#### **5.2.4 Access**

Riversong currently has a permanent access in place via River Heights Drive and Highway 22. This access will soon be enhanced by the planned new intersection of River Heights Drive and Highway 22, as discussed in Section 5.2.2.

##### **5.2.4.1 Emergency Access (External) via River Avenue Bridge**

Emergency access will be provided to Riversong via the River Avenue Bridge. See Figure 7. An all weather access road through Riversong's lower bench lands will connect River Avenue Bridge to River Heights Drive.

As per verification from Alberta Transportation to the Town of Cochrane Engineering Department, and the existing weight limit sign, River Avenue Bridge has the capacity to carry up to 40 tons, which will accommodate the heaviest emergency response vehicle. Therefore River Avenue Bridge can be utilized as an

emergency access while remaining closed to public vehicular traffic.

It is important to note that the River Avenue Bridge remains under the jurisdiction of Alberta Transportation. Alberta Transportation has agreed to the use of River Avenue Bridge as an emergency access into Riversong. This agreement letter can be found in Appendix G. An agreement shall be made between the developer and Alberta Transportation relative to the maintenance and use of the bridge.

#### **5.2.4.2 Future Bridge**

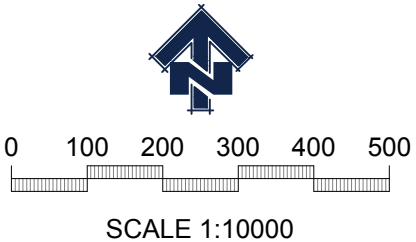
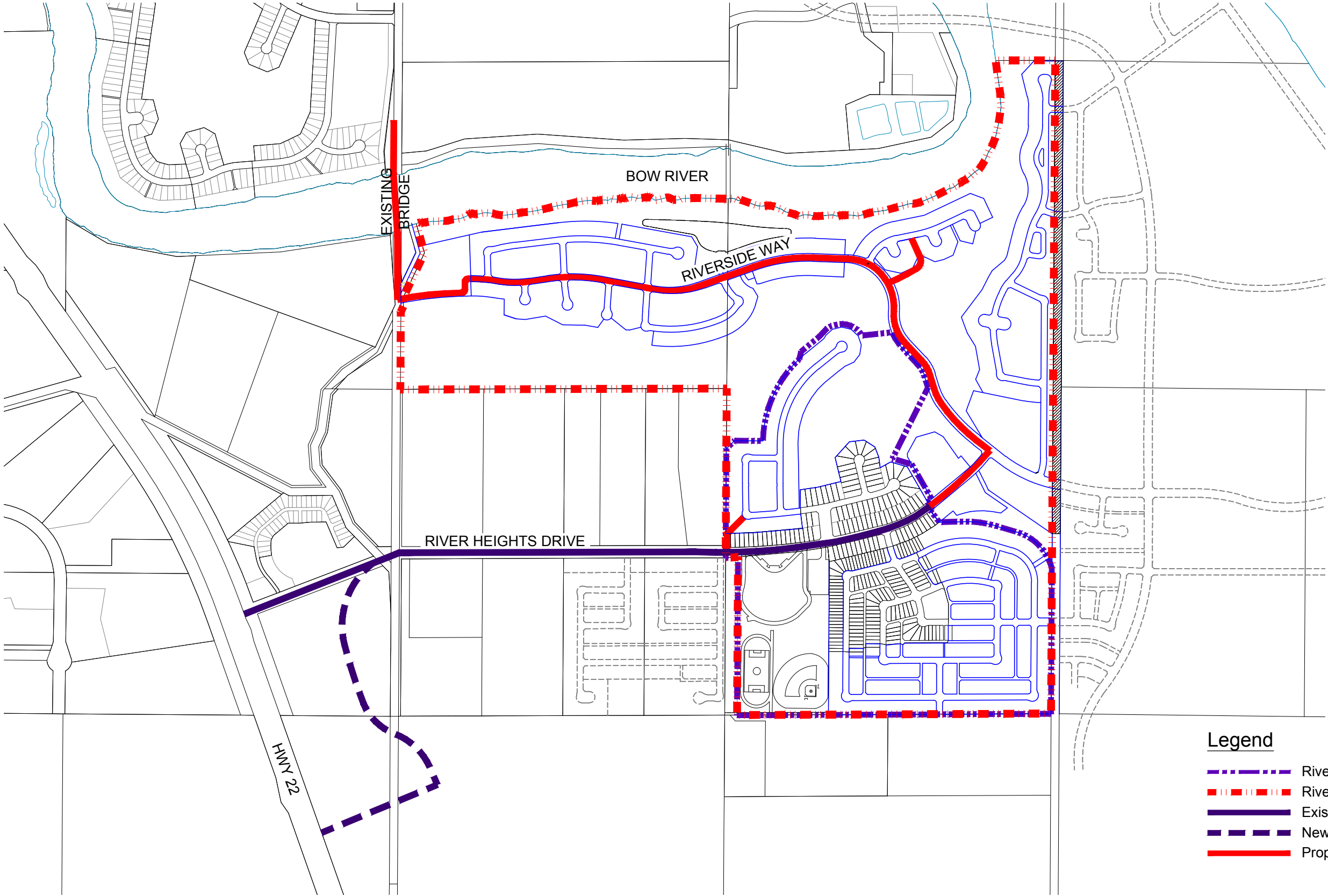
A second permanent bridge crossing of the Bow River has been identified in the MDP and the SR-ASP. The approximate location of this new bridge has been identified northeast of Riversong, within the SR-ASP lands.

The timing and construction of the new bridge will be guided by the policies of the MDP. Sections 9.3.1(j) – (l) of the MDP state that:

- (j) In accordance with the Town of Cochrane Analysis of Future Bow River Crossings: Planning Study, as amended from time to time, a new Bow River bridge shall be constructed and the existing River Avenue bridge shall be converted to a pedestrian crossing and emergency access.
- (k) Design and construction costs for bridges (pedestrian and vehicular) required to serve lands south of the Bow River shall be collected through offsite levies or other appropriate financial strategies.
- (l) The Town shall determine when design, construction, and completion of any bridges are to occur.<sup>7</sup>

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<sup>7</sup> Town of Cochrane, Municipal Development Plan, October 2008, Section 9.3.1 (j) – (l), page 43



Legend

- Riversong Stage 1 Neighbourhood Plan Boundary
- - - Riversong Boundary
- Existing Access
- - - New Access to commence Constructed Summer 2010
- Proposed Emergency Access Route

**Figure 7:**  
Emergency Access Routes

### 5.3 *Internal Road Network*

#### 5.3.1 Road Hierarchy

Riversong's internal road network consists of two collector roads, River Heights Drive and Riverside Way, and multiple residential roads.

An internal road review was preformed by D.A. Watt and detailed in a letter report<sup>8</sup> dated October 3, 2007. The letter report evaluates both the short and the long term traffic scenarios.

The short term traffic scenario is based on the existing surrounding development, the RS1NP development, and the current road network comprising a single route into the development from Highway 22 via River Heights Drive. See Stage 1 of Figure 5.

The long term scenario is based on complete build-out of Riversong and all internal roads, full build-out of other future developments in the area, the New East-West arterial road, New North-South arterial road, future North-South collector west of the school site and the proposed New Bridge being in place. See Figure 6.

The result of the traffic review was to recommend that:

- 1) Riverside Way be designed and built as a Modified Collector Road (Cross-Section in Appendix E);
- 2) River Heights Boulevard from River Heights Drive to River Heights Crescent, where it runs parallel to the east boundary of Riversong be designed and built as a 15m Modified Residential Road (Cross-Section in Appendix F);
- 3) River Heights Boulevard from the end of the recommended Modified Residential Road to the east boundary of Riversong, be designed and built as a 19.3m Avenue Road<sup>9</sup> (City of Calgary Alternative Street Design Standard).

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<sup>8</sup> Riversong Development, Cochrane – Road Standard Review, D.A.Watt Consulting, February 3, 2005

<sup>9</sup> The City of Calgary Design Guidelines for Subdivision Servicing, August 2004, Appendix II-B, Sheet 21



The purpose of recommendation number 1 is to increase the capacity of Riverside Way by providing wider driving lanes and no parking lanes along this road.

The purpose of recommendation number 2 is to increase the capacity of River Heights Boulevard by also providing wider driving lanes and no parking lanes. This will allow transit to utilize these roads. Further engineering review has determined that this cross-section must also include additional width to accommodate a waterline. The full cross-section is 27.0 metres wide and accommodates D.A.Watt's recommendations as well as the engineering requirements. This cross-section can be found in Appendix 'E'.

These conclusions have been acknowledged by the developer and will be implemented into the future construction in Riversong.

### **5.3.2 Culs-de-Sac**

The internal road network of Riversong respects the natural topography of the land. The natural topography provides challenges to the opportunity of providing a grid like street design with a high level of connectivity. To mitigate the connectivity limitation of the culs-de-sac walkways near the ends of the culs-de-sac, or open ended culs-de-sac are provided to create greater efficiency in the pedestrian network.

It is recommended that the maximum length of a cul-de-sac be 200 metres. A cul-de-sac longer than 200 metres must provide either an emergency access or an automatic sprinkler system installed in all residences past the 200 metre distance. The sprinkler system must be installed and maintained in accordance with the *Alberta Building Code*.

### **5.3.3 Emergency Access (Internal)**

All internal emergency accesses shall be constructed to support an emergency vehicle and be paved to a width of 6 metres. The exact location of emergency accesses will be determined for individual phases at the subdivision application stage.

## 5.4 *Transit System*

### 5.4.1 Public Transportation

In anticipation that the Town of Cochrane will be implementing a public transportation system, Riversong makes provisions for a transit route in its plan.

Figure 8 identifies both the ultimate and interim public transportation route.

The ultimate public transportation route through Riversong would be River Heights Drive to Riverside Way. A bus turnaround must be provided at the north end of Riverside Way, in the lower bench lands, to allow the bus to turnaround and head back up Riverside Way, and ultimately continue east once future urban development occurs. It is anticipated that with this future urban development, a north/south arterial road will run adjacent to Riversong's east boundary. The continuation of the bus route along this arterial road will provide 400 metre walking distance access to the residences in the east/northeast portion of Riversong.

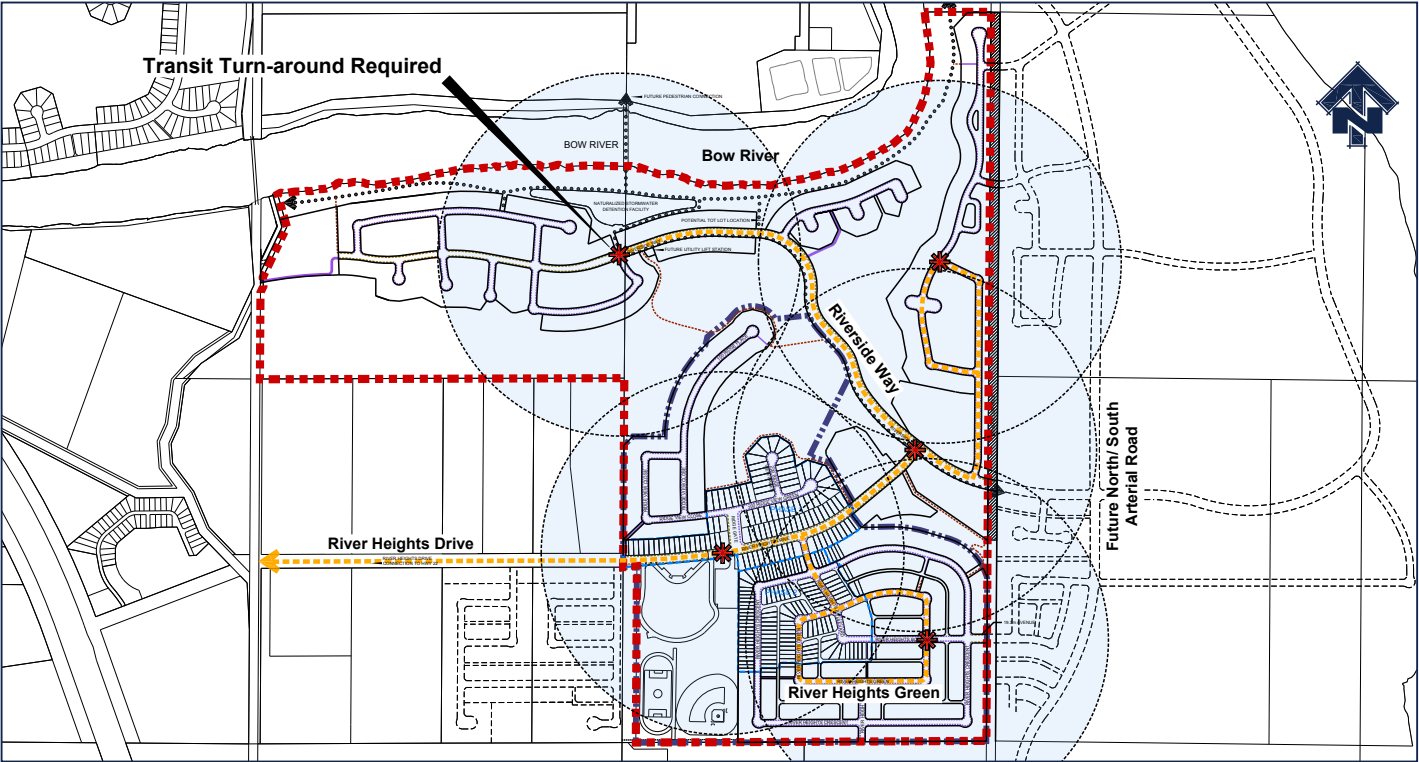
The interim public transportation route, also identified in Figure 8 utilizes River Height Drive to River Heights Boulevard. The route then loops around River Heights Green to then exit Riversong along the same route it entered on. Once Riverside Way and the northeast portion of Riversong are developed an interim bus route will be implemented along these roads until the ultimate route can be realized.

The public transportation route and bus stops identified in Figure 8 will provide more than 95% of all residents less than 400 metre walking distance to a bus stop. Final location of bus stops will be determined to the satisfaction of the Town of Cochrane at the subdivision application stage.

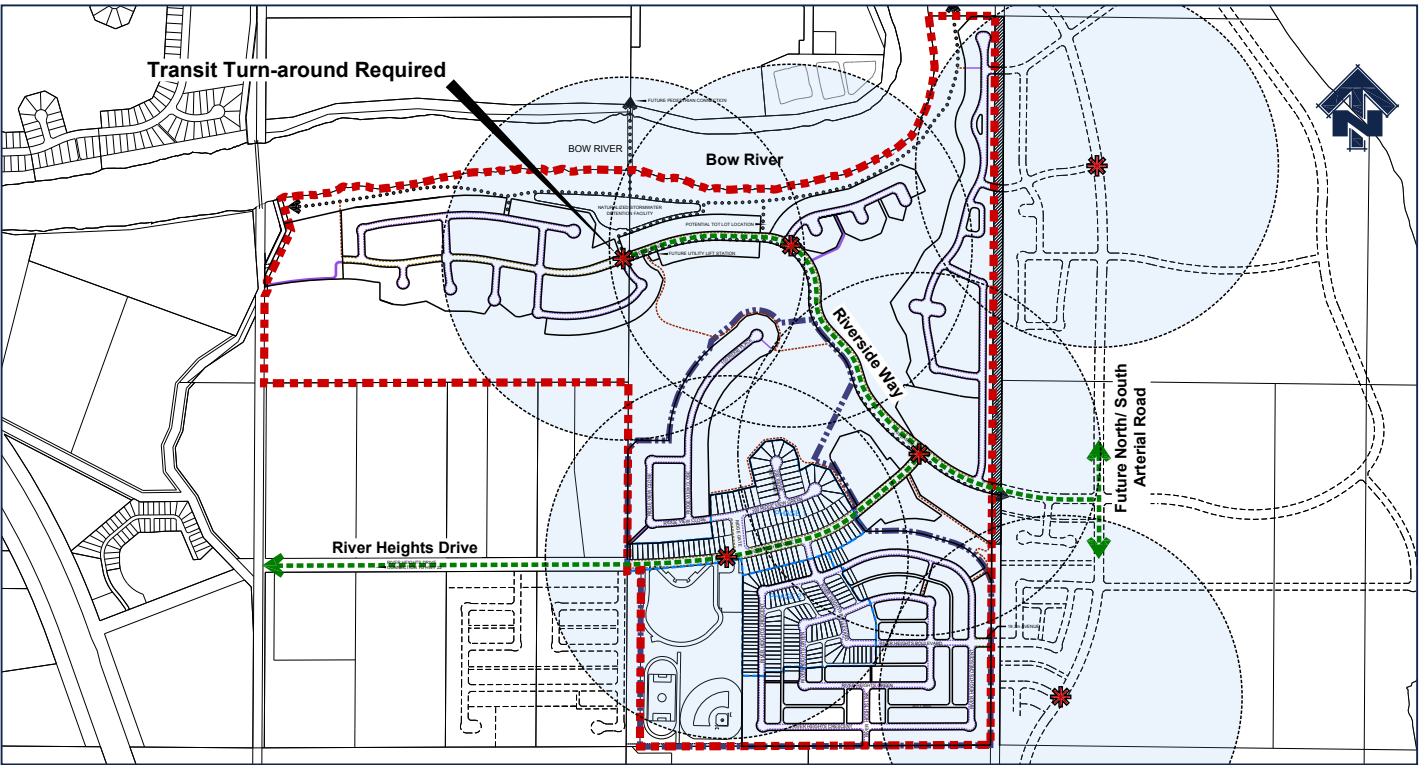
### 5.4.2 School Bus Transportation

The anticipated school bus transportation route is illustrated on Figure 9. This route utilizes some residential standard roads.

The school bus transportation route as illustrated on Figure 9 will provide all children with maximum 400 metre walking distance to school bus stops.



Interim Transit Bus Route

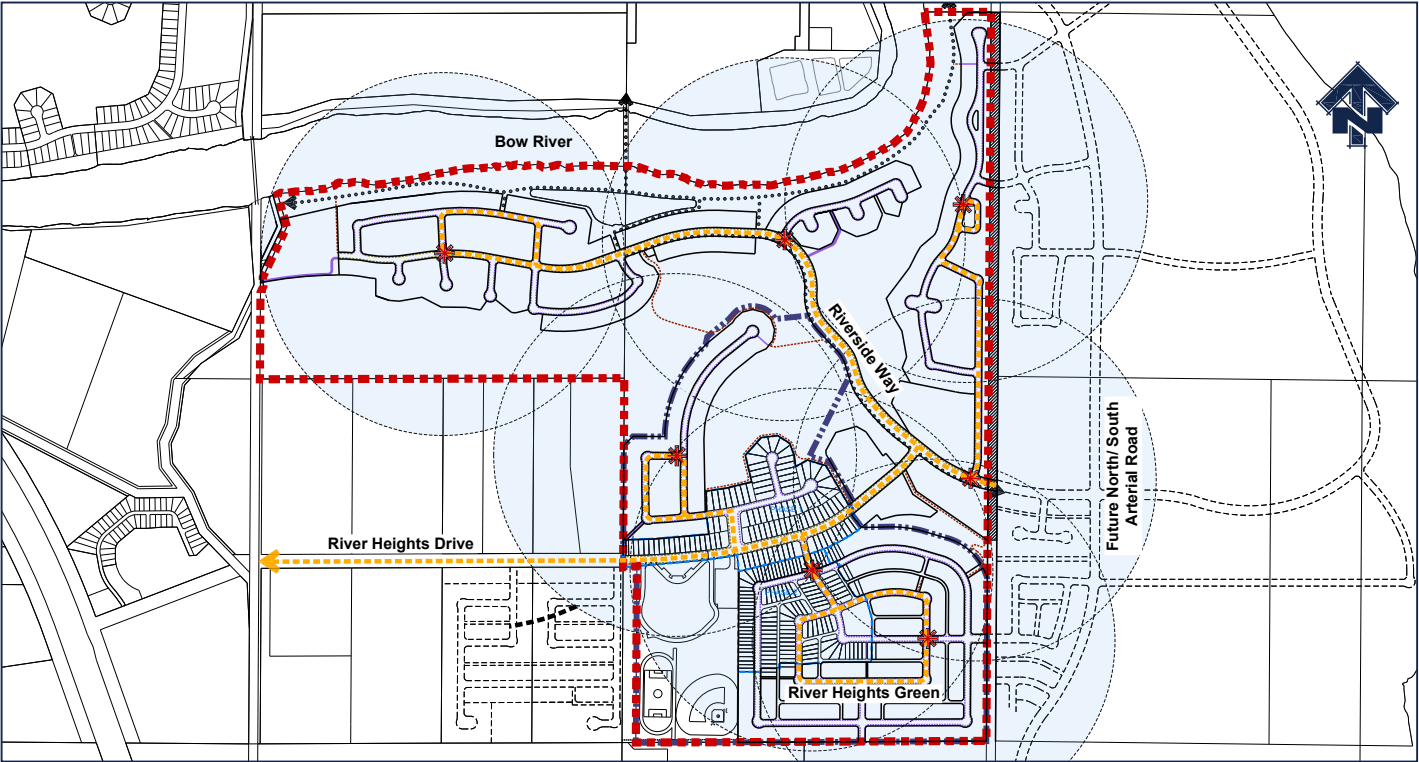


Ultimate Transit Bus Route

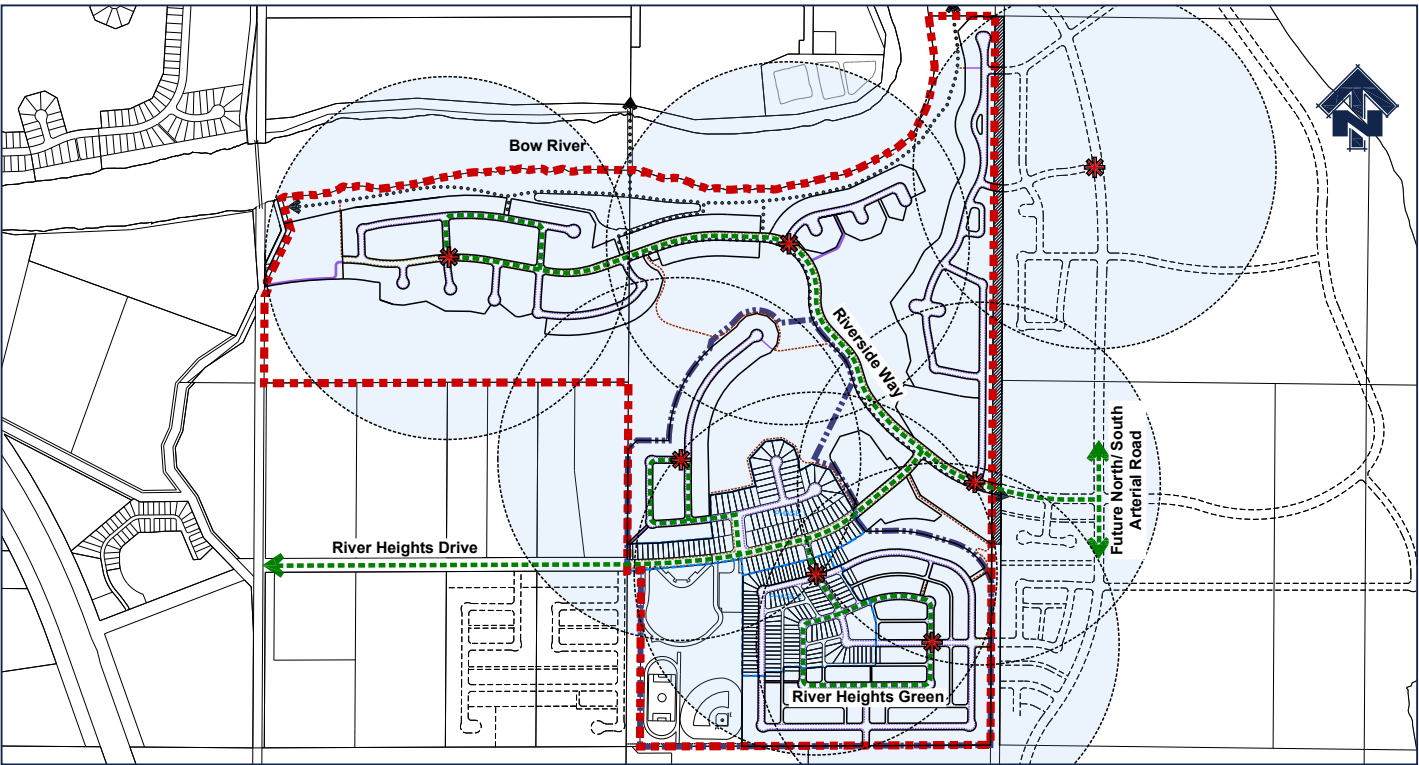


- Legend:
- Riversong Stage 1 Boundary
  - Riversong Boundary
  - Existing Phase Boundary
  - Interim Bus Route
  - Ultimate Bus Route
  - ★ Transit Bus Stop Locations
  - 400m Walking Distance

**Figure 8:**  
Public Transportation  
Route



Interim School Bus Route



Ultimate School Bus Route



- Legend:
- Riversong Stage 1 Boundary
  - Riversong Boundary
  - Existing Phase Boundary
  - Interim Bus Route
  - Ultimate Bus Route

- ✱ School Bus Stop Locations
- 400m Walking Distance

**Figure 9:**  
School Bus  
Transportation Route

## 5.5 *Regional Pedestrian Network*

A regional pathway will be constructed along Riverside Way, bringing pedestrian traffic from the upper bench lands down to the Bow River. Once in the lower bench lands, the regional path will continue along the entire south bank of the Bow River, inside Riversong's boundary. The pathways along the river will be 3.5m wide in conjunction with the Town of Cochrane's river pathway guidelines. Future development will then connect to this pathway and it will continue east and west.

The 3.5m wide Bow River pathway is in conjunction with Cochrane's future Open Space Plan. Also anticipated to be identified in the future Open Space Plan is a future regional pedestrian bridge crossing of the Bow River. The location of this bridge is anticipated to be such that it will connect the Spray Lakes Recreation Centre to all of the lands south of the Bow River. This future regional pedestrian bridge will not only benefit all of the developments and communities in this area south of the Bow River, but increase the pedestrian connectivity of the entire Town of Cochrane.



## 6.0 *Utility Servicing*

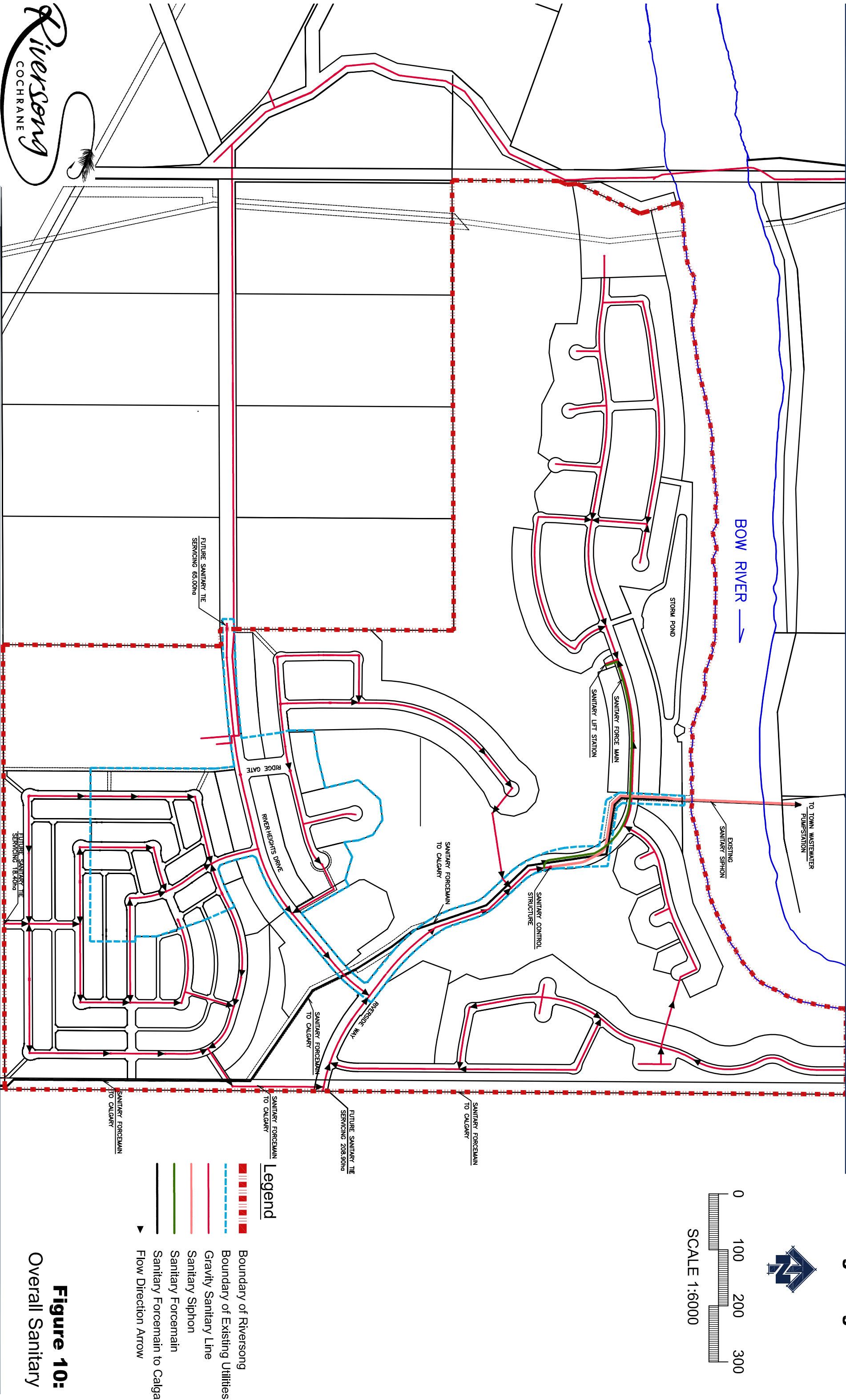
### 6.1 *Sanitary Servicing*

Sanitary servicing for the community of Riversong is provided by twin sanitary siphon pipes under the Bow River that tie to the existing Town Wastewater Pumping Station. The sanitary siphon was completed and put into service by the Developer as part of Riversong Phase 1. The siphon has been designed in accordance with the Town of Cochrane Sewer Master Plan and has capacity to service all the Riversong development lands as well as future adjacent tributary development lands. The proposed sanitary sewer network is shown in Figure 10, benefiting lands are shown in Figure 11.

The upper, southern area of Riversong, including the existing High School, Phases 1 & 2, and the Stage 1 Neighbourhood Plan area, is serviced by gravity mains flowing to the existing sanitary sewer trunk and siphon in Riverside Way. Existing stubbs at the west development boundary in River Heights Drive has capacity to provide service for a design area of 65.0ha as shown as area 'A' in Figure 11. The sanitary gravity network will also be extended through the Stage 1 Neighbourhood Plan area and stubbs will provide service to design area 'B' comprised of 18.40ha to the south. Additionally, the existing sanitary main in Riverside Way will be extended to the east boundary to service the Stage 1 Neighbourhood Plan area and an additional 208.90ha of land to the east shown as area 'C' in Figures 11.

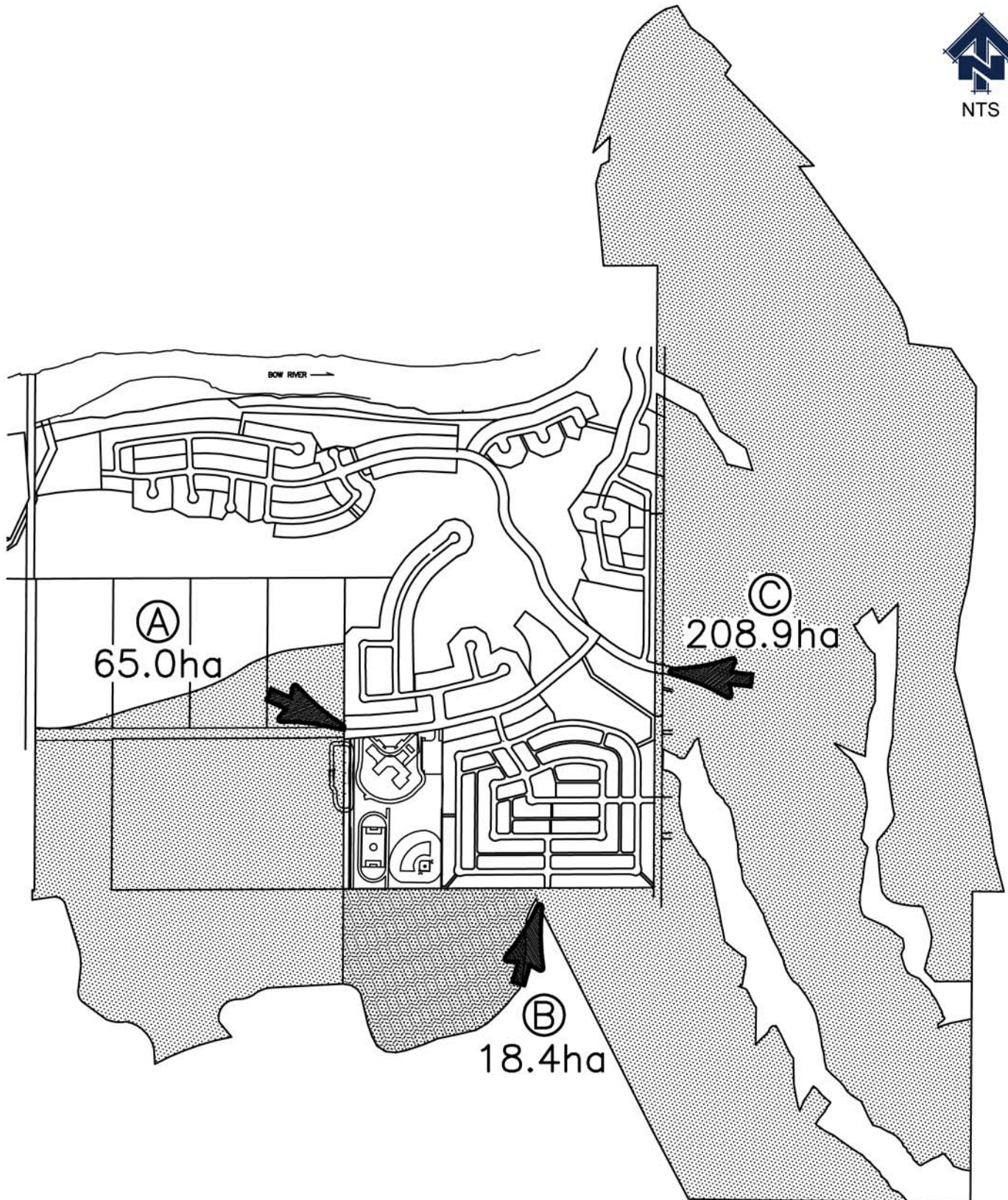
The development in the northern, lower bench area, along the banks of the Bow River will be serviced via gravity sanitary lines to a lift station. The lift station will connect to the existing sanitary siphon via force main. The existing sanitary control structure was designed to accommodate the future forcemain connection and flow as shown in Figure 10. The location of the lift station will be determined in conjunction with future Neighbourhood Plan areas and has been conceptually shown in Figure 10.

The Riversong development area is bisected by the existing Town of Cochrane to City of Calgary Sanitary Forcemain and Utility Right-of-Way, extending up Riverside Way to the east boundary before traversing the east boundary before changing direction to the south. No physical modifications are proposed for this force main.



**Figure 10:**  
Overall Sanitary





**Figure 11:**  
Benefiting Sanitary Area



## 6.2 *Water Distribution*

Water servicing for the existing Riversong Phases 1 & 2 and the High School is provided by two water mains in River Heights Drive from the existing River Heights Reservoir and Pump Station. The proposed water system distribution concept is shown on Figure 12 and is an extension of the existing watermain distribution network in the existing Phase 1 and Phase 2 development areas. The proposed staging of development takes into account the need to maintain a looped water system for security of supply.

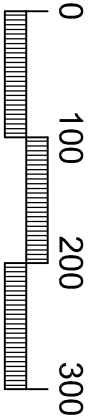
Distribution mains will extend through Riversong on a grid system as shown in Figure 12, and in accordance with the Town of Cochrane Water System Master Plan. Stubs for servicing of future developments will be provided to the east in Riverside Way & River Heights Blvd and to the south in River Heights Link. All internal valve and hydrant coverage will be provided in accordance with City of Calgary and Town of Cochrane requirements.

The southern, upper area of Riversong, including the existing High School, Phases 1 & 2, and the Stage 1 Neighbourhood Plan area, is within the River Heights water pressure zone (Elev 1170 to 1210). The watermain in Riverside Way will include a pressure reducing valve (PRV) assembly and stub, after the looping tie to Phase 4, to provide service to the future development area in the development in the northern, lower bench which is in the Main Town pressure zone (Elev 1130 to 1170). The existing 1170 meter contour has been highlighted in Figure 12 for reference. The lower bench will also tie to the existing water main at the bridge crossing the Bow River on River Heights Rise. This tie will be required with the initial development on the lower bench in accordance with City of Calgary design guidelines to maintain a looped water system for security of supply.

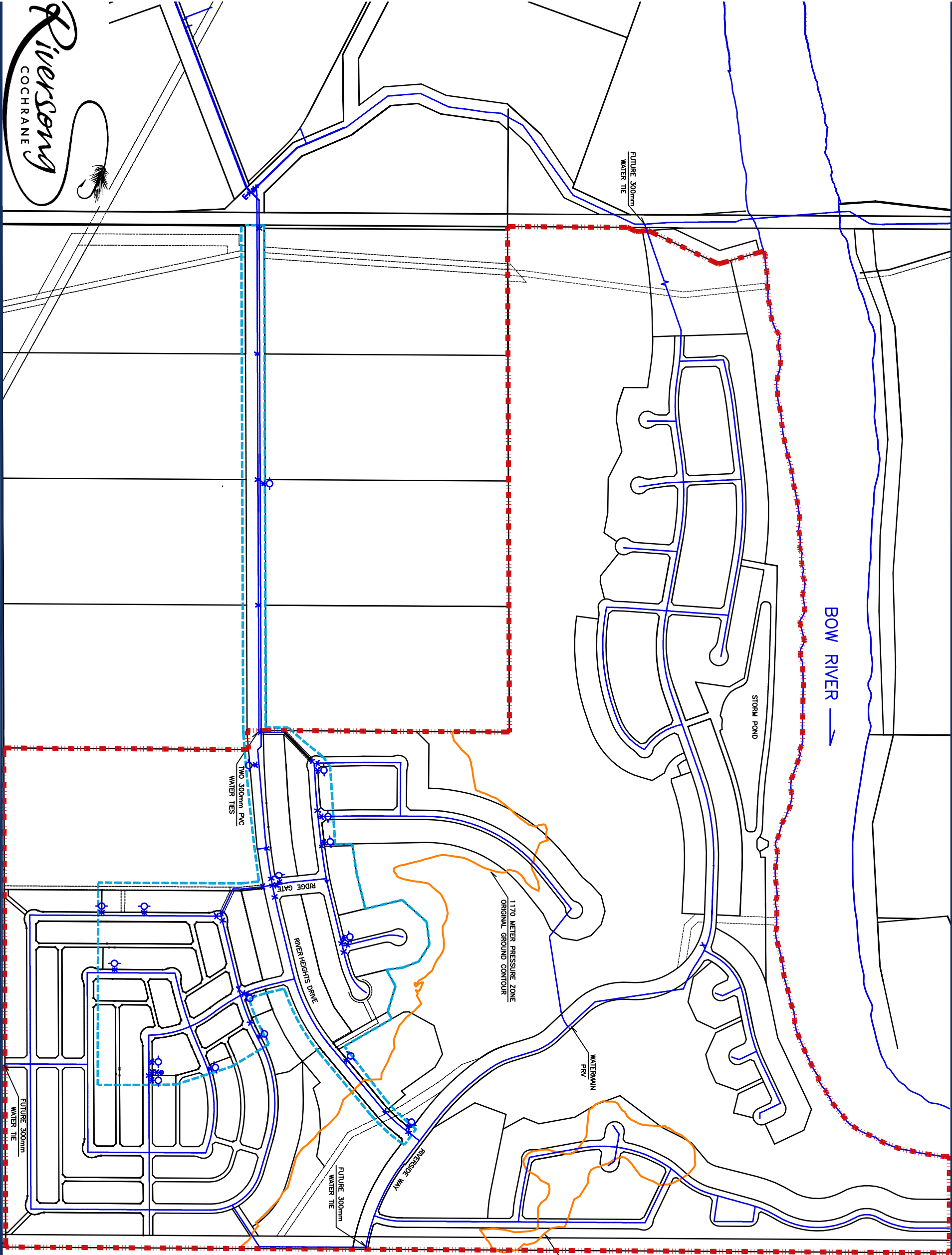
## 6.3 *Stormwater Management*

The stormwater management concept for Riversong has been identified in the report entitled *Staged Master Drainage Plan for Cochrane Crossing* (SMDP) by Westhoff Engineering Resources, Inc. (Nov 2005). As set out in this SMDP the existing topography of Riversong will facilitate drainage to a conventional storm water storage facility located adjacent to the Bow River as shown in Figure 13. The storm water management facility will outfall to the Bow River.

The Riversong development area will be serviced by conventional minor (pipe) and major (surface) drainage systems which will convey drainage to the above storm water storage facilities. The proposed storm sewer network is shown in Figure 13.



SCALE 1:6000



**Legend**

- Boundary of Riversong
- Boundary of Existing Utilities
- Watermain
- Pressure Zone 1170meters
- Fire Hydrant with Valve
- Valve
- Park Water Service
- Pipe Cap

**Figure 12:**  
Overall Water

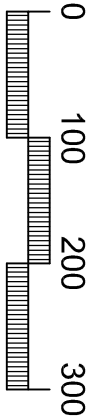


The southern, upper area of Riversong, including the existing High School, Phases 1 & 2, and the Stage 1 Neighbourhood Plan area, is serviced by gravity mains flowing to the existing storm sewer trunk in Riverside Way. The existing storm trunk discharges to an interim storm pond that was designed and approved to service Phases 1 & 2 of Riversong only. Further development in Riversong will require the construction of the ultimate storm water management facility and outfall and the extension of the storm trunk. The location of the interim storm pond is shown in Figure 13. Upon completion of the ultimate storm water management facility, outfall and the extension of the storm trunk the interim storm pond will be taken out of service and the area will be rehabilitated, graded and incorporated in the future development of the lower bench area.

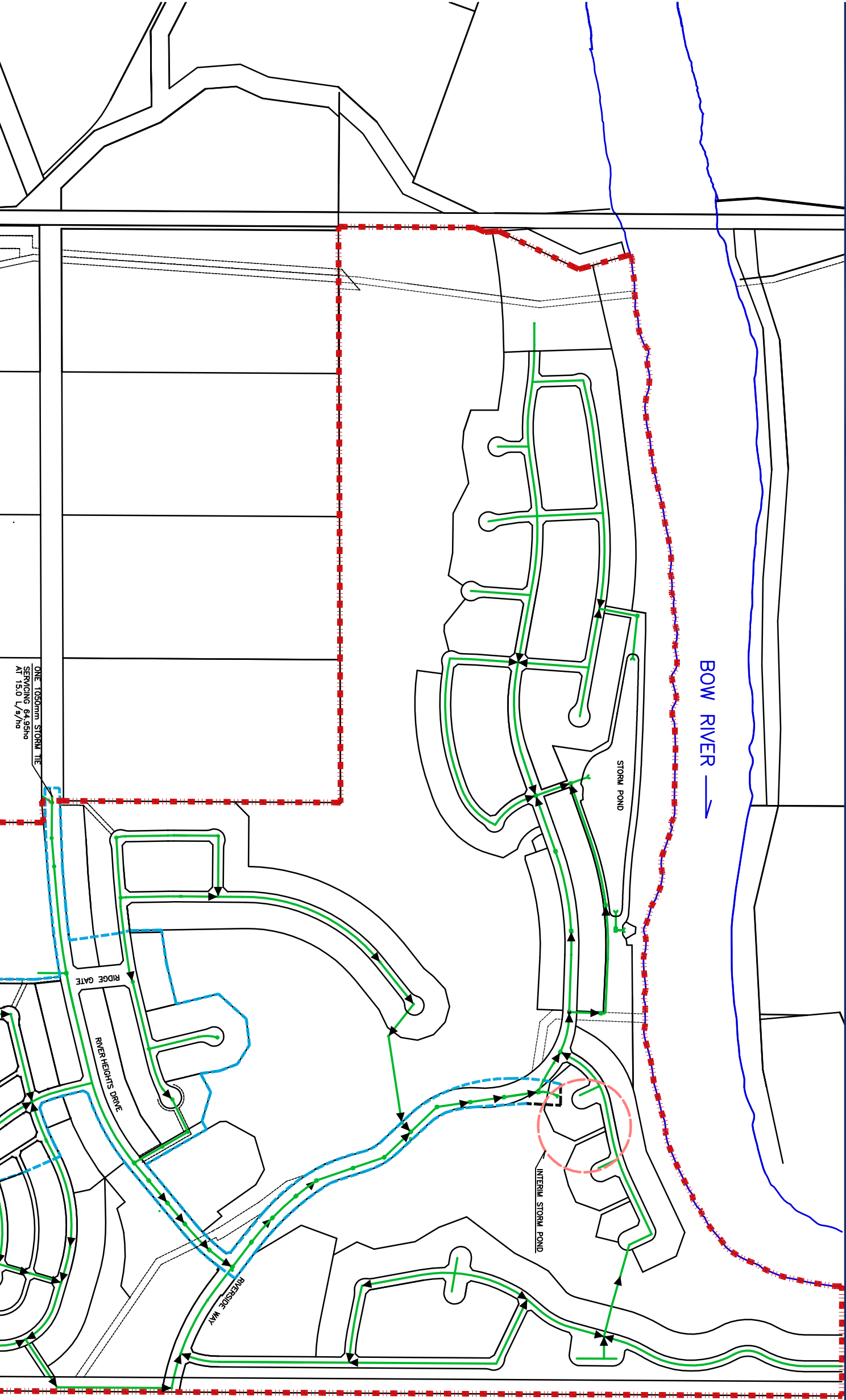
The existing network is stubbed at the west development boundary on River Heights Drive to provide service for a future storm pond discharge at pre-development rates. A design area of 64.95ha to the west of Riversong is shown in Figure 14 as area 'A'. The storm gravity network will also be extended through the Stage 1 Neighbourhood Plan area and stubbed to provide service for a future storm pond discharge at pre-development rates. This design area consists of 16.9ha to the south of Riversong and is labelled as area 'C' in Figure 14. Both of these areas, 'A' & 'C' have a unit discharge rate of 15.0 litres per second per hectare.

The storm sewer pipe system will drain to the storm water storage facilities via the existing storm trunk in Riverside Way, constructed by the Developer as part of Riversong Phase 1. The trunk will be extended along Riverside Way to the storm water storage facility, as per the Riversong Phase 2 Off-site Storm Trunk design drawings prepared by Focus.

Subsequent to the approval of the Riversong Stage 1 Neighbourhood Plan, a development permit application can be made to facilitate the construction of the stormwater management facilities.



SCALE 1:6000



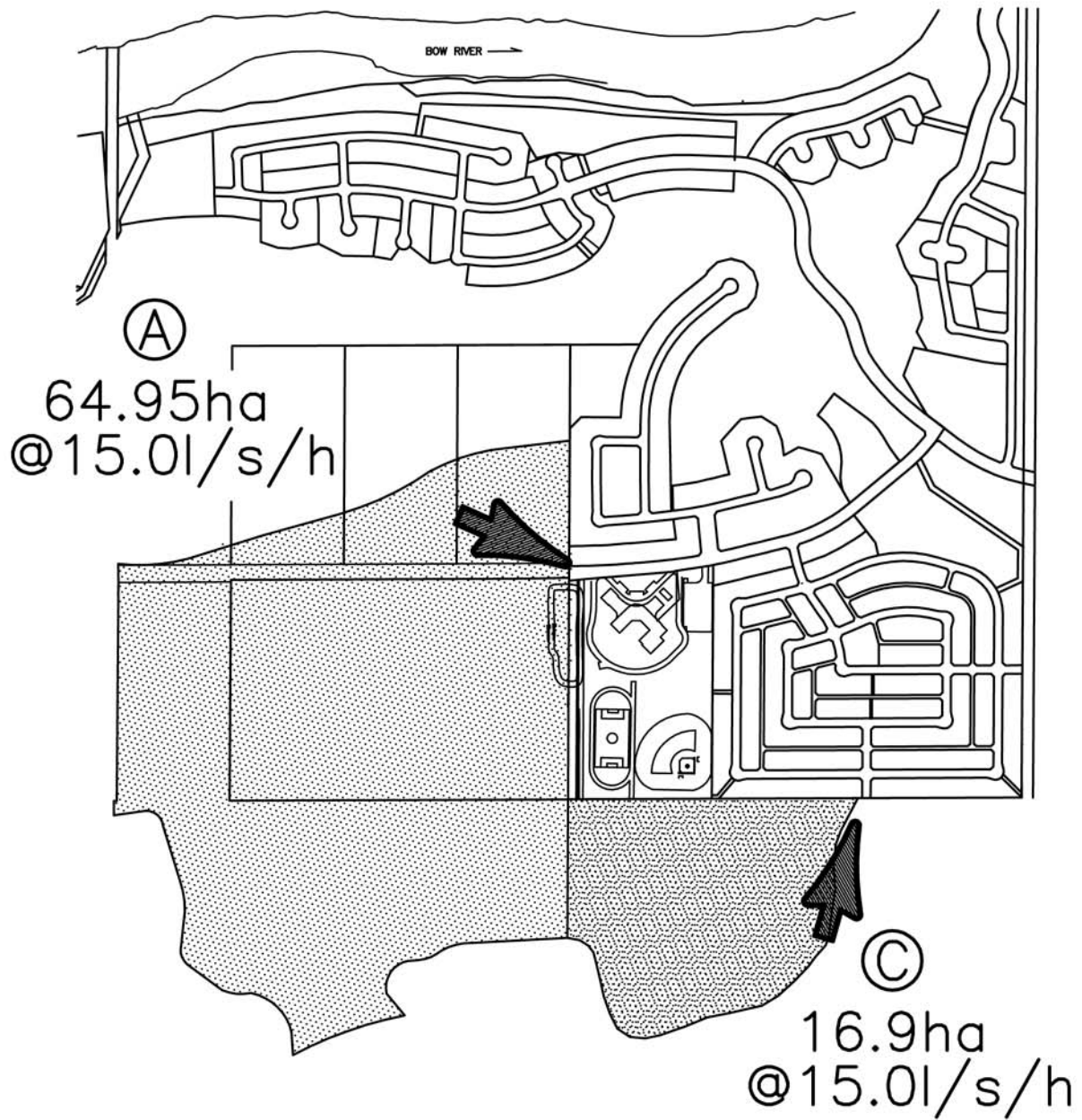
Legend

- Boundary of Riversong
- Boundary of Existing Utilities
- Storm Line
- Flow Direction Arrow

Figure 13:  
Overall Storm







**Figure 14:**  
Benefiting Storm Area

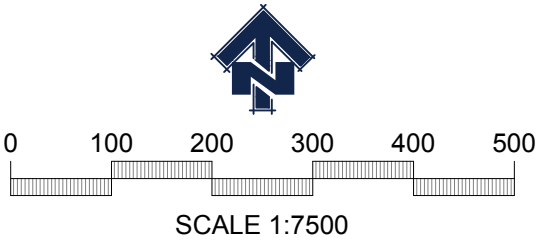
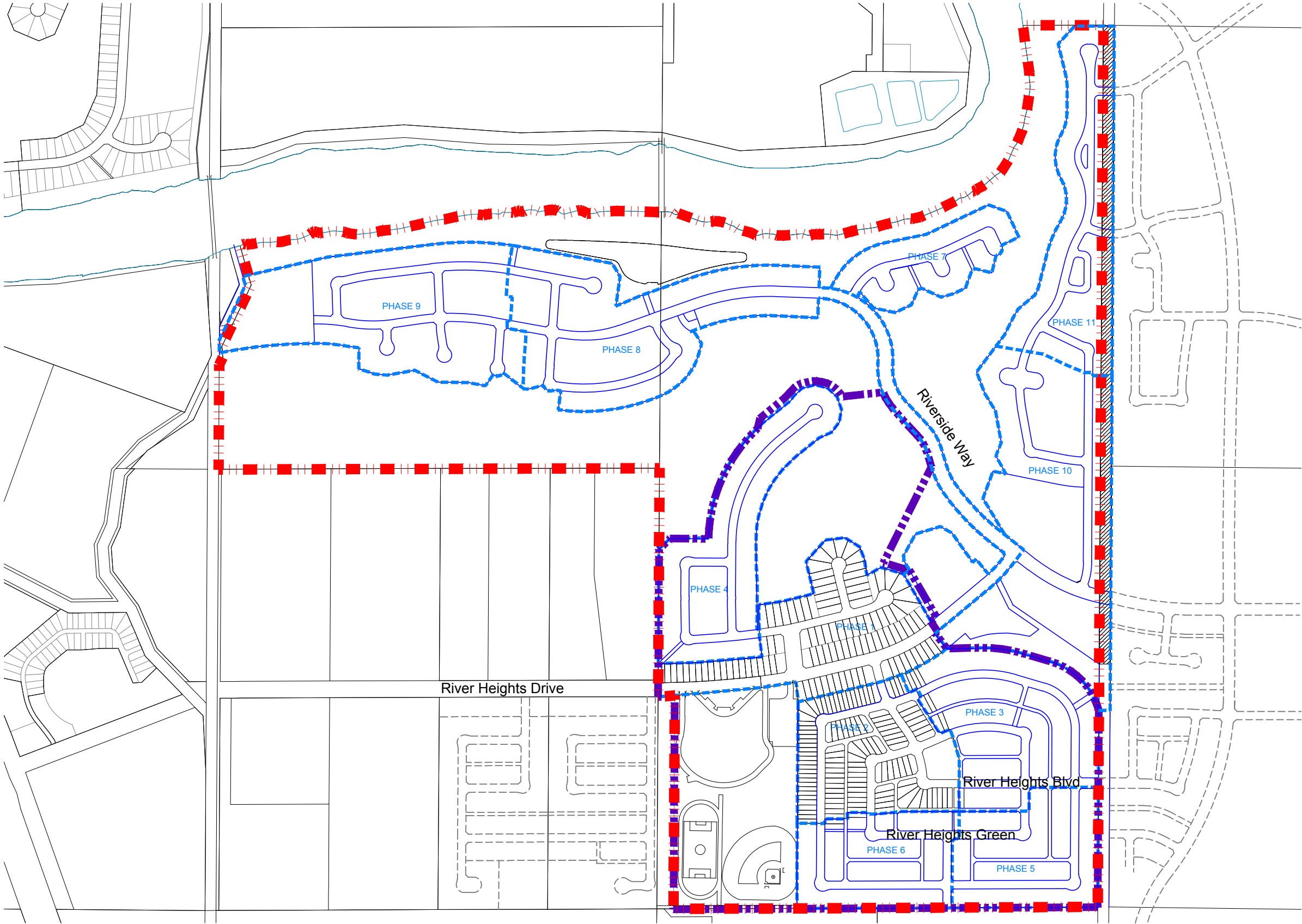
#### **6.4 *Shallow Utilities***

Shallow utility servicing to Riversong will be provided by extension of existing facilities in the adjacent Phase 1 and Phase 2 development areas. All power, telephone, and cable television distribution systems will be constructed underground within the subject area.

### **7.0 *Phasing***

#### **7.1 *Phasing Plan***

The anticipated Riversong Phasing Plan is illustrated in Figure 15. The Phasing is largely dictated by market conditions and servicing. Development will generally proceed from the upper bench lands northwards to the lower bench, then move east to west. It is anticipated that the east side of Riversong will be developed after the lower bench lands. Unforeseen events or changes in market conditions could result in changes to the phasing order.



- Legend**
- Red dashed line with square markers: Riversong Boundary
  - Purple dashed line: Stage 1 Neighbourhood Plan Boundary
  - Blue dashed line: Phase Boundaries



**Figure 15:**  
Phasing Plan



## 8.0 Cochrane Sustainability Plan

The Cochrane Sustainability Plan was adopted by Council in May 2009. The plan provides thirteen (13) Pathways to the Future to help guide future development within Cochrane. These pathways are grouped into 4 categories.

### 8.1 We Build a Culture of Responsibility

**Pathway 1:** *We are a socially responsible and empowered community.*

Riversong is a community built on natural amenities, extensive sidewalk and pathway connections, greenspaces including tot lots and a community garden, and a local high school site. Providing outlets for social interact such as a community garden and the school site, will help residents of Riversong develop a strong sense of ownership toward their community. Ownership of the environment generates the desire to act responsibly and to protect and help direct its future. Residents of Riversong will feel connected to Cochrane through their enjoyment of their surroundings, and therefore empowered to become a voice in Cochrane's future.

The local high school site offers the opportunity for parents and students to volunteer in classrooms, sporting and other school events thereby becoming more involved in the community. Residents will have the opportunity to interact and socialize at local sporting events, art shows and school festivals.

### 8.2 We are Responsible Citizens of the Planet

**Pathway 2:** *We treat water as a precious resource.*

**Pathway 3:** *We use energy responsibly and innovatively.*

**Pathway 4:** *We contribute to the solution on climate change.*

The community of Riversong will target a density level that conforms to the 19.3 units per hectare (8.0 units per acre) required by the MDP. Higher density communities are more environmentally responsible than lower density communities as there is less land form disturbance for servicing, less vehicular impact (shorter drive times and reduced road construction), and greater opportunity for residents to use alternate forms of transportation.

The developer has and will continue to encourage energy efficient homes within Riversong that employ innovative technology to reduce energy consumption, such as low flush toilets, energy efficient lighting, and energy star rated appliances.

Riversong has and will continue to develop under the guidelines of a proper Stormwater Management Plan to ensure the stormwater runoff quality meets Provincial standards prior to entering the Bow River.

### **8.3 We Live Locally**

**Pathway 5:** *We consume the bounty of our local economy.*

**Pathway 6:** *Our local economy is healthy and diverse.*

**Pathway 7:** *Everyone has an opportunity to pursue their potential in Cochrane.*

**Pathway 8:** *We are a caring community that lives and celebrates together.*

The community of Riversong will provide homes for approximately 5200 new residents to Cochrane. These residents will utilize the nearby commercial centres as well as the downtown core for their shopping, entertainment and service needs. The continued development of the community will help provide jobs to local trades and services.

Riversong will include a community garden. This community garden will be located to provide residents of multi-unit developments the opportunity to plant a garden and enjoy the bounty of their own locally grown produce.

The local school site will provide educational needs, jobs and volunteering opportunities for Riversong residents. Sporting events, school concerts, festivals and art shows will provide residents with the opportunity to socialize and celebrate together; thereby providing a social focus for the community.

### **8.4 Cochrane is a Complete Community**

**Pathway 9:** *Everyone has a roof over their head.*

**Pathway 10:** *There's enough room for everything a community should have.*

**Pathway 11:** *Wherever you are in Cochrane, you're close and connected.*

**Pathway 12:** *There are diverse options for getting around.*

**Pathway 13:** *We build Cochrane on the strengths of our natural and cultural heritage.*

Riversong provides residents with a diverse range of housing options. The lifecycle housing provided in Riversong will allow a resident to live their entire life within the community that offers housing appropriate for all stages of life and income levels. Section 3.1 provides further information on the housing variety available in Riversong.

The developer of Riversong also commits to working with the Cochrane Society for Housing Options to provide affordable housing within

Riversong. The form and management of the housing will be determined in conjunction with the Cochrane Society for Housing Options at the time of development.

The extensive sidewalk, walkway and pathway system in Riversong offer residents with multiple choices for getting around their community. The natural escarpment is a significant feature of the community and will be left in its natural state. Walkways will be provided in locations that allow pedestrian access but cause minimal impact to the escarpment. Although a portion of the community is already developed, sidewalks will be placed on both sides of the street throughout the remainder of the community to aid in the walkability of the community.

The local school provides opportunities for education, jobs and volunteering within the Riversong community.

Public art will be erected adjacent to the storm pond near the banks of the Bow River. This art piece will provide a sense of place to residents as they become familiar with this feature and identify it as part of their community.

## 9.0 Sustainability Matrix

The Town of Cochrane MDP provides a sustainability matrix in Appendix I. The matrix is intended to inspire new developments to evaluate how the development contributes to Cochrane and the positive and negative impacts it will have on surrounding communities. The section below details how Riversong addresses the five (5) Planning Principles of Section 3.1 in the MDP in the form of the Sustainability Matrix from Appendix I.

<p><b>2.1.1</b>  <b>Principle 1:</b>  <b>Responsible Growth Management</b>  <i>“Responsible growth management demands that the Town make every effort to meet the needs of a growing population, in an ecologically-aware and efficient manner, using limited natural, human, built, and financial resources”.</i></p>	<ul style="list-style-type: none"> <li>a. Riversong meets the Town’s Responsible Growth Management goals by providing a new community for future residents of the Town of Cochrane through a logical extension of existing infrastructure and utility servicing thereby using limited built and financial resources.</li> <li>b. Riversong conforms to the 2008 MDP housing mix policy 8.4.3(a), by providing a range of housing forms. By introducing townhouses, as well as continuing to offer narrow lot homes, semi-detached homes, front-drive garage homes, and estate level housing, Riversong offers lifecycle housing achievable to multiple income ranges.</li> <li>c. By ensuring the community of Riversong meets the density levels identified in the 2008 MDP, the community will be meeting the needs of a growing population in an ecologically-aware and efficient manner.</li> <li>d. A substantial sidewalk and pathway system will link current and future residents with the abundance of natural open spaces. There is a significant amount of environmental reserve throughout Riversong. The natural ecology of the environmental reserve area will remain intact. The design of the community respects the natural escarpment thereby reducing the impact on the natural topography. In this manner, the community embraces the natural topography of the land and utilizes this feature as an amenity for the community.</li> </ul>
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**2.1.2****Principle 2:****Social & Cultural Well Being**

*“Social well-being and a high quality of life is a reflection of living in a community that creates a safe, healthy, and comfortable environment in which to live, work and play.”*

- a. Riversong is a community that provides an abundance of greenspace and close proximity to the Bow River. Well connected sidewalks and walking paths will provide the opportunity for residents to venture outdoors to exercise and enjoy these natural amenities. The active presence of the residents within the community will augment the social development of the community. Opportunities for interaction with the outdoors will potentially provide residents with a connection to their environment, thereby increasing their quality of life.
- b. Riversong will include a community garden. A community garden allows residents who do not have access to private greenspace to plant a garden and grow their own produce. A community garden not only increases the quality of life of these residents, but also provides an opportunity for social interaction and increased community spirit.
- c. The existing and operating public high-school site provides local education and the opportunity for residents to walk to school. The school will become a social focus point in the community as residents become involved with the school through participation and attendance at sporting events, art shows and school fairs. The school will also provide jobs and volunteering opportunities providing the potential for residents to work where they live.

<p><b>2.1.3</b>  <b>Principle 3:</b>  <b>Environmental Stewardship</b>  <i>“Environmental stewardship highlights the Town’s commitment to careful and responsible management of our natural resources and ecological assets”</i></p>	<ul style="list-style-type: none"> <li>a. The community of Riversong provides an abundance of environmental reserve, preserving the existing vegetation and wildlife habitats within the Plan boundary. The preservation of existing conditions within the environmental reserve will help maintain the local air quality. The topography of Riversong is a beautiful natural feature of the community that has been respected with the community design.</li> <li>b. As mentioned in Section 2.1.2 a community garden will be provided in Riversong which further supports environmental stewardship.</li> </ul>
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<p><b>2.1.4</b>  <b>Principle 4:</b>  <b>Economic Vitality</b>  <i>“Economic vitality provides the foundation for a healthy, diverse, active, prosperous, and resilient economy.”</i></p>	<ul style="list-style-type: none"> <li>a. The anticipated number of residential units with the community of Riversong is 1930. The approximate projected population (based on 3.0 people per household in single family and semi-detached housing, and 2.1 people per household in the townhouse and multi-family housing) is 5219 people. This additional population will support local business which will encourage industries and new employers to base themselves in Cochrane as well as provide significant residential property tax revenue to the Town.</li> <li>b. While the community of Riversong does not include commercial development, there are commercial developments approved within close proximity to Riversong along Highway 22. The residential base of Riversong will aid in the sustainability of these commercial developments. See Section 3.5 for further discussion on nearby commercial sites.</li> </ul>
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<p><b>2.1.5</b>  <b>Principle 5:</b>  <b>Community Engagement</b>  <i>“Community engagement builds trust, ensures accountability, and improves the quality of decision making as the public plays a valuable role in the formulation of plans and developing services.”</i></p>	<p>a. The community of Riversong has been partially developed and is currently home to many residents. At the onset of development, the public was consulted with the proposed Riversong design and layout. This document is being prepared outside of the typical development process of a community. The residents and neighbouring residents of Riversong are aware of Riversong’s approved land use designations as identified in the SR-ASP as well as the community design as it has been featured in the sales centres which they visited during the decision process to purchase a home in this particular community.</p> <p>b. Although the future development of Riversong will meet the new Town policies in regards to density, the developer wants to ensure that the community continues to develop with design and land uses similar to the original Concept Plan to ensure that existing residents will see their community develop as per their expectations when they decided to build and invest in Riversong.</p>
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## 10.0 *Implementation*

The Riversong Design Brief has outlined how Riversong will develop as a complete and sustainable community in accordance with a comprehensively planned community design and supporting implementation and servicing strategies. Key results of sound community planning will include:

- accessible pedestrian networks;
- lifecycle and affordable housing;
- institutional uses;
- proximity to future commercial developments;
- abundant open spaces;
- tot lot parks;
- community garden;
- public art;
- proper access;
- crime prevention through environmental design;
- densities that target the 2008 MDP requirements.

The Riversong Design Brief is consistent with the vision and guiding principles of the Cochrane Sustainability Plan and the Municipal Development Plan.

Council adoption of the Riversong Design Brief will establish a policy framework consistent with the Sustainability Plan and the MDP and support future ASP amendments, neighbourhood planning and the subdivision and development of the Riversong community.

**APPENDIX A: BYLAW 19/2006**

## TOWN OF COCHRANE

### BYLAW NUMBER 19/2006

Being a Bylaw amending the Land Use Bylaw for the Town of Cochrane, in the Province of Alberta.

Whereas: pursuant to Section 639 of the *Municipal Government Act*, Revised Statutes of Alberta, 2000, Chapter M-26, and amendments thereto, the Council of the Town of Cochrane in the Province of Alberta has adopted Land Use Bylaw No.01/2004, as amended;

And Whereas: the Council deems it desirable to amend Land Use Bylaw No. 01/2004, as amended;

Now Therefore: the Council, duly assembled, hereby enacts as follows:


1. Section 10.2.0 (Land Use Map) of Land Use Bylaw No. 01/2004 is amended by redesignating Lot 1, Block 9, Plan 041 2318 and portions of the SW ¼ of 35-25-4 W5M from Urban Reserve (UR), Residential Single-Detached Dwelling District (R-1), Residential Single and Two-Dwelling District (R-2), Residential High Density Multi Unit Dwelling District (R-M) and Local Commercial District (C) to Residential Single Detached Dwelling District (R-1), Residential Single and Two Dwelling District (R-2), Residential High Density Multi-Unit Dwelling District (R-M) and Public Service District (PS) as shown on Schedule 'A' and attached to and forming part of this Bylaw.
2. This Bylaw comes into full force and effect upon the date of third and final reading.

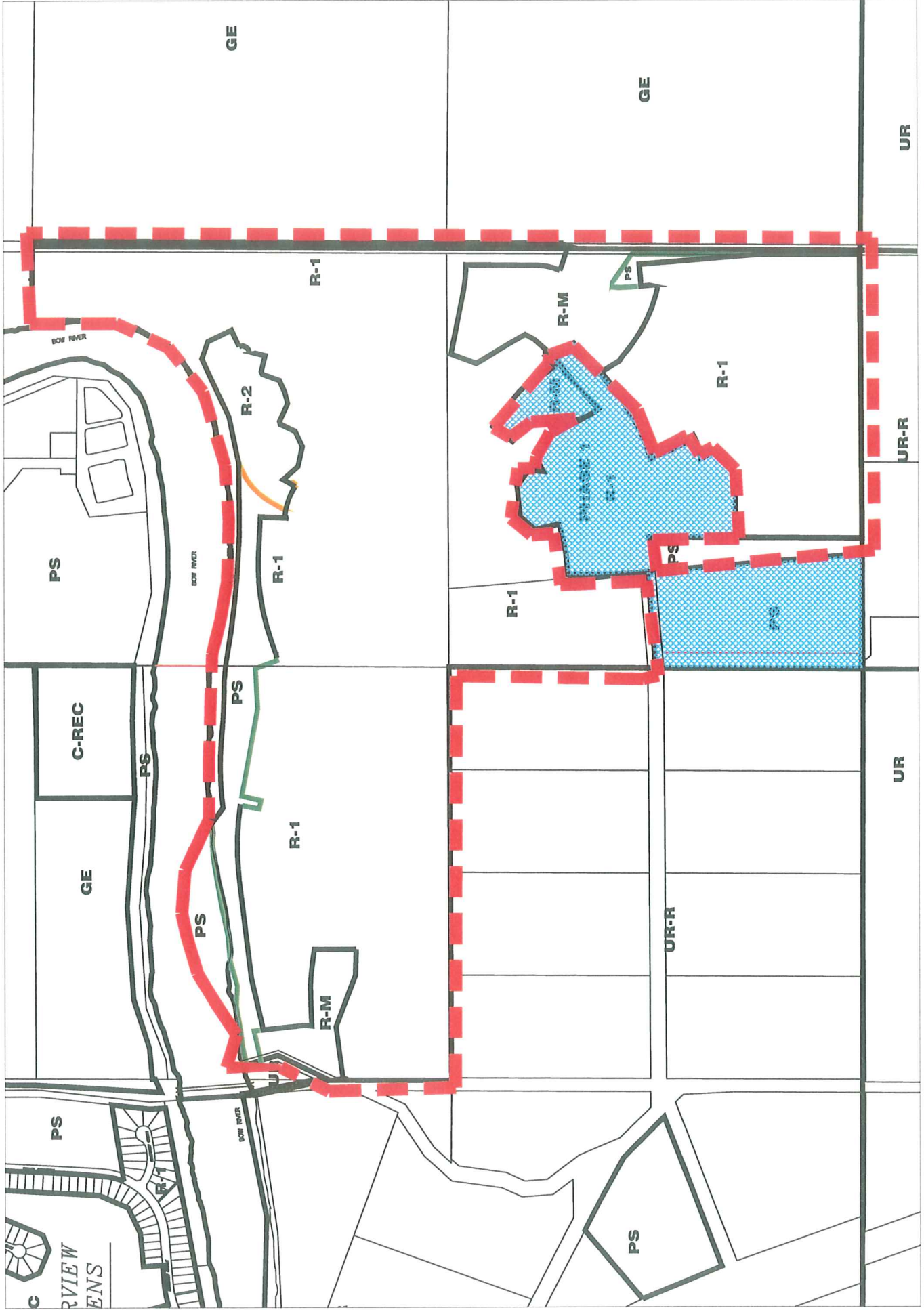
First Reading: June 26, 2006

Second Reading: September 25, 2006

Third Reading: September 25, 2006

  
\_\_\_\_\_  
Mayor/Deputy Mayor

  
\_\_\_\_\_  
Municipal Clerk



**APPENDIX B: BYLAW 17/2007**



**TOWN OF COCHRANE**  
**BYLAW NUMBER 17/2007**

Being a Bylaw amending the Land Use Bylaw  
for the Town of Cochrane, in the Province of Alberta

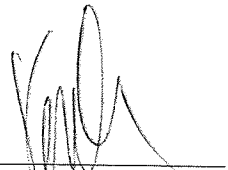

WHEREAS pursuant to Section 639 of the *Municipal Government Act*, Revised Statutes of Alberta, 2000, Chapter M-26, and amendments thereto, the Council of the Town of Cochrane in the Province of Alberta has adopted Land Use Bylaw No.01/2004, as amended;

AND WHEREAS the Council deems it desirable to amend Land Use Bylaw No. 01/2004, as amended;

NOW THEREFORE the Council, duly assembled, hereby enacts as follows:

1. Section 10.2.0 (Land Use Map) of Land Use Bylaw No. 01/2004 is amended by redesignating portions of Lot 1, Block 9, Plan 041 2318 from Residential Single Detached Dwelling District (R-1) to Residential Single and Two-Dwelling District (R-2) and Residential High Density Multi Unit Dwelling District as shown on Exhibit 1.1 and attached to and forming part of this Bylaw.
2. This Bylaw comes into full force and effect upon the date of third and final reading.

Read a first time May 14, 2007  
Read a second time June 25, 2007  
Read a third time June 25, 2007

  
\_\_\_\_\_  
Mayor  
  
  
\_\_\_\_\_  
Municipal Clerk

REC FIND



## APPENDIX C: HISTORICAL RESOURCE IMPACT ASSESSEMENT CLEARANCE LETTER



Cultural Facilities and  
Historical Resources Division

Office of the Assistant  
Deputy Minister

April 2, 1998

Old St. Stephen's College  
8820 - 112 Street  
Edmonton, Alberta  
Canada T6G 2P8

Telephone 403/431-2300  
Fax 403/427-5598

Our File: 80-181

Mr. Ken Brisbin:  
Brisbin and Sentic Ltd.  
220-5403 Crowchild Trail N.W.  
Calgary, Alberta  
T3B 4Z1

Dear Mr. Brisbin:

SUBJECT: SOUTHLAND DEVELOPMENT CORP. - SHADOW RIDGE SUBDIVISION  
MITIGATION REQUIREMENTS, ARCHAEOLOGICAL SITE EhPo-49  
HISTORICAL RESOURCES ACT REQUIREMENTS

I recently received a letter (March 16, 1998) from your consultant Brian Reeves, written in response to outstanding requirements for mitigation at archaeological site EhPo-49 (Permit 80-181).

In his letter, Mr. Reeves has indicated that he revisited the site, and determined that in fact it is a natural formation of loose cobble sized rocks, rather than a cultural feature. Based on this inspection Mr. Reeves has recommended that the mitigation requirements for site EhPo-49 be rescinded.

I concur with this recommendation. Consequently, Alberta Community Development has no further concerns with or objections to development proceeding on the captioned subdivision.

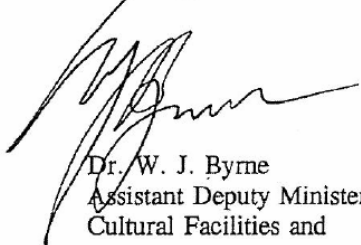
Should you require additional information or have any questions regarding our Department's review of this project, please contact Barry Newton of the Historic Sites Service, (431-2330, Historical Resources Division, Alberta Community Development, 8820-112 Street, Edmonton, Alberta, T6G 2P8, or Fax 427-3956.

...cont.

Mr. Ken Brisbin  
April 2, 1998  
Page 2

On behalf of Alberta Community Development, I would like to thank you for your cooperation in our endeavour to conserve Alberta's past.

Sincerely,



Dr. W. J. Byrne  
Assistant Deputy Minister  
Cultural Facilities and  
Historical Resources Division

cc: **Brian Reeves**, Lifeways of Canada Ltd.  
J. W. Ives, Archaeology and Ethnology Section, P.M.A.  
Barry Newton, Historic Sites Service, SUB 97.80-181.RES

**APPENDIX D: ENVIRONMENTAL SITE ASSESSMENT LETTER UPDATE**



ALMOR TESTING SERVICES LTD.

7505 - 40 STREET S.E., CALGARY, AB T2C 2H5 PHONE (403) 236-8880 • FAX (403) 236-1707

2006 10 12

86-042-03-1

Keyland Development Corporation  
Box 68022 - 28 Crowfoot Terrace NW  
Calgary, Alberta  
T3G 3N8

Attention: Mr. Raymond Smith Sr.

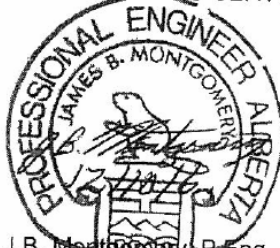
Re: Level I Environmental Site Assessment Update  
Cochrane Crossing  
Portions of S ½ of Sec 35, Twp 25, Rge 4, W5M and  
NE ¼ of Sec 26, Twp 25, Rge 4, W5M  
Cochrane, Alberta

This letter confirms we were retained to conduct an updated Phase I Environmental Site Assessment (ESA), for the above noted site. A Level I ESA was completed in January, 1998, by Almor. The surface and subsoils in the acreage area have not been compromised, since the initial observations and review. Rough Grading construction in the north portion was completed and no environmental hazards were encountered at the site. The mobile home services in the northwest corner of the site requires removal of the associated water well and septic tank. Attached are site plans of the area.

It is our opinion that no significant environmental impairment exists on the subject site. Further environmental investigation is not required, at this time.

We trust this meets with your present requirements.

Respectfully submitted,  
ALMOR TESTING SERVICES LTD.

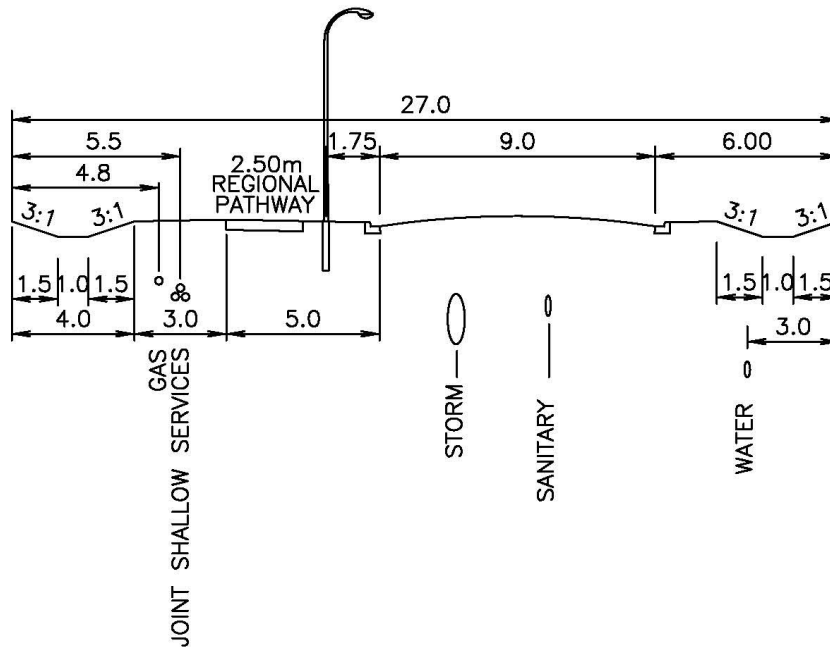


J.B. Montgomery, P.Eng.  
JBM:ms:A01785

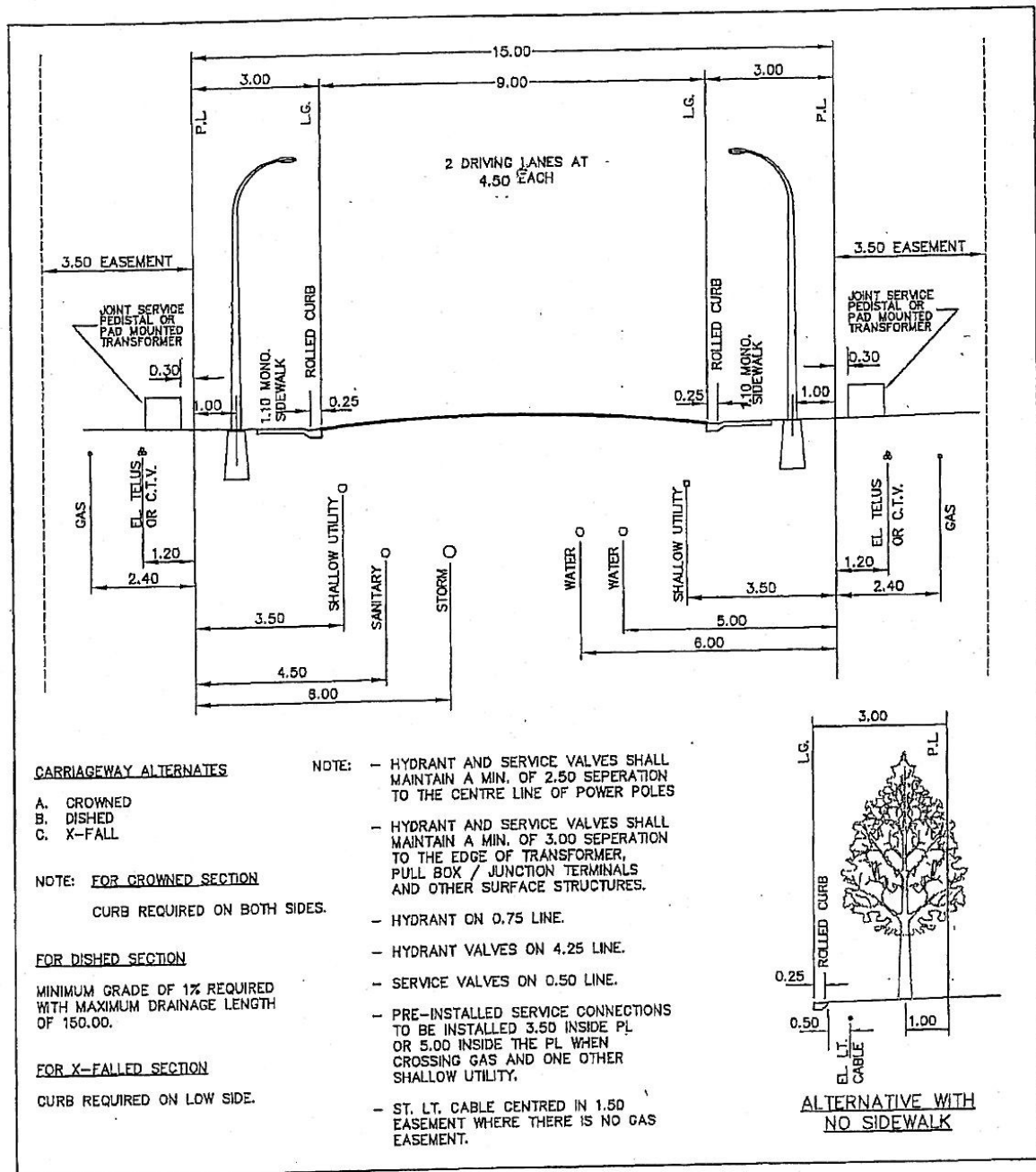
\* APEGGA Permit to Practice #P2260



## APPENDIX E: MODIFIED COLLECTOR ROAD CROSS-SECTION



CROSS SECTION  
RIVERSIDE WAY  
RIVERSIDE HEIGHTS DRIVE TO RIVERSIDE COURT

**APPENDIX F: MODIFIED RESIDENTIAL ROAD CROSS-SECTION**

**APPENDIX G: LETTER FROM ALBERTA TRANSPORTATION RE: RIVER AVENUE BRIDGE**



Regional Services  
SOUTHERN REGION

2nd Floor, 803 Manning Road NE  
Calgary Alberta T2E 7M8

Toll-Free Connection  
Outside Edmonton - Dial 310-0000  
Telephone 403/297-6311  
Fax 403/297-7682  
www.trans.gov.ab.ca

Our File: Cochrane-137

May 4, 2010

Mr. Reg Jans  
Focus Corporation  
100, 6131 - 6 Street SE  
Calgary AB T2H 1L9

Dear Mr. Jans:

**RE: PROPOSED USE OF RIVER AVENUE BRIDGE  
BOW RIVER, EAST OF HIGHWAY 22**

Regarding your email inquiry for emergency vehicle access to this bridge, Alberta Transportation can confirm that the bridge is able to be used for emergency access to the Riversong community. This clarification was previously provided to the Town of Cochrane by the department's bridge section in an email dated March 29, 2010.

This bridge is on a local road in the Town of Cochrane. Although Alberta Transportation has continued to be involved with this bridge structure (for example providing technical assistance when a water line was added in 2007) the Town of Cochrane is the responsible road authority and the bridge is under the control and management of the Town of Cochrane.

If you have any questions, please contact this office.

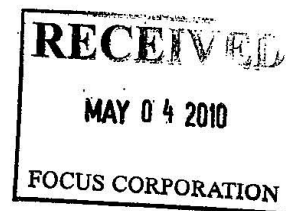
Yours truly,

A handwritten signature in cursive script, appearing to read "Trevor Richelhof".

For Trevor Richelhof  
Development and Planning Technologist

TBR/fm

cc: Mr. Kurt Alksne - Town of Cochrane



R:\URBAN\C\Cochrane\Cochrane-137.doc

7000 / 7000 5 5592#

NOTIFICATION BY TRANSPORTATION

7000 / 6750 5 7015 ST 0707 50 1270