**TOWN OF CHESTERMERE**

**POLICY HANDBOOK**

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| **EFFECTIVE DATE:** June 1, 2015 | **POLICY: 314** |
| **APPROVED BY: Council** | **SUBJECT: Chestermere Boulevard Corridor Plan** |
| **REVISED DATE:** | **PAGE NO.:** 1 of |
| **EXPIRY DATE:** | **POLICY TYPE: General Town Policy** |

## PURPOSE AND INTENT

The Chestermere Boulevard Corridor Plan sets out a vision for Chestermere Boulevard and provides guidance and concepts on how to achieve it.

## POLICY

Attached

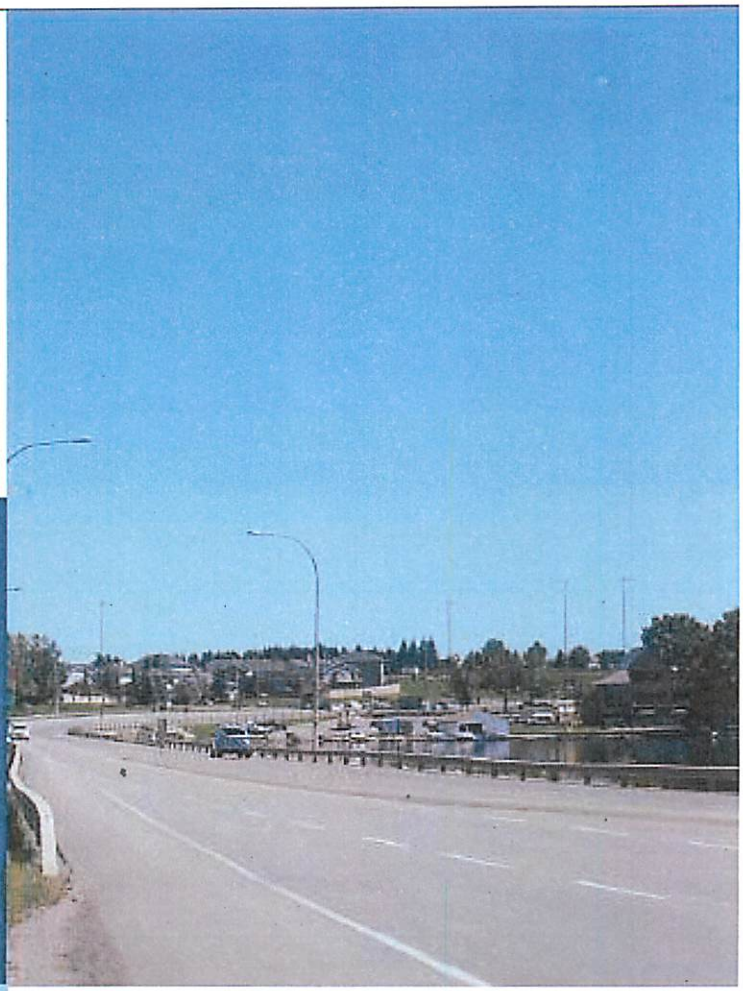
**Adopted by Council:**

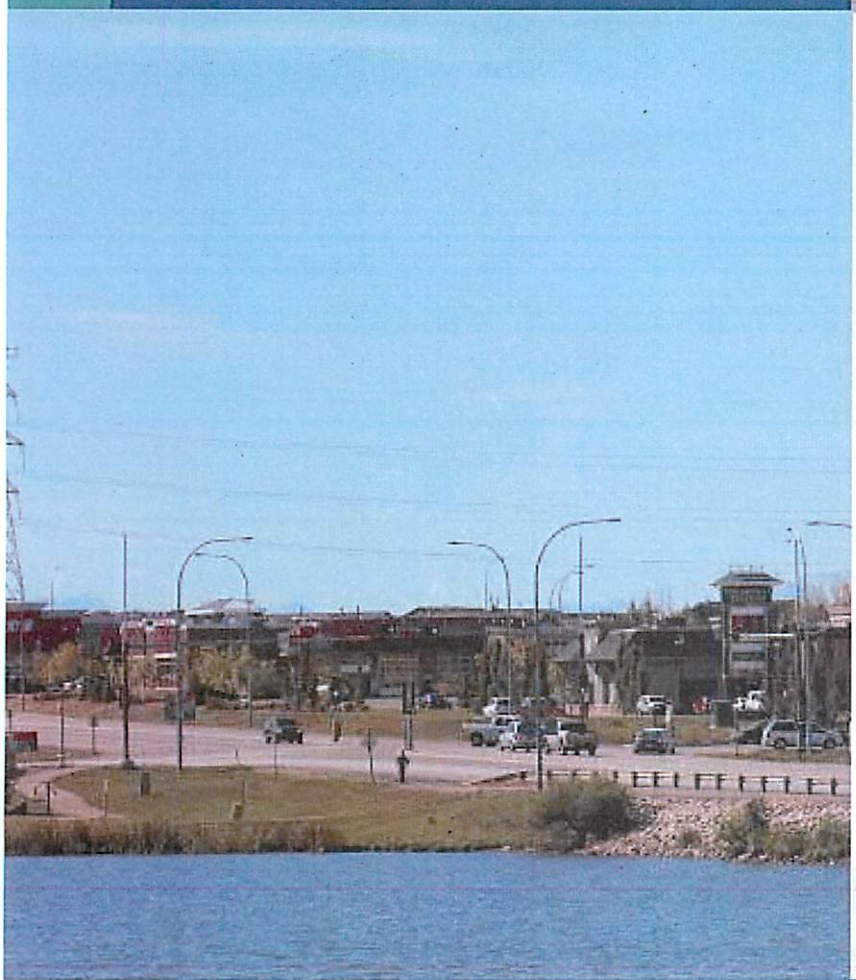
**Resolution Number:** 3.017.060115
178-15

**MAYOR**

**CAO**

June
2015





CHESTERMERE

# Chestermere Boulevard
## Corridor Plan
City of Chestermere

HDR

## PROJECT TEAM

**City of Chestermere**

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# EXECUTIVE SUMMARY

The Chestermere Boulevard Corridor Plan sets out a vision for Chestermere Boulevard and provides guidance and concepts on how to achieve it. Now under the City of Chestermere's jurisdiction, the corridor will evolve from a place for vehicles to pass through to a place where people choose to be. The concepts will support and synergize with new development, invigorate existing commercial uses and connect residents to the community and each other. Above all, the connections will be facilitated through an economic, ecological and equitable multimodal transportation corridor that will serve as the backbone for Chestermere's future transportation system and urban structure.

The Boulevard is envisioned to function as an **urban street** that is **safe for all users**, facilitates **local connections** and **serves as a gateway** to the unique community and its **local destinations**. These principles, developed through stakeholder consultation, guide the plan's technical directives, concepts and final recommendations and give rise to the ultimate vision. Three distinct themes, **Gateway**, **Destination**, and **Multimodal Travel** are assigned to corridor segments to further relate the guiding principles to the diverse functionality of the existing and future corridor and adjacent land use. The plan directs the Eastern and Western Gateways to convey transition and signal a sense of arrival into a distinctive community and destination. The plan promotes two Destination segments, the future Development Centre and the existing Chestermere Station, placing emphasis on local connectivity, accessibility and sense of place to spur economic vitality. The two destinations will be connected via Multimodal Travel through the Central Corridor where the plan promotes mobility for all and in all travel forms.


Concepts and recommendations to improve the streetscape, public realm and urban form create an environment that produces benefits for all street users and the community as a whole. These aspects of a street play an undervalued role in promoting safe and efficient travel. A street that is pleasant to be on, regardless of the mode of travel, will reduce the perceived travel time while the environment naturally tempers excessive speeds. Promoting such an environment is a fundamental tenet of the plan, as it balances the many, often conflicting uses of a street. A naturally slower environment provides the opportunity for a passerby to note retail and recreational offerings, increasing business visibility and viability; it creates an environment that is amenable to pedestrians, cyclists and other more vulnerable users of the street, but nevertheless provides the opportunity for efficient through mobility, and it follows ecological goals in the long term by seamlessly shifting travel patterns toward a variety of safe, effective and affordable transportation modes and local trip demands.

The Chestermere Boulevard Corridor Plan provides the framework to create a boulevard that will have a markedly positive effect on the future of the community. The corridor's final form will have a lasting impact on the City 's economic and social structure, and it is imperative that present planning leads to implementation of the ultimate vision.

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# INTRODUCTION

In June 2013, control of Highway 1A through the City of Chestermere was transferred from Alberta Transportation to the City and the name changed to Chestermere Boulevard, reflecting the importance of the corridor for the City . Transfer of the road allows the City of Chestermere to determine the future role and function of this important corridor that runs through the centre of the community.

The Chestermere Boulevard corridor is a 4.4 km section, extending from Conrich Road at the City of Calgary / City of Chestermere boundary to the west, to the Trans-Canada Highway (Highway 1) to the east. It is currently a two-lane rural highway with a posted speed limit of 60 or 80 km/h.

As Chestermere grows, the role of Chestermere Boulevard will need to evolve to serve the changing needs of the community. Regional growth will also play a part in establishing a future for the Chestermere Boulevard corridor. As other transportation corridors in the region are developed, the role of Chestermere Boulevard as a connection to Calgary will change. This corridor will continue to be the main street through Chestermere.

The City now has an opportunity to direct its evolution to reflect Chestermere's distinctiveness and identity, rather than a rural highway that divides the community. With early planning supported by a vision for the corridor, it can be a catalyst for new development that supports the kind of place residents want Chestermere to be.

This is a long term plan. It is evolutionary and will serve as a guide for both development and redevelopment. There will be some early projects that set the tone for the new Chestermere Boulevard; however, much of the change in the corridor will occur over time, in a sustainable and affordable manner. It should also be a living plan, that can adapt and be refined for future conditions, but a plan that is founded on strong principles that will protect the overall vision for the corridor.

**"This section of Highway 1A is an important and well-used local road, helping residents get where they want to go, so it makes sense to transfer ownership to the Town of Chestermere,"**

*– Ric McIver, Former Alberta Minister of Transportation*

**The Chestermere Boulevard Corridor will be a multi-modal and multi-function space that connects the community, supports development and encourages placemaking.**

## Purpose and Objectives

The Chestermere Boulevard Corridor Plan will be a guiding document for the evolution of Chestermere Boulevard from a provincial rural highway to a City street. This document provides a concept plan for the Chestermere Boulevard corridor that will guide the change of the role of the corridor from a place to move automobiles to one that supports development and placemaking for the City . Most of all, it provides direction on how the corridor can be designed to accommodate multiple uses.

The corridor plan will:

- Provide a review of past documents, including the City 's Transportation Master Plan, and highlight the relationships of each to the Chestermere Boulevard corridor;
- Provide direction on the corridor requirements, and provide input to future development patterns for the Waterbridge Master Area Structure Plan area;
- Provide guidance on design and operational elements for the corridor such as vehicle speeds and corridor widths;
- Address the need, and benefits associated with, capacity expansion on the causeway, as well as identification of technical issues associated with the current structure;
- Consider transitions between 17th Avenue SE and Chestermere Boulevard, with a particular focus on the planned 17th Avenue Bus Rapid Transit corridor;
- Review intersection function and identify potential upgrading as well as minor and operational short, medium and long-term improvements;
- Assess a full range of options for safe pedestrian movement along and across the highway; and
- Apply a Complete Streets approach to developing a multi-modal corridor for Chestermere Boulevard.

## Guiding Principles

A workshop involving City staff and other key stakeholders was held in August 2013 to begin to define a future vision for Chestermere Boulevard. Based on the input from this workshop, some key guiding principles have been established. These guiding principles will be used in the generation and evaluation of concepts for the corridor.

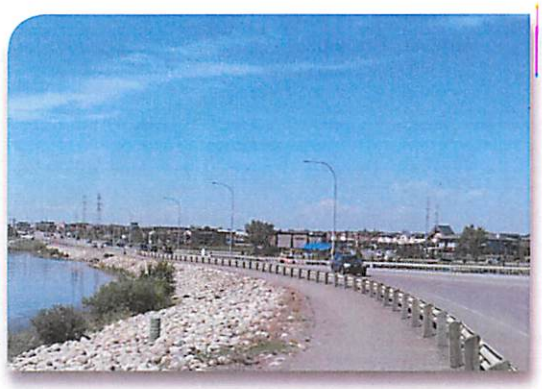
### *Chestermere Boulevard will be an **urban street.***

As Highway 1A, the corridor was a rural highway. Priorities for the corridor were consistent with Alberta Transportation requirements. In many ways, these priorities have led to the corridor being a barrier to local movement and a safety concern for pedestrians, cyclists and drivers. With control of the corridor's future now with the City of Chestermere, it is possible to develop the corridor as a local main street that continues to move vehicles, but also facilitates movement of people along and across it, and provides an active streetfront that is consistent with the urban scale of Chestermere.

### *Chestermere Boulevard will be **safe for all users.***

The corridor is perceived to be unsafe. It is a high speed rural corridor that is indeed an unsafe environment for pedestrians as it is not intended to serve pedestrians, cyclists or even local vehicle traffic. The future Chestermere Boulevard will promote slower vehicle travel speeds to improve the safety environment for local access to land use along the corridor. Pedestrian and cycling facilities will be provided that will attract pedestrians and cyclists to use the corridor. Crossings of Chestermere Boulevard will be safe for cars, pedestrians and cyclists.

### *Chestermere Boulevard will **serve as a gateway** for the City .*



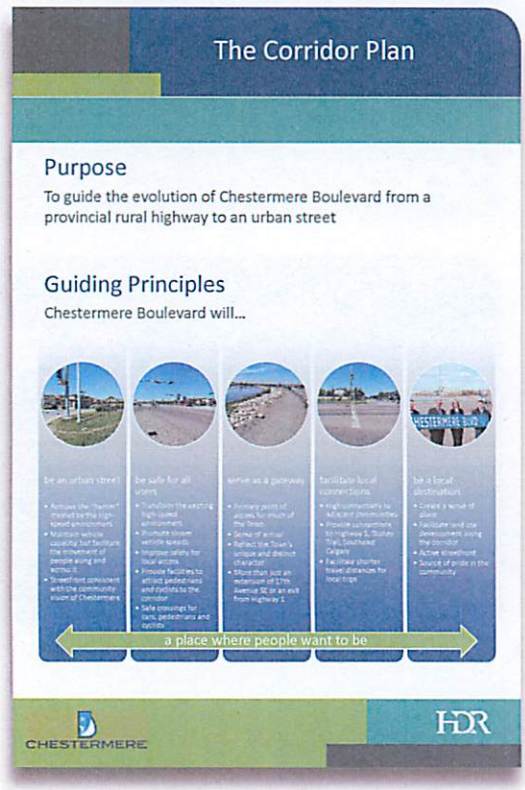
Chestermere Boulevard will be the primary point of access to much of Chestermere. People entering Chestermere via Chestermere Boulevard should have a sense of arrival and the corridor should reflect the City 's unique and distinct character. Land use, urban design and landscape architecture treatments will be important components in creating the gateways, but the movement elements will also have an influence. Chestermere Boulevard should not simply be an extension of 17th Avenue SE or an exit from the Trans-Canada Highway. It should welcome people to the City . With this in mind, new Area Structure Plans, Outline Plans, and Subdivisions along this corridor should identify distinguishing design elements along the corridor.

*Chestermere Boulevard will facilitate* ***local connections.***

Chestermere Boulevard will provide high levels of connectivity for adjacent communities and land use along the corridor. Vehicle movement along the corridor will continue to be an important function as Chestermere Boulevard is a connection for residents of Chestermere to the Trans-Canada Highway, Stoney Trail and southeast Calgary. However, some reduction in travel speed along the corridor may be required to improve overall connectivity for the City and to reduce travel distances for local trips by any mode.


*Chestermere Boulevard will be a* ***local destination.***

Development of the corridor will create a sense of place by facilitating attractive land uses along the corridor and providing an active streetfront. The corridor is a key east-west spine in the City and has a large right-of-way. It has great potential to be developed in a way that attracts residents and is a source of pride for the community.




## Consultation

Through the course of the study, two stakeholder workshops and a public open house were held. The Corridor Visioning stakeholder workshop held on August 27th 2013, explained the planning process and defined the project's guiding principles and the overall vision for the corridor in the future. The results of this workshop are reflected in the Guiding Principles section of this report. The second stakeholder workshop was the Options Generation workshop which was held on January 4th 2014. In this workshop, key stakeholders were asked to suggest options to be carried forward in the study. These are presented in the Options Generation section of this report.

As an important part of the Chestermere Boulevard Corridor Plan, an open house was held on April 30th, 2014 in the Council Chambers of the City Hall from 5:00pm to 8:00pm. The purpose of the open house was to collect feedback on the plan in general, and on the five main corridor segments. For each segment, approximately two options were presented. These options had been generated in part through stakeholder workshops, and were analyzed and refined. During that process, options not congruent with the project's guiding principles or which were not technically feasible were excluded from further consideration as well as to provide a manageable number of options for public presentation. The feedback received aided in further refining the options to develop a final corridor plan recommendation. The summarized feedback can be found in **Appendix A.**

# CONTEXT

The City of Chestermere recently assumed control of Chestermere Boulevard from Alberta Transportation. Control of this corridor provides considerable opportunity for the City to transform the corridor from a rural, high-speed route to one that is more compatible with a "main street" through Chestermere. There are several issues that currently exist that are common with a provincial highway within a community – high speeds, noise, difficult pedestrian crossings and overall community disconnection. The transformed corridor can address many of these issues by focusing on creating an urban corridor at a scale appropriate for Chestermere that is ***a place where people want to be***.

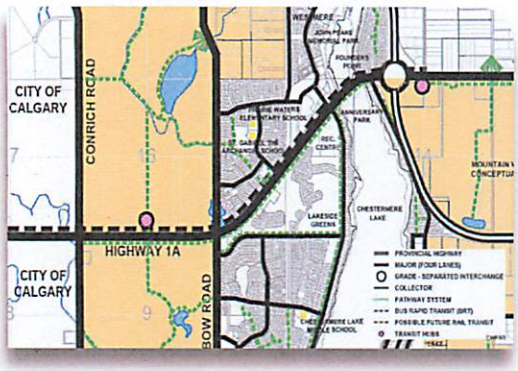
In its current form, the Chestermere Boulevard corridor provides little value in generating economic activity for the City . As an urban corridor, it can function as frontage for new commercial activity, provide access to shopping, attract pedestrian activity along and across it and provide parking. As an urban corridor, it may have more intersections, providing additional opportunities for pedestrian crossings and further distributing turning traffic demand.

The 2012 Community Survey identified several priorities, concerns and desires that can be supported with a change in the form and function of Chestermere Boulevard. The survey noted that 27% of survey participants wanted an increase in public transportation (ranked 5th). There are opportunities to provide local transit service, or even the infrastructure to extend rapid transit services from 17 Ave. SE into Chestermere if desired. The survey also showed that an active lifestyle was important or very important to 94% of households. This suggests that there is potential for more walking and cycling along the corridor, if appropriate facilities are provided in an inviting environment.

This section provides some background on plans, strategies and developments that may affect the corridor, as well as defining the future role and function of Chestermere Boulevard.

## Related Plans and Strategies

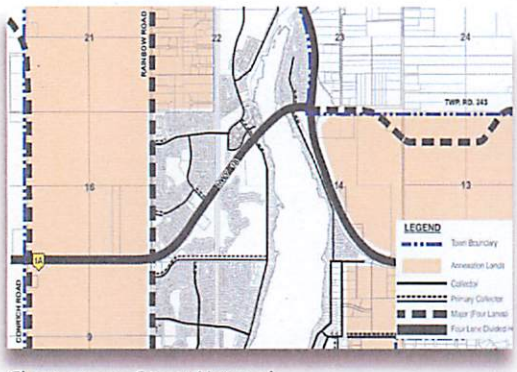
The following provides an outline of related plans and strategies that may have an impact on the Chestermere Boulevard corridor.




Source: Chestermere Municipal Development Plan

### Chestermere Municipal Development Plan

The Chestermere Municipal Development Plan, updated in 2015, provides the framework for the long term development of the City . The planned land use along the Chestermere Boulevard corridor between Conrich Road and Rainbow Road includes a regional retail / City centre node bordered by mixed use / village centre land uses. The Chestermere MDP highlights that Chestermere Boulevard should be upgraded to an urban major roadway with trails, pedestrian corridors, landscaping, and access control. Land should be set aside at appropriate locations for parking requirements associated with a regional BRT along the corridor.




Chestermere Street Network

### Chestermere Transportation Master Plan

The 2010 Chestermere Transportation Master Plan (CTMP), to be updated in 2015, identified improvements required to the Chestermere Boulevard corridor for the short range, medium range, and long range growth forecasts.

In the short range forecast (20,000 population horizon), the Plan identified a need for traffic signals at the Invermere Drive intersection. The remaining signalized intersections would require signal optimization. Traffic forecasts along Chestermere Boulevard are expected to exceed the Alberta Transportation threshold for a two-lane highway but the CTMP suggests that a three-lane cross-section would be sufficient to accommodate the short range traffic forecasts.

In the medium range (30,000 population horizon), Chestermere Boulevard would require widening to four-lanes based on the modeling results and signal optimization at all signalized intersections.

For the long range forecast (population 60,000 to 80,000), the Rainbow Road intersection requires fully channelized right turns along with eastbound and westbound dual left turn lanes. The Conrich Road intersection would require traffic signals with separate right turn lanes and eastbound and westbound left turn lanes.

## Calgary Transportation Plan

The Calgary Transportation Plan (CTP) outlines the future direction of transportation infrastructure in the City of Calgary. This latest Transportation Plan puts more emphasis on increasing alternative transportation usage such as walking, cycling, and public transit. Chestermere Boulevard transitions to 17th Avenue Southeast at the City limits. In the CTP, the 17th Ave SE corridor is envisioned to become an Urban Boulevard with a pedestrian friendly streetscape that will support public transit modes.

The CTP has designated 17th Avenue Southeast as a Primary Bicycle Route which is defined as a high-priority bicycle route where the most concentrated activity will occur. It is also designated as a Primary Transit Route which is defined by the level of service, not by mode. A permanent network of high frequency transit service will operate every 10 minutes or less over an extended operating period, seven days a week, based on this designation.


The CTP notes that the City of Chestermere was included in the Calgary Regional Transit Plan as a Regional/Inter-City Gateway Hub which will be served by either BRT or LRT services. This has the potential to reduce the vehicular traffic on Chestermere Boulevard within the City of Chestermere if the frequency and level of service of the regional transit service is sufficient.

The CTP also identifies the 17th Avenue Southeast corridor as a potential High Occupancy Vehicle route, which would dedicate one lane per direction for vehicles with more than two occupants and/or transit vehicles.

The CTP does not identify the 17th Avenue Southeast corridor as part of the Primary Goods Movement network. Highway 1 to the north is identified as the east-west primary goods movement route in this area.

17th Avenue S.E. after (concept only)

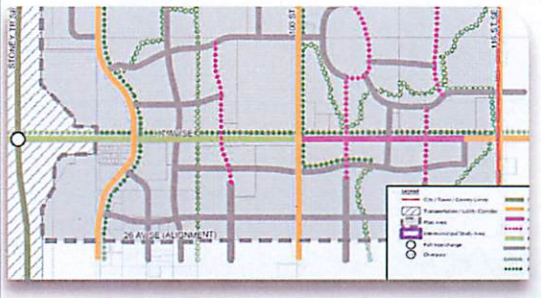
*Credit: Design Centre for Sustainability, SALA, UBC*

## Rocky View County MDP and Growth Management Strategy

The Rocky View County MDP designates Highway 1A as a Primary Highway outside of the 'old' City of Chestermere boundary. It limits the number of accesses to the highway as well as land uses along the highway. The Rocky View County MDP was completed before Highway 1A was turned over to the City .

The Rocky View Growth Strategy highlights include:

- **Conrich Growth Node** – The Growth Strategy identifies Conrich as a growth node in the form of an urban style community with mixed land uses. The build out population of the growth node is anticipated to be 10,000.
- **Major business corridor along Highway 1 to the east and north** – Development along these corridors is intended to be non-contiguous and nodal in design, and focused around interchanges and highway access points. This area has several significant locational advantages, including high visibility, access to regional and provincial markets, access to labour, and the presence of a number of expanding enterprises
- **Janet Business Node / Regional Employment Centre** – Located immediately south of Chestermere, this node contains much of Rocky View's existing business and industrial land, benefiting from excellent road and rail access. There is significant potential in this area for further light industrial and medium industrial expansion



## Calgary - Belvedere Area Structure Plan

The Belvedere Area Structure Plan presents the long term development plan for much of the area of Calgary bordering Chestermere. The main east-west corridor through the ASP is 17th Avenue Southeast. The ASP identifies the 17th Avenue Southeast corridor as a combination of 'Parkway' in the west section and 'Urban Boulevard' / Arterial Road' at the east end. A regional pathway is shown along 17th Avenue Southeast, as well as a Bus Rapid Transit (BRT) corridor.

The proposed land use plan consists of urban corridor (mixed commercial, higher density residential), and identifies transit oriented development (TOD) nodes along the corridor including higher density along the proposed BRT route. In the area around the Stoney Trail interchange, the land use is identified as a Super Regional Centre, which is currently under construction and will generate high traffic volumes.

### Master Recreation Plan

One of the goals of the Master Recreation Plan is to increase the connectivity of existing pathways and to expand the overall pathway system. It recommends a continuous pathway system for recreational use as well as for everyday trip purposes. The recreation plan identifies future pathways and crossings in Chestermere with varying degrees of priority. It calls for increased and enhanced crossings connections to and across Chestermere Boulevard.

## Regional Influences

Chestermere shares boundaries with Rocky View County and the City of Calgary, and activity in Chestermere is influenced by these municipalities. Additionally, Highway 1 forms the northern and part of the eastern boundary of Chestermere, therefore Alberta Transportation's plans in the area will also have an impact on Chestermere. A few of the key future plans that will have an impact on Chestermere are highlighted in **"Figure 1: Regional Influences".**

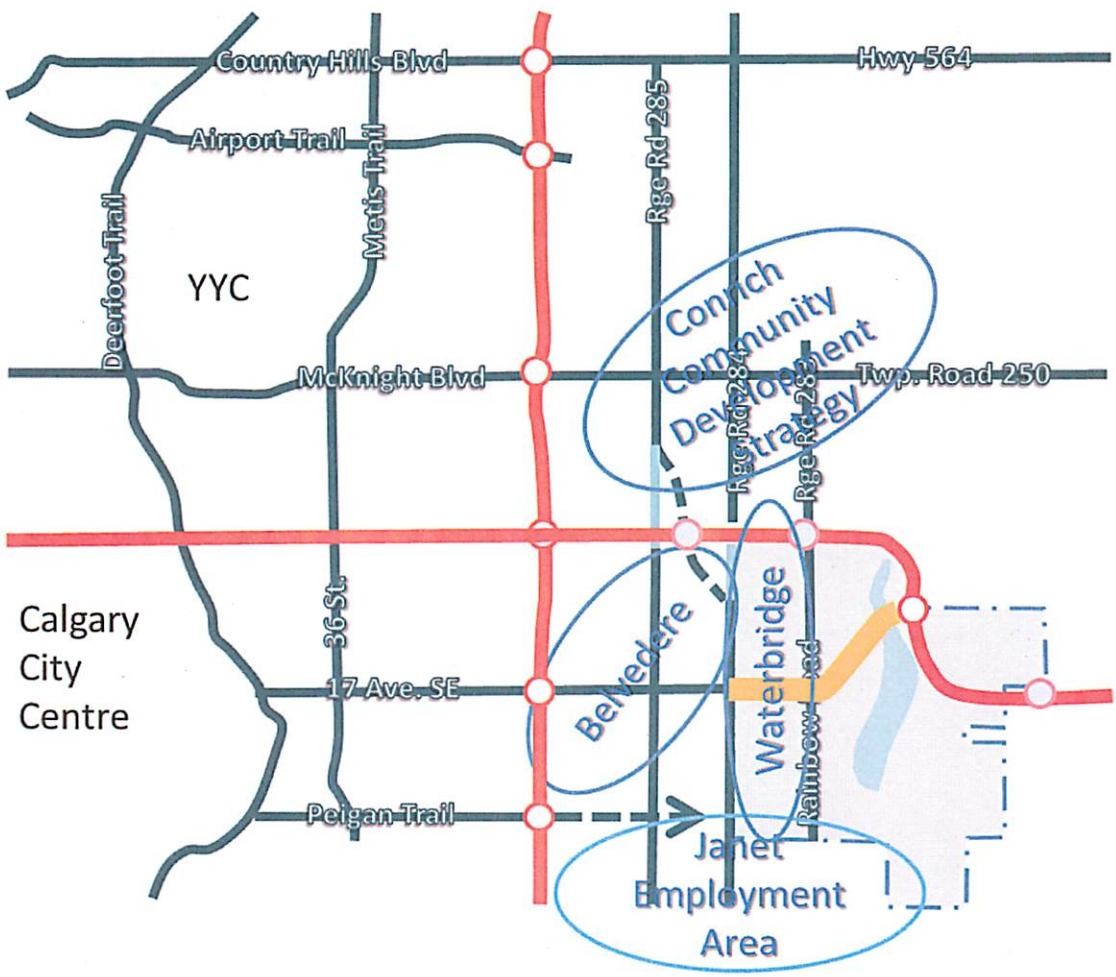



Figure 1: Regional Influences

**The future role of Chestermere Boulevard is to serve as a cross-City arterial street for all modes, providing access to collector and local streets, providing frontage for a range of land uses and direct access for limited large properties.**

## The Role of Chestermere Boulevard

Transfer of control of Chestermere Boulevard from Alberta Transportation to the City of Chestermere signals a significant change in the role of Chestermere Boulevard in the regional transportation system.

As Highway 1A, it was part of the Provincial Highway System with a significant role as a goods movement connection between the industrial areas of east Calgary and the Trans-Canada Highway (Highway 1) to the east. Stoney Trail can now provide the major goods movement connection to Highway 1 that Highway 1A previously provided. In addition, Highway 1A had previously served as a commuter connection between Highway 1 at Chestermere and Calgary, via 17th Avenue SE. The opening of Stoney Trail provides a high-speed north-south route that can distribute commuter and other traffic into Calgary, allowing Highway 1 to become the dominant east-west route into Calgary.

The removal of the external commuter and goods movement roles allows Chestermere Boulevard to serve a role that is local rather than regional in nature. It will continue to be an important arterial street, but it will primarily facilitate travel that starts and/or ends in Chestermere. As such, the average trip length will be significantly reduced and thus the need for a high-speed facility diminishes dramatically. As a cross-City arterial, there will be a continued need to accommodate reasonably high volumes of traffic, but lower vehicle travel speeds will allow other needs to be accommodated. A more welcoming boulevard will also play an increased role in attracting and facilitating recreational trips.

## CORRIDOR FUNCTION

Chestermere Boulevard will function as an arterial street in the context of a community the size of Chestermere. Although an arterial, its function will vary with each segment and be reflective of the surrounding land use. As Chestermere's main east-west street, and the primary route to the future City centre and existing retail/commercial centre on the lake, it will create the first impression of Chestermere for visitors. As such, the east and west ends should serve as gateways and the street should be reflective of the City 's unique and distinct character.

There are three key themes that have been used to assist in defining the functions for each segment – Gateway, Destination and Multi-Modal Travel.

| | |
|---|---|
| **Gateway** | Gateways are transition zones that should signal a sense of arrival to those travelling on the corridor. The east and west ends of the corridor will serve as gateways and support the unique and distinct character of the City . |
| **Destination** | The Destination segments should create a sense of place, where the street itself is part of the attraction of the area. Local access rather than through traffic is the priority on these segments. The street should be as inviting as possible for all modes. |
| **Multi Modal Travel** | The Multi Modal travel segments should facilitate efficient movement for all modes along the corridor. There is some access to adjacent land use. Connections to neighbourhood pathways should be provided. |

The corridor functions have been organized by mode, plus the role the corridor segment should have in land use integration and placemaking. **Table 1** describe the general modal functions. These represent key functions, but are not the only functions served.

Table 1: General Modal Functions

| Mode | Key Segment Function | | |
|---|---|---|---|
| | **Gateway** | **Destination** | **Multi Modal Travel** |
| **Private Vehicles** | Commuting<br>Regional Travel | Access to shopping, recreation and other services | Commuting<br>Local and Regional Travel |
| **Commercial Vehicles** | Local Delivery and business access | Local Delivery and business access | Local Delivery and business access |
| **Cyclists** | Regional Connections | Access to shopping, recreation and other services | Local connections<br>Recreation and fitness |
| **Pedestrians** | Access to transit<br>Access to adjacent land use | Access to shopping, recreation and other services<br>Cross-corridor connections | Access to transit<br>Recreation and fitness |
| **Transit** | Commuting<br>Regional Connections | Terminus and/or transfer<br>Access to shopping, recreation and other services | Regional and local connection |
| **Land Use and Placemaking** | Create a sense of arrival<br>Little land use access | Retail frontage and access<br>Corridor is part of the attraction of the destination | Connect neighbourhoods by all modes |

## Corridor Segments

The Chestermere Boulevard corridor will be developed in a way that best serves adjacent land uses and facilitates future development plans. The corridor will not be the same along the full length as land use will vary. The corridor has been divided into the following segments:

- Eastern Gateway – including the Highway 1 ramp connections, East Chestermere Boulevard and the causeway;
- Chestermere Station – extending from the west end of the causeway, and including the Windermere/western Chestermere and Marina Drive intersections;
- Central Corridor – through the primarily residential areas and including the Invermere and Rainbow Road intersections;
- Development Centre – the area that is within the Waterbridge Master Area Structure Plan area; and
- West Gateway – the transition from 17th Avenue SE in Calgary, and primarily including the Conrich Road intersection.

These segments are shown on **Figure 2** and described on the following pages.

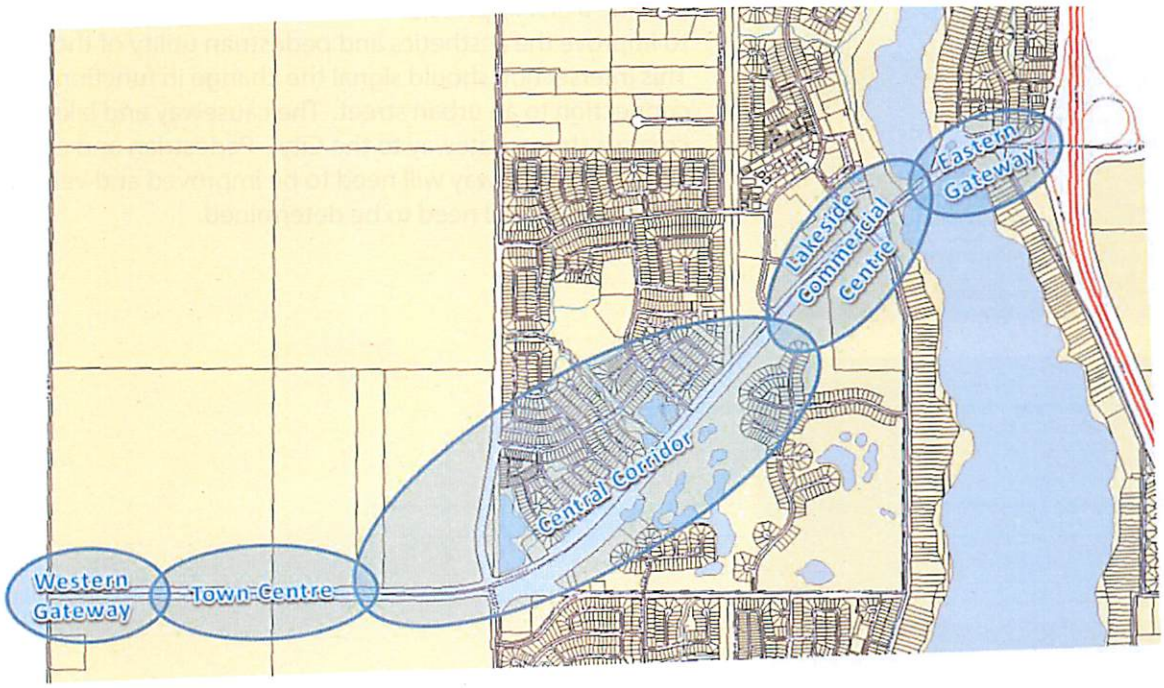
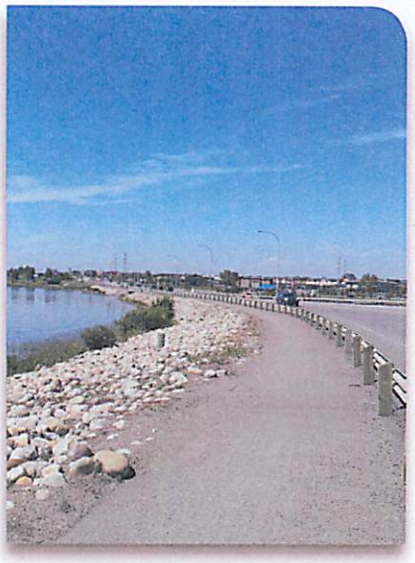
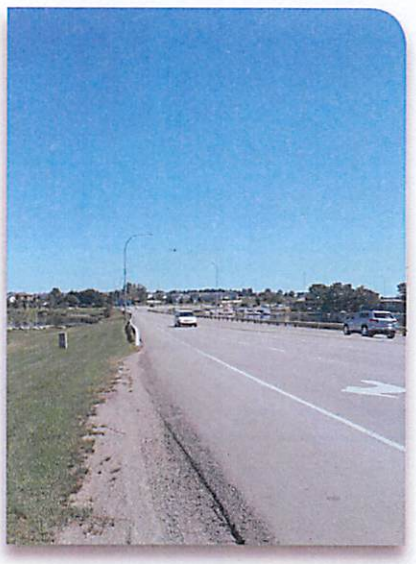


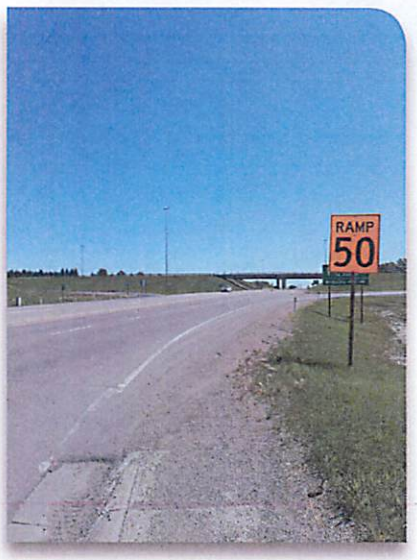

Figure 2: Corridor Segments





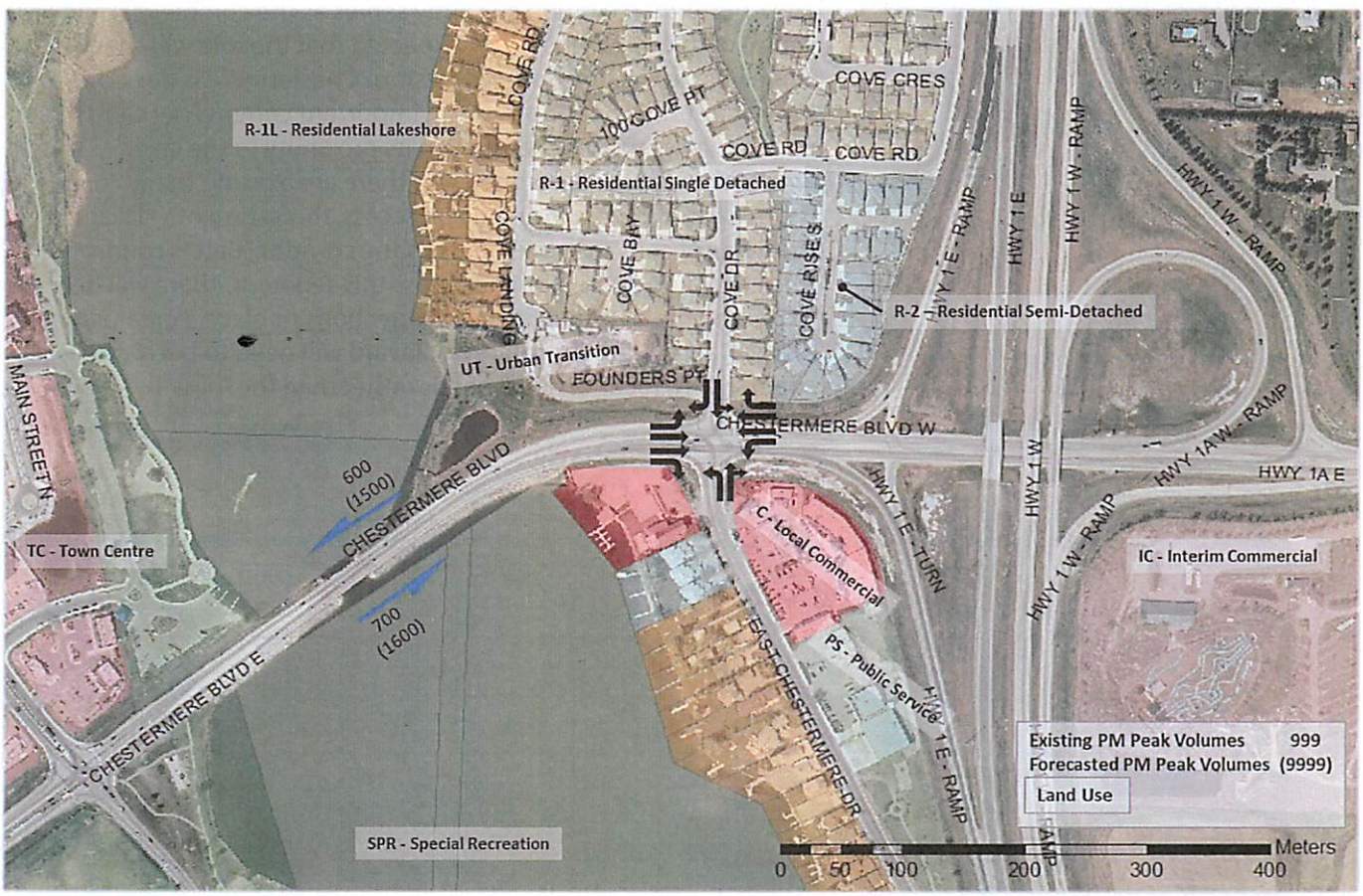
## Eastern Gateway

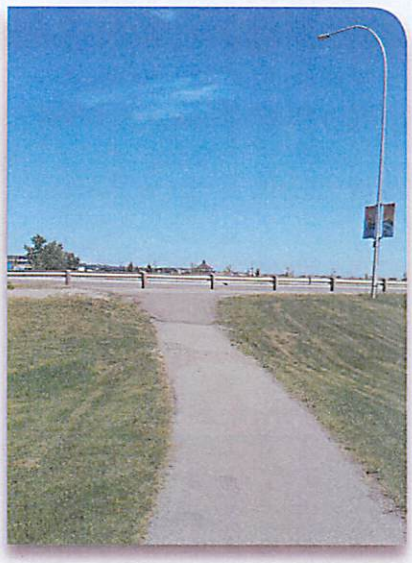
The Eastern Gateway is the entry to Chestermere from Highway 1. As it includes the Highway 1 ramps and does not directly connect to land use, it will continue to be a section with high importance placed on vehicle movement. The East Chestermere intersection will provide a first impression of Chestermere and there are opportunities to improve the aesthetics and pedestrian utility of the intersection. This intersection should signal the change in function from a freeway connection to an urban street. The causeway and lake views will create a strong gateway to the City . Pedestrian and cycling facilities across the causeway will need to be improved and vehicle capacity requirements will need to be determined.



## Segment Functions:

| Private Vehicles | Commercial Vehicles | Cyclists | Pedestrians | Transit | Land Use Integration |
|---|---|---|---|---|---|
| Commuter route | Local Delivery | Cross-Lake Connection | Cross-Lake Connection | Local Connection to East Chestermere neighbourhoods | Access to neighbourhoods and businesses on the east side of the lake; creates the first impression of arrival from the east |



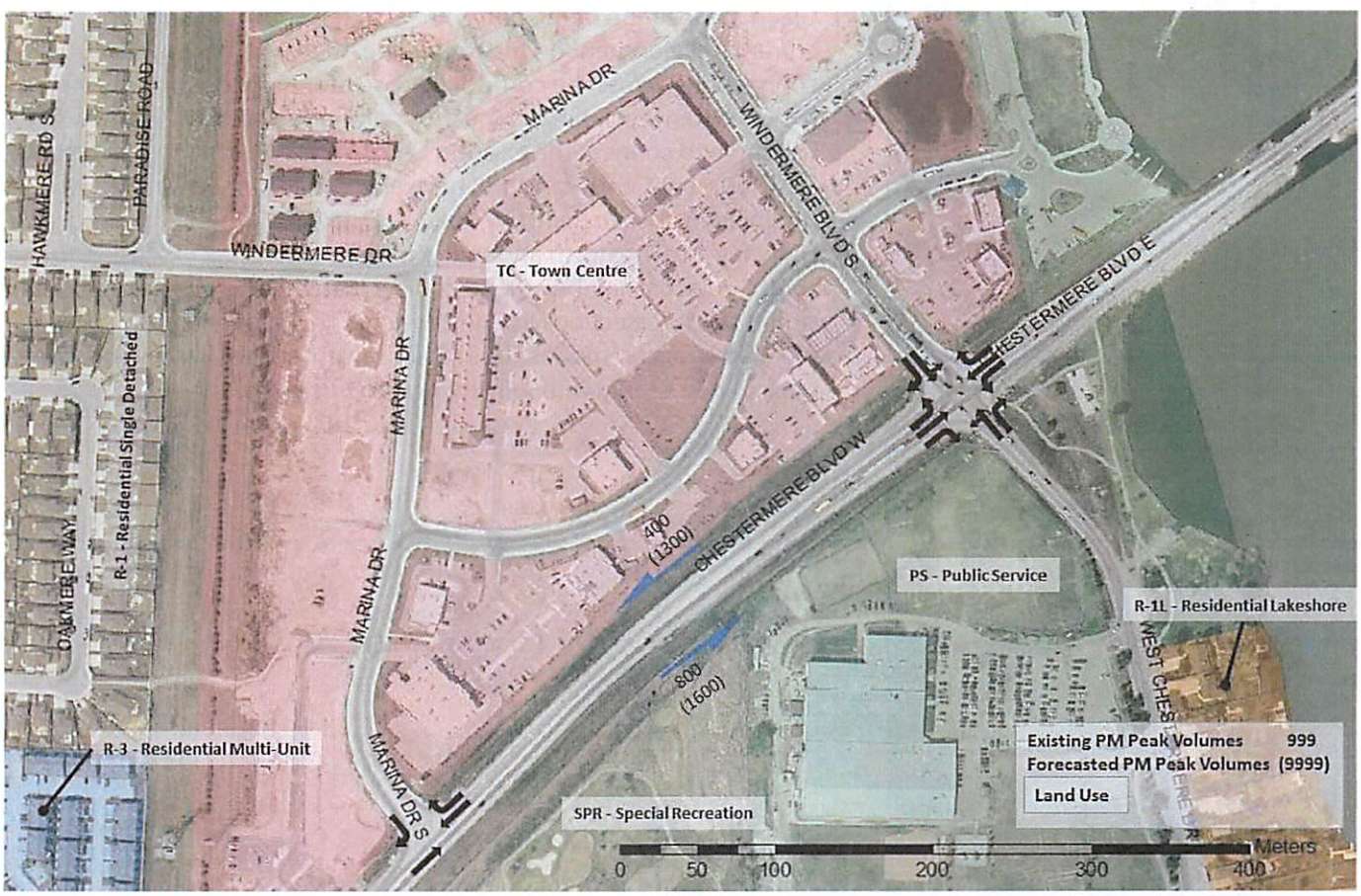


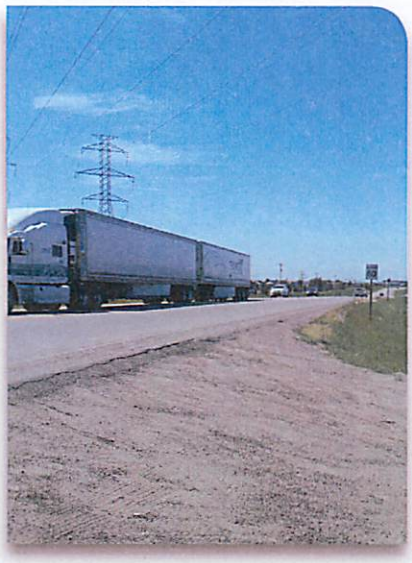
## Chestermere Station

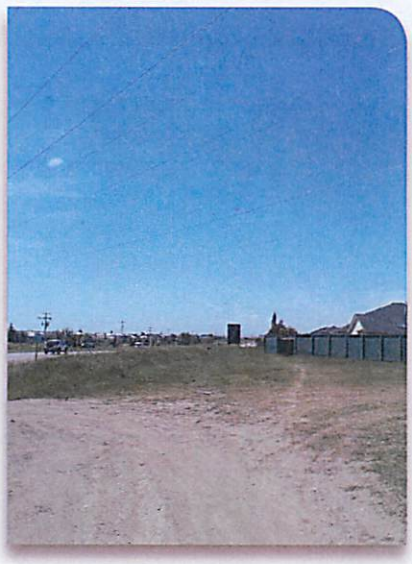
The Chestermere Station currently serves as the commercial and civic centre of the community. It is expected that the role will change somewhat in the long term as western Chestermere is developed. However, it will continue to be an important commercial centre and community gathering place given its proximity to the lake. As this area is already well developed and there are existing traffic congestion issues caused by insufficient local access, this segment will likely be the focus of early improvements to the corridor. Better connections for active modes are required across this segment. There will need to be a higher density of street connections to place a greater focus on local access. Chestermere Boulevard will need to become a local street, with a focus on local needs rather than the "pass-by" function it now serves.

## Segment Functions:

| Private Vehicles | Commercial Vehicles | Cyclists | Pedestrians | Transit | Land Use Integration |
|---|---|---|---|---|---|
| Commuter route, shopping and recreation access | Local Retail / Commercial Deliveries | Recreational access, shopping access, connection between communities north and south | Connect businesses, recreational access, connection between communities north and south | Destination and/or terminus | Commercial frontage, primary access to retail areas, primary access to lakeside recreation opportunities |





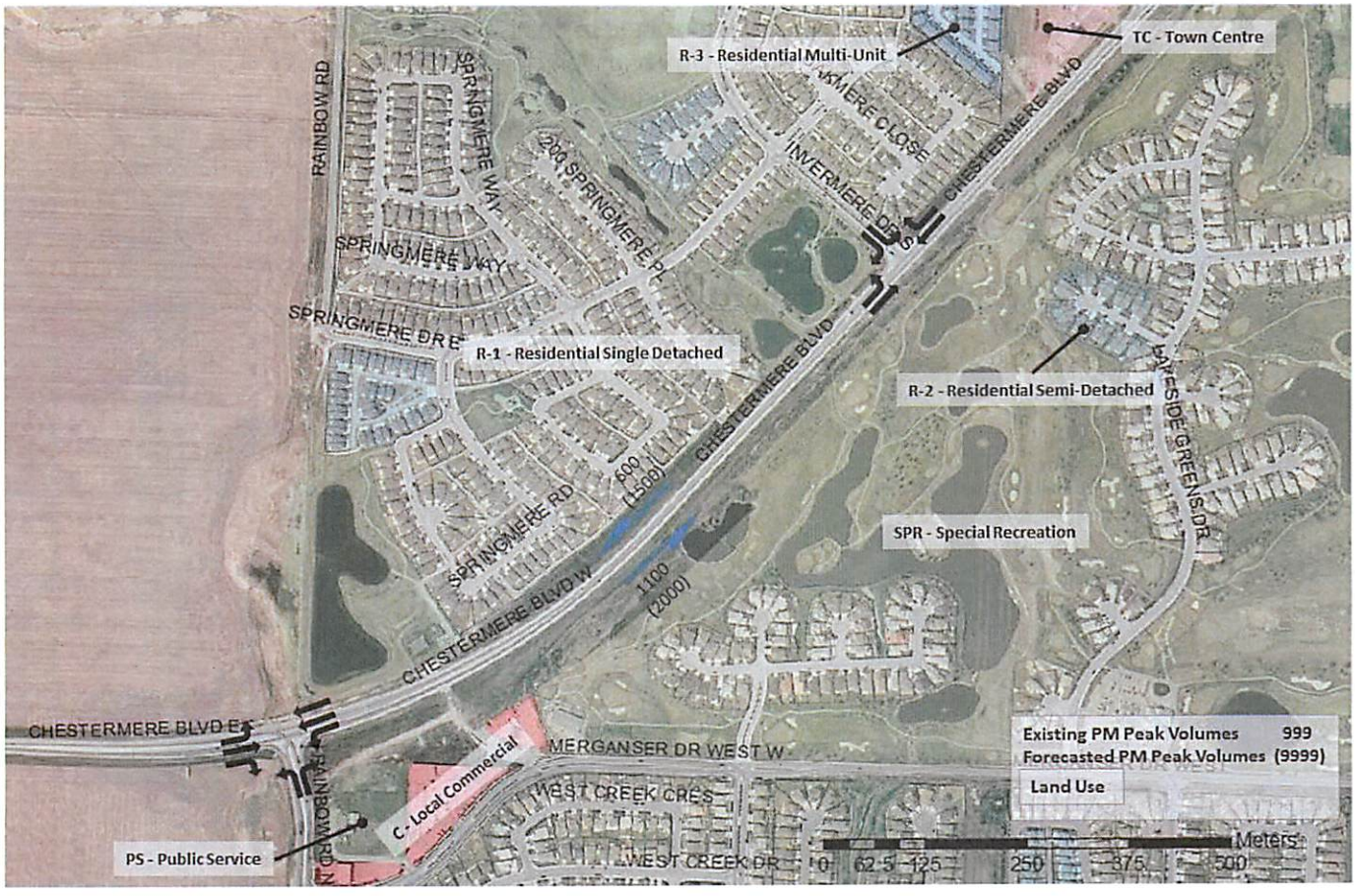


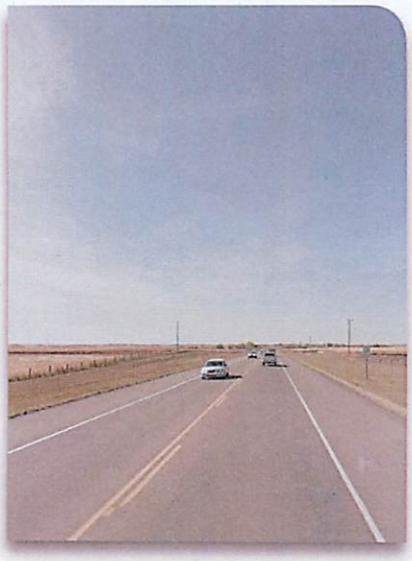
## Central Corridor

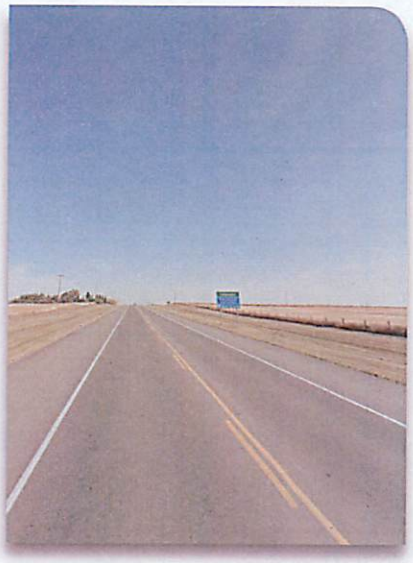
Given the location of the golf course on the south side and the current development on the north side, there will be less of a focus on connections across the corridor, and greater focus on improvements to active transportation connections along the corridor. This section will serve to connect the existing Chestermere Station to the future Development Centre, and will have a regional connection role by providing access to Rainbow Road, which will ultimately connect to Highway 1 to the north and to the future Peigan Trail extension to the south. As such, Rainbow Road could potentially be one of the most significant intersections in Chestermere. This segment should be planned to accommodate bus rapid transit services in the long term, but not necessarily with fully dedicated bus lanes.

## Segment Functions:

| Private Vehicles | Commercial Vehicles | Cyclists | Pedestrians | Transit | Land Use Integration |
|---|---|---|---|---|---|
| Commuting and mobility | Minor local delivery; connection to Rainbow Road | Recreational and commuting travel route | Minor connecting function; recreation and amenity | Regional and local connection; potentially a rapid transit route | Minimal land use connection; primarily provides a connection to other arterial streets and non-vehicular connections between communities |





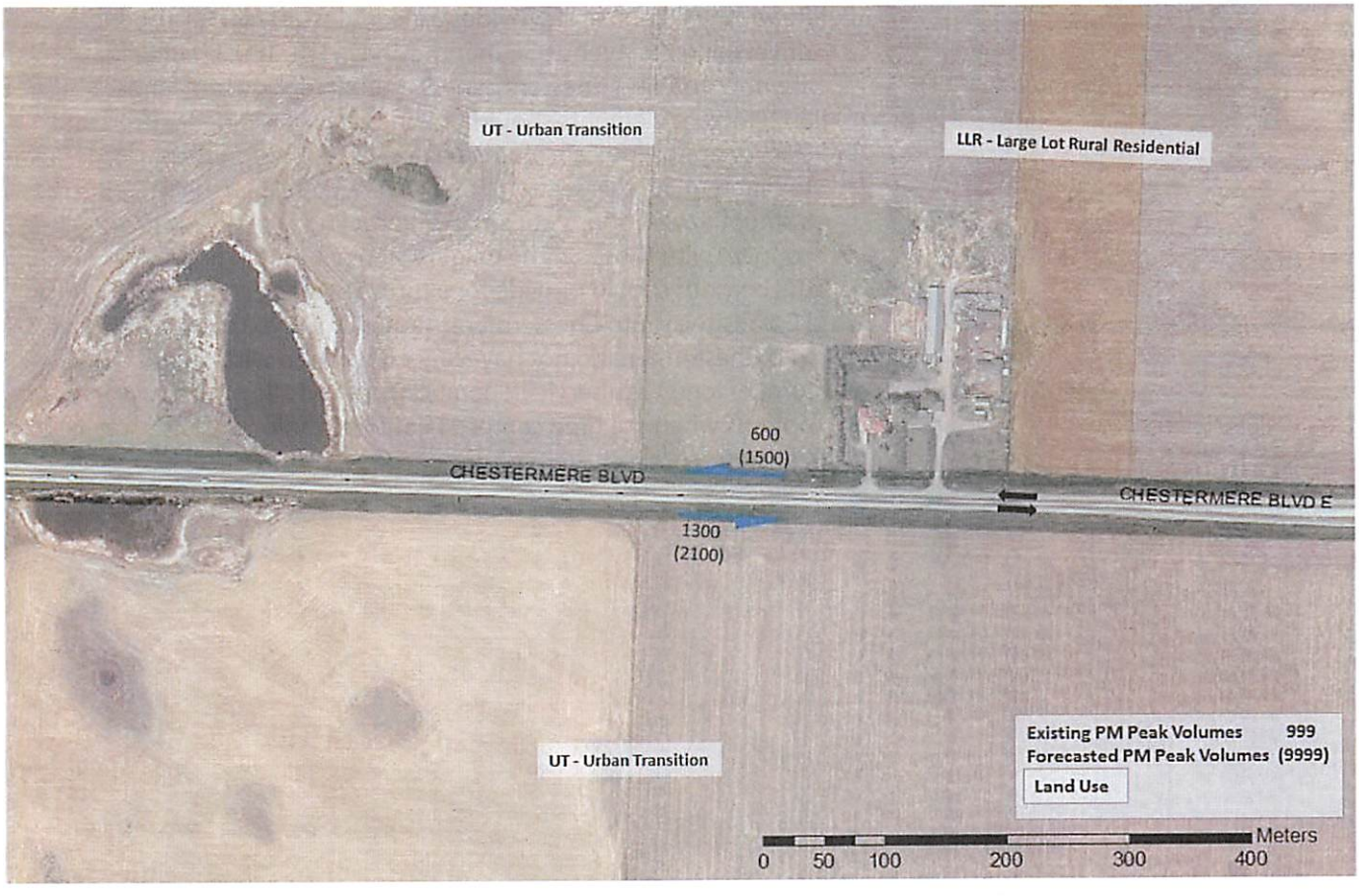


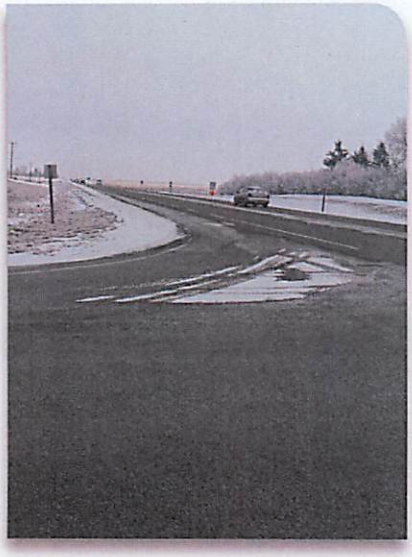
## Development Centre

The Development Centre segment of Chestermere Boulevard should place high importance on local access to the Development Centre which is expected to be bisected by the corridor. Although it will need to carry high vehicle volumes, the focus will be on local access rather than through movement. In this regard, high capacity will be important, but not necessarily high speed. Since the corridor will bisect the Development Centre, strong pedestrian and cycling connections will be required across and along Chestermere Boulevard. This section may include a bus rapid transit station and potentially a terminal station, if this area becomes the end of the route and buses do not continue further east on Chestermere Boulevard.

## Segment Functions:

| Private Vehicles | Commercial Vehicles | Cyclists | Pedestrians | Transit | Land Use Integration |
|---|---|---|---|---|---|
| Commuter route, civic and retail access | Local retail / commercial delivery only | East-west through travel, north-south connections, City centre access | Connections, business and property access | Regional destination, rapid transit hub | Frontage and access for City centre businesses and other land uses |






## Western Gateway

The Western Gateway is a short section that includes the Conrich Road intersection and provides a clear message for eastbound drivers on 17th Avenue SE that they have left the City of Calgary and are now entering Chestermere. The urban design and landscape architecture elements should provide distinguishing features and a streetscape to indicate a sense of arrival. Although there is a desire to differentiate this section from 17th Avenue, there will need to be a smooth transition. Pedestrian and cycling facilities should logically connect with those on the Calgary side of Conrich Road. Planning for the corridor should provide for a future extension of the 17th Avenue SE transitway into Chestermere. Provisions to extend the BRT facility into Chestermere do not have any implication with regard to the form of long term service operation, but will allow for a full range of options when the time comes to consider regional transit services to Chestermere.

## Segment Functions:

| Private Vehicles | Commercial Vehicles | Cyclists | Pedestrians | Transit | Land Use Integration |
|---|---|---|---|---|---|
| Transition to 17th Avenue SE and City centre gateway | City centre connection to Stoney Trail | Commuter travel route; connection to City of Calgary cycle network | Minor connection role, land use access | Rapid Transit and local connection to Calgary | Minimal land use integration; transition to Calgary |

## Issues and Opportunities

In general, Chestermere Boulevard currently acts as a significant barrier and community divider due to the high vehicular speeds and the wide, open right of way along the corridor. Movement along and across the corridor is difficult and unsafe for pedestrians and cyclists and local access for private and commercial vehicles is limited. The adjacent land uses do not integrate well with the roadway, so there is little street activity. This does not allow adjacent land uses or activity along the corridor to naturally temper driving speeds and provides little incentive for people to use it as a destination or for recreational purposes.

Increased network connectivity and points of access for all modes can better integrate the boulevard with the surrounding land use. The expansive corridor right of way presents the opportunity to repurpose the adjacent land for mixed, residential or commercial uses and provide facilities for more choice in transportation modes. The boulevard can be planned and redesigned to foster a community feel and make it more amenable to everyday and recreational trips. Design measures to lower vehicular speeds and encourage alternate routing can facilitate the desired corridor segment functions. Future commuting and trip patterns can be distributed through north-south connections, as well as the Trans-Canada Highway.

Specific issues, opportunities and the options that harmonize these are presented in the **Options Generation section.**

## Desired Performance

The corridor should support all modes of transportation and integrate these well with the surrounding land uses. The extent to which the existing and future corridor accomplishes this can be assessed using various metrics. Typical metrics such as intersection level of service are not inclusive of alternative modes or comprehensive (they do not measure broader performance objectives even for vehicular travel such as average trip times or costs of congestion). As such, additional quantitative and qualitative performance metrics that regard all transportation modes and how these integrate with the surrounding land uses are needed. How these align with the project's guiding principles and adhere to each segment's overarching theme is summarized in the **Table 2.**

Table 2: Performance Metrics

| Guiding Principle | Performance Metric | Relationship to Defined Theme | | |
|---|---|---|---|---|
| | | Gateway | Destination | Multimodal Travel |
| *Chestermere Boulevard will be an* ***urban street*** | Intersection multimodal level of service<br>Multimodal travel times (savings) | Efficient conveyance through transition area | Facilitate movement in all directions.<br>Reduce pedestrian crossing and waiting times | Minimize longitudinal travel times for all modes |
| *Chestermere Boulevard will be* ***safe for all users*** | Physically separated infrastructure along corridor<br>Human-scale infrastructure to increase perceived safety | Safe conveyance through transition area<br>Physical separation of different modes, where appropriate | Physical separation longitudinally<br>Minimize vehicle lanes and intersection size | Physical separation longitudinally<br>Minimize vehicle lanes and intersection size |
| *Chestermere Boulevard will serve as a* ***gateway for the City.*** | Aesthetics and Sense of Arrival | High importance Physical differentiation between connections | Aesthetically pleasing | Aesthetically pleasing |
| *Chestermere Boulevard will facilitate* ***local connections*** | Connectivity | Regional network connectivity | Requires high local connectivity | Connectivity required longitudinally along corridor |
| *Chestermere Boulevard will be a* ***local destination*** | Amenity accessibility<br>Economic Generation<br>Place-making | Convey a sense of arrival to a new destination | Require high accessibility<br>Active land uses | Longitudinal accessibility |

## Travel Patterns

Currently Chestermere Boulevard is used predominantly as a commuter route and the travel patterns along it reflect this. The majority of trips are to and from external activity locations, such as Calgary. However, as Chestermere develops, this will increasingly change. This section describes current and future travel patterns by mode and examines factors that can influence travel patterns and the forecast vehicular volumes.

### Active Transportation

Pedestrians and cyclists currently do not have the opportunity to travel safely along the corridor, thus, their trips are mainly across the corridor. These crossings occur mostly at Windermere Boulevard and Cove Drive intersections. These intersections provide the only formal and reasonably safe crossing locations that allow access to nearby amenities. These local amenities generate local trips that are often best served by active modes.

Active mode travel demand across and along the corridor can be expected to increase, especially with increased development adjacent to it.


### Public Transit

There is currently no local public transit service within the community or regional public transit service to nearby communities including the City of Calgary. Future transit use patterns can therefore not be forecasted based on existing conditions within the corridor.

However, given current regional and transit planning initiatives it can be reasonably assumed that initial transit service will be regional and will predominantly serve peak period commuter trips. The current regional structure of employment and activity opportunities makes it unlikely that there will be any significant number of reverse commute trips. However, with increasing development, high quality and levels of transit service and appropriately located transit stops, the regional functionality can be leveraged to serve local and internal transit trips along the corridor. Corridor segments with destination roles should serve as springboards for these patterns.

## Commercial Vehicles

Currently, large commercial vehicles regularly make use of the boulevard. As the nature of the boulevard shifts, these types of commercial vehicles will find it more convenient and efficient to use the Trans-Canada Highway, the primary goods movement route, to complete their trips. Future commercial vehicle trips will mostly serve local requirements – the last leg of goods movement from regional distribution centres to local businesses, typically using smaller vehicles.

## Private Vehicles

West of Windermere Boulevard, existing traffic flows on Chestermere Boulevard exhibit significant asymmetry during the two peak travel periods. The morning peak sees larger flow west toward the City of Calgary and the reverse occurs during the afternoon peak. This is less the case east of Windermere Boulevard and across the Chestermere Lake Causeway. Here traffic exiting off of the Trans-Canada Highway into the City contributes to westbound flow – making traffic flows fairly evenly split in either direction.

At the 80,000 population horizon, traffic flows are forecasted to be slightly more directionally balanced (**Figure 3**). The same pattern of traffic entering onto (AM) and exiting off of (PM) the Trans-Canada highway will continue to occur, but at greater volumes.

Generally, the boulevard is largely used as a commuter route for external trips. Increased development will shift more of these trips to be local and internal to the City ; however, many commuting trips will still be generated. These trips will increasingly be distributed along north-south roads and the Trans-Canada Highway.

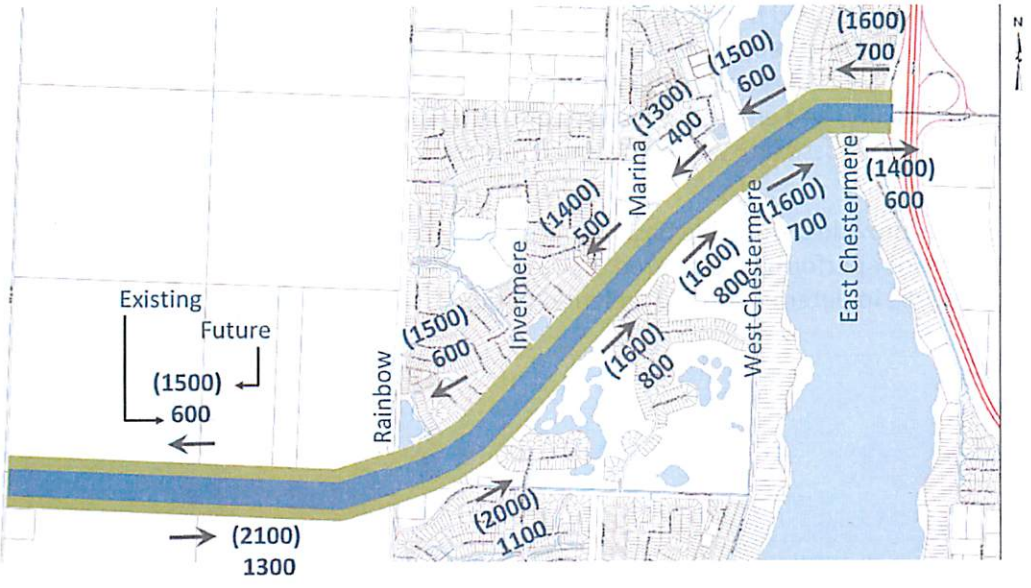



Figure 3: Existing and Forecasted Traffic Volumes

## Influencing Factors

Travel behaviour and patterns are influenced by a multitude of factors. These can be grouped loosely into the following two categories:

**Accessibility Factors**

- Travel time
- Travel cost
- Travel time reliability
- Mode availability/ ownership
- Mode comfort
- Safety and security
- Destination
- Trip purpose
- Trip start time
- Trip group size
- Urban design
- Climate and weather

**Socioeconomic Factors (relating to trip maker)**

- Income
- Household size
- Household status
- Age
- Gender
- Education level

Travel patterns and therefore the vehicular forecasts for Chestermere Boulevard will be influenced by all of these factors to some degree. With additional development and therefore more activity destinations, a higher proportion of travel will be local and trips will be shorter. These trips can be served by making alternative modes more attractive.

Changing societal and technological trends have decreased the amount of private vehicular travel in most parts of the developed world[1] . Applying this to a local context recognizes that extraneous factors are shifting travel behaviours and that these will have an impact that must be acknowledged. Younger people rely less on vehicular travel, economic fundamentals are changing (i.e. shared economy, climate change, energy availability) and emerging technologies (e.g. driverless vehicles) are a very real possibility within the timeframe used for these forecasts.

The forecasted volumes thus provide a workable basis for relative option evaluation only. Corridor performance centred on these forecasts will play a limited role in determining the preferred option.

1 Frontier Group 2013 A New Direction: Our Changing Relationship with Driving and the Implications for America's Future

## Performance Assessment

Given that quantitative data was only available for vehicular traffic flows, this section briefly focuses on intersection level of service and vehicular travel times. A qualitative interpretation of the analysis is also provided. Assessing other performance indicators is largely a qualitative exercise, and those results are provided throughout the remainder of the study.

### Existing Base Case:

An existing estimate of traffic volumes was determined using the Chestermere Transportation Master Plan (2010) as a base. Site specific traffic generated from known developments since then was added to the TMP volumes and these were adjusted to 2013 using typical background growth rates.

Currently all the controlled intersections along the boulevard operate acceptably overall. Some movements are associated with delay; however, all of these are within acceptable levels. Previous studies and analysis done by HDR had found that pedestrians crossing Chestermere Boulevard, specifically at Windermere Boulevard, perceive it to be unsafe. Pedestrian and cyclist crossings occur predominantly at this intersection as well as at the Chestermere Boulevard and Cove Drive intersection.

### Future Base Case:

The future base case traffic volumes and flows corresponding to the 80,000 population horizon were derived by adding the 2013 volumes to traffic forecasted to be generated by new developments expected in proximity to Chestermere Boulevard. The majority of this development is expected to occur in western Chestermere.

Without significant improvements to the boulevard or considerable shifts in travel patterns, the existing boulevard will not be sufficient to handle the forecasted volumes. Most of the intersections would not perform at acceptable levels and long delays would occur.

# OPTIONS GENERATION

Many of the options that were evaluated within the study were generated during the Options Generation Workshop held in January 2014. City staff and other key stakeholders were invited to take part. The participants were given information regarding the project's vision and guiding principles, each segment's desired functions and technical inputs such as the forecasted vehicular volumes and adjacent existing land uses. Participants were encouraged to think unconventionally and beyond options directly addressing issues with vehicular traffic.

For each segment a bundle of options was created. These included generalized cross section options along the corridor segment and plan options for key intersections, midblock crossings or access points. The options are intended to address the main issues corresponding to each corridor segment.

## Eastern Gateway Options

Currently, vehicles entering this section by exiting off of the Trans-Canada Highway off ramps affect the safety and operation of the intersection at Chestermere Boulevard and Cove Drive In addition, there is no physical or aesthetic transition that signifies arrival into a community or onto an urban street. The existing causeway and bridge structure may not be adequate in the future if the forecasted volumes materialize and if facilities for alternative modes are to be improved. The generated options needed to address these issues.

| Generalized Cross Sections Options | Plan Options |
|---|---|
| 2 lanes over the causeway and additional pedestrian and cycling infrastructure by reconfiguring the lanes | Realign the Trans-Canada on and off ramps – the ramps would be aligned more parallel with the Trans-Canada Highway and reduce off ramp speeds. |
| 4 lanes undivided | Reducing corner radii at Cove Drive Intersection |
| 4 lanes divided by a median | Redeveloping land freed by realigning the Trans-Canada ramps for residential or commercial use |
| Multiuse paths and/or pedestrian connections on both sides of the causeway and bridge | |
| Sidewalks on both sides of boulevard | |
| Boardwalk on north side of causeway/bridge | |
| Transit only lanes | |
| Transit in mixed traffic: non-exclusive lanes | |

## Chestermere Station Options

The Chestermere Station will be a destination. Currently, access to adjacent land use is limited to Marina Drive and Windermere Boulevard; however, Marina Drive does not allow left turn vehicular access or egress. This causes increased left turn demand at the Windermere Boulevard intersection. This intersection is currently deemed as unsafe for pedestrians due to its crossing distances and configuration. This section lacks adequate opportunities for pedestrians and cyclists to cross. Accessibility for non-vehicular transportation modes requires improvement.

| Generalized Cross Sections Options | Plan Options |
|---|---|
| 2 lanes | Multilane roundabout at Marina Drive intersection |
| 4 lanes undivided | Signalization at Marina Drive intersection, allowing left turns in and out |
| 4 lanes divided by a median | Multilane roundabout at Windermere Boulevard intersection |
| 3 lanes: 1 per direction and two way left turn lane | Reconfigure existing lanes at Windermere Boulevard intersection |
| On-street parking | Additional right in, right out access between Marina Drive and Windermere Boulevard |
| Commercial or residential units within the existing right of way – on the wider south side of the boulevard | Midblock crossing(s) |
| Multiuse path on north side | Pedestrian and cyclist underpass adjacent to the lake |
| Sidewalks on both sides of boulevard | |
| Raised one way cycle tracks | |
| On-street bike lanes | |
| Transit only lanes | |
| Transit in mixed traffic: non-exclusive lanes | |

## Central Corridor Options

This segment is intended to facilitate mobility along the corridor. The existing intersections at Marina Drive, Invermere Drive and Rainbow Road currently support vehicle trips well; however, they impose large crossing distances on pedestrians. There are currently no options for travelling along this segment of the corridor for non-vehicular modes. The current speed limit of 80 kph is an unsafe environment for such modes, and creates an undesirable adjacent public realm.

| Generalized Cross Sections Options | Plan Options |
|---|---|
| 2 lanes | Signalized Invermere Drive intersection: two eastbound lanes, shared left turn lane |
| 4 lanes undivided | Signalized Invermere Drive intersection: two eastbound lanes plus exclusive left turn lane |
| 4 lanes divided by a median | Midblock crossing(s) |
| On-street parking east of Rainbow Road | Multilane roundabout at Rainbow Road (with integrated transit station) |
| Commercial units within the existing right of way - on the south side of the boulevard east of Rainbow Road | Signalized Rainbow Road intersection - reconfigured to have shared through and right turn lanes, exclusive left turn lanes |
| Multiuse path on north side | |
| Sidewalks on both sides of boulevard | |
| Raised one way cycle tracks | |
| On-street bike lanes | |
| Transit only lanes | |
| Transit in mixed traffic: non-exclusive lanes | |

## Development Centre Options

As a future destination, this area will require a high amount of local access. Currently there are no urban land uses along the corridor and roadway speeds are high. During peak periods, traffic flow can be steady, but it is not congested. There are no facilities for active mode users to make trips along the corridor.

| Generalized Cross Sections Options | Plan Options |
|---|---|
| 4 lanes undivided | Future collector road signalized intersections with two lanes – shared left and right turning lanes |
| 4 lanes divided by a median | Future collector road signalized intersections – exclusive left turning lanes |
| On-street parking on both sides throughout | Future collector road multilane turbo roundabout intersections |
| Building frontage onto street | Additional local roads |
| Multiuse path on north side | Multiple points of access along street |
| Sidewalks on both sides of boulevard | Multiple mid-block crossings |
| Raised one way cycle tracks | |
| On-street bike lanes | |
| Transit only lanes – two median lanes | |
| Transit only lane – one lane reversible | |
| Transit in mixed traffic: non-exclusive lanes | |

## Western Gateway Options

In the future, this section should convey a sense of arrival and serve as a transition between Calgary and Chestermere. This portion of the boulevard currently has no adjacent urban land uses. Its existing conditions and the performance of the corridor here mirror those in the Development Centre above.

| Generalized Cross Sections Options | Plan Options |
|---|---|
| 4 lanes undivided | Multilane roundabout at Conrich Road (with integrated transit station) |
| 4 lanes divided by a median | Signalized intersection at Conrich Road |
| Multiuse path on north side | Future north side multiuse path connection to a future north side multiuse path in Calgary |
| Sidewalks on both sides of boulevard | Future cycle track connection to a future north side multiuse path in Calgary |
| Raised one way cycle tracks | |
| Transit only lanes – two median lanes | |
| Transit in mixed traffic: non-exclusive lanes | |

# OPTION EVALUATION

In this section the generated options are subjected to an evaluation process that involves several steps. An initial high level evaluation is carried out to ensure that the generated options adhere to the desired performance of the corridor and are consistent with the guiding principles which were developed through the desires of community stakeholders. A generalized cross section is introduced that upholds the desired performance and additional filtering criteria are provided. Together these are used to decide how or if the option should be advanced through the study while identifying the opportunity that each option presents.

An evaluation framework is presented that is used to determine a final preferred option. The framework is largely an extension of that used for concept filtering. In addition a triple bottom line approach is introduced into the framework.

## Generalized Cross Section

The general preferred cross section requires that multiple modes are accommodated. It should align with Complete Streets principles and provide facilities for active mode users – pedestrians and cyclists (among others), high quality transit, local commercial vehicles and private vehicles. To provide a human-scale environment that is perceived to be and is actually safe and one that does not create over-reliance on single occupancy vehicle use, the generalized cross section should not contain more than four vehicular lanes.

## Concept Filtering

The initial concept filtering step is undertaken to produce a more manageable set of options for the corridor and corridor segments. The filtering process applies the generalized cross section and additional filtering criteria. The options filtered are those that clearly do not meet the criteria at the outset and can easily be identified as such.

### Application of the Generalized Cross Section

The preferred generalized cross section is used to determine if an option is consistent with the full corridor vision. Conceptual options that do not align with the generalized preferred cross section and cannot be refined to do so constitute a "fatal flaw". These are subsequently not given further consideration in the study.

## Filtering Criteria

The following provides the criteria that were used to determine if a conceptual option contains a fatal flaw notwithstanding compliance with the preferred cross section. These are options that cannot be refined further to support the overall project vision and desired performance of the corridor. The criteria are either technical in nature or are based on specific policies. They mirror the metrics used to determine the desired performance of the corridor. The list is not exhaustive.

- Safe for pedestrians
- Safe for cyclists
- Safe for car drivers
- Does not increase travel times for pedestrians
- Does not increase travel times for cyclists
- Supportive of regional transit aspirations
- Supportive of a high quality transit service
- Supportive of operationally efficient transit service
- Provides adequate vehicular capacity
- Increases access to commercial areas
- Does not negatively affect streetscape and aesthetics
- Improves network connectivity
- Project Guidance (from stakeholders)

## Concept Filtering & Opportunity Assessment

The generated concepts were slotted into three different categories according to how or if they were to be carried forward in the study process. In the table below, each categorized concept is provided with further detail. The three categories and the additional detail listed in the table are as follows:

- Not recommended – the unmet fatal flaw criterion (or criteria) above is stated and further explanation is given as to its noncompliance.
- Refinement required to carry forward – the flaw(s) in the option's current conception are highlighted; however, the concept nevertheless presents a valuable opportunity and this is assessed as well. This designation is also used if the option is fine in its current form but requires that underlying conditions change for it to be consistent with the corridor vision.
- Undertake detailed evaluation – the concepts under this category present clear opportunity with minimal adverse affects. The opportunity is stated within the table.

The results of the concept filtering process are divided into conceptual options that are applicable along the entire corridor by mode and those that are specific to a particular corridor segment.

The fatal flaws, flaws and opportunities associated with each conceptual option are symbolically depicted with an F, f or O respectively.

### By Transportation Mode

Options applicable to a specific mode on a corridor wide basis are filtered in the table below.

Table 3: Options by Transportation Mode

| Mode | Concept | Carry forward | Fatal Flaw (F), Flaw (f) and/or Opportunity (O) |
|---|---|---|---|
| Walking | Sidewalks on both sides of boulevard | **Undertake detailed evaluation** | O Sidewalks on both sides of the street create a more walkable street and pedestrian friendly public realm |
| Walking / Cycling | Midblock crossings | **Undertake detailed evaluation** | O Midblock crossings increase connectivity for active modes, reducing distances and thereby travel times |
| | Multiuse path on north side | **Refinement required to carry forward** | f Typical multiuse paths are often too narrow to allow for easy lateral passage of various users and can create conflicts. They are usually constructed for recreational purposes and therefore do not support direct purposeful trips or provide access to uses fronting the boulevard.<br>O These can be constructed to mitigate these issues however, and/or developed as exclusive bike paths. The north side of the boulevard is the preferred location because this would provide pathway continuity with the pathway network planned in the Belvedere Area Structure Plan and the Waterbridge Master Area Structure Plan. In addition , this path would provide improved access to the Chestermere Station commercial area. |
| Cycling | On-street bike lanes | **Not recommended** | F On-street bike lanes are best suited to lower speed and lower vehicular volume streets. Because they are not separated from vehicular traffic, they are generally **less safe.** They are often obstructed by other vehicles and, in winter by snowplow windrows. |
| | Raised one way cycle tracks | **Undertake detailed evaluation** | O This type of facility is vertically separated from vehicular traffic and the roadway. They allow for easy access to building frontages and mirror the desire lines of car drivers. |

| Mode | Concept | Carry forward | Fatal Flaw (F), Flaw (f) and/or Opportunity (O) |
|---|---|---|---|
| Transit | Two lane median transit right of way (transitway) | **Undertake detailed evaluation** | O This supports a high transit level of service, making it a very attractive alternative to vehicular travel. It can therefore require that less right of way be devoted exclusively for vehicle use.<br>Walkability and high transit level of service go hand in hand. |
| | One lane reversible transit right of way | **Not recommended** | F One lane reversible transit right of way requires less corridor right of way and can have easier constructability. However, it requires more specialized vehicles and/or doubling of station infrastructure and **lower transit operating efficiency and level of service.** It is also more difficult to upgrade the transit technology – from a bus to an LRT for example. |
| | Mixed traffic transit | **Refinement required to carry forward** | f Operating transit within vehicular lanes reduces the transit level of service. The western segments of the corridor should connect harmoniously with future transit infrastructure being planned by the City of Calgary along 17th Ave.<br>O Transit mixed with traffic may be adequate in the more eastern segments of the corridor. |
| | Bus only curb lanes | **Not recommended** | F Although generally more preferable for passenger alighting and boarding, these lanes get obstructed by right turning vehicles and vehicles that are parking, **lowering the level of service**. They are also less supportive of mode progression. |
| Driving | On-street parking | **Refinement required to carry forward** | f On-street parking allows direct vehicular access to store fronts and other land uses. Parked cars can act as a barrier between moving vehicles and pedestrians and provide natural traffic calming.<br>O On-street parking generally requires that there is adjoining land-use that supports it, such as retail and residential uses. |
| | Two lane roadway | **Refinement required to carry forward** | f For the most part, forecasted vehicular volumes will require that additional capacity is required – 2 lanes would be insufficient.<br>O However, certain segments may be served adequately with two lanes until capacity increases are required. This becomes a question of staging. |
| | Four lane undivided roadway | **Undertake detailed evaluation** | f An undivided roadway may not align with desired aesthetic properties of the boulevard. Implementing exclusive left turn lanes here requires increasing roadway widths at intersections – this cross section is less adaptable.<br>O Reduces overall roadway right of way and overall crossing distances. Could be applied where right of way constraints exist. |
| | Four lane roadway divided by a median | **Undertake detailed evaluation** | O A divided roadway with a median can have the aesthetic qualities that are desired for the boulevard. A divided roadway also accommodates exclusive transit lanes. |
| | 3 lanes: 1 per direction and a two way left turn lane | **Not recommended** | F Limited applicability as some segments have no accessible land use from the boulevard – no reason for vehicles to make left turns. In the future, they may **not provide enough capacity for the forecasted vehicular volumes.** |

## By Corridor Segment

Options specific to a corridor segment are filtered in the table below.

Table 4: Options by Corridor Segment

| Segment | Concept | Carry forward | Rationale |
|---|---|---|---|
| Eastern Gateway | Realign the Trans-Canada on and off ramps | **Undertake detailed evaluation** | O Realigning these ramps can improve safety and operations at Cove Drive intersection and discourage heavy commercial vehicles. It could free up land to catalyze redevelopment and create a physical change to the streetscape. |
| | Boardwalk on north side of causeway/bridge | **Refinement required to carry forward** | O This concept aligns with improving the boulevard's aesthetics, and pedestrian connections.<br>f Requires additional space in a constrained right of way. |
| | Reconfigure Cove Drive intersection | **Undertake detailed evaluation** | O Reconfiguring the intersection to make optimal use of existing capacity can allow better operations in tandem with realigned Trans-Canada ramps. |
| Chestermere Station | Multilane roundabout at Marina Drive intersection | **Not recommended** | F **Stakeholder input and project progress.** |
| | Multilane roundabout at Windermere Boulevard intersection | **Refinement required to carry forward** | O A roundabout here provides an opportunity to improve traffic flow and increase safety.<br>f Additional right of way would need to be acquired. It would also increase crossing distances for pedestrians and create difficulties for transit prioritization. |
| | Reconfigure existing lanes at Windermere Boulevard intersection | **Undertake detailed evaluation** | O Reconfiguring the intersection to make optimal use of existing capacity can improve its operations. |
| | Additional right in, right out access between Marina Drive and Windermere Boulevard | **Undertake detailed evaluation** | O Allow for additional vehicular access to the existing commercial land uses in the area north of Chestermere Boulevard. |
| | Pedestrian and cyclist underpass adjacent to the lake | **Refinement required to carry forward** | O Provides a direct connection between Anniversary Park to John Peake Memorial park for pedestrians and cyclists.<br>f Relatively large associated infrastructure costs. |

| Segment | Concept | Carry forward | Rationale |
|---|---|---|---|
| Central Corridor | Signalized Invermere Drive intersection | **Undertake detailed evaluation** | O Left turn volumes are expected to be high here and a controlled intersection will be required to safely accommodate these. |
| | Multilane roundabout at Rainbow Road (with integrated transit station) | **Refinement required to carry forward** | O A multilane roundabout may allow for improved traffic flow and intersection operations as well as increase overall intersection safety.<br>f It can pose as an obstacle for transit lanes or provide a natural land reserve for station infrastructure. It also requires greater right of way and can increase travel times for active modes. |
| | Reconfigured signalized Rainbow Road intersection. | **Undertake detailed evaluation** | O Reconfiguring the intersection to make optimal use of existing capacity can improve its operations. |
| | Right in, right out access to Chestermere Plaza east of Rainbow Road | **Refinement required to carry forward** | O This option would improve access to existing businesses in Chestermere Plaza and could also help operations at the Rainbow Road intersection in the future, drawing some traffic away from turning movements there.<br>f Right of way must be acquired and there is currently little development to justify a new access link. |
| Development Centre | Future collector road signalized intersections with two lanes – shared left and right turning lanes | **Undertake detailed evaluation** | O Left turn volumes are forecasted to be low onto these collector roads. |
| | Future collector road signalized intersections – exclusive left turning lanes | **Refinement required to carry forward** | f The increased roadway width due to left turn lanes would create increased pedestrian crossing distances and lower the perceived safety of the street.<br>O In the long term if warranted by increased left turn volumes, exclusive left turn lanes could be added. |
| | Future collector road multilane turbo roundabout intersections | **Not recommended** | This concept recognizes the low volumes forecasted on the collector roads and provides multiple lanes in the roundabout only for the main road – the Boulevard.<br>F However, they **nevertheless increase crossing distances for pedestrians** and create **difficulties for transit prioritization** and exclusive transit right of ways. |
| | Additional local roads | **Refinement required to carry forward** | O To allow for access to local commercial and residential land uses in the future.<br>f Too many local roads will interfere with transit and traffic flow. |
| | Multiple points of access along street | **Refinement required to carry forward** | O To allow for additional access to large lot local commercial and residential land uses in the future.<br>f Too many accesses interrupt the public realm and interfere with pedestrian and bicyclist flows. |

| Segment | Concept | Carry forward | Rationale |
|---|---|---|---|
| Western Gateway | Multilane roundabout at Conrich Road (with integrated transit station) | **Refinement required to carry forward** | O A multilane roundabout may allow for improved traffic flow and intersection operations as well as increase overall intersection safety. It could act as a gateway landmark.<br>f It can pose either as an obstacle for transit lanes or provide a natural land reserve for station infrastructure. It also requires greater ROW and can increase travel times for active modes. Additional issues here pertain to right of way acquisition on the west side of Conrich Road. |
| | Signalized intersection at Conrich Road | **Undertake detailed evaluation** | O Conrich Road is forecasted to have significant vehicular volumes and the intersection will need to be controlled. |
| | Future north side multiuse path connection to a future north side multiuse path in Calgary | **Refinement required to carry forward** | f The same rationale applies here as was stated in Table 1 above regarding multiuse paths. A homogenous multiuse path connection from Calgary to Chestermere may not provide any indication that a street user has arrived in a different community.<br>O A continuous north side multiuse path connection would be less complicated for users. |
| | Future cycle track connection to a future north side multiuse path in Calgary. The cycle tracks being on either side of the main roadway require unique intersection treatments. | **Undertake detailed evaluation** | O The same rationale applies here as was stated in Table 3 above regarding cycle tracks. One-way raised cycle tracks can provide a physical differentiation between Calgary and Chestermere and signify entry and transition into a destination. |

## General Options

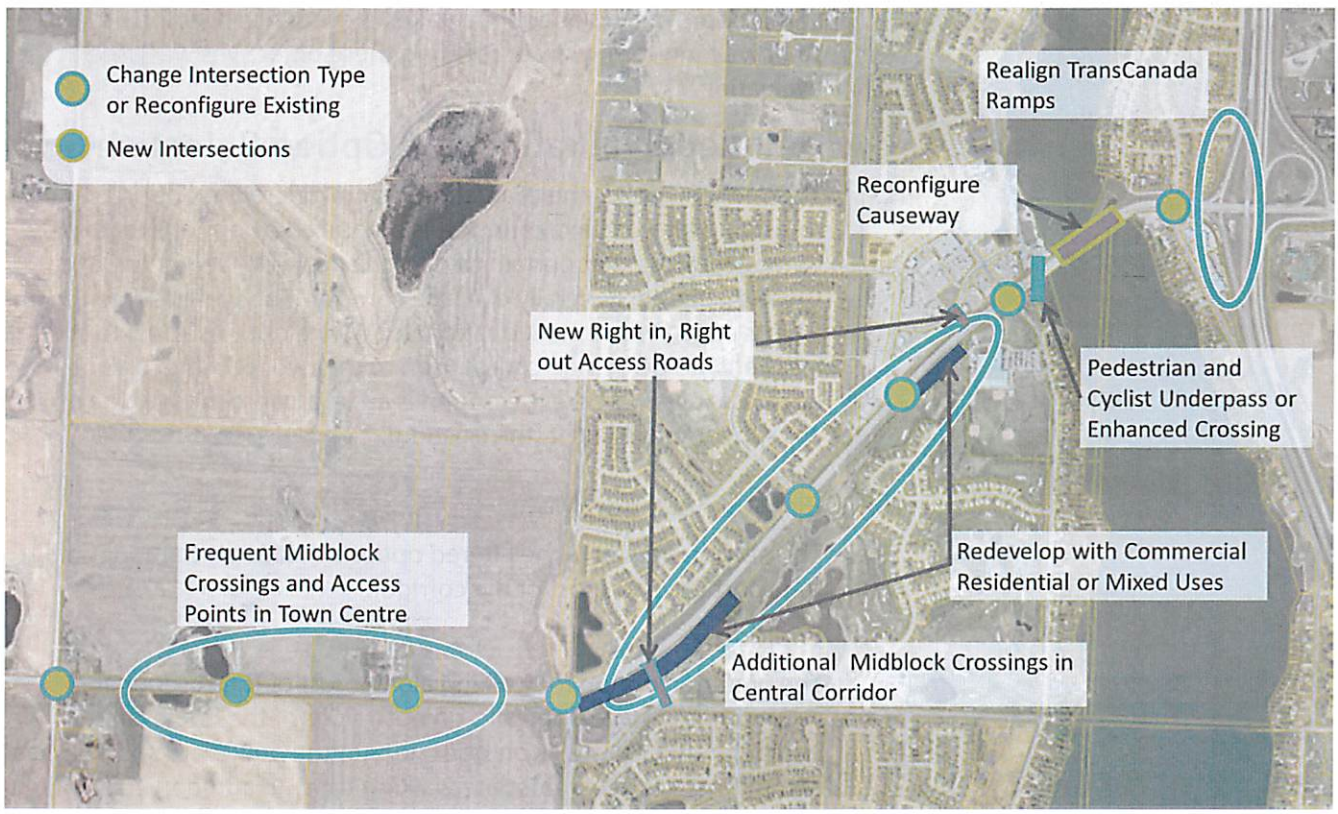
These are options that apply to most or the entire corridor.

Table 5: General Options

| | | | |
|---|---|---|---|
| All | Reduced Intersection Turn Radii | **Undertake detailed evaluation** | O Reducing the turn radii at intersections (tightening the corners) improves safety for all users. It requires vehicles to slow down to negotiate a turn, increasing drivers' ability to spot conflicts and other street users. Crossing distances for active mode users is reduced and both perceived and real safety is improved. |
| | Commercial or Residential uses along corridor in existing right of way | **Undertake detailed evaluation** | O In the existing built up areas, Chestermere Boulevard's right of way has sufficient space to allow for development of commercial or residential uses. These uses would be integral in activating the boulevard and increasing retail and/or housing options. |
| | Reduced speed limits | **Refinement required to carry forward** | O Reduced speed limits increase safety for all modes, reduces vehicular noise emissions and allows car drivers to become more aware of commercial and recreational opportunities within the City .<br>f Reducing the allowable speed will increase vehicular travel times. |

## Summary of Opportunities

The map below shows a summary of the major opportunities identified along the corridor. The symbols shown are conceptual only. Additional details, such as exact location, size requirements and design elements would be determined at the development and implementation stages. These opportunities are carried forward in the study for further and more detailed evaluation.



**In transportation terms, some examples of how the evaluative parameters are applied to option selection are:**

- Reducing crossing distances especially for the elderly or others with mobility disadvantages may require that a slight increase in vehicular delay is accepted.
- Accepting a modest level of congestion in the short term, realizing that this can shape travel behaviour in the long term and reduce single occupancy vehicle use.
- Reducing roadway cross section widths lowers required surface sealing (asphalt) – this in turn lowers the heat island effect and reduces surface runoff.

## Evaluation Framework

The evaluation framework used in preferred option selection constitutes a more analytical application of the criteria used for filtering conceptual options. The evaluation makes greater use of quantitative comparisons where applicable and draws from more detailed qualitative assessments.

In addition, the options were required to adhere to a triple bottom line approach. The underlying premise of this approach is that the options agree with combined social, economic and environmental objectives. In this approach, no one aspect takes precedence over the other. Finally, a long-term view of meeting these objectives was used in the evaluation.

## Detailed Evaluation and Option Selection

This section applies the evaluation framework to the options remaining after initial filtering. It is organized by options that apply to modes, those that pertain to particular corridor segments, and those that apply generally over the corridor. The preferred option for each is stated with detailed rationale. Where options apply to specific locations, a side by side comparison of the two (or more) unique options is given; where the option is an improvement over the existing it is superimposed on it [the existing].

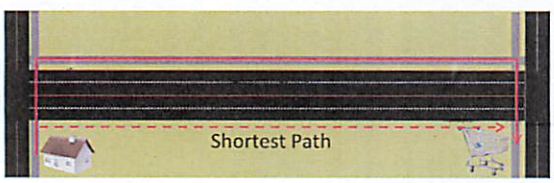
### By Transportation Mode

This section evaluates the filtered options that apply to modes of transportation for most of the corridor.

#### Walking

The preferred option for walking along most of the corridor and segments is to have sidewalks on both sides of the boulevard. Implementing sidewalks on both sides of the boulevard shows a clear commitment to accommodate walking trips. In addition, this option:

- Anticipates development:
  As development continues to occur along the boulevard, sidewalks on both sides will provide a concrete reminder that pedestrian access be prioritized – with the base sidewalk network already in place.
- Accommodates peoples' desired lines:
  Even with limited corridor land use development, pedestrians will have a desire to walk in a manner that creates the shortest path. Sidewalks on both sides allow for shorter distances even when there are relatively few destinations.
- Symmetry and streetscape:
  Sidewalks on both sides will allow the boulevard to retain a symmetrical and balanced urban feel. Symmetry provides a greater visual appeal.



## Cycling

Cycling can be accommodated by several facilities; however, **one-way raised cycle tracks** (on either side of the boulevard) are the preferred option. Similar to constructing sidewalks on both sides, this option benefits from symmetry, accommodating desire lines and adaptability to changing conditions, only here it is more pronounced. In addition to these benefits, and as compared to the alternative multiuse pathway option, one-way raised cycle tracks have the following positive attributes:

- Safety:
  One-way cycle tracks provide high levels of real and perceived safety[1]. The latter is of particular importance as high perceived safety levels encourages increased cycling, which itself indirectly increases safety via the "safety in numbers" phenomenon – where the presence of more bicyclists reduces accident rates as street users become more accustomed.
- Alignment:
  As the facilities are directly adjacent to the roadway, they benefit from the smooth, direct and intuitive alignment associated with the existing roadway.
- Width:
  Bicyclists have varying levels of skills and confidence. A wide, direct track accommodates the broadest spectrum of users and trip types while minimizing conflicts. Bicyclists are separated from pedestrians and can still overtake one another - all are traveling in the same direction. Generous width also allows continued functionality where on-street parking is allowed – bicyclists will naturally hold right and temper their speeds accordingly.
- Maintenance and Conditions:
  With vertical grade separation, turning vehicles, temporarily parked vehicles and snow plow windrows cannot obstruct the cycle tracks. Buildup of sand and loose gravel is also avoided. In winter, snow clearance can be done to either side (depending on amounts and if it is picked-up) and using specialized equipment, can be done simultaneously with the adjacent roadway lanes. Given a mild cross slope, water can drain off the tracks toward the roadway and does not collect in dips (as is often the case for multiuse paths).
- Intersection Integration:
  This element takes advantage of the superior alignment and it also contributes to improved safety, as most collisions occur at intersections. Cyclists remain in drivers' sightlines and flow in the same direction, reducing unexpected behaviours and points of conflict at intersections.

One way cycle tracks are the preferred option for a full corridor build out. **Multiuse paths** are nevertheless an appropriate interim option if short-term implementation is desired. If constructed wide enough and in a direct, continuous manner, they can serve purposeful trips along the corridor as well.

1 Teschke et al 2012 Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. American Journal of Public Health 2012 Vol. 102, No. 12

## Public Transit

For the majority of the corridor segments, a two lane median transitway is the preferred option. Showing a strong commitment to public transit is vital to the corridor's overall vision. The stations will play a key role in anchoring the destination segments (Development Centre and Chestermere Station). The main benefits of this preferred option are as follows:

- High Transit Level of Service:
  A two lane transitway (with signal prioritization) will provide an unimpeded route for transit vehicles. It will offer a very attractive alternative to the private vehicle for trips to regional destinations. For direct trips, travel times will be quicker and more reliable.

  Local walkability is improved by virtue of high quality transit, as willingness to walk to stations increases with transit service quality and speed.
- Adaptability to Future Conditions and Permanence:
  Retaining and preserving a two lane transitway ensures that mode progression (upgrading to higher capacity or quality services) can occur if and when needed, i.e. an LRT service can replace a BRT service. In addition, high quality infrastructure conveys permanence of the infrastructure. Residents make long-term location decisions based on transit infrastructure if it's assumed to be there permanently.
- Operational Efficiency:
  Allowing for unimpeded public transit flow reduces transit route cycle times and schedule variability. This translates to fewer vehicle service hours to provide at least the same level of service (frequency) and can reduce the amount of transit vehicles and drivers required to serve a transit line.
- Continuity and Connection:
  It aligns with the transit plans for Calgary's 17th Ave corridor.
- Alternative Uses:
  A transitway can be utilized by additional modes. It can provide emergency vehicles unimpeded routes or be used for local commercial or high occupancy vehicles and taxis.

## Private and Commercial Vehicles

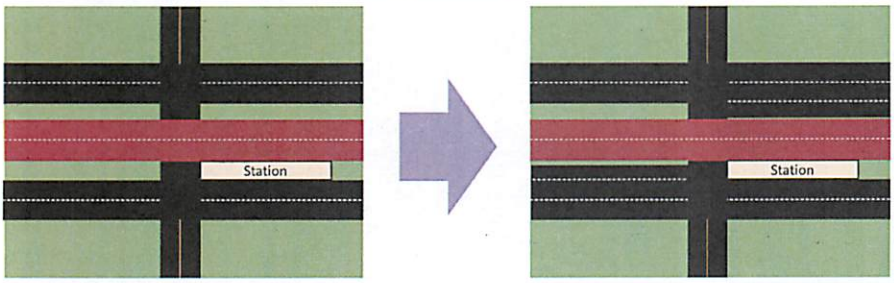
To accommodate forecasted volumes, the corridor requires two lanes in each direction. Through project guidance and to accommodate transit lanes, a four lane divided roadway was selected as the preferred cross section option. Where on-street parking is required, parking lanes can also be added. This cross section provides additional benefits:

Aesthetics:

The median can be used to provide greenery or other elements to enhance the streetscape, as well as provide a location for streetlights.

Expandable:

Even with transit lanes in the median, it is possible to provide exclusive left turn lanes at intersections if they become required without necessitating a large realignment of the roadway.




Safer Midblock Crossings:

A median will provide a pedestrian refuge area at midblock crossings, so that only two lanes must be crossed and vehicles from only one direction (except for at the less busy transitway) are expected at any one time.

## By Corridor Segment

This section evaluates the filtered options that were generated specifically for each corridor segment. These options pertain to intersections, crossings and where other constraints or conflicts might occur.

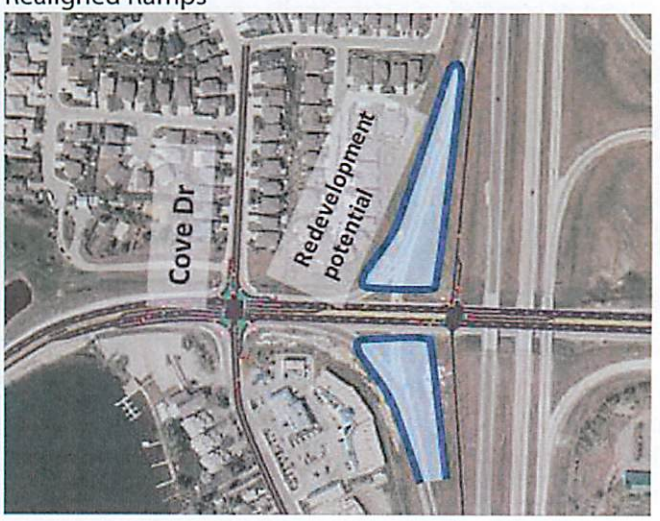
### Eastern Gateway

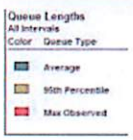
**Option: Realigned Ramps**

This option carries considerable costs and the benefits require explanation. A Synchro and SimTraffic analysis was performed to better understand the implications realigning the Trans-Canada Hwy ramps has on traffic operations. Full reports are given in **Appendix B**.

Exisiting Ramps


Realigned Ramps




The above analysis corresponds with forecasted traffic volumes at the 80,000 population level. At the forecasted levels the realigned ramp option will have the following benefits and is therefore a preferred option:

- Reduction in queue lengths
- Less delay per vehicle
- Conveys a transition to an urban street
- Presents opportunity for redevelopment
- Discourages larger commercial vehicles

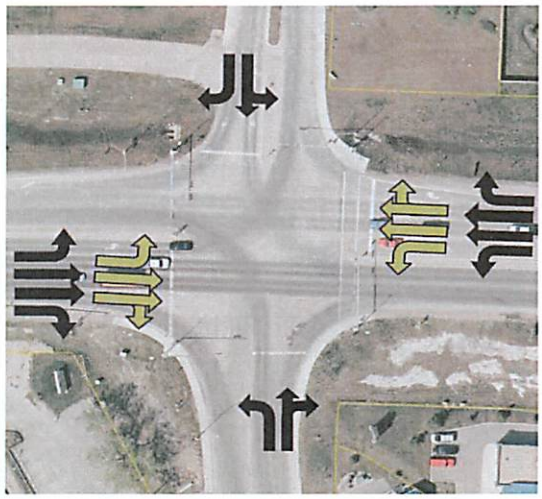
**Option: Reconfigure Cove Drive**

There are multiple options for reconfiguring the existing Cove Drive / East Chestermere Drive & Chestermere Boulevard intersection, given that the east and west approaches on Chestermere Boulevard have four lanes each. To allow for more convenient pedestrian and cyclist crossings and to discourage larger commercial vehicles, a lane reduction at the approaches is the preferred option.

This option will have minimal adverse impacts on traffic flow. The smaller Chestermere Boulevard cross section will reduce pedestrian crossing distances. As the intersection has minimal north-south through movements, green signal times are dictated by pedestrian crossing times. A smaller crossing distance reduces these crossing times and can allocate more green time in the east west directions. Capacity is largely maintained, speeds are tempered and the environment is friendlier for other users of the street.

In addition, tempering vehicular speeds around the corners of the intersection will make it easier for vehicles to enter and exit the access roads immediately south of Chestermere Boulevard.

Given the current and forecasted low north – south volumes, the existing configurations on these legs will be sufficient. However, there is sufficient roadway width at the Cove Drive and East Chestermere Drive approaches to allow for reconfiguration if necessary in the long term.



**Black arrows** denote existing lanes **Green arrows** denote reconfigured or new lanes

**Option(s): Causeway Cross Section:**

The preferred cross section for this segment differs from the preferred cross section selected for most of the corridor due the constraint imposed by the causeway and bridge structure. As well, the segment is a gateway in nature and few non-vehicular trips further east of the segment will be generated. An interim option that is consistent with the corridor vision is given below.

- Interim Option: **Reconfigure the existing right of way**
  - Reconfigure the existing right of way
  - Add a multiuse path on north side to provide partial connection to the north-south multiuse path in 'The Cove' neighbourhood
  - Design to naturally temper vehicle speeds
- Ultimate Option: **Four lane undivided roadway**
  - Provides adequate vehicular capacity and prevents delays for transit in mixed traffic
  - Multiuse paths on north and south side of causeway to accommodate desire lines of all active mode users
  - Option for a boardwalk type structure on north side

## Chestermere Station


**Option: Pedestrian and cyclist underpass adjacent to the lake**

The option to connect Anniversary Park with John Peake Memorial Park via an underpass adjacent to the lake will provide a direct connection for pedestrians and cyclists and allows these users an option to avoid Windermere Boulevard. It also facilitates continuous trips along the corridor and over the causeway bridge on the new multiuse path. This is a preferred long-term option due to the fact that it would require a major upgrade and construction works.

**Option: Windermere Boulevard intersection**

The existing intersection at Windermere Boulevard currently underutilizes its roadway right of way. Eastbound and westbound Chestermere Boulevard both provide exclusive right turn lanes although there are relatively low volumes associated with this movement now and in the future.

The existing intersection at Windermere Boulevard is perceived to be unsafe. The eastbound Chestermere Boulevard and southbound Windermere Boulevard left turn lanes sometimes suffer from long delays. A roundabout here can improve these aspects of the intersection.

A traffic analysis was done for both of the intersections options shown. In either case, a modest level of congestion will occur under the forecasted volumes. Comparatively, the roundabout option would have less delay per vehicle for all directions. However, the roundabout option would require additional space, causing inconvenient detours for pedestrians and cyclists as well as making transit more difficult to prioritize. Due to the intersection's proximity to commercial and recreational land uses, larger pedestrian volumes can be expected. This would reduce the roundabout's traffic flow efficacy.

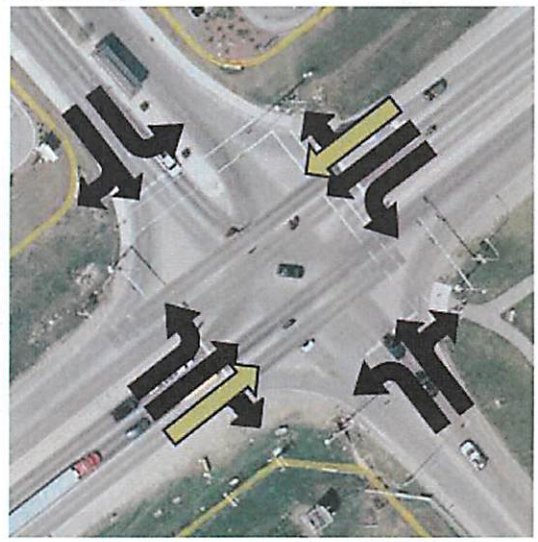
A reconfiguration of the lanes coupled with the corresponding signal plan will improve current operations and aligns better with the final vision for the corridor. The roadway cross section remains human scaled.

The preferred option is to **reconfigure the existing Rainbow Road. intersection**.

**Option: Right in, right out access between Marina Drive and Windermere Boulevard**

This is the preferred option to improve vehicular access directly to the commercial area and increase the road network's connectivity. The increased network connectivity has ancillary benefits for users of active modes. It will also divert some traffic away from Windermere Boulevard. The option requires obtaining right of way from adjacent property owners. The tangible benefits the option will provide will make this an attractive proposition for these owners.

Reconfigured Windermere Boulevard Intersection



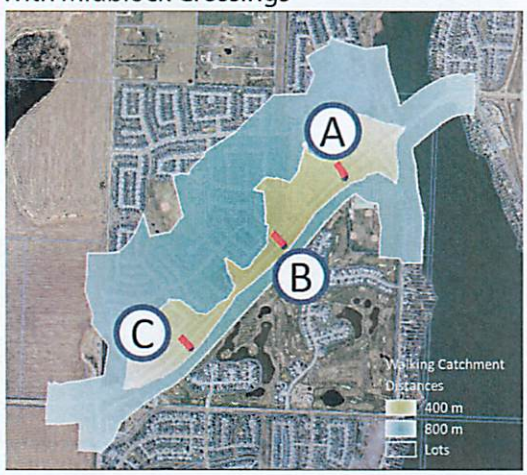
**Black arrows** denote existing lanes **Green arrows** denote reconfigured or new lanes

Multilane Roundabout

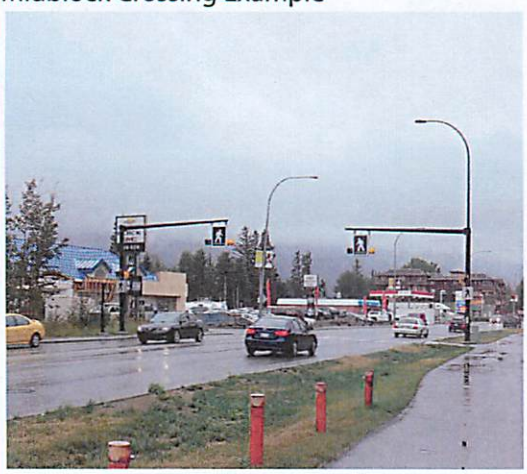
The circle represents the approximate extents of the type of roundabout that would be required here. It does not include pedestrian or cyclist facilities.

Existing (Without Midblock Crossings


With Midblock Crossings




Midblock Crossing Example



## Central Corridor

Locating midblock crossings in optimal places along the corridor will improve the corridor's accessibility. Vital points along the corridor become within reasonable walking distance by a much larger portion of the residents by virtue of midblock crossings. The figures show optimal locations for future midblock crossings and assesses their effectiveness.

Based on the analysis, the three locations all increase the corridor's accessibility substantially. Together, they allow for more than double the amount of lots within a 10 minute walking time (800 m) to the corridor. These crossings would be located along the corridor where they can easily connect to existing or potential pathways or the street network. This would provide intuitive and direct walking and cycling trips.

| Midblock Crossing | Connection |
|---|---|
| A | At new right in, right out vehicular access link.<br>➢ Provides a shorter connection between the commercial centre and recreation centre. it would be located approximately as shown in the previous corridor segment section, Chestermere Station. |
| B | In the utility corridor right of way to connect to multiuse paths.<br>➢ No multiuse path currently exists that extends all the way to the corridor from the north. This midblock crossing would include providing a north-south multiuse pathway connection to the existing informal east-west path and to Windermere Drive |
| C | To the laneway adjacent to Springmere Road.<br>➢ Provides a connection from the corridor to the small park adjacent to Springmere Grove and would allow more direct connections between the community and Chestermere Plaza. |

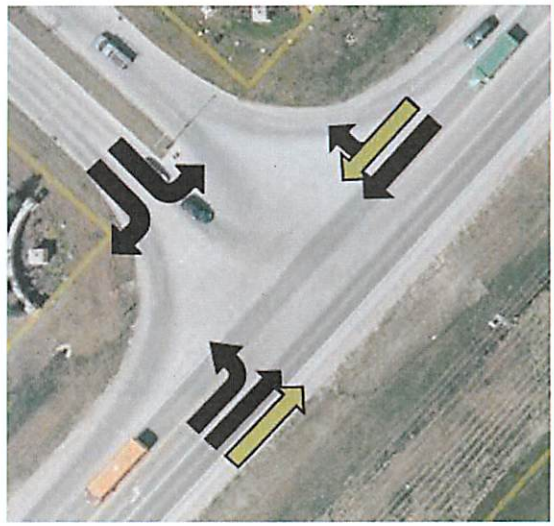
**Crossing A is the most recommended**. The existing land uses in this area have the largest trip generating potential and this crossing would therefore be the most utilized. Feedback received in the open house showed equal priority for crossings C and B. Crossing C captures a larger additional area within shorter walking distance and allows for a shorter connection to commercial uses. Thus, **Crossing C is preferred over Crossing B**.

**Option: Signalized Invermere Drive Intersection**

Westbound (southwest) Chestermere Boulevard currently has an exclusive right turn lane at the unsignalized Invermere Drive intersection. This movement is associated with low volumes now and in the future. Thus, the lane is highly underutilized and can be reconfigured to allow through movements as well.

This option is adaptable to changing conditions. An additional eastbound lane can be added on the south side of Chestermere Boulevard as volumes warrant. However, this would only be necessary in the longer term.

The preferred option is to **reconfigure the existing Invermere Drive Intersection and signalize as** vehicle volumes warrant.



**Black arrows** denote existing lanes **Green arrows** denote reconfigured or new lanes

**Option: Rainbow Road Intersection**

The multilane roundabout is a layered option – The roundabout itself and the potential for an integrated transit station.

The type of facility required to adequately facilitate vehicular flows would be a large, modern roundabout.

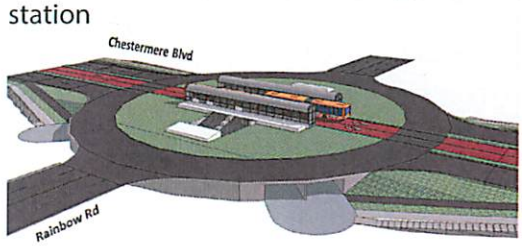
The existing intersection at Rainbow Road. currently has no northern leg, although this is under construction. Eastbound and westbound Chestermere Boulevard both provide exclusive right turn lanes. This lane capacity can be better utilized if these lanes allow through movements as well.

A comparative analysis was done between a roundabout and a reconfigured Rainbow Road. intersection option. From a traffic operations perspective, the two options were found to have similar performance. The roundabout performs better for north-south Rainbow Road. directions, but less well along Chestermere Boulevard. In either case, a modest level of congestion will need to be accepted so that the facility's performance and safety for active modes is not compromised and long term overreliance on single vehicle travel is reduced.

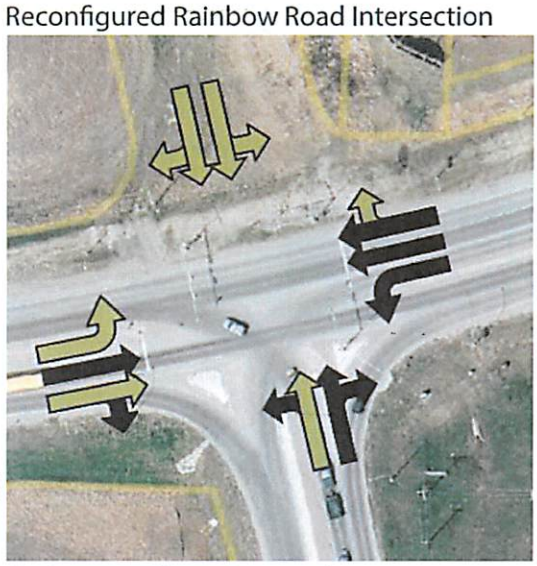
The roundabout option would require a larger right of way and additional land acquisition. Unless implemented as depicted, it would also impose inconvenient detours for pedestrians and cyclists as well as preclude the possibility of prioritizing transit effectively. The forecasted vehicular volumes are high and unbalanced. A signalized intersection can dynamically adapt to and manage changing flows and allows for signal coordination along the corridor.

The preferred option is to **reconfigure the existing Rainbow Road intersection**.

Multilane Roundabout (with integrated transit station




Reconfigured Rainbow Road Intersection



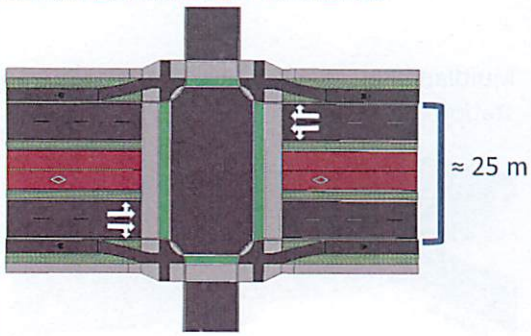
**Black arrows** denote existing lanes **Green arrows** denote reconfigured or new lanes


**Option: Right in, right out access to Chestermere Plaza east of Rainbow Road.**

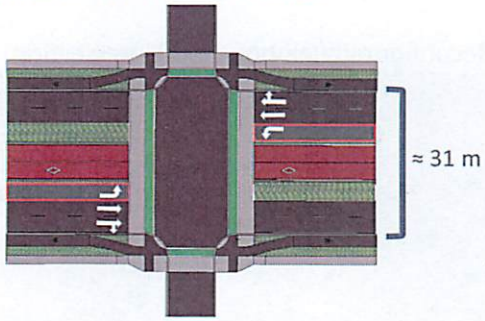
This option was generated in the later stages of the consultation process – through the open house. The access should be located approximately as shown here.

- Allows additional access to existing commercial uses in Chestermere Plaza and aligns with suggesting access spacing in the Calgary 2011 Interim Complete Streets Guide
- Supports new development in the plaza and along the boulevard
- Provides an alternative to Rainbow Road. intersection, as well as increases connectivity for active modes
- This is a preferred option but depends largely on other planned City facilities in the area and on concurrent development occurring to leverage the full benefits.

Without Exclusive Left Turn Lanes




With Exclusive Left Turn Lanes




## Development Centre

**Option: Collector Road Intersections**

Due to the large and unbalanced nature of traffic flows and the requirement for a transitway, these intersections are best suited for signalization. Their preferred configuration is analyzed here.

Implementing these intersections without exclusive left turn lanes imposes only marginal additional delay on left turning vehicles and through travel times would increase by about 5 seconds in either direction. However, the additional crossing distance reduces perceived pedestrian safety, and increases pedestrian crosswalk walking times and waiting times at signals. The preferred option for the new collector road intersections is Chestermere Boulevard with **two through lanes without exclusive left turn lanes.**

**Option(s): Additional local roads & multiple points of access**

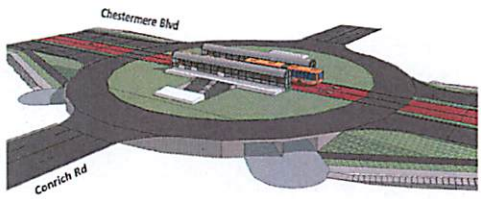
Typical Complete Streets guides suggest minimum intersection spacing of 300 m for a divided urban arterial. The distance between Conrich Road and Rainbow Road is approximately 1600 m. The Waterbridge Master Area Structure Plan has identified two new collector roads between these. Thus, three additional local roads would approximately adhere to this guideline. Given a median transitway, too many intersections would cause additional conflicts. Right in, right out access points at large lots and numerous midblock crossings will maintain adequate pedestrian, cyclist and vehicular access.

## Western Gateway

**Option: Conrich Road Intersection**

This option would be similar to that generated for Rainbow Road previously. Like the option for Rainbow Road, this would require a large roundabout with multiple lanes to effectively facilitate the forecasted traffic volumes.

Multilane Roundabout (with integrated transit station

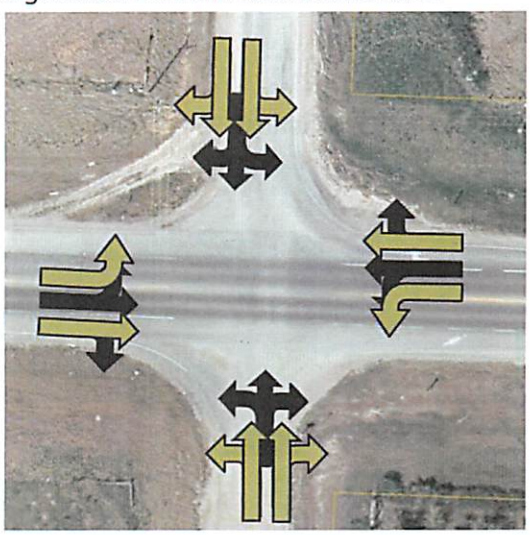



The existing intersection at Conrich Road would require signalization and additional infrastructure to manage the forecasted volumes. The configuration shown here is analyzed below.

Conrich Road is expected to become an important part of the local network as a boundary road. Its final cross section and implementation is subject to development pace and intensity on either side. The above reflect intersection configurations that align with the corridor vision.

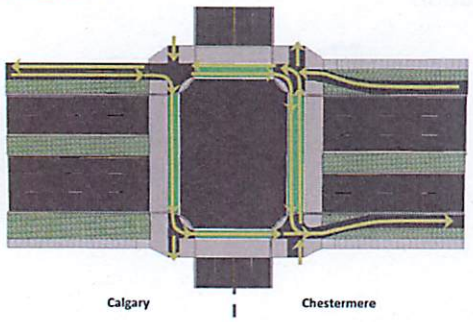
In either case, some congestion will occur. The evaluation used at Rainbow Road applies here as well. A roundabout here would convey a sense of arrival and a physical transition across the boundary between Calgary and Chestermere. Due to its large size, additional right of way would be required on either side of the boundary road. Thus, under current conditions the preferred option is a **signalized intersection at Conrich Road** Coordination between Chestermere and the City of Calgary will be required to ensure high design standard and aligned connections.

Signalized Conrich Road Intersection



**Black arrows** denote existing lanes **Green arrows** denote reconfigured or new lanes

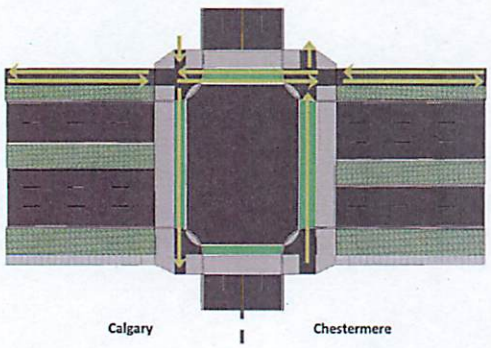
Multiuse Path to One Way Cycle Track Connection




**Option: Active Transportation Connection**

- ✓ Conveys a physical change in the streetscape
- ✓ Cyclists can take advantage of widened crossings on north and east legs of intersection to avoid having to wait for 2 signal phases to make connection
- ✓ Allows cyclists direct access to either side of street
- × More confusing routing through the intersection for cyclists going eastbound
- × Driver's may not expect some of the cyclists' movements

Multiuse Path to Multiuse Path Connection




- ✓ Shorter, more intuitive connection in both directions
- ✓ Connects seamlessly to the multiuse path planned in the Belvedere (Calgary) development on the north side of 17th Ave
- × Does not allow cyclist's access to the south side of the street
- × Typically, multiuse paths are set further back from intersections and cyclists are placed out of driver's attention field

**A Multiuse Path to One Way Cycle Track Connection is preferred.** This option provides a physical change to the street and acts as a gateway. It also provides the benefits stated above regarding cycling infrastructure. The connection here establishes the active transportation infrastructure for much of the remainder of the corridor eastward: continuity of the facilities is desired and this connection aligns with the recommended options specific to the cycling and walking modes as stated in the previous section.

## General Options

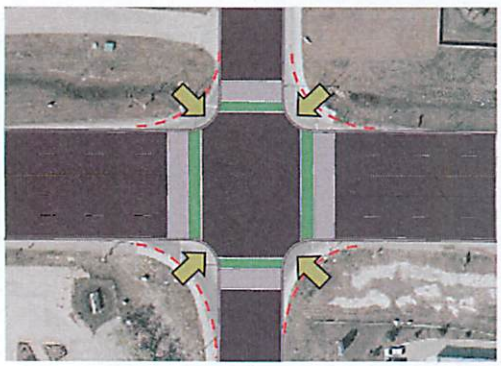
**Option: Lower speed limit**

Lower vehicular travel speeds increases safety for all users. A lower speed environment also reduces noise emissions and increases perceived safety. In addition, lower speeds allow passing car drivers to better observe the surrounding environment, including available opportunities for retail and recreational activities. This improves the local economy and the street level activity.

Travel times become less affected by corridor speeds as vehicular volumes increase and with reduced spacing of cross streets and intersections. The delays this causes are incurred regardless of speeds. Thus, a decrease in vehicular speeds will have a diminishing effect on travel time as they become lower given additional intersections along Chestermere Boulevard. This was analyzed and is summarized below:

| Target Speed (Speed Limit) | Average Vehicular Travel Times (sec) | |
|---|---|---|
| | From Conrich Road to Cove Drive | From Cove Drive to Conrich Road |
| 40 | 553 | 479 |
| 50 | 487 | 417 |
| 60 | 402 | 414 |

The preferred option is a single, continuous target **speed of 50 kph** along the boulevard. The difference in average travel times is minimal between a 50 kph and 60 kph speed limit especially in the non-peak direction. In addition, car drivers are familiar with this speed limit as it is typical for urban areas. This speed limit provides an acceptable balance between safety considerations and vehicular travel times.



**Option: Reduced Intersection Corner Radii**
This option has numerous benefits that align with the corridor vision and is recommended in Complete Streets guidelines.

- Natural design elements to reduce vehicular speeds and increase safety
- Decreases pedestrian and cyclist crossing distances and times
- Creates a more human-scaled public realm and urban street

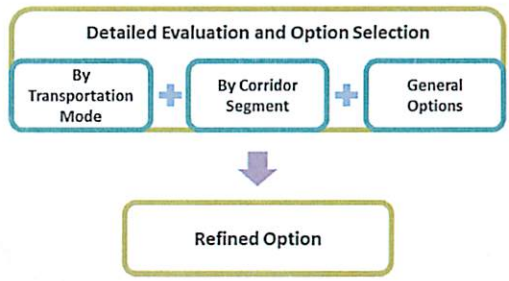
A simulation was run and results analyzed with reduced corner radii at all legs of every intersection along Chestermere Boulevard. It was found that the average travel time from Conrich Road to Cove Drive (westward) was slightly lower than when compared to travel times without this measure (at 50 kph as in the above). Travel times from Cove Drive to Conrich Road (eastward) increased only marginally.

**Reducing Intersection Corner Radii at existing intersections** and applying this treatment at new intersections is a preferred option.

**Option: Mixed Use, Commercial or Residential Development**
Most of the existing corridor right of way is sufficiently large enough to accommodate mixed, commercial or residential uses in addition to the boulevard's transportation elements. Three particularly opportune areas for development have been identified. They have been shown in previous sections, but are evaluated here. **All of these options are preferred.**

| Segment | Land Availability | Particular Area |
|---|---|---|
| Central Corridor | 60 m to 110 m ROW | Directly east of Rainbow Road and north of Chestermere Plaza. New commercial uses here would compliment existing commercial uses in the plaza. |
| Chestermere Station | 50 m to 65 m ROW | A 65 m cross-sectional ROW provides adequate space for development. This can be found in the segment approximately across from the Shoppers Drug Mart. Mixed, commercial or residential uses would fit here. |
| Eastern Gateway | 1.5 to 2.0 hectares | Realigning the on and off ramps would release land for redevelopment north and south of the corridor. Negotiation with the province would be required to obtain and repurpose the land for development. |

# PREFERRED OPTION REFINEMENT




This section combines the results of the above evaluation process and represents the **finalized preferred options** after some additional refinements were made to the evaluated options. The refinements that were required are noted and a succinct preferred option for each corridor segment with graphical representations is provided. This includes the refined cross section(s) as well as the refined options in plan view corresponding to major intersections or crossings. The following list addresses where major refinements were made and what these were.

- Pedestrian underpass adjacent to the lake in the Chestermere Station refined to an at-grade crossing for quicker implementation and to align with phasing of boulevard construction.
- Mini-medians to separate the transit lanes from vehicular lanes: requires slightly more right of way, less flexible for use from alternative modes or vehicles, but assures that private vehicles do not impede transit vehicles. This refinement also has more desirable aesthetic qualities.
- Addition of transit lanes to all applicable intersections.
- Where applicable, the cross sections conceptually show how residential or commercial development would integrate with the boulevard.
- The addition of an on-street parking lane to support access to new commercial development in the Central Corridor.
- Cross sections were assigned specific dimensions.
- Reducing intersection corner radii was a preferred option. All existing and new intersections have been refined to reflect this treatment.

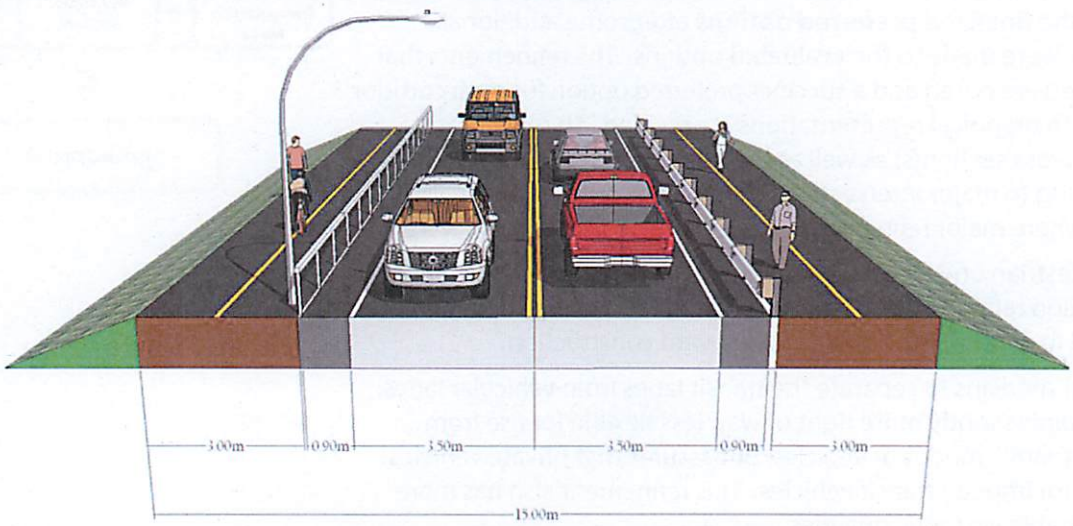
Recommended dimensions are shown for the cross section elements; however, these are subject to change in detailed design phases. Detailed designs as well as the following general details were beyond the scope of the study.

- The exact configurations and cross sections of cross streets (Conrich Road, Windermere Boulevard, etc.).
- Locations of transit stops and their integration with the surrounding infrastructure.
- Midblock crossing types – whether these are controlled or uncontrolled.
- Precise timing for the implementation of the options.
- Traffic micro-simulation validated on existing conditions.
- Detailed optimization and coordination of traffic lights along the entire corridor.

A brief description summarizing the detail provided in the previous sections is provided for each option. Additional details beyond the scope of the corridor plan specific to a segment or cross section are also listed where applicable.

## Eastern Gateway

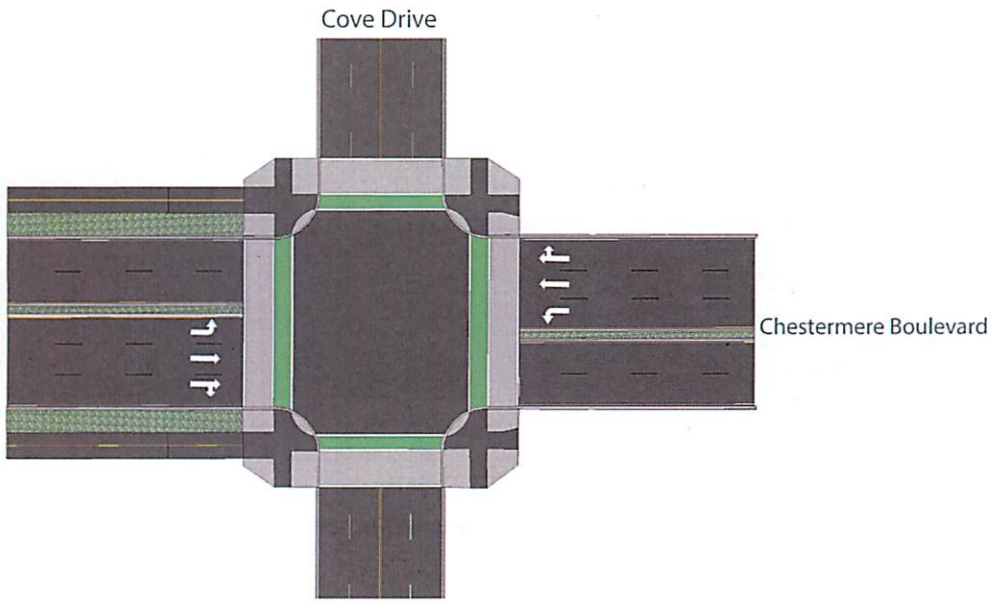
### Interim Refined Cross Section: Reconfigure Existing Right of Way




Reconfigure the existing right of way to provide a design that naturally tempers driving speeds and allows space to implement a multiuse path on the north side of the causeway.

Widening of the causeway may be warranted in the future, depending on travel demand. Also under consideration should be continued pedestrian and bicycle facilities on both sides of the roadway and a boardwalk structure on the north side.

## Refined Cove Drive Intersection




The existing intersection is reconfigured to have reduced approach lanes. The right turn lanes are combined with the through lanes for improved lane utilization and to reduce crossing distances and create a friendlier environment for other street users.

## Realigned Trans-Canada Highway Ramps

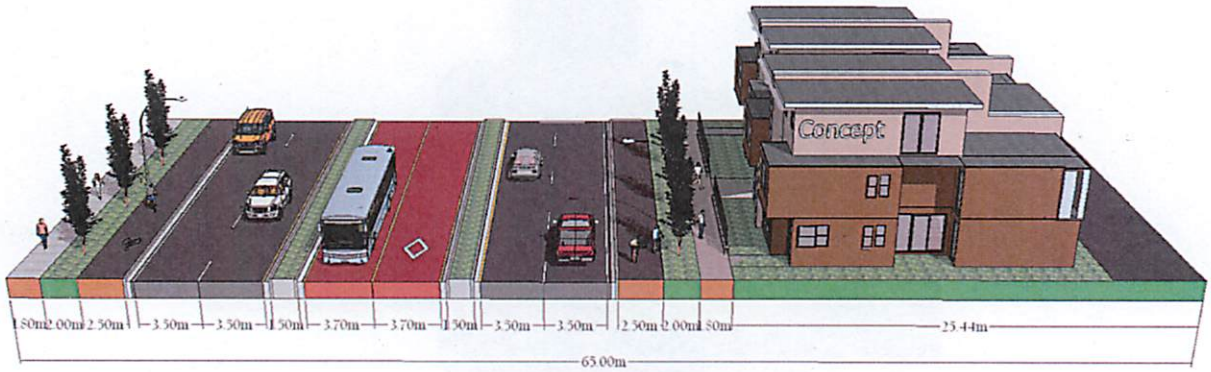
In the future with increased traffic volumes, realigning the on and off ramps will improve overall traffic flow and create a safer environment.

**Additonal Details Required in this Segment:**

- Further study on the full effects of realigning the Trans-Canada ramps with more precise data on vehicle movements.
- Multiuse path(s) connections past Cove Drive & East Chestermere Drive
- Timing of the ramp realignment. Future Alberta Transportation plans envision this interchange to be realigned in its entirety.

## Chestermere Station

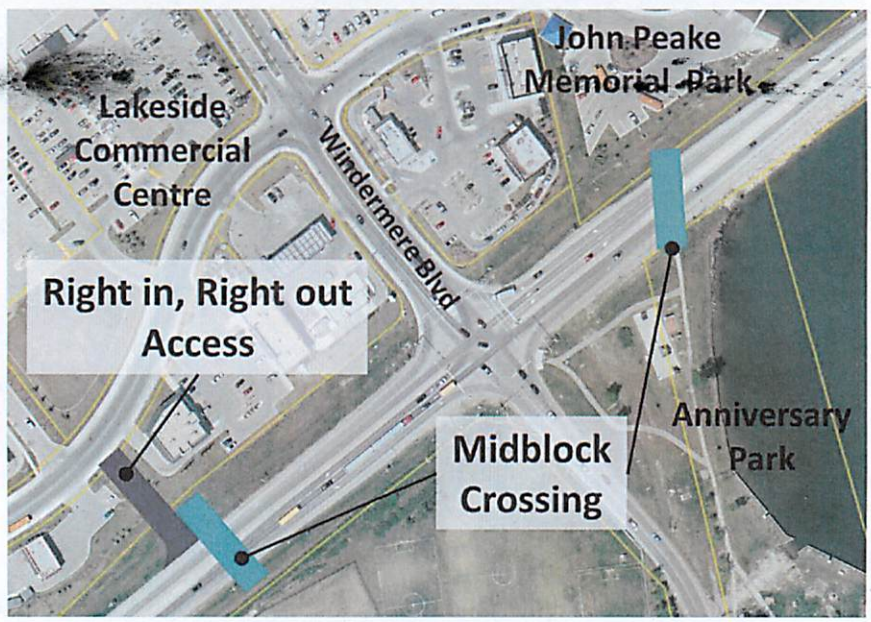
### Refined Cross Section




The following cross section components should be implemented in the preferred option:

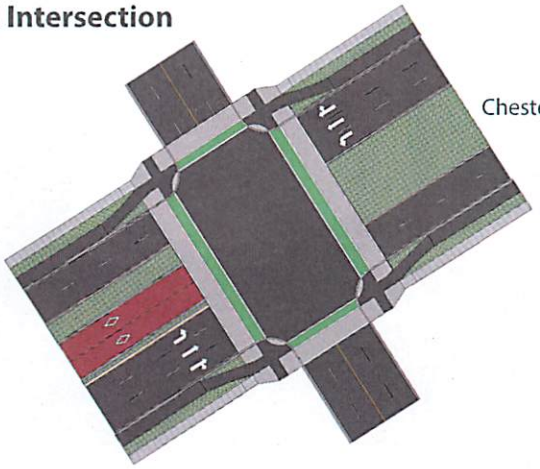
- Two travel lanes in each direction
- Two lane median transitway
- One way raised cycle tracks (on either side of the roadway)
- Sidewalks on both sides of the roadway
- Mixed land use on the south side of the roadway where space permits

### Refined Midblock Crossings and Access Locations



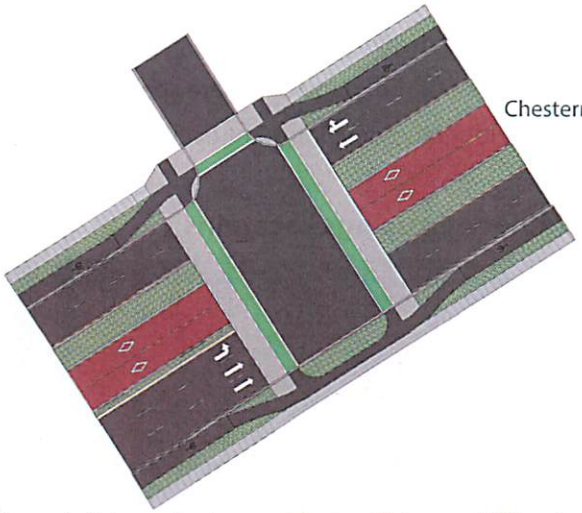

The right in, right out access will improve access to the commercial areas. The midblock street crossings provide increased active mode connectivity and facilitate more direct trips.

### Refined Windermere Boulevard Intersection




To better utilize the road and corridor right of way and create a safer environment for pedestrians, the preferred option is to reconfigure the existing vehicular lanes as depicted here. The transitway should extend into this section; however, it may terminate prior to the intersection depending on the location of stations (in the graphic, it is representative only).

### Refined Marina Drive Intersection



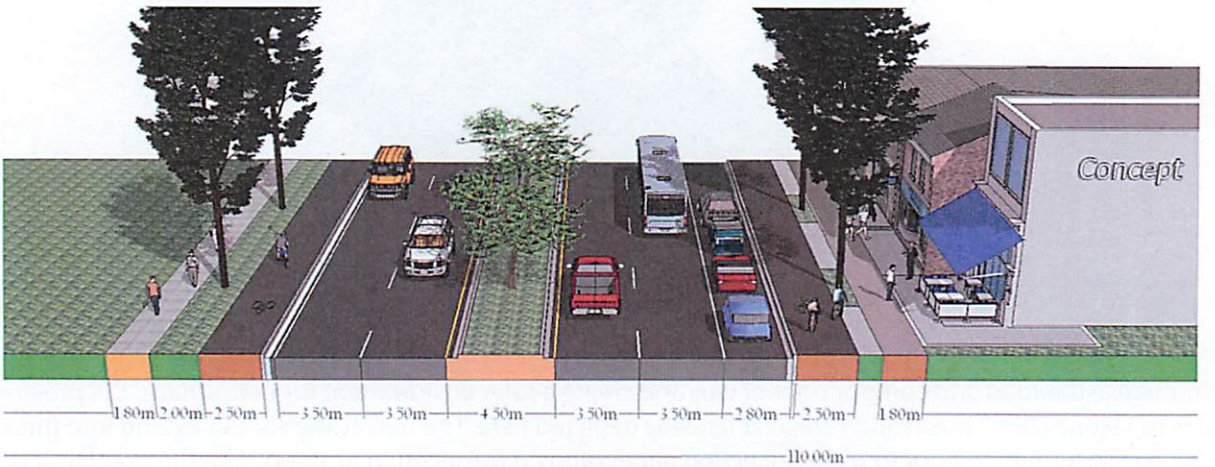

The signalized intersection option allows left turns between Marina Drive and Chestermere Boulevard. The exclusive left turn lane will encourage a more distributed traffic pattern in the segment.

**Additional Details Required in this Segment:**

- The transitway should extend to Chestermere Station as this is a key destination. The study does not detail how and where exactly the transitway should terminate - transit vehicles may continue into the Eastern Gateway segment within mixed traffic.
- The midblock crossing adjacent to the lake connecting Anniversary and John Peak Memorial should align with future pathways in Anniversary Park currently under construction. In the long term, this crossing should become an underpass – those details are not provided here.

# Central Corridor

## Refined Cross Section



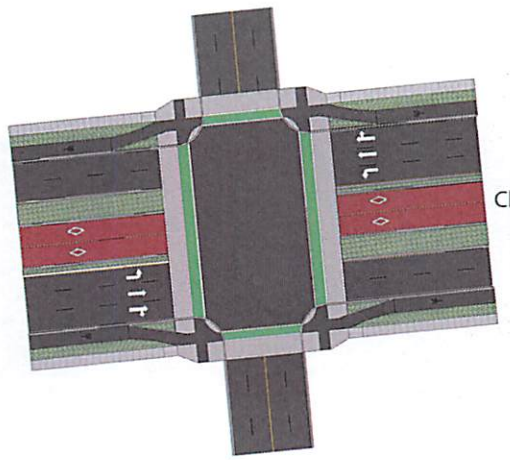

The following cross section components should be implemented in the preferred option:

- Two travel lanes in each direction
- Two lane median transitway
- One way raised cycle tracks (on either side of the roadway)
- Sidewalks on both sides of the roadway
- Mixed land use on the south side of the roadway where space permits
- On-street parking where corridor land development occurs

## Refined Central Corridor Midblock Crossings Locations

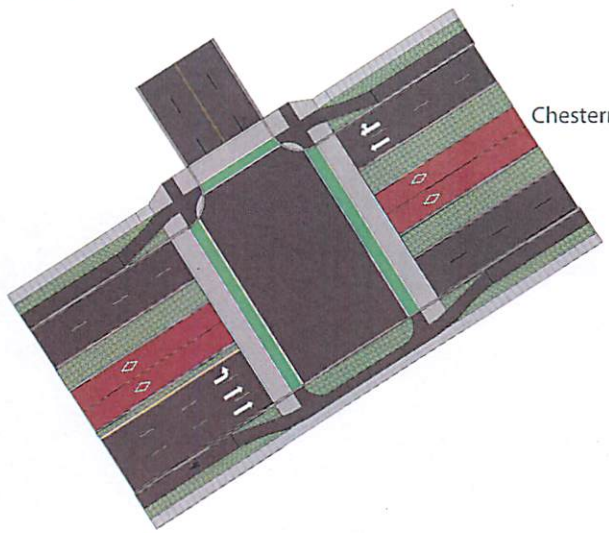

The midblock crossings should be located approximately as shown to facilitate connections across and along the corridor. They will connect to sidewalk and cycling facilities as the corridor develops and the cross section is implemented.

### Refined Rainbow Road Intersection




The Rainbow Road signalized intersection option improves lane utilization and capacity. The removal of exclusive right turn lanes and smaller corners creates a safer and friendlier environment for all street users.

### Refined Invermere Drive Intersection



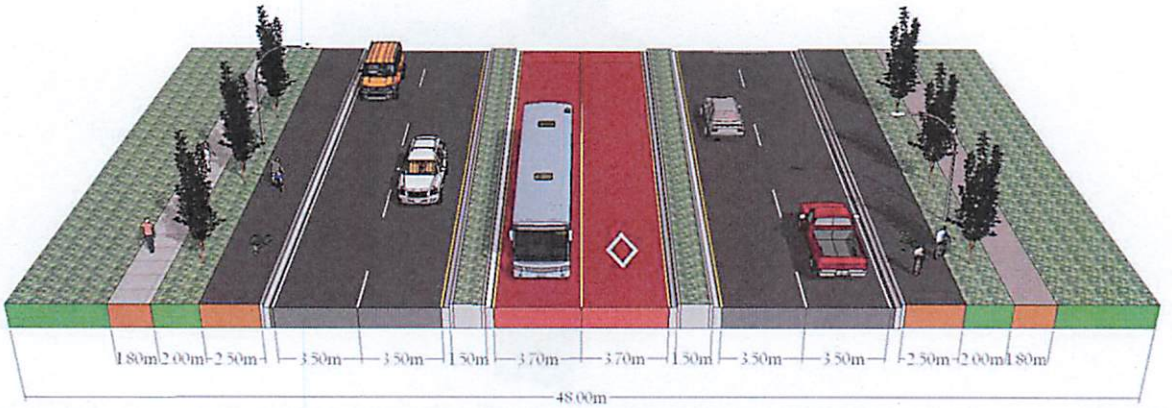

The refined Invermere Drive option is a signalized intersection that reconfigures the lanes to better utilized lane capacities. This intersection should also be implemented with smaller corner radii.

**Additional Details Required in this Segment:**

- On-street parking is recommended in this section on the premise that increased commercial development occurs adjacent to the existing Chestermere Plaza. The length and extent of the parking lane will be determined by development.
- The types of midblock crossings, as these will be determined through additional analysis as warranted.

# Development Centre

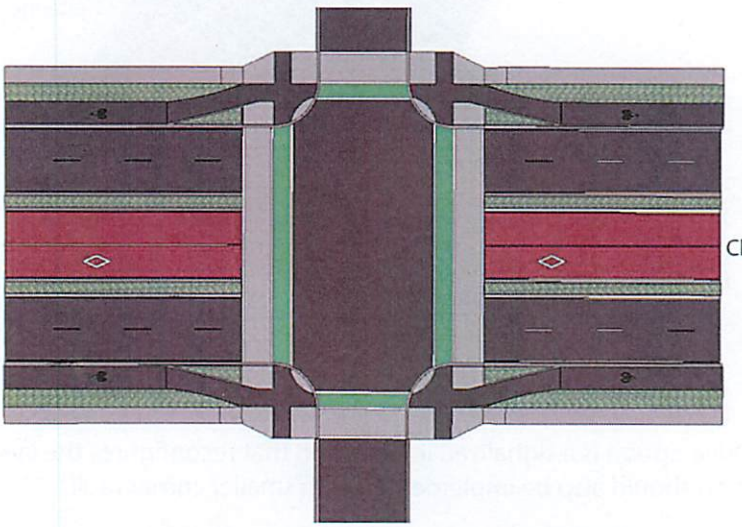
## Refined Cross Section




The following cross section components should be implemented in the preferred option:

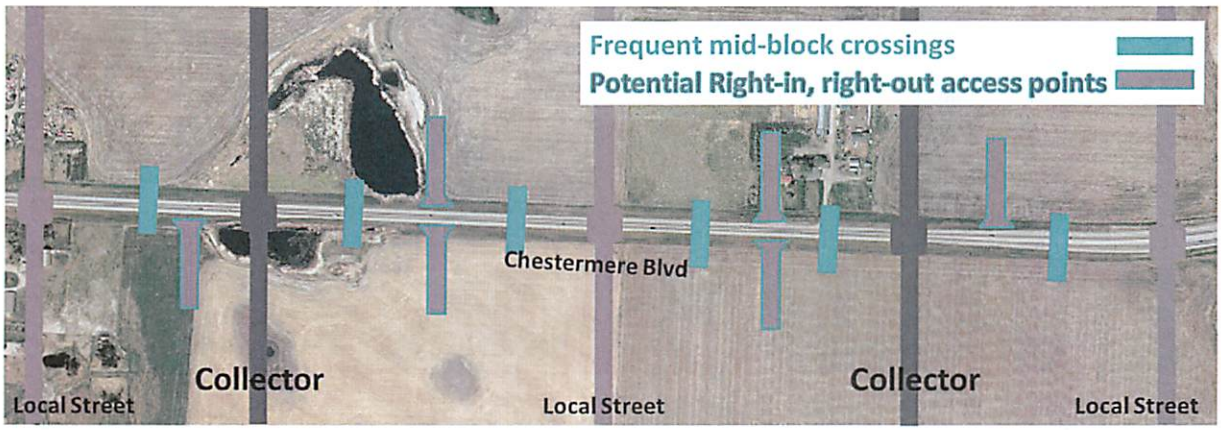
- Two travel lanes in each direction
- Two lane median transitway
- One way raised cycle tracks (on either side of the roadway)
- Sidewalks on both sides of the roadway

## Refined Collector Road Intersections




The collector intersections should be signalized but should not be implemented with exclusive turn lanes

## Refined General Local Access

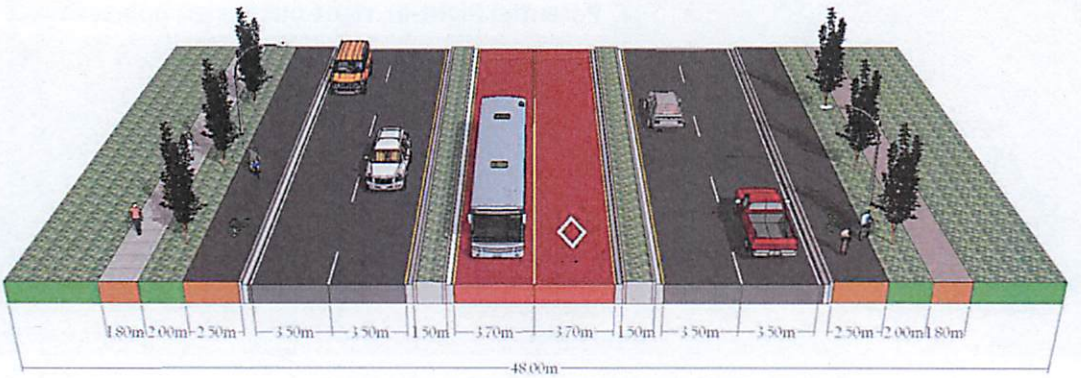



**Additional Details Required in this Segment:**

- The exact locations of the local streets and collectors as well as the amount and locations of additional large lot access points and midblock crossings will be determined in conjunction with development.
- The intersection configuration and control type for the additional local roads.

# Western Gateway

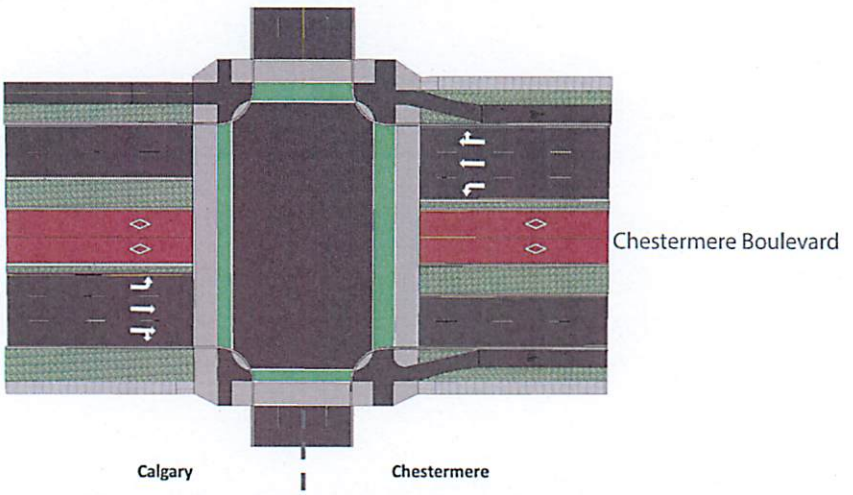
## Refined Cross Section




The following cross section components should be implemented in the preferred option:

- Two travel lanes in each direction
- Two lane median transitway
- One way raised cycle tracks (on either side of the roadway)
- Sidewalks on both sides of the roadway

## Refined Conrich Road Intersection




The preferred option is a signalized intersection at Conrich Road with small corner radii. The intersection will require treatments that allow safe, convenient and intuitive connections for active modes between the multiuse path and the cycle tracks and sidewalks.

**Additional Details Required in this Segment:**

- The nature and final cross section of Conrich Road will be determined as necessitated by adjacent development

## Outstanding Options

Throughout the evaluation process, options were filtered and ultimately selected based on a static set of underlying conditions – such as the forecasted traffic volumes, access requirements, right of way availability and general community desires. As time passes and the plan progresses into implementation stages, these conditions are subject to change and some of the conceptual options generated in the plan can be revisited. These options and applicable corridor location are listed below, as well as the condition(s) the options are contingent on.

| Option | Applicable Segment | Condition(s) |
|---|---|---|
| Roundabouts | Western Gateway<br>Central Corridor<br>Eastern Gateway<br>Chestermere Station | Additional right of way may need to be acquired in most cases as these would be large facilities, and cross-jurisdictional coordination would be required for this option at Rainbow Road In addition, a thorough understanding and study of the desired objectives these facilities are intended to achieve is recommended in each case where they are being further considered. |
| Integrated transit stations within roundabouts | Western Gateway<br>Central Corridor | If roundabouts are to be constructed at any of the main intersections in the future, they will have to accommodate transit lanes. Naturally, they provide an opportunity to accommodate an integrated multimodal station. This concept will stand poised to efficiently accommodate and encourage the increasing trend toward intermodal trips. |
| Pedestrian and cyclist underpass adjacent to the lake | Chestermere Station | This option is dependent on construction phasing of the boulevard. It should be revisited once the causeway and bridge are to be widened. |
| Boardwalk on north side of Causeway and Bridge | Eastern Gateway | This option should be pursued once the causeway and bridge are to be widened. The interim solution for the bridge has space constraints and cannot accommodate a boardwalk. |
| Redevelopment of land in areas of existing on and off ramps | Eastern Gateway | This option can only be realized once the Trans-Canada ramps are realigned. |
| Multiuse path along north side of Boulevard | All segments | The one-way raised cycle tracks as the preferred option are most effective in tandem with development fronting onto the Boulevard. A multiuse path would suffice as an interim option only, given the prerequisite. If this type of development does not occur, this option should be pursued in lieu of the one way raised cycle tracks in the long-term as well. |
| On-street parking | Development Centre<br>Central Corridor<br>Chestermere Station | This option is strongly linked with having development front onto the boulevard. |
| Right in, right out access to Chestermere Plaza east of Rainbow Road | Central Corridor | Would be more beneficial if commercial activity increases in Chestermere Plaza. Right of way would need to be obtained for an additional link from Chestermere Boulevard to Merganser Drive east of Rainbow Road |

## Implementation

The following chart provides a high-level guide for effective implementation of the preferred options. The exact timing of specific options depends on additional factors not highlighted below. Traffic volumes should not be the sole determinant for initiating implementation. Streetscape improvements and supporting alternative modes should also be considered. The requisite cross sectional elements from the ultimate preferred options can be selected to support these modes in the short-term before full implementation. For example, adding sidewalks to the existing corridor in the Central Corridor segment. Distinguishing streetscape and landscaping features should be established and identified in Outline Plans and Subdivisions, along with any re-development or upgrade plans for along the Corridor. Future Area Structure Plans or Redevelopment Plans should also be required to apply and support the recommendations and options, or be used to initiate implementation of the options in the concerned areas.

**Monitor Development & Traffic Volumes**

**Consider Multimodal and Streetscape Improvements**

**Future Area Structure Plans**
- Apply and drive Corridor Plan's recommendations and options
- Approval contingent on adherence to Corridor Plan

**Apply interim option(s) and reconfigure existing intersections as suggested if required in the short-term**
- Implement the Interim **Reconfigured Causeway Option** to improve active mode options
- Make all 2009 TMP improvements to signal timings
- Existing Windermere Blvd, Invermere Dr, Rainbow Rd intersections can be reconfigured with minimal construction

**Monitor Development & Traffic Volumes**

**Monitor Regional Transit Plans**

**Implement Cove Dr Intersection Option in Tandem with Realignment of the Trans Canada Hwy Ramps**
- The Cove Dr intersection option requires that the ramps are realigned so that vehicular speeds harmonize and full benefits of the intersection improvements are realized

Once the Causeway cross section has been reconfigured and the Trans-Canada ramps realigned, the speed limits in the Eastern Gateway Segment should be reduced to the preferred 50 kph.

**Initiate Implementation of Preferred Options**

**Implementation of Ultimate Preferred Options can be based on:**
- Multimodal Aspirations
- Streetscape Improvements
- Regional Transit Aspirations
- Traffic volumes
- Supporting Development

**Regional Transit Plans**
- If 17th Ave Transitway has been implemented or is imminent, construct preferred options with transit lanes
- If 17th Ave Transitway implementation has not commenced, construct preferred options with a preserved right of way for future transit lanes.
- Identify final station locations

**Implement Preferred Options in Full**
- Re-evaluate **outstanding options** if conditions have changed to meet prerequisites
- Retain intersection lane configurations. Reconfigure lanes of remaining intersections to reflect preferred options.
- Preserve right of way for adjacent developments in existing built-up areas

**Finalize Corridor Vision**
- Lower speed limits to the recommended option of 50 kph
- Continue to support development adjacent to the corridor and in remnant right of way
- Continue monitoring and supporting regional transit plans if not yet implemented

# CONCLUSION AND RECOMMENDATIONS

The final refined options shown above were developed in light of the guiding principles and align with the overall corridor vision. The options recommended in this plan will effectively create an urban boulevard that is safe and facilitates all modes. It will compliment the unique character of Chestermere and lend it a sense of place and belonging while sustaining further City development.

The options suggested both support and anticipate adjacent development. Specifically, the options dovetail with development fronting onto the corridor and are intended to provide quick, direct access for users of all transportation modes. In addition, the anticipated development will serve to naturally temper vehicular speeds due to the increased activity and narrowed view fields. Without adjacent development occurring, the intended benefits of the recommended options will not materialize to the same degree. Thus, it is strongly recommended that development that fronts onto (or is at least adjacent to) the boulevard is supported, especially in destination corridor segments.

## Summary of Main Recommendations:

- Most of the corridor to be an urban boulevard with 4 lanes divided.
- Median bidirectional transit lanes (transitway) from Conrich Road to Chestermere Station.
- One way raised cycle tracks on either side of boulevard in the direction of traffic flow from Conrich Road approximately to the Causeway.
- Sidewalks on both sides of the boulevard from Conrich Road approximately to the Causeway.
- The Causeway to have a short-term interim option and long-term ultimate option:
  - Existing lanes are reconfigured to allow space for a multiuse path on both sides.
  - Causeway and bridge are widened for 4 lanes and dual multiuse paths.
- Realign the Trans-Canada Hwy on and off ramps in the Eastern Gateway.
- Signalization of intersections along corridor:
  - Existing intersection roadway surfaces are large enough so that reconfiguration can occur in the short term to make optimal use of space and provide optimal capacity;
  - Intersection lane configurations retained in long term (the number of vehicular approach lanes does not increase) and reduced corner radii are provided once the divided roadway and transitway is implemented.

- Midblock crossings to be provided in existing built-up areas as well as in areas of new development.
- Additional right-in, right-out access roads.
- Speed limit lowered to 50 kph at full corridor build out.
- Support development fronting onto the corridor, particularly where corridor remnant right of way can be utilized, and in corridor segments that will function as destinations.
- Re-evaluate outstanding options where and when conditions are met.

# APPENDIX A: CONSULTATION SUMMARY

In all, 11 completed feedback forms were received; 10 of these at the event itself and 1 was later sent via email. During the event held on April 30, 2014, it was clear that there was mixed support for some of the concepts and options being shown. The following provides a summary of the general feedback received and the degree to which people agreed with certain options or concepts and the plan as a whole.

## Ideas for Consideration

A significant aspect of the corridor plan is determining a target speed- the speed limit which will be posted and for which the corridor is to be designed. The current speed limit of Chestermere Boulevard is 60 kph in the east and 80 kph in the western portion. Preferred posted speed limits were ranked in the following order:

- 60 kph (6 respondents)
- 50 kph (3 respondents)
- 40 kph and Other (80 kph) each had one respondent in favour

One objective is to make the corridor safer and friendlier for alternative modes of travel. To better understand what kind of infrastructure would encourage more cyclists, four types of typical cycling infrastructure were presented. These were felt to encourage cycling best in the following order:

- Two-way cycle track on one side of the street
- Bike lanes in each direction
- One-way cycle track on each side of the street
- Multiuse path

## Western Gateway

As Chestermere Boulevard is developed, it should provide for the City 's needs while complementing Calgary's 17th Ave plans: The majority of respondents either **agreed** or **strongly agreed** that there is a need to clearly signify a point of transition between Chestermere and Calgary. Some were **neutral** on the question while one response each for **disagree** and **strongly disagree** was stated.

## Development Centre

The Development Centre segment is to function as a destination in the future, allowing for access and strong active mode connections. Street crossings for these modes are made easier when distances are shorter; not providing an exclusive left turn lane for vehicles can accomplish this in part, but can increase vehicular delay. Respondents were thus asked how agreeable accepting a modest level of increased delay would be to improve crossing distances for active modes.

There was moderate support for this measure, with no respondents **strongly agreeing** but 1/3 **agreeing**. Some were **neutral** with another 1/3 **disagreeing** and one respondent **strongly disagreeing.**

Transit will play a vital role along the corridor in the future. The feedback form asked which Bus Rapid Transit (BRT) configuration would be preferable:

- One Lane Reversible BRT
- Two Lane Median BRT
- Neither

In general, a Two Lane Median BRT was the most preferred with double the respondents choosing this as compared to a One Lane Median BRT. No respondents stated they would prefer seeing neither. When asked to describe why a particular configuration was preferred, most were positive and corresponded with a preference for the Two Lane Median BRT. They generally stated that the physical size [two lanes] showed a commitment to public transportation and that more options would reduce congestion. However, one respondent was doubtful that the City would ever generate high transit ridership.

## Central Corridor

To mitigate the barrier effects that the street imposes on pedestrians trying to cross it, three locations for midblock crossings were identified. The respondents were asked which one they felt was of greatest priority.

- Location A (near the recreation centre)
- Location B (at the utility corridor)
- Location C (at lane near Springmere Close)

Location B & C were equally favoured and slightly more so than Location A.

The Central Corridor has sufficient right of way in some locations to allow redevelopment with the addition of retail and/or commercial activity fronting the street. Respondents were asked if they would like to see more of this along the corridor. They responded with their preferences in the following order:

- No [they would not like to see more retail/commercial activity along the corridor]
- Yes, but not with the activity fronting onto the street
- Yes
- Yes, but not with on-street parking

A roundabout concept was shown for this section as well, at Rainbow Road. The roundabout would double as a station for future BRT that is integrated well with station access modes. Two questions were asked regarding the concept – whether it was felt to be feasible and whether the respondents would use it.

The majority of respondents felt it was feasible; however, that did not correspond with whether they would use it or not. Half the respondents stated they would use it and the other half stated they would not.

## Chestermere Station

For this section, two different cross sections were shown and the respondents with 5 unique elements each. They were asked to rank their preferred elements. The following shows how each cross section's elements were ranked from top to bottom:

| S1 | S2 |
|---|---|
| Wide, leafy street median | Sidewalks on both sides of the street |
| Multiuse Path | Median transit right-of-way (e.g. true BRT) |
| Wide south sidewalk | Transit right-of-way median separation |
| Transit in mixed traffic | Raised one-way cycle tracks |
| Residential units on south side | Wide, and open right-of-way |

A **wide, leafy street median** was decisively ranked as the most preferred element overall. **Multiuse paths** and **sidewalks on both sides of the street** were also ranked highly. The least preferred element overall was having **residential units on the south side**.

## Eastern Gateway

In the future, the existing Causeway to cross the lake will require improvement. However, this may be achieved without widening it in the interim. Right of way exists to allow for a reconfiguration to make crossing it more attractive, especially for active transportation modes. An option for a widened Causeway cross section was also presented. Respondents were thus asked to state which they preferred for active modes, and which they preferred overall. In both cases, a **widened causeway** was slightly more preferred over reconfiguring the existing facilities. In general, less responses were given for active mode preferences.

Cove Drive intersection currently has large turning radii and its operation is affected by vehicles coming off of the Trans-Canada Hwy off ramps. Respondents were asked if they had any concerns with how the intersection functions from the perspective of different modes.

Most respondents either did not have any concerns or stated that they did not use the intersection in general. Two respondents had concerns from the perspective of a **car driver**, stating that the intersection was large and undefined and that traffic was moving through the intersection too fast. One respondent from the perspective of a **pedestrian or cyclists** was concerned that right turning vehicles are unaware [of users crossing the intersection].

## Additional Comments about the Study

Respondents were able to use the feedback form to stated any other outstanding concerns or given their impressions overall about the study. These are summarized here:

- One concern was that speed limits not be lowered at all as Chestermere Boulevard is a main commuter roadway.
- Several concerns were raised with large commercial vehicles and that these be discouraged or banned from Chestermere Boulevard. It was also heard throughout the open house event that freight vehicles exit off of the Trans-Canada ramps at excessive speeds and produce a lot of noise.
- Improved lighting along the corridor.
- Some comments suggested that the sooner the improvements would be implemented the better.
- Roundabouts along the corridor were supported.
- Increased safety and facilities for pedestrians and cyclists both along the corridor and to cross it. It was felt to be unsafe in its existing state.
- Enhanced options for vehicular left turns onto the boulevard.

## Comments Collected through Social Media

As well as obtaining input via the feedback forms and the open house event, the presentation boards used were later posted on the social networking website, Facebook. These comments (19 in all) were collected and are summarized here:

- A few negative comments toward lowering speed limits on the Boulevard were received. However, some felt that lowering speed limits from the current 80 kph was reasonable, although there was no direct support for limits as low as 40 kph.
- Some comments were given regarding cycling infrastructure. There was some doubt as to how much they would be used in winter time. Another comment explicitly expressed that they would not be used.
- "Michigan Lefts" (where a right turn is followed by a U-turn to make a left) were suggested as something to try.
- One commenter suggested that the plan be directly voted on.
- Several comments expressed support for grade separation of pedestrian crossings, specifically between Anniversary Park and John Peake Memorial Park. One commenter felt that all intersections should have pedestrians completely separated from vehicles.
- There was support for pedestrian infrastructure on the north side of the bridge to connect Founders Point Park and John Peak Memorial Park.

- Concern expressed toward large commercial vehicles going through the City .
- There was positive feedback given on the fact that the plan aims to reduce the barrier effect currently caused by Chestermere Boulevard in its existing form.
- A roundabout at Windermere Boulevard and Chestermere Boulevard was requested.

## Letter of Support

Following the completion of the open house, the project team received a letter from the president of the Chestermere Chamber of Commerce. The Chamber of Commerce represents the interests of the Chestermere business community and is a vital proponent of a vibrant local economy. The comments received expressed large support for the options presented at the open house and for the plan in general. The plan aims to increase access to local businesses directly and also create a slower speed environment where commercial opportunities become more apparent to a passerby. The comments were supportive of this and helped to directly create an option that had theretofore not been considered – improving access to Chestermere Plaza from Chestermere Boulevard via a new access road.

# APPENDIX B - TRANS-CANADA RAMPS SYNCHRO REPORTS