June 1, 2019

Ms. Susan McRory
Chair, Municipal Government Board
2nd Floor, Summerside Business Centre
1229 91st St. SW
Edmonton, AB

Dear Ms. McRory,

RE: Annexation of Territory from Foothills County by the Town of Black Diamond

The Town of Black Diamond and Foothills County are pleased to submit five copies of an annexation application concerning approximately 812 acres of land within Foothills County to be annexed into the Town of Black Diamond. We understand the fee for this annexation is $600 and a cheque for this amount is attached, payable to the Minister of Finance. We request that the Municipal Government Board proceed in processing this annexation application.

By way of this letter Foothills County and the Town of Black Diamond endorse the Annexation Report. In addition, a Certificate, signed by the Town, is included which states that the report accurately reflects the results of the negotiations. There has been complete agreement on the annexation between Foothills County and the Town of Black Diamond, and an Annexation Agreement has been signed by both municipalities.

The annexation proposal has been through a thorough public engagement process, and the municipalities have worked to address the concerns of affected landowners and the general public.

The Annexation Application comprises a Report that outlines the rationale for the annexation and describes the negotiations, a Certificate stating that the Report accurately reflects the results of the negotiations, an Annexation Agreement that contains the terms agreed to through the negotiation process, and various Appendices containing relevant plans, and public consultation materials.

Should you have any questions please contact Sharlene Brown, CAO, Town of Black Diamond at 403-933-4348 or sharleneb@town.blackdiamond.ab.ca

Sincerely,

Sharlene Brown
CAO, Town of Black Diamond

Harry Riva-Cambrin
CAO, Foothills County

cc:

Kaycee Madu, Minister of Municipal Affairs
R.J. Sigurdson, MLA for Highwood
John Barlow, MP for Foothills
Larry Spilak, Reeve, Municipal District of Foothills No. 31
Todd Sharpe, CAO, Town of Turner Valley
Deb Rhodes, Vice President Corporate Services, Alberta Health Services
Darren Davidson, Regional Director, Alberta Transportation, South Region
John Bailey, Superintendent of Schools Foothills, School Division No. 31
Scott Morrison, Superintendent, Christ the Redeemer Catholic Schools
Harry Riva Cambrin, CAO, Sheep River Regional Utility Corporation
Laurie McCreary-Burke, Secretary Treasurer, Westend Regional Sewage Service Commission
Merlin MacNaughton, Stakeholder Relations Manager, Fortis Alberta Inc.
Jason Sharpe, Sr. Vice President and General Manager, ATCO Pipelines Head Office
Mike Shaw, Vice President, Calgary Region Operations, ATCO Gas

EXECUTIVE SUMMARY

The Town of Black Diamond wishes to proceed with the annexation initiated in the fall of 2017, and intends for the following report to become the Town's application for annexation. The purpose of this report is to provide information to the Municipal Government Board based on the requirements of the *Annexation Application Checklist* provided by the Board, and to demonstrate full compliance with the *Annexation Principles*.

The preparation of this report has considered the following information:

- Municipal Government Board Annexation Bulletin No. 1-2005
- Municipal Government Board Annexation Bulletin No. 2-2008
- Annexation Principles (Municipal Government Board Order 123-06)

Over the past decade, the Town of Black Diamond has grown steadily, and the remaining supply of developable land has been reduced to less than 10 years of growth. In 2016 Black Diamond, in conjunction with the Town of Turner Valley, prepared a *Joint Growth Strategy* that investigated land use and infrastructure servicing necessary to support the growth of the Towns over a 60 year horizon. In October 2017 Black Diamond initiated annexation negotiations with Foothills County by giving notice of its intention to annex. Over the past year and a half the Town and the County have conducted productive negotiations and have consulted with landowners, stakeholders, and the general public.

The enclosed annexation report represents the culmination of years of effort, focused on Black Diamond needs to remain a sustainable, prosperous, and complete community. By bringing additional lands into the Town's boundaries, Council, staff and the citizens of Black Diamond will have confidence in the direction that growth will take over the coming decades.

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Part 1 Introduction

The Town of Black Diamond is a vibrant and growing town located approximately 45 km southwest of the City of Calgary. The Town is located on the eastern edge of the foothills, along the banks of the Sheep River, where the Cowboy Trial (Hwy 22) is intersected by Hwy 7. There are many facets to the Town – it functions as a local service center to the surrounding agricultural community, providing schools, a hospital, recreational facilities, health providers, banking, professional services, food, entertainment, and retail outlets; it is a retirement community for young and active retirees; a home for young families; and a distant bedroom community to the ever-expanding city of Calgary. As the community has grown, the supply of lands available for development has diminished, and developable lands within the Town boundary now represent approximately 5 to 10 years of growth capacity. In order to plan for and accommodate the predicted growth of the community over the next 50 years, Black Diamond needs to annex lands from Foothills County.

Part 2 Purpose Statement

The purpose of this annexation report is to act as the Town's application for annexation, and to provide sufficient rationale for the annexation. The lands that have been identified for annexation are seen to be most suitable for the growth and expansion of Black Diamond over the next 50 years.

Part 3 Annexation Negotiations

The Town issued its Notice of Intention to Annex in October 2017 (Appendix O), and the Town and County Councils each appointed Council members to the 'Black Diamond Annexation Negotiation Committee' shortly thereafter. The Town and County each adopted a Terms of Reference outlining the purpose, composition, and function for the Committee in March 2018. Between February 2018 and April 2019 the Committee met 8 times (see Appendix N for Committee meeting minutes) to negotiate the annexation process, including the public consultation process, annexation area, boundary roads, and the terms and conditions of the annexation agreement. Upon reaching consensus on annexation agreement, the committee made a recommendation to the respective Councils that the annexation agreement be approved.

The committee engaged in productive and respectful discussions throughout the process, and members from both municipalities remarked at the conclusion of negotiations that the process was positive.

Part 3 Proposed Annexation Area and Boundary Roads

The Annexation Area Map shown in **Figure 1** identifies all of the lands that are proposed to be annexed and provides an overview of the annexation area with legal descriptions and right-of-way plans noted. **Figure 1** is coded with numeric references for each of the lands, with corresponding legal descriptions provided in the Annexation Area Map Index in **Table 1**.

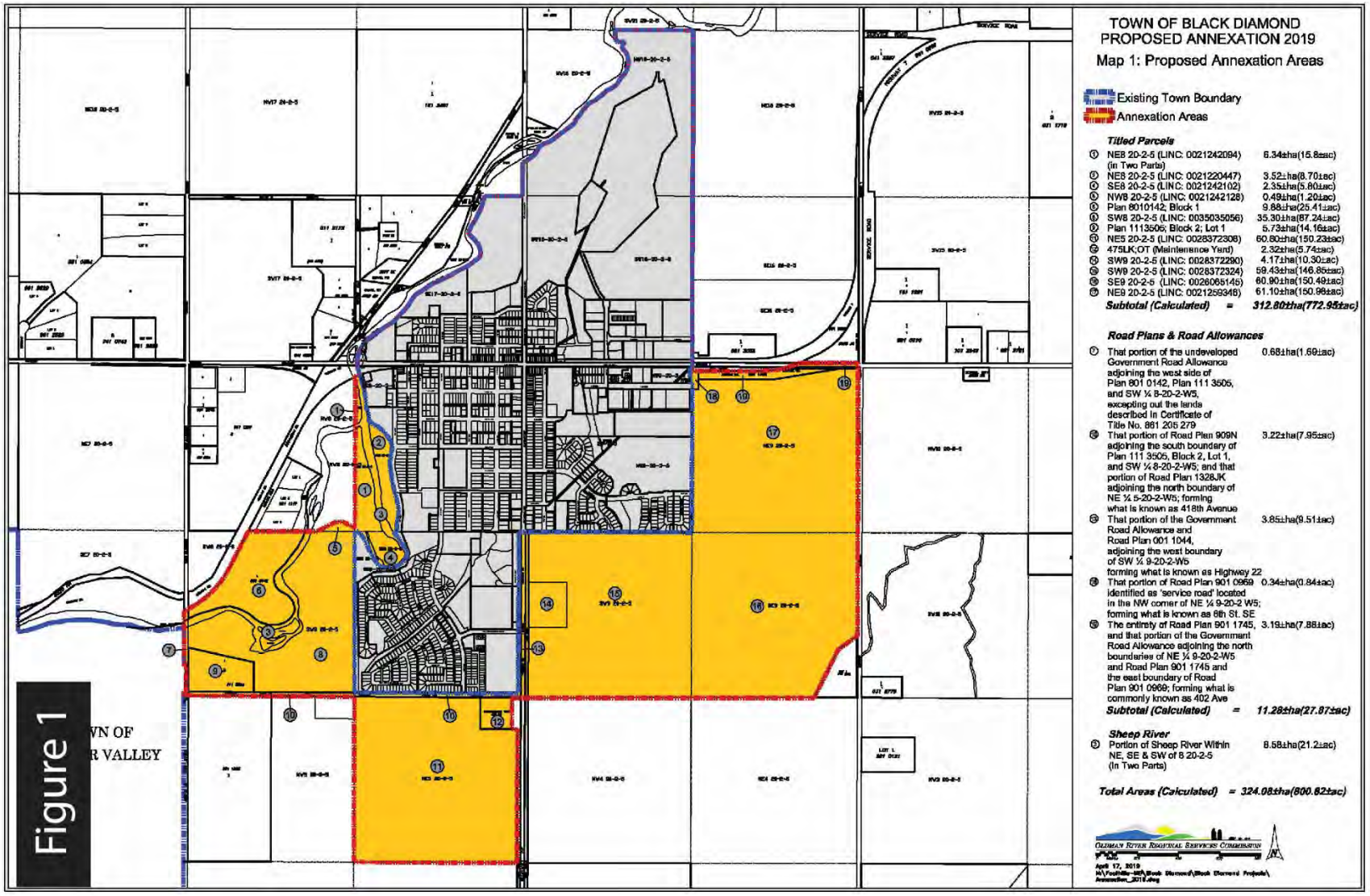

TOWN OF BLACK DIAMOND
PROPOSED ANNEXATION 2019
Map 1: Proposed Annexation Areas
Existing Town Boundary
Annexation Areas
Titled Parcels
① NE8 20-2-5 (LINC: 0021242094) 6.34±ha(15.8±ac)
(in Two Parts)
② NE8 20-2-5 (LINC: 0021220447) 3.52±ha(8.70±ac)
③ SE8 20-2-5 (LINC: 0021242102) 2.35±ha(5.80±ac)
④ NW8 20-2-5 (LINC: 0021242128) 0.49±ha(1.20±ac)
⑤ Plan 8010142; Block 1 9.88±ha(25.41±ac)
⑥ SW8 20-2-5 (LINC: 0035035056) 35.30±ha(87.24±ac)
⑦ Plan 1113505; Block 2; Lot 1 5.73±ha(14.16±ac)
⑪ NE5 20-2-5 (LINC: 0028372308) 60.80±ha(150.23±ac)
⑫ 475LK;OT (Maintenance Yard) 2.32±ha(5.74±ac)
⑭ SW9 20-2-5 (LINC: 0028372290) 4.17±ha(10.30±ac)
⑮ SW9 20-2-5 (LINC: 0028372324) 59.43±ha(146.85±ac)
⑯ SE9 20-2-5 (LINC: 0026065145) 60.90±ha(150.49±ac)
⑰ NE9 20-2-5 (LINC: 0021259348) 61.10±ha(150.96±ac)
Subtotal (Calculated) = 312.80±ha(772.95±ac)
Road Plans & Road Allowances
⑦ That portion of the undeveloped Government Road Allowance adjoining the west side of Plan 801 0142, Plan 111 3505, and SW ¼ 8-20-2-W5, excepting out the lands described in Certificate of Title No. 861 205 279 0.68±ha(1.69±ac)
⑧ That portion of Road Plan 909N adjoining the south boundary of Plan 111 3505, Block 2, Lot 1, and SW ¼ 8-20-2-W5; and that portion of Road Plan 1328JK adjoining the north boundary of NE ¼ 5-20-2-W5; forming what is known as 418th Avenue 3.22±ha(7.95±ac)
⑨ That portion of the Government Road Allowance and Road Plan 001 1044, adjoining the west boundary of SW ¼ 9-20-2-W5 forming what is known as Highway 22 3.85±ha(9.51±ac)
⑬ That portion of Road Plan 901 0969 identified as 'service road' located in the NW corner of NE ¼ 9-20-2 W5; forming what is known as 6th St. SE 0.34±ha(0.84±ac)
⑱ The entirety of Road Plan 901 1745, and that portion of the Government Road Allowance adjoining the north boundaries of NE ¼ 9-20-2-W5 and Road Plan 901 1745 and the east boundary of Road Plan 901 0969; forming what is commonly known as 402 Ave 3.19±ha(7.88±ac)
Subtotal (Calculated) = 11.28±ha(27.87±ac)
Sheep River
⑩ Portion of Sheep River Within NE, SE & SW of 8 20-2-5 (In Two Parts) 8.58±ha(21.2±ac)
Total Areas (Calculated) = 324.08±ha(800.62±ac)
Oldman River Regional Services Commission
April 17, 2019
M:\Foothills_MD\Black Diamond\Black Diamond Projects\Annexation_2019.dwg
Figure 1
WN OF
R VALLEY

TABLE 1

Titled Parcels			
Map Ref.	**Legal Description**	**Cert. of Title**	**Area (Ac)**
1	NE 8-20-2 W5	161 260 885	15.8
2	NE 8-20-2 W5	891 104 921	8.7
4	SE 8-20-2 W5	161 260 885 +1	5.8
5	NW 8-20-2 W5	971 378 878	1.2
6	Block 1, Plan 8010142	801 015 653	25.41
8	SW 8-20-2 W5	111 311 965 +1	87.24
9	Lot 1, Block 2, Plan 1113505	111 311 965	14.16
11	NE 5-20-2 W5	001 110 623 +3	150.23
12	Plan 475LK	121 275 486 +4	5.74
14	SW 9-20-2 W5	001 110 623 +2	10.3
15	SW 9-20-2 W5	101 216 209	146.85
16	SE 9-20-2 W5	101 236 396	150.49
17	NE 9-20-2 W5	101 236 396 +1	150.98
		Total Area Titled Parcels	***772.9***

Road Plans			
Map Ref.	**Legal Description**	**Cert. of Title**	**Area (Ac)**
7	That portion of the undeveloped Government Road Allowance adjoining the west side of Plan 801 0142, Plan 111 3505, and SW ¼ 8-20-2-W5, excepting out the lands described in Certificate of Title No. 861 205 279		1.69
10	That portion of Road Plan 909N adjoining the south boundary of Plan 111 3505, Block 2, Lot 1, and SW ¼ 8-20-2-W5; and that portion of Road Plan 1328JK adjoining the north boundary of NE ¼ 5-20-2-W5; forming what is known as 418th Avenue;		8.4
13	That portion of the Government Road Allowance and Road Plan 001 1044, adjoining the west boundary of SW ¼ 9-20-2-W5 forming what is known as Highway 22;		9.68
18	That portion of Road Plan 901 0969 identified as 'service road' located in the NW corner of NE ¼ 9-20-2 W5, forming what is known as 6th St. SE;		0.84
19	The entirety of Road Plan 901 1745, and that portion of the Government Road Allowance adjoining the north boundaries of NE ¼ 9-20-2-W5 and Road Plan 901 1745 and the east boundary of Road Plan 901 0969, forming what is commonly known as 402 Ave.		6.73
		Total Area of Roads	***27.34***

Sheep River			
Map Ref.	**Legal Description**	**C of T**	**Area (Ac)**
3	Portions of the Sheep River within NE, SE & SW of 8-20-2-W5		21.2
		Total of Sheep River	***21.2***

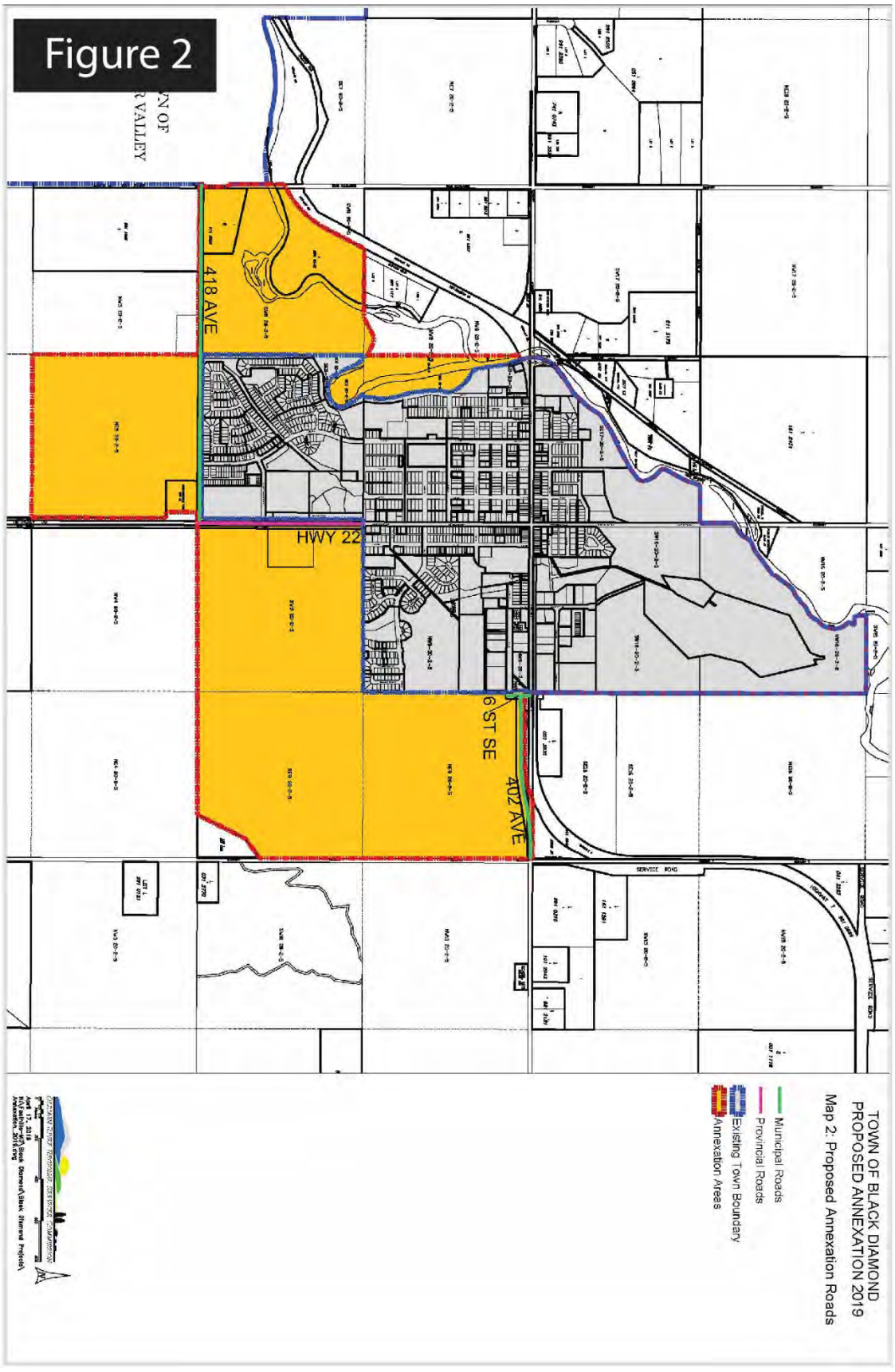
Total Annexation Area	***821.44***

The total annexation proposal area is 821.44 acres and includes 13 individually titled properties totaling 772.9 acres, (see Appendix D for all property titles); a number of road plans totaling 27.34 acres in area; and 21.2 acres of the Sheep River, which has also been issued a title.

Figure 2 and **Table 1** identify the roads that are to be annexed into the Town:

- 418th Avenue west of Highway 22 to the east boundary of the Town of Turner Valley, approximately 1 mile in length. This road is currently controlled and maintained by Foothills County;
- 402nd Avenue east of the current boundary of the Town of Black Diamond to 144th St, approximately 1/2 mile in length. This road is currently controlled and maintained by Foothills County;
- 6th St SE south of Hwy 7 to 1st Ave SE, approximately 80m in length. Although located within Foothills County, this road has been maintained by the Town of Black Diamond;
- Highway 22 from 6th Ave S to 418th Ave, approximately ½ mile in length. This is a Provincial Highway, controlled and maintained by the Province.

The Town and County are discussing a separate agreement for the County to provide maintenance and construction services on 402nd Ave and 418th Ave at the cost of the Town.


Figure 2
418 AVE
HWY 22
6 ST SE
402 AVE
SERVICE ROAD
TOWN OF BLACK DIAMOND
PROPOSED ANNEXATION 2019
Map 2: Proposed Annexation Roads
Municipal Roads
Provincial Roads
Existing Town Boundary
Annexation Areas

Part 4 Relevant Planning Documents

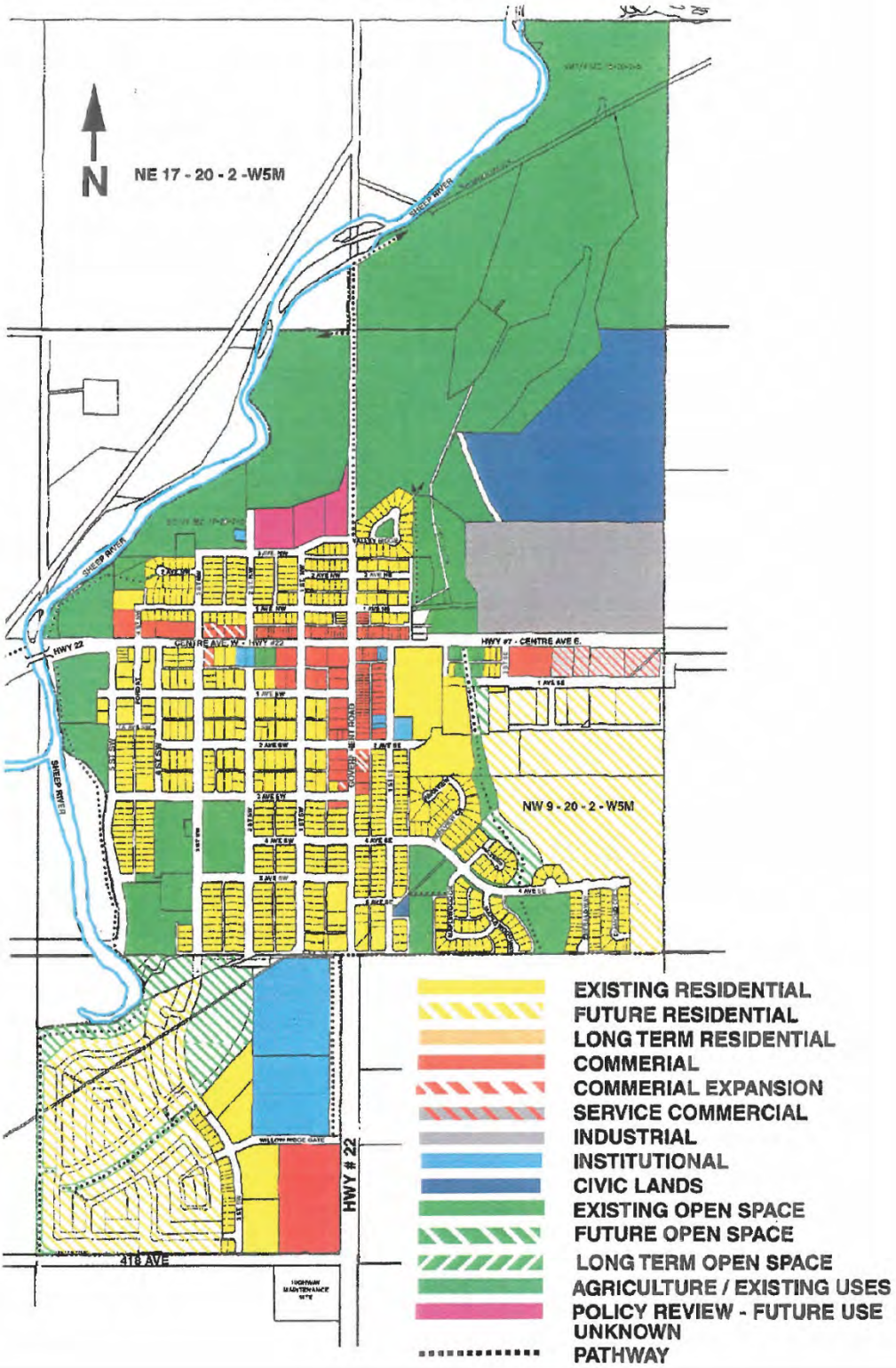
This part will discuss the relevant planning documents, including statutory plans, and non-statutory studies. The annexation application will be assessed against key policies of the statutory plans for compliance with the policy direction.

Town of Black Diamond Municipal Development Plan (Bylaw No. 01-14)

The Town of Black Diamond's *Municipal Development Plan (MDP)* was adopted in 2001 (see Appendix H) and is the Town's primary long-range statutory planning document. The *MDP* provides guidance and recommendation through a framework of background information, goals and policies intended to assist decision makers and developers with the growth and change of the community over time. The *MDP's* Land Use Concept is show in **Figure 3**.

Figure 3

LAND USE CONCEPT
BLACK DIAMOND MUNICIPAL DEVELOPMENT PLAN
BYLAW 2001-14
ADOPTED OCTOBER 3, 2001



The MDP provides guidance for the long-term growth of the Town in Section 5.1:

> *5.1 Direction of Future Growth*
> *With the Sheep River Valley acting as a development boundary to the North and West of the Town of Black Diamond, any future growth will be to the East and South.*
>
> *Land that is generally developed on the west of the Town, west of the Sheep River, will be shown as Urban Reserve Areas as will all adjacent land to the current Town boundaries. Council will consider land use policies, regarding development of this area and additional when and if annexation should occur*

Has the policy been followed?

YES. The lands that are being annexed for development are located east and south of the current town boundary. The lands on the west side of Town in the annexation area are not proposed for development. They are being annexed for the strategic purposes of bringing lands that are owned by the Town of Black Diamond within the town boundary; and to create a contiguous border with the Town of Turner Valley for the purpose of facilitating future amalgamation, should the Towns choose to pursue that.

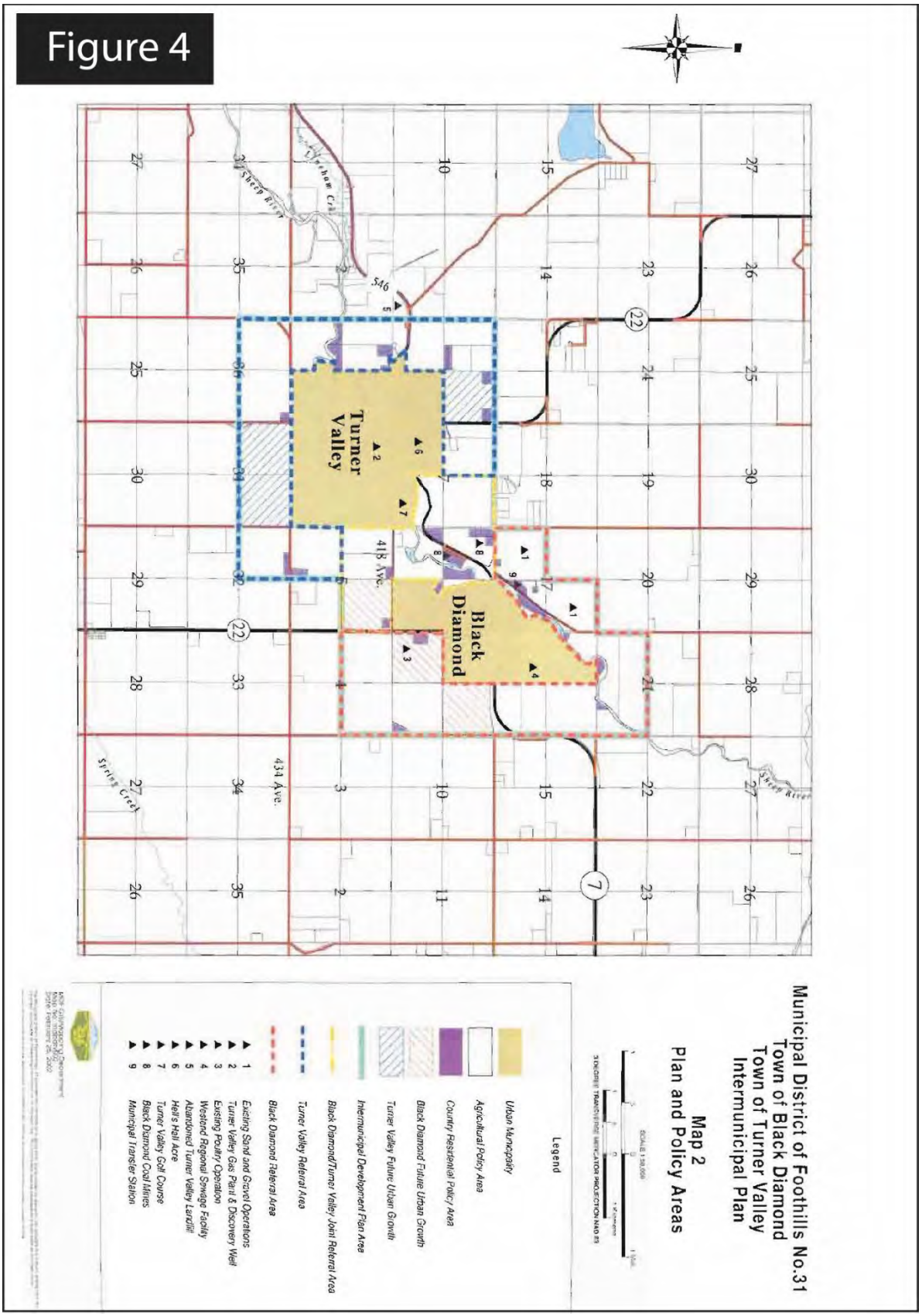
The *MDP* is dated and in need of comprehensive review. It does not adequately address development issues or reflect and articulate the aspirations of the Town. Upon approval of the annexation the Town intends to begin work creating a new *MDP*.

MD of Foothills No. 31 / Town of Black Diamond / Town of Turner Valley Intermunicipal Development Plan (Town Bylaw No. 02-05) (County Bylaw No. 75/2002)

The *Intermunicipal Development Plan (IDP)* was adopted in 2002 (see Appendix G) and provides a statutory foundation for the municipalities to navigate the variety of opportunities and constraints, elements of shared interest, and competing factors that take place in an urban/rural fringe area such as the one surrounding the Towns of Black Diamond and Turner Valley.

The adopted *IDP* contains policies that focus on future urban expansion, the expectations of each municipality regarding how and where future growth may occur, and what processes should be followed when contemplating such matters. Map 2 'Plan and Policy Areas' identifies expected growth corridors for each Town. The *IDP* directs the County to give special consideration to the Towns' long-term growth needs when reviewing proposals for redesignation, subdivision, or development in the expected growth corridors. The policy areas discussed in the IDP are shown in **Figure 4.**

Figure 4


Municipal District of Foothills No.31
Town of Black Diamond
Town of Turner Valley
Intermunicipal Plan
Map 2
Plan and Policy Areas
Legend
Urban Municipality
Agricultural Policy Area
Country Residential Policy Area
Black Diamond Future Urban Growth
Turner Valley Future Urban Growth
Intermunicipal Development Plan Area
Black Diamond/Turner Valley Joint Referral Area
Turner Valley Referral Area
Black Diamond Referral Area
1 Existing Sand and Gravel Operations
2 Turner Valley Gas Plant & Discovery Well
3 Existing Poultry Operation
4 Westend Regional Sewage Facility
5 Abandoned Turner Valley Landfill
6 Hell's Half Acre
7 Turner Valley Golf Course
8 Black Diamond Coal Mines
9 Municipal Transfer Station
Turner Valley
Black Diamond
546
418 Ave.
434 Ave.
Sheep River
Sterling Creek

The *IDP* discusses the long-term growth corridor for Black Diamond in Section 3.4.1:

> *3.4.1 Urban Growth Areas: Black Diamond*
> *The long-term growth corridors for Black Diamond are projected to be towards the southeasterly and southerly direction. The NE ¼ and SW ¼ of Section 9 are the preferred choice for growth options because of the proximity of infrastructure to service the lands. It is recognized that the intensive agricultural operation on the SW ¼ 9 does pose a short to medium term impediment to residential development. The development that is occurring in the SE ¼ Section 8, and because servicing extensions could accommodate some southward expansion into the NE ¼ 5, there is a potential for growth in this direction.*
>
> *The time frame for development is unknown and is totally market driven. These abutting lands are recognized as having the most potential development possibilities given that the Sheep River and its flood plain and the proximity of the wastewater treatment plant pose as major impediments to residential growth in either the north or northeast directions.*
>
> ***Has the policy been followed?***
>
> **YES**. The annexation area contains the lands shown as Black Diamond's urban growth areas. Although the IDP does not identify the SE ¼ 9-20-2-W5 as an urban growth corridor, the IDP does not preclude the Town from annexing lands in addition to those identified as an urban growth corridor.
>
> The annexation lands are relatively unfragmented, and no subdivision or significant development has been approved by the County in the urban growth area since adoption of the IDP.
>
> *3.4.3 Annexation*
> *The Town of Turner Valley and the Town of Black Diamond anticipate the eventual annexation of additional land. The timing of annexation will depend, among other considerations, on the pace of growth and unique land use requirements within the Towns. In addition, the relative merits of phased verses comprehensive annexation will be considered by affected municipalities. Any annexation will be based on further technical analysis and public consultation. The M.D. of Foothills and the Towns of Turner Valley and Black Diamond will endeavor to reach an intermunicipal agreement on annexation before any application for annexation is submitted to the Municipal Government Board.*
>
> ***Has the policy been followed?***
>
> **YES**. The municipalities agree a long-range, comprehensive annexation will allow the Town invest in and enjoy the benefits of long range, comprehensive plans for land use, transportation, infrastructure, and finance. The Town prepared an '*Annexation Lands Servicing Review*' to understand the infrastructure requirements to service the annexation area with roads, water, sanitary sewer, and storm water management

infrastructure. The Town has consulted with landowners, stakeholders, and the general public concerning annexation, and has revised the annexation in response to feedback received. The Town and the County have entered into a formal agreement on annexation and the County supports this annexation application.

3.2.2 Plan Amendment

The Intermunicipal Development Plan may be amended from time to time subject to the agreement of the Municipal Councils. The types of amendments that could be anticipated include the following:

1. *Changes to Policies*
   Any changes to the text of the Intermunicipal Development Plan will require an amendment.

2. *Boundary Adjustments*
   Any changes to the boundaries of the Intermunicipal Development Plan will require an amendment.

3. *Other*
   Subject to the agreement of the three municipalities, this Intermunicipal Development Plan may be amended for any other purpose not listed in this section.

Has this policy been followed?

IN PROGRESS. The Towns of Black Diamond and Turner Valley and the County had begun a review of the IDP in 2012. Work on the review was paused in 2015 at the request of the Towns, as they determined it was necessary to prepare a *Joint Growth Strategy* to better understand their long-term growth aspirations and infrastructure requirements. Black Diamond then initiated annexation proceedings in October 2017. The Towns and the County have discussed resuming the IDP review in 2020 after the annexation takes effect. The Towns and County are also required to prepare an Intermunicipal Collaborative Framework (ICF). Preparation of an ICF will begin in 2020.

Town of Black Diamond Land Use Bylaw No. 98-14

The Town's *Land Use Bylaw (LUB)* is the primary land use and development regulation document for the Town. The intent of the *LUB* is to regulate and control the use and development of lands and buildings in order to achieve safe, efficient, attractive, and orderly patterns of development. Ideally the *LUB* and *MDP* are in alignment, where the *MDP* articulates a vision for the Town in high-level policies and objectives, and the *LUB* regulates the use and development of land with detailed regulations that are consistent with the *MDP's* objectives.

Although the *LUB* is dated and has been in need of a comprehensive review for a number of years, the Town has deferred investing resources in this project until after annexation and adoption of a new *MDP*.

Turner Valley and Black Diamond Joint Growth Study 2016 (approved February 2018)

The Towns of Black Diamond and Turner Valley, in conjunction with O2 Planning and Design, began

preparation of the *Joint Growth Strategy (JGS)* in 2015 (see Appendix I). The intent of the strategy was to define and plan for a shared vision of long-term growth, which would serve as the foundation for the Towns to review and updated their *MDPs*, plan and coordinate future infrastructure investments, to update the *IDP*, and to inform annexation processes. The project was led by a Joint Advisory Committee comprised of Mayors and Councilors from both Towns.

The development of the *Joint Growth Strategy* included an assessment of: population growth, land needs, land suitability, and associated implications for infrastructure servicing. The *Joint Growth Strategy* illustrates efficient, responsible, and sustainable scenarios of future growth over the next 60 years. This document and process was guided by the Joint Advisory Committee (the Committee) comprised of members from the towns' councils to examine growth scenarios without considering town boundaries as constraints.

The findings of the *Joint Growth Strategy* are summarized below:

Population Growth: The Town's population in 2015 was estimated to be 2,577. The *JGS* prepared 2 population forecasts for a 60 year period (2015 – 2065):

- A higher growth trend assuming the Town would grow initially at an annual rate of 3%, which would decline to 2.75% by 2045, and then to 2.5% by 2055, for an overall average growth rate of 2.75%
- A lower growth trend assuming the Town would grow initially at an annual rate of 2.5%, then decline to 2.25% by 2045, and then to 20% by 2055, for an overall average growth rate of 2.25%.

The forecasts suggested that the population of Black Diamond will grow from a population of 2,511 in 2015 to between 5,275 (lower forecast) to 6,105 (higher) by 2045, and to 9,792 (low) to 13, 121 (high) by 2075. Put another way, by 2075 the Town population will increase by between 7,281 and 10,610.

Residential Land Requirements: The land requirement forecast is a function of the projected population growth, number of people per dwelling, the number of dwellings per acre, and the amount of land available within the current Town boundary.

- The average household size was 2.4 people in 2011, and is assumed to remain at this level for the next 60 years.
- Residential density is assumed in the JGS to increase over time. In 2016 the Town was a member of the Calgary Regional Partnership, a voluntary association of urban municipalities in the Calgary region. The Calgary Metropolitan Plan contained policies that encouraged municipalities to achieve a minimum density 8 -10 units per gross residential acre in new communities – a significant increase from current development patterns (the most recent Area Structure Plans within Black Diamond (Willow Ridge ASP 1999 and Kaiser ASP 2017) achieve a density of approximately 5.5 units per gross developable acre (UPGDA).*[1]

[1] * ***gross developable acre*** is defined, in this report, as the total size of an area of land, less lands that would qualify as environmental reserve; lands that are undevelopable due to rights-of-way and/or required setbacks. Land related to services associated with a residential community, including roads, local utilities, local stormwater management facilities, schools, and parks are all included within this measure. In compliance with the Calgary Regional Partnership's guidance on measuring density, the JGS did not apply any gross-up factor to account for these uses.

- Recognizing that 8-10 UPGDA is a significant increase over current levels, the JGS chose to gradually increase density in new development over time. Residential density for new development was assumed to achieve 5.5 upga from 2015 – 2035, increasing to 6.5 upga for 2035 – 2045, and to 8.0 upga for 2045-2075. The overall average density for new residential growth from 2015 – 2075 is 7.2 upga.
- To achieve this increase in density, share of single family dwellings is to decrease from 75% of the total number of housing units to 65%, and the share of apartment units is to increase from 10% to 20%. The size of residential parcels will decrease, and the number of accessory suites in single and semi-detached dwellings will increase.
- There are 64.5 acres of vacant developable land within the Town available for residential use, assuming development at 5.5 upga, this will accommodate 850 people.
- *An additional 365 – 556 gross residential developable acres is required to support the additional 7,281 – 10,610 people forecast for Black Diamond by 2075.*

Commercial Land Requirements: The JGS prepared the forecast for commercial land requirements for Black Diamond and Turner Valley together – it did not distinguish what share each town was to accommodate. The forecast was based on an assessment of the role of Black Diamond and Turner Valley as a commercial center in the region - the towns are not anticipate to attract any regional retail and service businesses (Okotoks is the regional service center in the area). It was assumed that the customer base for businesses in Black Diamond includes the residents of Black Diamond, Turner Valley, and the surrounding rural area.

- *A total of 48 acres (lower forecast) – 69 acres (higher forecast) will be required to meet the combined demand for commercial lands of Black Diamond and Turner Valley. As of 2015, Black Diamond had 11 acres of vacant developable commercial land within its boundary.*

Industrial Land Requirements: The JGS prepared the forecast for industrial land requirements for Black Diamond and Turner Valley together – it did not distinguish what share each town was to accommodate. Okotoks and the Hwy 2A corridor are assumed to capture most of the industrial businesses in the region. It is unlikely Black Diamond and Turner Valley will attract a significant number of industrial businesses that serve regional, provincial, or broader markets. Future industrial floor space growth in the two towns is expected to mainly be linked to the overall pace of growth in the towns, and is therefore expected to grow by average of about 2% per year.

- *A total of 31 acres will be required to meet the combined demand for industrial land over the entire forecast period for the Towns of Black Diamond and Turner Valley. As of 2015, Black Diamond has 8.5 vacant acres of industrial land within its boundary.*

Assessment of Development Hazard and Vulnerable Landscape Elements: Hazards to development (water courses and flood risk areas; slopes, ridges & escarpments; setbacks from wastewater treatment lagoons and non-operating landfill; and setbacks from active and inactive pipelines & wells) and vulnerable landscape elements (wetlands, natural vegetated patches & riparian lands; historic resources) were mapped to identify areas with development constraints. As already identified in the MDP and IDP, there are significant constraints in growing to the north and west, and relatively few constraints to the south and east.

Growth Scenarios: A series of growth scenarios were developed to accommodate the forecasted land

requirements. The growth scenarios were based on 2 themes: growing together, and growing apart. Two scenarios were developed for each theme. Servicing concepts for water, sanitary sewer, stormwater, and transportation infrastructure were developed to assess the relative cost of the scenarios. The Joint Advisory Committee directed that a 3rd scenario be developed, which expanded the industrial growth area with the addition of another quarter section. Scenario 3, the 'preferred' growth scenario, has the following features:

- Land uses are planned without consideration of municipal boundaries – no consideration is given to ensuring a balance of commercial or industrial development between the Towns.
- Results in long-term contiguous development between Black Diamond and Turner Valley;
- Growth is concentrated in the least constrained lands;
- River valley lands provide environmental and open space connection between the Towns;
- Creation of a new commercial node along Highway 22;
- Concentration of employment (industrial) lands along Highway 7;
- Sufficient land to meet the high growth estimate;
- Substantial employment (industrial) lands in excess of forecast demand.

South Saskatchewan Regional Plan 2014 – 2024

Applicable objectives and strategies of the South Saskatchewan Regional Plan (SSRP) 2014-2024 have been considered with respect to building a sustainable community that meets the needs of current and future residents. Specific consideration was given to Section 8, Community Development, of the Implementation Plan in the South Saskatchewan Regional Plan. In particular:

Section 8: Community Development

Outcome: Community development needs are anticipated and accommodated. (p. 105)

Comment: Annexing a 50-year supply of land allows the Town to invest in long-term planning initiatives that will identify the infrastructure and services necessary to support the Town's growth.

Planning Cooperation and Integration (p. 107)

8.4 Work together to anticipate, plan and set aside adequate land with the physical infrastructure and services required to accommodate future population growth and accompanying community development needs. (p. 107)

Comment: Black Diamond has a history of partnering with neighbouring municipalities in planning and developing infrastructure to support community development needs, including regional water and wastewater treatment systems, and continues to partner with other municipalities to address community needs.

Building Sustainable Communities (pg. 109)
Strategies:

8.11 Provide an appropriate mix of agricultural, residential, commercial, industrial, institutional, public and recreational land uses; developed in an orderly, efficient, compatible, safe and economical manner.

8.12 Contribute to a healthy environment, a healthy economy and a high quality of life.

8.13 Provide a wide range of economic development opportunities, stimulate local employment growth and promote a healthy and stable economy. Municipalities are also expected to complement regional and provincial economic development activities.

8.14 Feature innovative housing designs, range of densities and housing types such as mixed- use, cluster developments, secondary suites, senior's centres and affordable housing. Provide the opportunity for a variety of residential environments which feature innovative designs and densities, and which make efficient use of existing facilities, infrastructure and public transportation.

8.17 Complement their municipal financial management strategies whereby land use decisions contribute to the financial sustainability of the community. (p. 108)

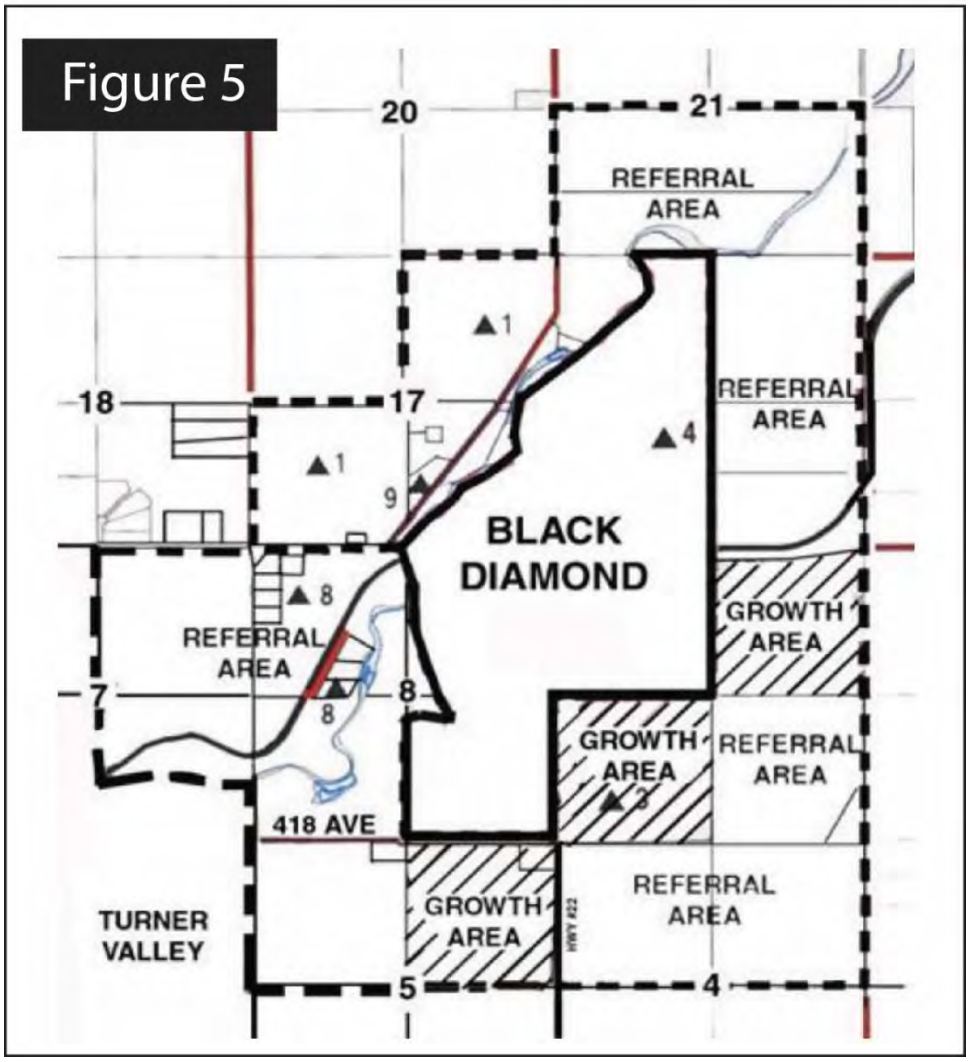
Comment: Achievement of these goals will necessitate the Town preparing a series of plans, studies, and policies, each of which will require an investment of time and resources to develop. The *Joint Growth Strategy* and the *Annexation Lands Servicing Review* provide high level planning that demonstrates the annexation area provides suitable opportunities for these strategies to be achieved.

Part 5 Annexation Application Land Use Concept

The *Joint Growth Strategy* outlines the need for additional lands to ensure Black Diamond may comprehensively and confidently plan for future growth. Further information gained through the annexation process led the Town to revise the annexation area from the area shown in the initial *Notice of Intent to Annex* issued by the Town in October 2017 (**Appendix O**). This Part will briefly discuss the iterations of the annexation proposal and then will describe the rationale for the final proposed annexation area.

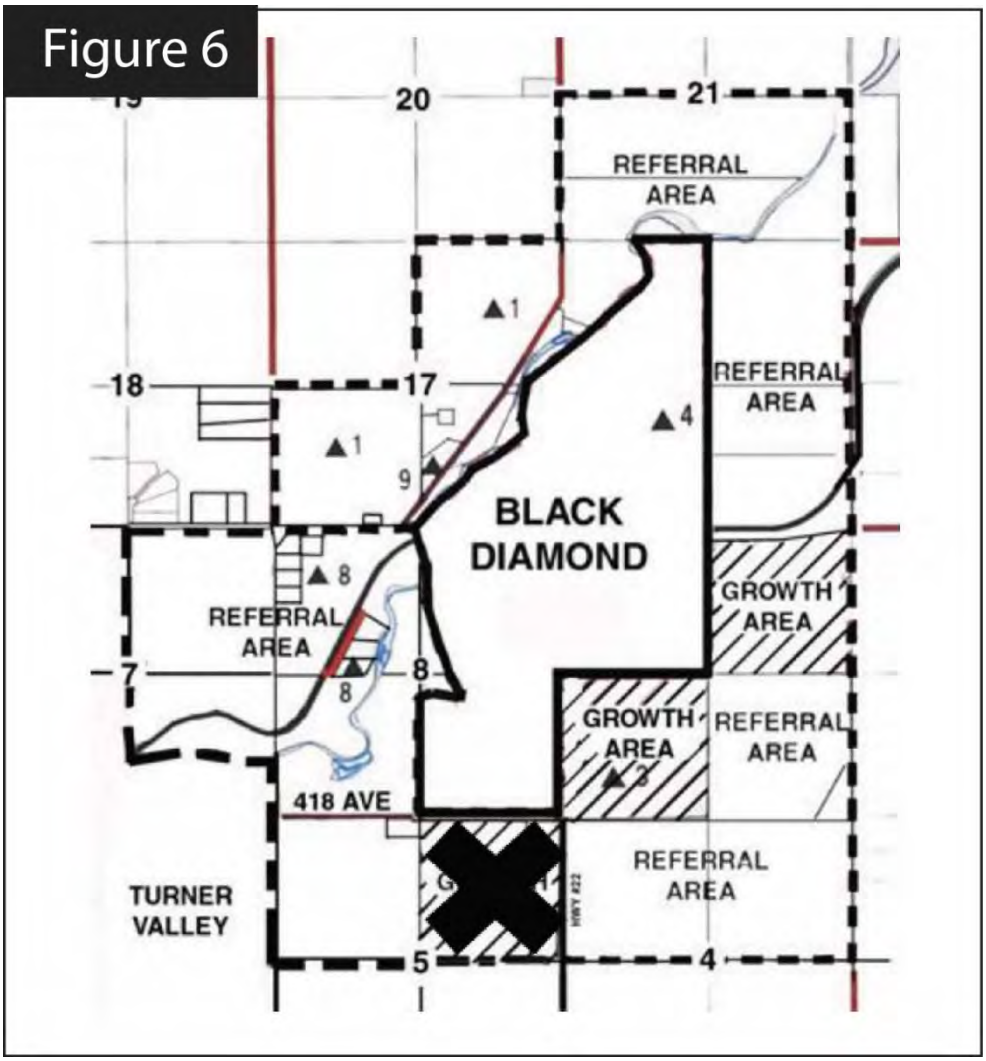
*October 2, 2017 Notice of Intent to Annex (**Appendix O**)*

- The proposed annexation area consists of the 3 quarter sections shown as Black Diamond's 'Urban Growth Area' in the IDP (NE 5-20-2-W5; SW 9-20-2-W5; NE 9-20-2-W5) – see **Figure 5**.



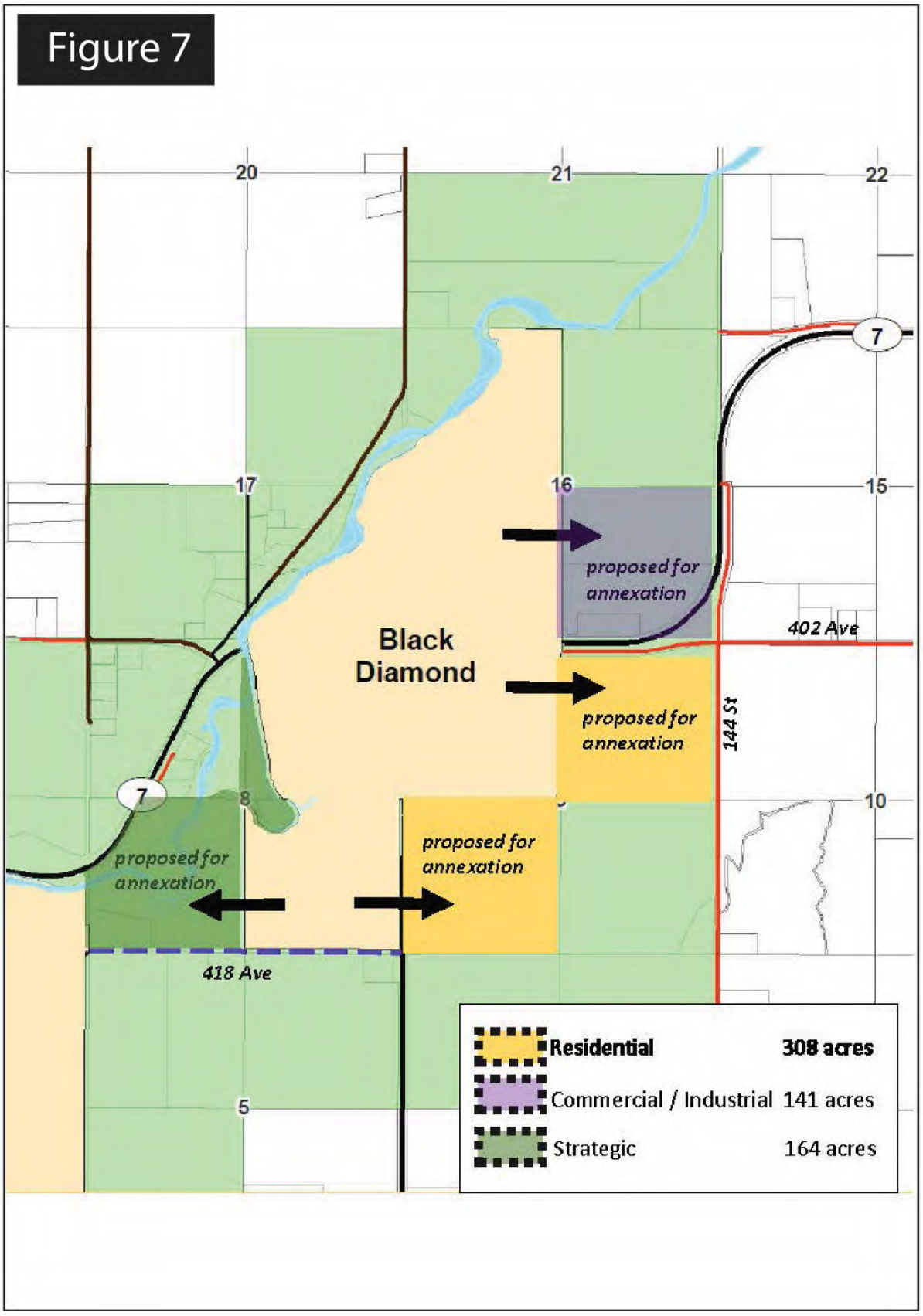
*March 22, 2018 Amended Notice of Intent to Annex (**Appendix O**)*

- The Town issued a revised *Notice of Intent to Annex* that removed the NE 5-20-2-W5 from the proposed annexation area. The revised *Notice of Intent to Annex* also provided additional information outlining how the Town would consult with landowners, stakeholders, and the general public concerning the proposed annexation – see **Figure 6**.



September & October 2018 Public Consultations

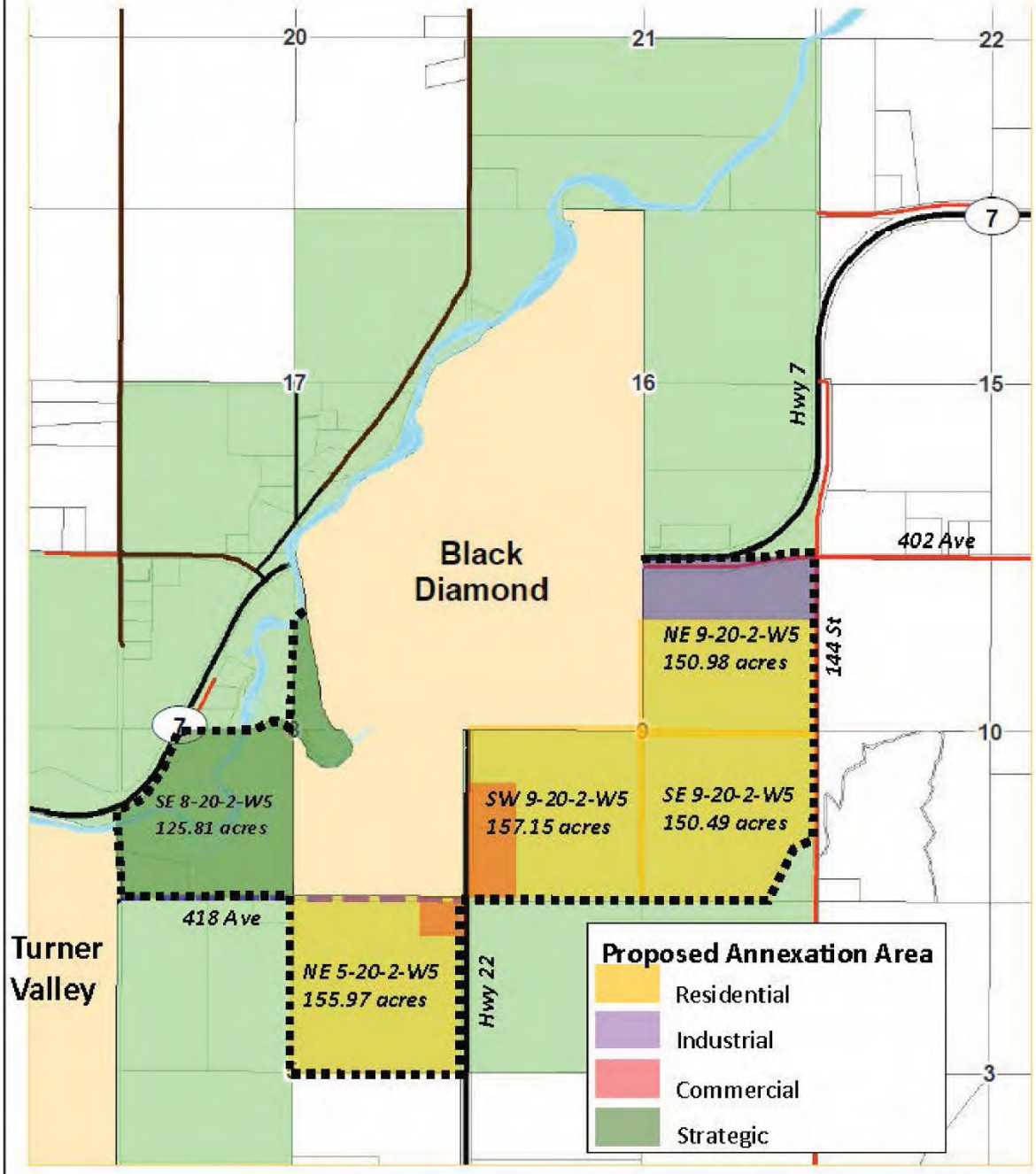
- Following direct negotiations with the County over the course of 6 months, and following consultation with directly affected landowners, the Town and County began public consultation showing an annexation area that added the SE-16-20-2-W5, and the SW-8-20-2-W5 – see **Figure 7**.


Figure 7
20
21
22
7
17
16
15
proposed for annexation
402 Ave
Black Diamond
proposed for annexation
144 St
7
8
10
proposed for annexation
proposed for annexation
418 Ave
5
Residential 308 acres
Commercial / Industrial 141 acres
Strategic 164 acres

March & April 2019 Public Consultations

- Following continued direct negotiations, and consultation with directly affected landowners, and taking into account information from the Annexation Lands Servicing Review, the Town and County held further public consultations showing an annexation area that removed the SE-16-20-2-W5, and added the SE-9-20-2-W5, and NE-5-20-2-W5 – see **Figure 8**.

Figure 8


20
21
22
17
16
15
10
3
7
Hwy 7
402 Ave
144 St
Hwy 22
Black Diamond
Turner Valley
NE 9-20-2-W5
150.98 acres
SE 8-20-2-W5
125.81 acres
SW 9-20-2-W5
157.15 acres
SE 9-20-2-W5
150.49 acres
418 Ave
NE 5-20-2-W5
155.97 acres
Proposed Annexation Area
Residential
Industrial
Commercial
Strategic

Final Proposed Annexation Area – Land Use Concept

The final proposed annexation area culminates from direct negotiations between the Town and County, consultation with landowners, stakeholders, and agencies, and is based on the statutory plans and planning and engineering strategies adopted by the Town.

The annexation area is 821.44 acres in total area, and consists of 794.1 acres in titled land (including 21.2 acres of the Sheep River that has been issued a title), and 27.34 acres of road right-of-way – as detailed in **Table 1**. The land use concept for the annexation area is based on the *Joint Growth Strategy*, and identifies lands for residential, commercial, and industrial uses, as well as lands that are proposed for annexation for 'strategic' purposes, and are not proposed for further development. The location and approximate area assigned to each of these land uses is summarized in the map below, and a brief rationale for the location and area of these major land uses is provided below, and illustrated in **Figure 9**. The total area and developable area for each quarter section of the annexation area, and the area of the proposed land use is summarized in **Table 2**.

Figure 9

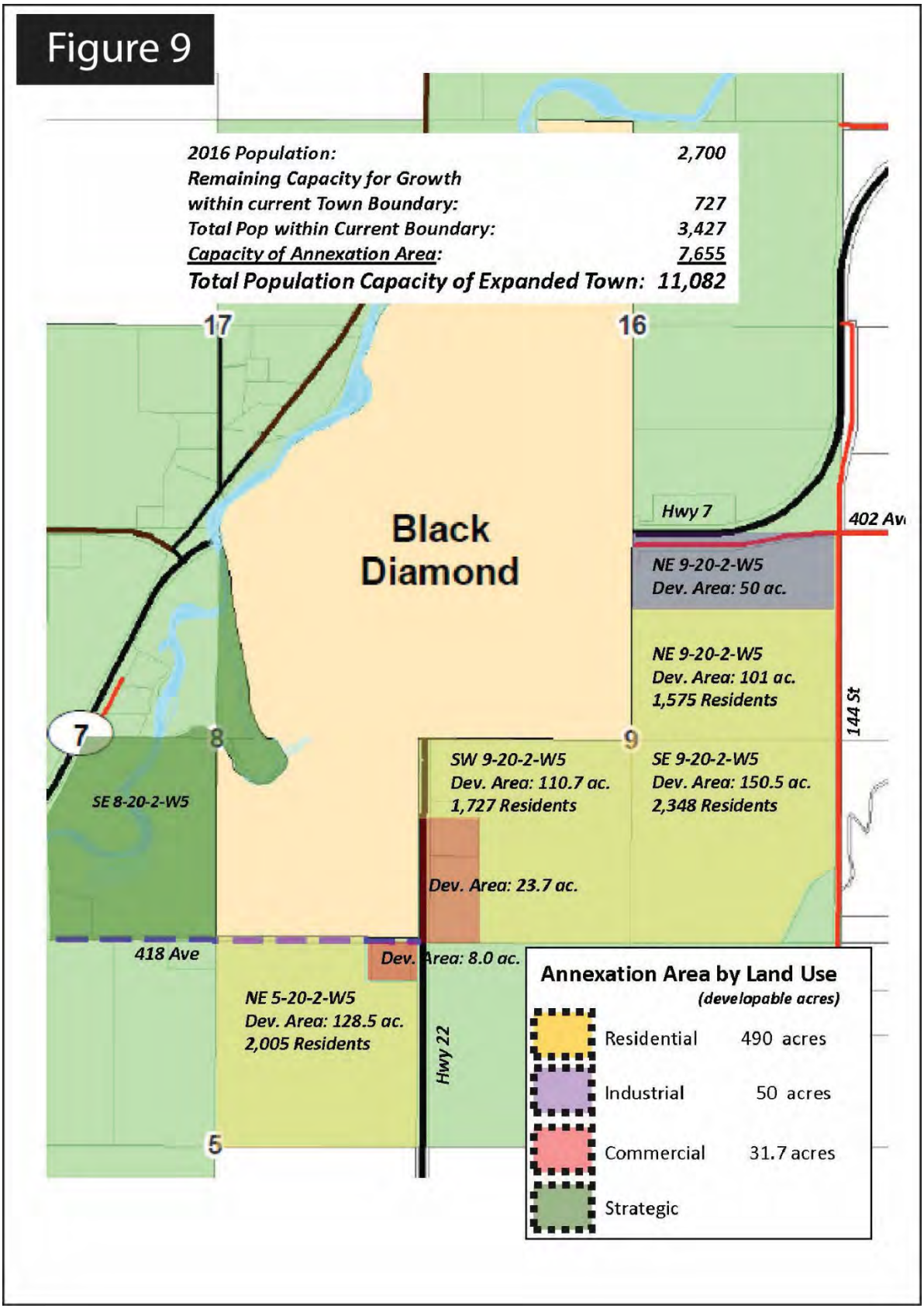

2016 Population: 2,700
Remaining Capacity for Growth within current Town Boundary: 727
Total Pop within Current Boundary: 3,427
Capacity of Annexation Area: 7,655
Total Population Capacity of Expanded Town: 11,082
17
16
Black Diamond
Hwy 7
402 Av
NE 9-20-2-W5
Dev. Area: 50 ac.
NE 9-20-2-W5
Dev. Area: 101 ac.
1,575 Residents
144 St
7
8
9
SE 8-20-2-W5
SW 9-20-2-W5
Dev. Area: 110.7 ac.
1,727 Residents
SE 9-20-2-W5
Dev. Area: 150.5 ac.
2,348 Residents
Dev. Area: 23.7 ac.
418 Ave
Dev. Area: 8.0 ac.
NE 5-20-2-W5
Dev. Area: 128.5 ac.
2,005 Residents
Hwy 22
5
Annexation Area by Land Use
(developable acres)
Residential 490 acres
Industrial 50 acres
Commercial 31.7 acres
Strategic

TABLE 2

Proposed Land Use for Annexation Area by Quarter Section							
Quarter Section	**Total Area**	**Dev. Acres**	**Residential**	**Res. Pop'n**	**Commercial**	**Industrial**	**Strategic**
NE 9-20-2 W5	150.98	150.98	100.98	1575		50	
SE 9-20-2 W5	150.49	150.5	150.5	2348			
SW 9-20-2 W5	157.15	134.4	110.7	1727	23.7		
NE 5-20-2 W5	155.97	136.5	128.5	2005	8		
SE 8-20-2 W5	5.8	0					5.8
NE 8-20-2 W5	24.5	0					24.5
SW 8-20-2 W5	126.81	0					126.81
NW 8-20-2 W5	1.2	0					1.2
Sheep River	21.2	0					21.2
Totals	**794.1**	**572.38**	**490.68**	**7655**	**31.7**	**50**	**179.51**

Residential Area

Approximately 490 developable acres are intended for residential use, and are expected to accommodate a population of 7655, based on the following assumptions:

- An average of 2.4 people per household, as per the *Joint Growth Strategy*. The average household size for Black Diamond has declined from 2.5 people in 2001, to 2.3 in 2016, and is slightly lower than the Calgary Metropolitan Area average of 2.6; and
- An average of 6.5 units per gross developable area. Although the JGS assumes an average density of 7.2 UPGDA, *for the purposes of this annexation application*, Black Diamond Council has determined that 6.5 UPGDA is an appropriate and realistic assumption for determining land needs.

The residential area is expected to be sufficient to meet the Town's growth needs for between 40 years (high growth rate) to 60 years (low growth rate).

The residential areas in the annexation area are contiguous with existing residential development within the Town, and allow for connections to existing infrastructure systems for water, sanitary sewer, and storm water management. Roads, sidewalks, pathways, and linear parks can also be extended from the existing residential neighbourhoods into the annexation area. All of these systems can be enhanced and strengthened through their expansion into the annexation area. Planning for the continuation of residential land use into the annexation area limits the potential for land use conflict, and allows for orderly and efficient provision of infrastructure and services.

The SE 9-20-2-W5 was added to the annexation area after the public consultation in September-October of 2018. The *Annexation Lands Servicing Review* determined that a right-of-way would be required across the northwest portion of the quarter section for water and sanitary sewer trunk lines, and a collector road. The presence of this infrastructure and road, along with future development to the north and west, increases the serviceability and long-term development potential of this quarter. This quarter section is serviceable provided the infrastructure is sized to accommodate its development. It was determined that inclusion of this quarter in the annexation area allows the Town to plan for its long-term, orderly and economic growth.

There is a 9.14 acre parcel (Lot 1, Plan 9411282) in the southeast corner of the SE 9-20-2-W5. The Town is not proposing to include this parcel in the annexation area. The property line follows a drainage course, and this corner of the quarter is physically fragmented from the rest. The parcel has access onto 144th St, a County road. The Town and County agree that it is reasonable for this parcel to remain in the County.

The NE 5-20-2-W5 was also added to the annexation area after the public consultation in September-October of 2018. The owners of the main parcel in the quarter requested that it be added to the annexation area, and stated that since the IDP had identified this quarter as a future urban growth area, the development opportunities for this quarter were very limited if it were not annexed. The Town assessed the servicing implications of adding this quarter to the annexation area, and determined that it is serviceable, but will require significant off-site water and sewer infrastructure if it were to be developed prior to other lands in the annexation area. Provided that infrastructure is designed to accommodate development of this quarter when other lands are developed, this quarter can be serviced in a cost effective manner.

The residential lands in the proposed annexation provide the Town with a long-term supply of land, allowing the Town to create long-term, comprehensive plans for developing orderly, attractive, efficient, and sustainable communities.

Commercial Area

Approximately 32 acres are intended for commercial use. The commercial area is adjacent to lands within the Town that are already designated for commercial use in the Land Use Bylaw, and will form a commercial node south of the existing downtown along Highway 22 that will be central to the residential communities of the annexation area. This resident-focused commercial development is anticipated to add significantly to the 'complete community' that is visualized for the residential growth areas. By focusing on complementary non-residential uses in this area, a number of core principles of Smart Growth can be realized. For example, a variety of supportive non- residential uses within approximately 500 metres or a 5-minute walk of many residences provides greater equality for the community, real opportunities for active modes to become more commonplace, and greater efficiency of land use.

The *Joint Growth Strategy* forecast a need for between 48 – 69 acres of commercial land to support growth in Black Diamond and Turner Valley over a 60 year timeframe. It is expected that 32 acres of land for commercial use will be sufficient to support Black Diamond's growth for 40 or more years.

Industrial Area

Approximately 50 acres are intended for industrial use. The industrial area is located south of Highway 7, on the north side of NE 9-20-2-W5, in proximity to the existing business park located north of Highway 7 in the south portion of SW 16-20-2-W5. This location is accessible and visible from Highway 7, and closest to the Hwy 2 corridor. Highway commercial uses are anticipated in proximity to the highway, along with light industrial uses. Industrial development was identified for this location in the *Joint Growth Strategy*.

The *Joint Growth Strategy* forecasted that an additional 23 acres of land for industrial use would meet the combined needs of Black Diamond and Turner Valley. This estimate is modest when contrasted with

the *Black Diamond Community Economic Development Plan*, which identified that the Town requires significantly more non-residential development in order increase the residential / non-residential assessment ratio from 90/10 to 85/15. The *Economic Development Plan* identified a deficiency of 105 acres in commercial and industrial land. As an addition to the vacant industrial lands within the current town, it is expected that the 50 acres of industrial land will meet the needs of the Town for at least 30 years. If future industrial growth depletes this supply, the Town will address that need when required.

When the Town consulted with landowners and the general public in September-October 2018, the proposed annexation area included the SE 16-20-2-W5 for use as a business park. Some of the landowners in this quarter supported annexation, while others were opposed. In response to concerns raised by landowners, the Town took a closer look at issues involved in servicing the quarter, particularly the challenges of phasing development of the land in increments small enough to match the relatively slow rate of growth anticipated for industrial development in Black Diamond. It was determined the topography of the quarter posed challenges for phasing construction of the infrastructure in a manner that suits Black Diamond's market conditions.

Strategic Area

The annexation area includes 158.31 acres of land (+21.2 acres of the Sheep River) to the west of the Town that are shown in **Figure 9** as 'Strategic'. These lands consist of the Sheep River valley floor, and south escarpment, and some rolling, forested land south of the escarpment to 418th Ave. These lands are not proposed for development, rather, the *Joint Growth Strategy* identifies the river valley as a *"key component to providing connectivity between the towns, ensuring ecological health for the area, preserving environmentally sensitive areas, and promoting the integration of a parks and open space network within future development."*

Black Diamond owns 3 parcels in this area, and intends to allow the public to access the land for recreation purposes. The Town is currently developing a baseball diamond on the 25.41 acre parcel located north and west of the Sheep River on the south side of Hwy 22 (Block 1, Plan 8010142). Annexation will allow the Town's Peace Officers to enforce municipal bylaws at this facility. Other lands in this area are owned by a land trust society, which also intends for the land to be preserved in its natural state and made accessible to the general public for passive recreation. These lands are largely undeveloped and in their natural state, however they do include a driving range and some maintenance buildings associated with the Turner Valley Golf Course.

Annexation of the lands in the strategic area will also result in a contiguous border between the Towns of Black Diamond and Turner Valley. The Towns have contemplated amalgamation in the past, and continue to discuss coordination and collaboration. As a contiguous border is a requirement for an amalgamated municipality (MGA Sec. 101(1)(b)), achievement of a contiguous border in this annexation may facilitate future amalgamation, should the Towns wish to pursue this in the future.

Part 6 Annexation Lands Servicing Review

The ability to provide municipal services and infrastructure, including water, sanitary, storm conveyance and catchment, and transportation networks, is a critical component in determining the feasibility of an annexation proposal. Taking into account the results of preliminary analysis of the annexation area and the capacities and limitations of the Town's existing infrastructure, it is anticipated that the annexation area can be efficiently serviced with municipal infrastructure. It should be noted here that the Town

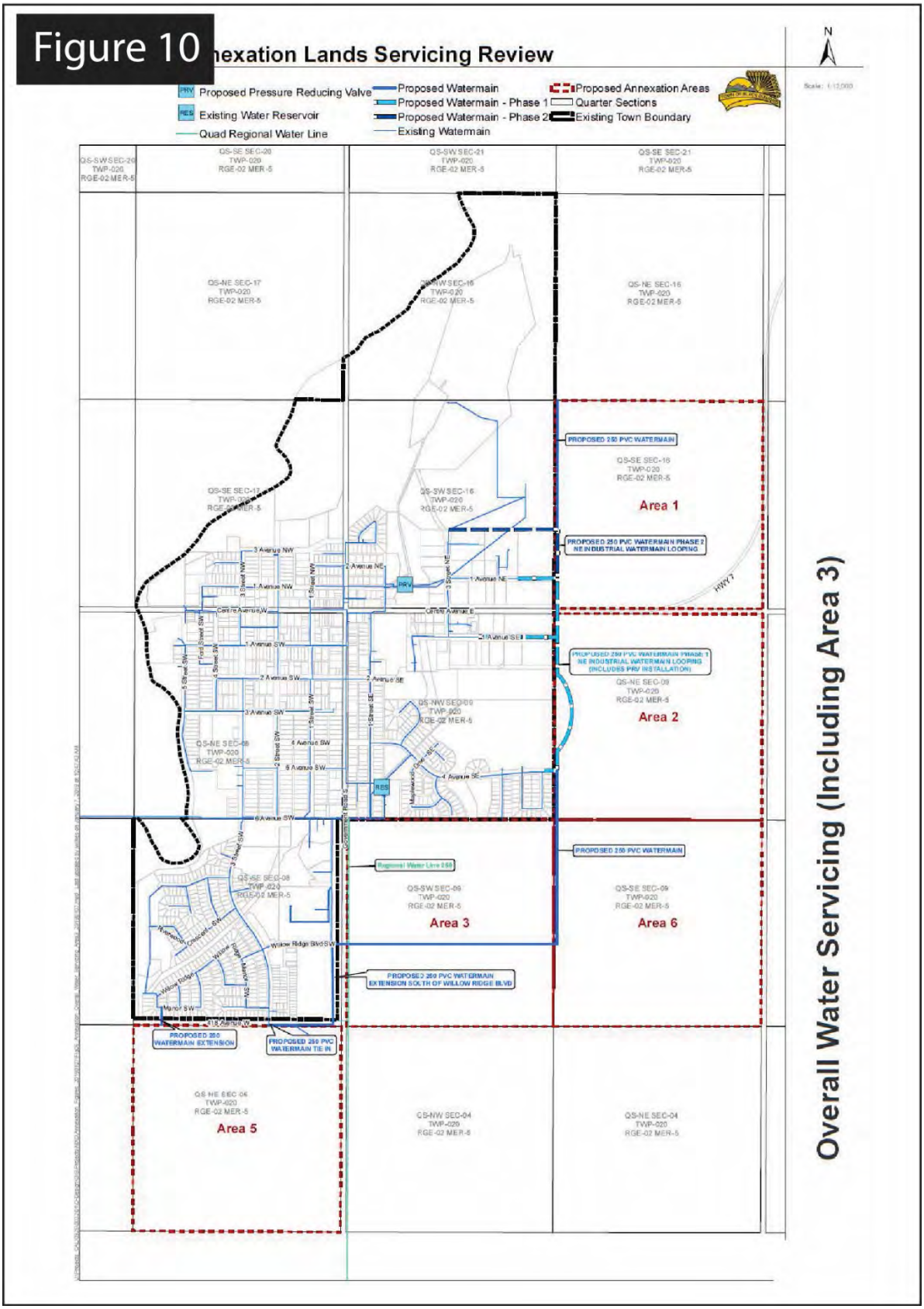
maintains an offsite levies bylaw, and the intention is to maintain and update this bylaw in accordance with the costs of future development, with a focus on ensuring that new development is not paid for by the existing citizenry. The *Annexation Lands Servicing Review* (Appendix K) prepared by Urban Systems assessed the serviceability of the annexation area.

Water

The Town's water is conveyed from the Sheep River Regional Utility Corporation (SRRUC) treatment plant in Turner Valley via a pipe system that follows the alignment of 434 Ave and Hwy 22. The treatment plant provides treated water to Black Diamond, Turner Valley, and the MD of Foothills, and has capacity to service a population of 9,160. The Town is allocated 45% of the treatment plant's capacity, the Town of Turner Valley has 45%, and Foothills County has 10%. It is estimated that the combined population of the service area will reach the capacity of the treatment plan between 2034 and 2039, depending on population growth. Further growth in the area will require expansion of the treatment plant. There are currently no plans in place to expand the plant at this time.

In order to receive the allocated capacity of treated water, each municipal member of SRRUC must have a corresponding provincial water license. The Town has 3 water licenses with a combined total volume of 954,660 m3, which exceeds the current total capacity of the treatment plant. Full buildout of remaining vacant land within Town and the entire annexation area is estimated to require 1,186,080 m3. Existing license will be sufficient to support growth until approximately 2056 – 2066, depending on growth rate, after which additional license will be required.

The water distribution concept for the annexation area is illustrated in **Figure 10**. Treated water is transmitted from the treatment plant in Turner Valley to a storage reservoir in Black Diamond, which has capacity to serve the entire annexation area. Water is distributed throughout the Town from the reservoir. Eventually additional pumps will be necessary to provide water to the annexation areas. A new water main is necessary to provide water to the annexation area – this main will eventually run from Willow Ridge Blvd (south of the Oilfields Hospital), east, and then north, connecting to the business park (see map), following the alignment of a new collector road that will serve the annexation area. The NE 5-20-2-W5 will require extension of new water and sewer mains and will likely be phased after development of SW 9-20-2 W5.


Figure 10
nexation Lands Servicing Review
Proposed Pressure Reducing Valve
Existing Water Reservoir
Quad Regional Water Line
Proposed Watermain
Proposed Watermain - Phase 1
Proposed Watermain - Phase 2
Existing Watermain
Proposed Annexation Areas
Quarter Sections
Existing Town Boundary
N
PROPOSED 250 PVC WATERMAIN
Area 1
PROPOSED 250 PVC WATERMAIN PHASE 2 NE INDUSTRIAL WATERMAIN LOOPING
PROPOSED 250 PVC WATERMAIN PHASE 1 NE INDUSTRIAL WATERMAIN LOOPING (INCLUDES PRV INSTALLATION)
Area 2
PROPOSED 250 PVC WATERMAIN
Area 3
Area 6
PROPOSED 250 PVC WATERMAIN EXTENSION SOUTH OF WILLOW RIDGE BLVD
PROPOSED 250 WATERMAIN EXTENSION
PROPOSED 250 PVC WATERMAIN TIE IN
Area 5
Overall Water Servicing (Including Area 3)

The water main and related upgrades will likely be constructed by the Town and funded in large part by off-site levies paid by developers. Land developers will be responsible for construction of the local water distribution system that will fed by the water main.

In partnership with the municipalities that comprise SRRUC, the Town continues to encourage and promote water conservation measures and it is anticipated that such action will reduce per-capita water consumption by the time the annexation area is fully built-out.

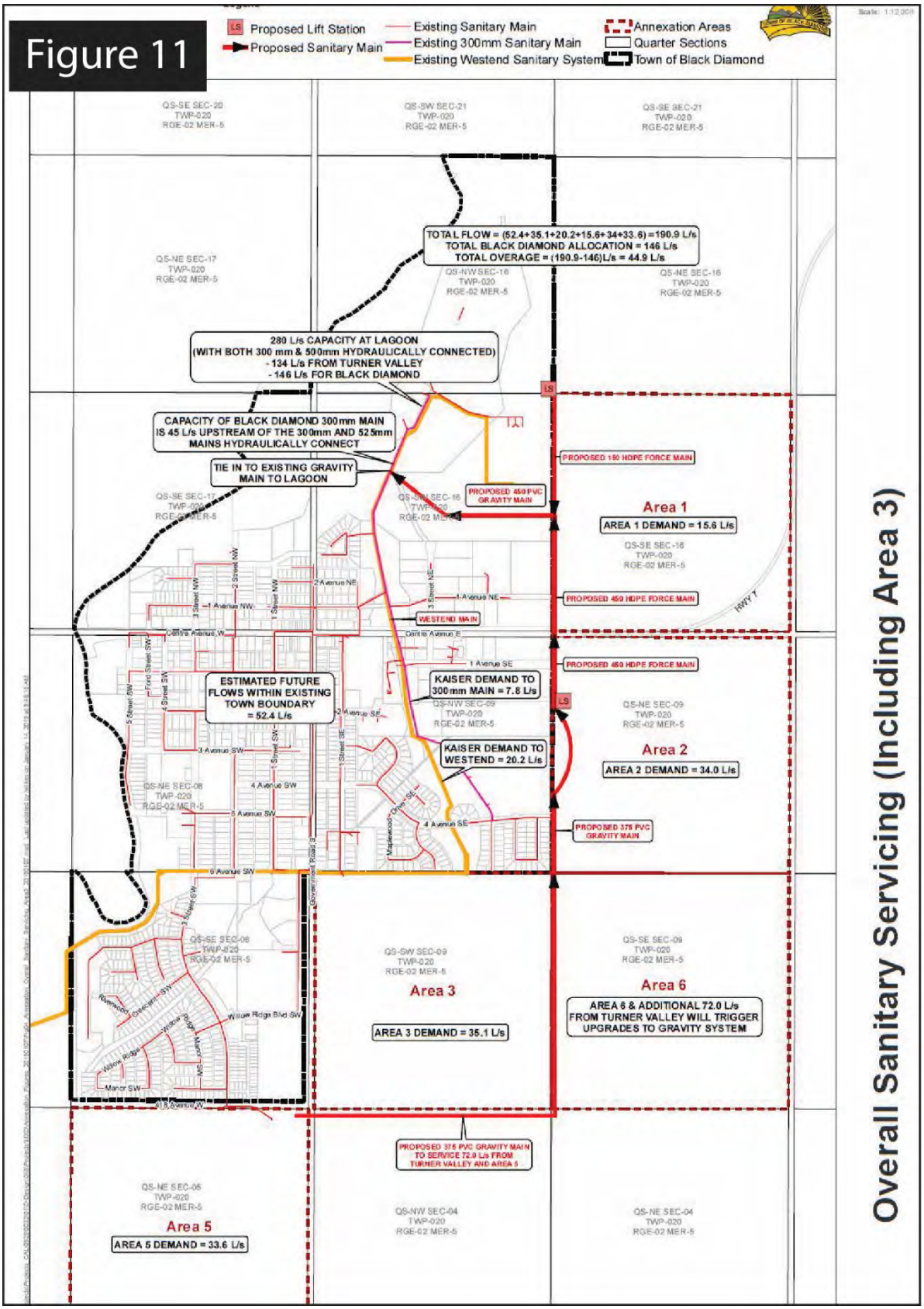
Sanitary Sewage

The Westend Regional Sewage Services Commission (WRRSC) operates sewage treatment lagoons in Black Diamond which provide sewage treatment for Black Diamond and Turner Valley. The lagoons currently have capacity to service a population of approximately 5300 (combined population of Black Diamond and Turner Valley), and are nearing capacity.

WRRSC has plans to upgrade the existing facility to improve treatment quality and increase treatment capacity. The expansion is sized for a population of approximately 8,000 (combined population of Black Diamond and Turner Valley). The Towns are expected to reach this population by 2030 – 2035.

Although the Town's sewage lagoons are nearing capacity, a major upgrade of the lagoon system is planned for 2018 or 2019 and will result in additional treatment functionality and capacity being available to accommodate growth to 2041 and beyond.

The sanitary sewage collection concept for the annexation area is illustrated in **Figure 11.** A new sewage main and lift station is necessary on the east side of Town (following the alignment of the current Town boundary) to convey sewage from NE & SE 9-20-2 W5 in the annexation area to the sewage treatment plant. This main will eventually have to be extended through the SW 9-20-2-W5 to accommodate sewage from the NE 5-20-2 W5 and will follow the alignment of a future collector road and water main.


Figure 11
Proposed Lift Station
Proposed Sanitary Main
Existing Sanitary Main
Existing 300mm Sanitary Main
Existing Westend Sanitary System
Annexation Areas
Quarter Sections
Town of Black Diamond
TOTAL FLOW = (52.4+35.1+20.2+15.6+34+33.6) = 190.9 L/s
TOTAL BLACK DIAMOND ALLOCATION = 146 L/s
TOTAL OVERAGE = (190.9-146) L/s = 44.9 L/s
280 L/s CAPACITY AT LAGOON
(WITH BOTH 300 mm & 500mm HYDRAULICALLY CONNECTED)
- 134 L/s FROM TURNER VALLEY
- 146 L/s FOR BLACK DIAMOND
CAPACITY OF BLACK DIAMOND 300mm MAIN IS 45 L/s UPSTREAM OF THE 300mm AND 525mm MAINS HYDRAULICALLY CONNECT
TIE IN TO EXISTING GRAVITY MAIN TO LAGOON
PROPOSED 150 HDPE FORCE MAIN
PROPOSED 450 PVC GRAVITY MAIN
Area 1
AREA 1 DEMAND = 15.6 L/s
PROPOSED 450 HDPE FORCE MAIN
WESTEND MAIN
PROPOSED 450 HDPE FORCE MAIN
ESTIMATED FUTURE FLOWS WITHIN EXISTING TOWN BOUNDARY = 52.4 L/s
KAISER DEMAND TO 300mm MAIN = 7.8 L/s
KAISER DEMAND TO WESTEND = 20.2 L/s
Area 2
AREA 2 DEMAND = 34.0 L/s
PROPOSED 375 PVC GRAVITY MAIN
Area 3
AREA 3 DEMAND = 35.1 L/s
Area 6
AREA 6 & ADDITIONAL 72.0 L/s FROM TURNER VALLEY WILL TRIGGER UPGRADES TO GRAVITY SYSTEM
PROPOSED 375 PVC GRAVITY MAIN TO SERVICE 72.0 L/s FROM TURNER VALLEY AND AREA 5
Area 5
AREA 5 DEMAND = 33.6 L/s
Overall Sanitary Servicing (Including Area 3)

The WRSSC operates a sewage main that transmits sewage from Turner Valley to Black Diamond. The western half of the main is a forcemain, but in Black Diamond it becomes a gravity main. There is excess capacity in the WRSSC gravity main that could accommodate all the sewage from the development of SW9-20-2 W5, which would allow development of the SW9-20-2-W5 prior to construction of the sewage main and lift station discussed above.

There is capacity within the existing collection system to accommodate development of up to 25 acres in the NE9-20-2 W5 or in the NE 5-20-2 W5, but development beyond this would require construction of the new main and lift station on either of those quarter sections. The SE 9-20-2-W5 will require construction of the new main and lift station. Full buildout of the NE 5-20-2-W5 will require extension of new water and sewer mains, and will likely be phased after development of SW 9-20-2 W5.

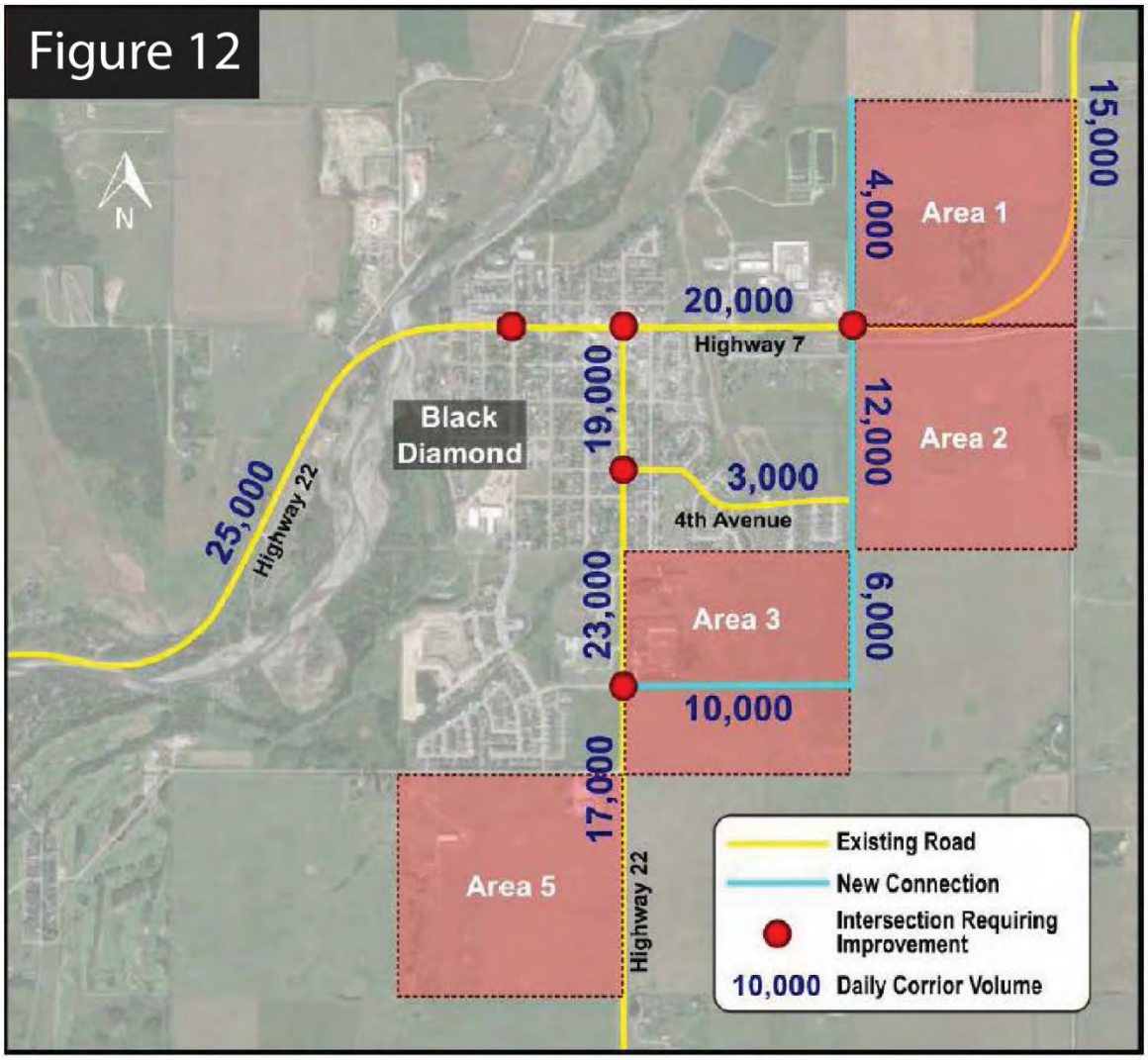
Similar to water infrastructure, developers will be responsible to construct the local collection system that will feed into the sewage main. The sewage main and lift station will likely be constructed by the Town and funded in large part by off-site levies paid by developers.

Stormwater Management

Stormwater collection and treatment will consist of a system of ponds, underground mains, gutters, and ditches. These facilities will serve the respective quarter sections and will be the responsibility of the developer. There will be instances where developed lands within the annexation area will require stormwater to discharge into roadside ditches or intermittent creeks in the County. These situations will require consultation with and approval from the County, and will be addressed when Area Structure Plans and Master Drainage Plans are prepared in the future. The Town intends to prepare a Master Drainage Plan for the entire Town in the years following annexation.

Transportation

The annexation area is served by a new north-south connection following the 6th St. E corridor to alleviate demand on the existing network, as shown in **Figure 12**. This road will swing west and connect with Highway 22 opposite Willow Ridge Gate, just south of the Oilfields General Hospital. A number of intersection upgrades will be necessary to support increased traffic throughout town as a result of growth. The new corridors provide an additional layer of mobility and connectivity into the existing transportation network. The high-level grid network provides a level of redundancy into the network, shifts demand during the peak period, and provides commuters with additional routes through Town to and from their destinations.



The transportation concept does not intend for development in the annexation area to have direct access onto the County's roads. The new corridor is intended to carry all traffic associated with the annexation area to the provincial highway network, as well as connect with existing roads in Town.

Utilities – Gas/Electric

No capacity issues have been identified by the utility providers in the Black Diamond area, and it is not anticipated that future growth will be a challenge to service.

Part 7 Financial Impact Analysis

The Town and County have mutually agreed that the Town will pay compensation to the County at the rate of $190 per developable acre, and they further agree that there are 583 developable acres in the annexation area, for a total compensation payment of $110,770, to be paid to the County in 5 equal

annual payments of $22,154, beginning in 2020.

Part 8 Public Engagement

Considerable effort has been taken to ensure all stakeholders, including Town and County landowners, residents, business owners, agencies, and utility operators are aware of and have opportunity to have input regarding the Town's annexation proposal.

Table 3 provides a timeline of how the Town has engaged with and informed the public, including the method of engagement used, target audience, and number of participants. Engagement materials and feedback received can be found in Appendix M.

TABLE 3

Date	Type of engagement	Target audience	Message/Intent
November 2017 March 2018	**Notice of Intent** mailed to government, agencies, local authorities, utilities	Provincial Ministries, Local Authorities, Agencies, Utilities	Town intends to commence annexation proceedings; annexation map
March 2017 – April 2019	**Face-to-face meetings** with affected landowners	Landowners in the annexation area	Town intends to annex; thorough discussion of implications, including taxation, municipal servicing, planning & development regulation; etc.
September 2018	**Letters** mailed to Annexed Landowners and IDP Landowners (not proposed for annexation)	Landowners in annexation area; IDP area	Annexation Map, Annexation FAQs, Invitation to Public Open House, Invitation to contact Town staff; link to annexation webpage.
September 2018 - ongoing	**Annexation Webpage** provided on Town website	Landowners, Agencies, Stakeholders, General Public	Summary of annexation proposal (briefly describe population projections, land requirements, servicing considerations). Annexation FAQs. Links to plans (IDP, MDPs), Links to studies (JGS, Annexation Servicing Study, BD Trans Study, BD Ec. Dev. Strategy). Link to MD Foothills Annexation Webpage Link to MGB Annexation resources Open House information. Online Survey.
September 2018	**Announcement on Social Media**	General Public, Town Residents, Landowners	Announce annexation; direct public to website for further info; announce Public Open House; invitation to complete online survey.

Sept 24 (release) Oct 3 (story in Western Wheel)	**Joint Press Release**	General Public, Town Residents, Landowners	Announce annexation proposal; explain process; status of negotiations; opportunities for public engagement; where to get more info; announce Public Open House
October 2018	**Joint Public Open House** **4-8 pm, Town Council Chambers**	Landowners, Town Residents, General Public	Provide info boards regarding annexation proposal (population growth, land requirements, servicing considerations). Provide info boards regarding Annexation FAQs Comment Boards ***30 attendees**
October 2018	**Annexation Opinion Survey**	Landowners, Town Residents, General Public	Online opinion survey open to general public regarding annexation. *18 responses
March 2019	**Letters** mailed to Landowners in annexation area and IDP area; to stakeholders, agencies, utility companies	Landowners in annexation area; IDP area; stakeholders; agencies; utility companies	*Revised* Annexation Map, Annexation FAQs, Invitation to Public Open House, Invitation to contact Town staff; link to annexation webpage.
March 5 2019 (release) March 27, 2019 (story in Western Wheel)	**Joint Press Release**	General Public, Town Residents, Landowners	Announce revision of annexation proposal; explain process; status of negotiations; opportunities for public engagement; where to get more info; announce Public Open House
April 2019	**Joint Public Open House** **4-8 pm, Town Council Chambers**	Landowners, Town Residents, General Public	Provide info boards regarding *revised* annexation proposal (population growth, land requirements, servicing considerations). Provide info boards regarding Annexation FAQs Comment Boards ***20 attendees**

May 2019	**Public Hearings held by Town Council (May 15 2019) and County Council (May 21 2019).**	Landowners, Town Residents, General Public	Provide overview of Annexation Agreement for Council and Public; provide Public an opportunity to address Council directly concerning annexation.

Throughout the public engagement process, landowners and residents have had a variety of questions relating to the annexation proposal. In response to feedback, the annexation area did change between September 2018 and February 2019, as shown in **Figure 7** and **Figure 8**.

Response to Landowner Feedback

The Town met directly with all but one of the landowners in the annexation area. Two of the landowners (or their representatives) attended meetings of the Annexation Negotiation Committee to discuss annexation. All communications submitted from landowners were provided to the Annexation Negotiation Committee for consideration. As a result of feedback from landowners, changes were made to the proposed annexation area. As discussed previously in Part 5, the SE 16-20-2-W5 was removed from the annexation area as 2 of the 3 landowners did not support annexation, and the topography of the quarter made phasing of development unsuited for the Black Diamond land market. Although 1 landowner in this quarter still seeks to be annexed, it was not rational to annex those lands in isolation of the other lands in the quarter.

As discussed in the Residential Area section of Part 5, the NE 5-20-2-W5 was added to the annexation area at the request of the landowners. The Annexation Lands Servicing Review determined it was serviceable provided infrastructure in adjacent lands is sized to accommodate its development.

Finally, the SE 9-20-2-W5 was added to the annexation area at the request of the Town, and with the support of the landowner.

Response to Feedback from the General Public

Interest from the general public was mild. Two Public Open House events were held, in October 2018, and April 2019. Both events were preceded by a press release and accompanying story in the local paper, and were advertised in the paper, on social media, and on the Town notice board. Thirty people attended the open house in October, and 20 attended the event in April. Although attendees were invited to provide written comment, none did, at either event.

Conversation with the attendees indicated the following concerns:

- Limited availability of water to support growth;
- Loss of small-town character and qualities as the Town grows into the annexation area;
- Traffic impact of growth;
- Cost of new infrastructure to support growth;

- Impact on taxes.

A Public Opinion Survey on Annexation was available at the October Open House for attendees to fill out, and was available online from October 15 – 24, 2018. A total of 18 surveys were filled out, with 14 indicating opposition to annexation, and 4 in favour. A tabulation of survey responses can be viewed in Appendix M.

At the Public Hearing held by the Town, an owner of land adjacent to the Town expressed broad concern with the annexation, stating that it was over-reaching, and unrealistic in terms of population forecast and land requirements; that the Town is unable to service the land efficiently and is challenged with maintaining existing infrastructure; that the Town can't afford to develop the additional infrastructure necessary to service the land. At the Public Hearing held by the County, the same land owner expressed concern that the imposition of Town taxes on the annexed lands will pose an undue burden on the annexed landowners.

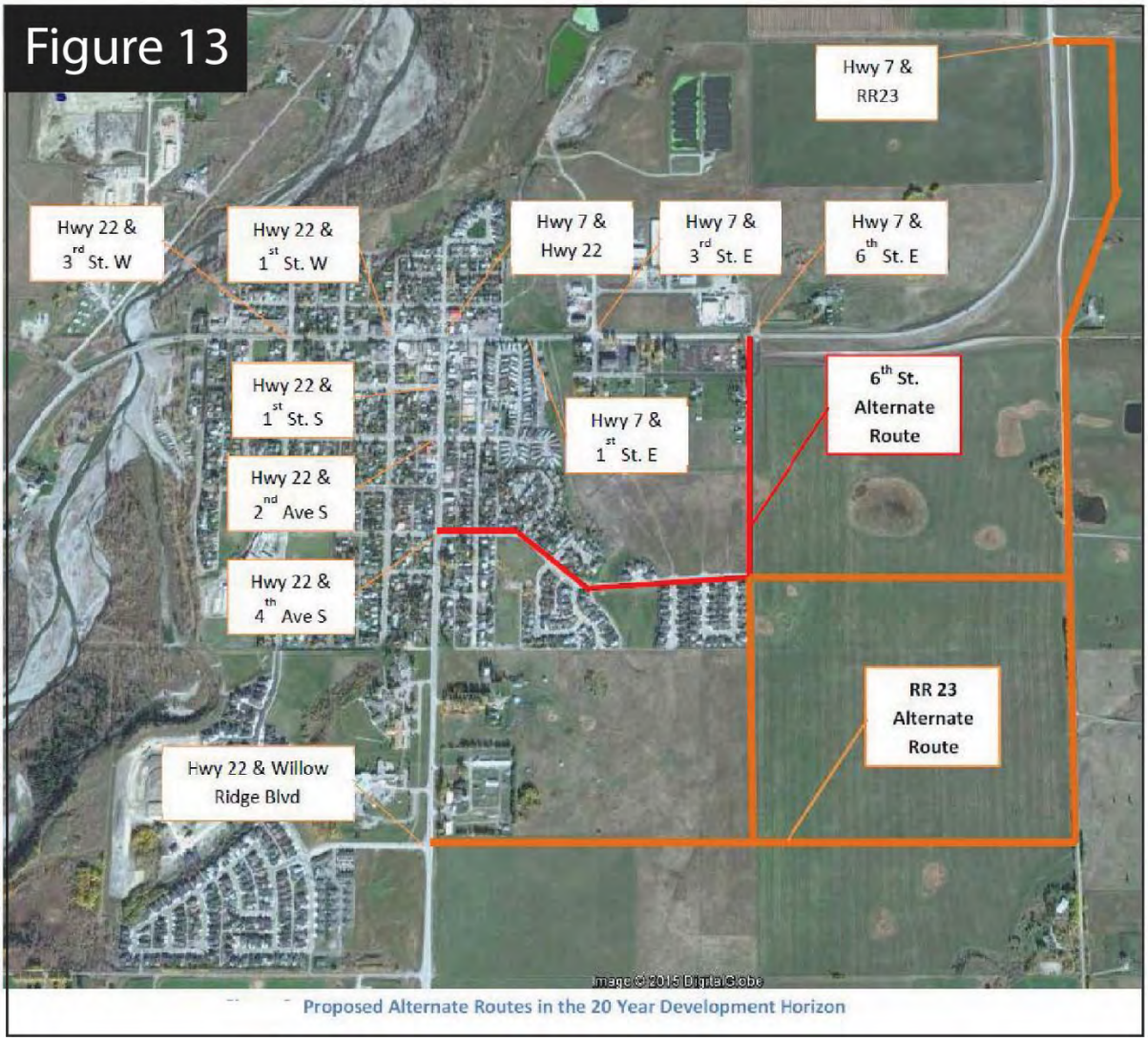
Concern regarding the imposition of Franchise Fees on electricity and gas utilities by the Town was also expressed by landowners within the annexation area at both Public Hearings. A request was made that the reprieve from payment of Franchise Fees be extended to annexed properties from 3 years to 25 years.

Part 9 Agency Consultation

The revised *Notice of Intent to Annex* was mailed to agencies and stakeholders on March 22, 2018, with subsequent letters advising of revisions to the annexation area and inviting attendance at the Open House on September 24, 2018 and March 5, 2019. Responses were received from Alberta Transportation, the Westend Regional Sewage Services Commission, and the Foothills School Division No. 38. These responses may be found in Appendix F.

Alberta Transportation sent 2 letters, both referencing the *Black Diamond Transportation Study (2015)* which was prepared by Alberta Transportation. This study considered the impact of the Town's growth on the function of Highways 7 and 22 over a 30 year horizon. The report identified a number of intersection upgrades and road widening for the highways that would be required as development proceeds. Among the recommendations was:

> *"that Range Road 23 (known locally as 144th St) be built and maintained by the Town to provide an alternate access to and from the development. It would be ideal if this road extended all the way south as a collector standard to the Willow Ridge Blvd intersection on Hwy 22, to provide an alternate route as shown on Figure 2* (note: refer to **Figure 13** below)*. If built property to accommodate commercial trucks, it could serve as an alternate route for commercial heavy vehicles commuting east, which would relieve the movement of eastbound commercial heavy vehicle traffic within the Town. This route would provide a more ideal route for commercial heavy vehicles because it would impact less residential development compared to using the 6th St. East route for commercial heavy vehicles." (page 9)*



The report was prepared by Alberta Transportation at the request of the Town, and was presented to Council, where it was accepted for information.

In its May 18, 2018 to the Municipal Government Board, and in its October 9, 2018 letter to the Town, Alberta Transportation strongly advises that Range Road 23 (144th St, located directly east of NE & SE 9-20-2-W5) be included in the annexation area.

The Town does not agree with Alberta Transportation on this matter. The transportation concept in the Annexation Lands Servicing Review shows a collector road following the 6th St. E alignment, which then swings west to intersect with Willow Ridge Blvd at Highway 22, south of the Oilfields General Hospital. This collector road will carry local traffic from the annexation area, which will connect with other local roads and the Provincial Highways. The Town does not intend for the annexation lands to have direct access onto the County's road network once they are developed. Furthermore, the Town does not support the notion that it has a responsibility to build local roads for the purpose of carrying highway traffic (see

email response from Black Diamond dated Oct 10, 2018 in Appendix F).

In follow-up correspondence with Alberta Transportation in May 2019, Alberta Transportation reaffirmed its position that RR23 (144th St) be included in the annexation area, as the department is of the opinion that a second access onto Hwy 7 is necessary to serve the build-out of the annexation area; to ensure the safe and efficient function of Hwy 7; and to avoid jurisdictional conflict with Foothills County.

The Town remains of the view that the transportation concept shown in the Annexation Lands Servicing Review is sufficient to support the build-out of the annexation area; that the transportation concept shown does not direct traffic onto RR23 (144th St); and that the access to Highway 7 from RR23 (144th St.) is not necessary to serve the needs of Black Diamond's growth. The Town does not want to assume the cost of maintaining 2.2 km of road that it does not intend to use.

The Town further notes that Foothills County has not indicated any concern with the exclusion of RR23 from the annexation area, nor has it raised any concern with the prospect of additional traffic on this road as a result of development in the annexation area. It is important to consider that a number of planning processes will occur prior to any development of the annexation area, each of which provides opportunity for the Town, County, and Alberta Transportation to address transportation-related concerns:

- The Town and County will review the Intermunicipal Development Plan
- The Town and County will enter into an Intermunicipal Collaboration Framework
- The Town will prepare a new Municipal Development Plan
- The Town will prepare a Master Transportation Strategy
- The Town will prepare Area Structure Plans

It is the Town's view that the annexation application should be approved as presented. The upcoming planning initiatives provide ample opportunity for the three parties to explore and address the concerns identified by Alberta Transportation.

The correspondence from the Westend Regional Sewage Services Commission and the Foothills School Division No. 38 indicated support for the Town's annexation proposal.

Part 9 Proposed Date of Annexation

It is proposed that the effective date of annexation be January 1, 2020 or as otherwise determined by the Annexation Order.

Part 10 Landowner Consent

Four of the eight affected landowners have signed formal Landowner Consent Forms regarding to annexation. Of the landowners that have not signed a Landowner Consent Form, the Town is not aware of any landowners that are opposed to annexation. A copy of each signed consent can be found in Appendix C. The specifics of the landowner consents are as follows:

ASSESSMENT AND TAXATION

1.1 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon,

excluding linear property, shall be assessed by the Town on the same basis as if they had remained in the County.

1.2 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be taxed by the Town using:

(a) the municipal property tax rate established by the County for the current tax year; and

(b) the Town shall offer a discount of 6% for early payment of taxes on the same terms offered by the County to it is taxpayers for the current tax year.

1.3 Where, in any tax year, any parcel of land within the Annexation Territory:

(a) is the subject of a subdivision or separation of title (whether by registered plan of subdivision, by instrument or any other method) whereby a new parcel of land is created (including the residual parcel), at the request of or on behalf of the landowner;

(b) is re-designated, at the request of or on behalf of the landowner, under the Town's Land Use Bylaw to another designation; or

(c) is connected, at the request of, or on behalf of the landowner, to the Town's water and/or sewer services;

(individually, a "Triggering Event"),

Sections 1.1 and 1.2 shall cease to apply to that parcel of land and any assessable improvements thereon at the end of the tax year in which the Triggering Event occurred.

OTHER PROVISIONS

1.4 The Town shall grant to the landowners in the Annexation Territory a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

1.5 Following the Effective Date of Annexation, planning and development of land within the Annexation Territory will continue to be subject to the County's Land Use Bylaw in place as of the Effective Date of Annexation until such time as Council for the Town amends the Town's Land Use Bylaw to include the Annexation Territory, in accordance with the statutory requirements of the Act, including but not limited to appropriate public engagement and a public hearing.

1.6 Land Use and Development within the Annexation Territory that is in compliance with the County's Land Use Bylaw as of the Effective Date of Annexation shall be permitted to continue until such time that the subject lands are re-designated or subdivided, at the request of or on behalf of the landowner, to a land use designation and/or property size that does not allow for the existing Land Use and/or Development.

Part 11 Agreement with Foothills County

The annexation agreement between Town and County is found in Appendix B. As indicated in Part 7 (Financial Impact Analysis), the Town has agreed to pay to Foothills County compensation in the amount of $190 per developable acre, and they further agree that there are 583 developable acres in the annexation area, for a total compensation payment of $110,770, to be paid to the County in 5 equal annual payments of $22,154, beginning in 2020

The agreement stipulates that the Town will continue to tax and assess annexed lands as though they were still in the County for 25 years following the date of annexation, including implementation of an early payment discount program as offered by the County, unless one of the following triggering events occur, which will result in the lands being taxed and assessed at the applicable Town rate:

- A parcel is affected by a subdivision or separation of title where a new parcel is created;
- A parcel is redesignated under the Town's Land Use Bylaw at the request of the owner; or
- A parcel is connected at the request of the landowner to the Town's water and/or sewer services.

The agreement further states that the County's Land Use Bylaw shall continue to apply to the annexation lands until such time as the Town amends its Land Use Bylaw to permit the same activities as those permitted in the County's Land Use Bylaw for the annexation lands.

The agreement also addresses the transfer of assessment, tax, and planning and development files associated with the annexation lands.

Part 12 Annexation Principles

This annexation application is consistent with the Annexation Principles developed by the Municipal Government Board, as outlined below:

1. Intermunicipal Cooperation

The Town and County have a strong and positive relationship and cooperate in a number of areas including:

- Adoption of an *Intermunicipal Development Plan* involving Foothills County, Town of Black Diamond, and Town of Turner Valley. As discussed in Part 4, this annexation application is consistent with the policies of the IDP;
- Formation of the *Sheep River Regional Utility Corporation* ;
- Quarterly meetings of the *Joint Advisory Committee*, which is charged with exploring areas of collaboration between Black Diamond, Turner Valley, Foothills County, and the Village of Longview;
- Both municipalities are members of the *Foothills Regional Services Commission* (Landfill);
- Funding or joint service agreements for the arena, library, cemetery, waste transfer station, and emergency services;
- As a result of annexation negotiations, the Town and County agree to negotiate an agreement

for the County to provide road maintenance services to the roads in the annexation area.

The process that led to this annexation agreement was positive, respectful, and productive, and is a testament to the long history of cooperation between the municipalities.

2. Accommodation of growth by all municipalities

   The annexation was initiated by the Town to accommodate its long-term growth needs. The annexation was informed by the *Joint Growth Strategy* - a joint initiative of Black Diamond and Turner Valley which provided direction for the long-term growth of both towns. The annexation achieves a contiguous border between Black Diamond and Turner Valley, while at the same time leaving land between the Towns for Turner Valley to annex, should it choose to do so.

   Although the County did not identify the need for a growth area in the vicinity of the Town during annexation negotiations, the annexation agreement states that the IDP will be reviewed, which will address land use and development in and around the Towns.

3. Recognition of local autonomy

   The negotiation process and resulting annexation agreement is evidence of the autonomy of the respective municipalities. The annexation proposal recognizes and respects local autonomy by allowing the both the Town and County to continue to plan, grow and develop in accordance with their aspirations, as expressed in plans, bylaws and policies.

4. Growth projections, available land within current boundaries and the consideration of reasonable growth options

   The *Joint Growth Strategy* provides justification for the need to annex lands and is based on the consideration of available lands within current boundaries, and the projected growth of the Town. The growth projection utilized in the Joint Growth Strategy was consistent with projections prepared for the Calgary Region and the Province at the time.

5. A logical extension of growth patterns, transportation and infrastructure servicing

   Growth patterns, transportation, and infrastructure servicing have been addressed, to varying extents, in the *IDP*, the *Black Diamond MDP*, and the *Joint Growth Strategy.* These documents consistently identify that the logical growth pattern for Black Diamond is to the east and south of the existing Town. The *Annexation Lands Servicing Review* has outlined logical and efficient concepts for water and sewer servicing. A new collector road will provide connection between the annexation area and the highways, and to the existing local network within Town. This road will provide greater connectivity and redundancy in the road network, and will mitigate the increase in traffic on the highway network by providing alternative route for local traffic. The Town is confident this annexation proposal will allow for growth in a more efficient, orderly, responsible and cost-effective manner than any other scenario.

6. The administration of services;

   The Town provides services to residents using a variety of delivery modes, often in partnership with other municipalities. Water treatment, sewage treatment, waste management, and library services,

are provided through partnerships with neighbouring municipalities. Emergency services are provided directly by the Town, but with the benefit of mutual aid agreements with neighbouring municipalities. Black Diamond continues to explore opportunities to collaborate in service delivery, recently established a joint Economic Development Committee with Turner Valley, and is in the process of developing a Community Transportation Strategy in partnership with Turner Valley.

As the Town grows, it will continue to seek out opportunities to improve the quality and efficiency of service through partnerships and collaboration with neighbouring municipalities and other partners.

7. Sensitivity and respect for key environmental features

The *Joint Growth Strategy* identified that there are no major sensitive environmental features within the portions of the annexation area that are proposed for development. The lands are in agricultural use and are mostly cultivated. The annexation area does include a portion of the Sheep River, floodplain and escarpment, but these lands are not proposed for development. Rather, the *Joint Growth Strategy* identifies the river valley as a *"key component to providing connectivity between the towns, ensuring ecological health for the area, preserving environmentally sensitive areas, and promoting the integration of a parks and open space network within future development."* Similarly, the riparian lands adjacent to the intermittent steams that traverse the lands that are intended for development have been assumed to be undevelopable for the purpose of determining the total developable acreage within the annexation area, and would be protected from development in accordance with the policies of the Municipal Development Plan.

8. Coordination and cost-effective use of resources:

As discussed in the preceding parts of this report, this annexation is aligned with and supported by a number of plans and studies adopted by the Town, including:

- *Municipal Development Plan (2001)*
- *Intermunicipal Development Plan (2002)*
- *Joint Growth Strategy (2016)*
- *Black Diamond Transportation Study (2015)*
- *Annexation Lands Servicing Review (2019)*
- *Economic Development Plan (2017)*

Consistency with these plans and strategies indicates the annexation application is well thought out.

9. Annexation proposals fully consider financial impacts on the initiating and responding municipality:

The primary land uses in the proposed annexation area are agricultural in nature, with no major country residential, industrial, commercial, or linear uses in place that generate significant tax revenues. Foothills County has not indicated that the amount of tax revenue lost as a result of the annexation will put the County in a problematic situation regarding operational budgeting. The loss of tax revenue to the County is offset by the compensation agreed to be paid by the Town. Furthermore, the County is no longer financially responsible for the maintenance and upgrade of road infrastructure in the annexation area, nor is it responsible for the provision of municipal services to the residents of the annexation area. The compensation to be paid by the Town to the County will not put the Town in a problematic situation. The compensation paid by the Town will be off-set by the additional tax revenue

to the Town from the annexed properties.

The Town maintains an offsite levies bylaw, and the Town's MDP provides general guidance to the effect that future development should be paid for by the developer. The offsite levies bylaw will be updated as part of a comprehensive planning program that will commence upon completion of the annexation.

10. Inter-agency consultation, coordination and cooperation:

    Local, provincial and non-government stakeholders have been circulated the Town's *Notice of Intent to Annex*, and Appendix F provides copies of all responses received.

11. Reasonable solutions to impacts on property owners and citizens:

    The Town revised the annexation proposal to address landowner concerns: lands where the owners were opposed to annexation were removed from the annexation area, and lands where the owners desired annexation were added to the annexation area. The concerns of landowners in the annexation area have been addressed through the conditions addressing assessment, taxation, and utility franchise fees.

12. Public and landowner consultation process:

    Please refer to Part 8

13. Revenue sharing/compensation may be warranted:

    Revenue sharing in the context of this annexation principle has not been contemplated. However, the history of collaboration between the Town and County indicates an openness to discussing the matter should a situation arise where revenue sharing may be appropriate.

14. Rationale to establish that the annexation proposal is not simply a tax grab:

    The lands proposed to be annexed currently generate tax revenue that is equal to approximately 0.8% percent of the Town's annual municipal tax revenue, and 0.08% of the County's tax revenue. The majority of lands are agricultural in nature. The Town has substantiated the annexation proposal by aligning the request with the IDP, and by undertaking a Growth Study that provides evidence of the need to accommodate future growth in areas currently outside of Town boundaries. Therefore, it is the Town's position that the lands proposed to be annexed do not represent a tax grab.

15. Conditions of annexation must be certain, unambiguous, enforceable and time-specific:

    The conditions of the annexation application, including conditions addressing assessment, taxation, triggering events, payment of compensation, and transition of bylaws, as outlined in the agreement with the County and in the consent letters signed by landowners are certain, unambiguous, enforceable and time-specific.

Appendix A
Town of Black Diamond Statement of Accuracy

CERTIFICATE OF ACCURACY

Pursuant to Section 118(2) of the Municipal Government Act, the Town of Black Diamond does certify that this report, including all appendices, accurately reflects the results of the negotiations with respect to the annexation

Date at Black Diamond, Alberta, this 01 day of June, 2019

THE TOWN OF BLACK DIAMOND



CHIEF ADMINISTRATIVE OFFICER

Appendix B
Town of Black Diamond & Foothills County Annexation Agreement

THIS AGREEMENT first written as of the 01 day of June, 2019.

BETWEEN:

THE TOWN OF BLACK DIAMOND
Being a municipal corporation in the Province of Alberta pursuant to the ***Municipal Government Act***, R.S.A. 2000 Chapter M-26

(the "**Town**")

- and -

FOOTHILLS COUNTY
Being a municipal corporation in the Province of Alberta pursuant to the ***Municipal Government Act***, R.S.A. 2000 Chapter M-26

(the "**County**")

ANNEXATION AGREEMENT

WHEREAS:

A. Pursuant to Section 116(1) of the ***Municipal Government Act***, R.S.A. 2000 Chapter M-26, on October 2, 2017 the Town notified the Alberta Municipal Government Board, the County and parties affected of its proposal to annex adjacent lands from the County;

B. Pursuant to Section 117 of the ***Municipal Government Act***, the Town and the County met to discuss the proposed annexation and negotiate in good faith;

C. The Town and the County have reached an agreement in respect of the proposed annexation and related matters and desire to document the settlement by way of a formal agreement;

D. The Town and the County acknowledge that neither the Municipal Government Board nor the Lieutenant Governor in Council are bound by the terms of this agreement;

NOW THEREFORE in consideration of the mutual obligations and covenants contained herein, the Town and the County hereby agree as follows:

Part 1 Definitions In this Agreement:

1.1 "Act" means the ***Municipal Government Act***, RSA 2000, Chapter M-26 as amended from time to time;

1.2 "Agreement" means the Annexation Agreement including the above preamble and all schedules attached to it;

1.3 "Annexation" means the incorporation of the Annexation Territory into the boundaries of the Town;

1.4 "Annexation Application" means the annexation report filed by the Town with the Municipal Government Board pursuant to the Act;

1.5 "Annexation Order" means the Order in Council by the Lieutenant Governor in Council authorizing the annexation of the Annexation Territory within the boundaries of the Town;

1.6 "Annexation Territory" means those lands located within the County shown on the map attached hereto as Schedule "A-1" and legally described in Schedule “A-2” attached hereto which the Town proposes to annex;

1.7 “Chief Administrative Officer” or “CAO” means a person appointed to a position under Section 205 of the Act, or his or her designate;

1.8 "Compensation Amount" means the amount to be paid by the Town to the County as compensation for the Annexation as detailed in Part 8.0;

1.9 "Effective Date of Annexation" means the later of:

(a) The earliest date specified in the Annexation Order on which the Annexation is to be effective; or

(b) The date on which the Lieutenant Governor in Council of the Province of Alberta authorizes the Annexation;

1.10 "County" means Foothills County, a municipal corporation in the Province of Alberta or the area within the corporate limits of the County, as the context requires;

1.11 “Developable Acre” means an acre of land that is suitable for urban development in accordance with provincial legislation and municipal plans and policies.

1.12 "Notice of Intention to Annex" means the notice issued by the Town to annex lands in accordance with Section 116 of the Act;

1.13 "Parties" means both the County and the Town and "Party" means either the County or the Town as the context requires;

1.14 “Reserve” means those lands within the Annexation Territory which are designated environmental reserve, municipal reserve, school reserve or municipal and school reserve as defined and referred to within the Act and as more particularly described in Schedule “D”; and

1.15 "Town" means the Town of Black Diamond, a municipal corporation in the Province of Alberta or the area within the corporate limits of the Town, as the context requires.

Part 2 Purpose

2.1 This Agreement between the Town and the County establishes:

(a) that the County supports the Annexation, and

(b) the terms and conditions under which the Town and the County agree that the Annexation shall occur.

Part 3 Mutual Co-operation

3.1 The Town and the County mutually agree to use all reasonable efforts to fully cooperate with one another in order to ensure that the terms and conditions of this Agreement are fulfilled and in order to ensure that the Town's application to be made the Municipal Government Board is granted with respect to the Annexation Territory boundaries established in this Agreement.

3.2 "Reasonable efforts" and "cooperation" referenced in this Part 3 shall include, but shall not be limited to:

(a) the Parties' provision of all information reasonably required by the other party with respect to the Annexation of the Annexation Territory for submission to the Municipal Government Board or other government departments;

(b) written confirmation by the County to the Municipal Government Board that it is not opposing the Annexation;

(c) any further assistance that the Parties may reasonably request, including an appearance by the County and the Town before the Municipal Government Board for the purpose of confirming the terms, covenants and conditions contained within this Agreement to ensure a recommendation of full approval of the Annexation by the Municipal Government Board and full approval of the Annexation by the Lieutenant Governor in Council;

(d) the proper and timely implementation of the Annexation Order; and

(e) the proper and timely performance of all things required to give effect to this Agreement, all of which shall be without cost or charge to the Town other than as may be specified herein.

3.3 The Town and the County agree that they each shall fully support and recommend to the Municipal Government Board the matters set forth in this Agreement.

3.4 The Town and the County agree that they each shall make reasonable efforts to encourage the Lieutenant Governor in Council to issue an Annexation Order pursuant to Section 125 of the Act which incorporates the purpose and intent of the provisions of this Agreement.

3.5 The Town agrees to prepare, file and present such reports and studies as are necessary to support the Annexation before the Municipal Government Board at the Town's cost and in accordance with the Act and the principles of annexation previously established by the Board.

3.6 The Parties acknowledge and agree that in the event the Lieutenant Governor in Council affects, alters, amends or in any way impacts the terms of this Agreement, the parties will continue to be bound by the terms of this Agreement, except where the terms of this Agreement conflict with the Annexation Order, in which case the Annexation Order will prevail; however, the Parties shall, in good faith, enter into renewed negotiations with respect to the implementation of the Agreement to the extent that it is impacted by the Order of the Lieutenant Governor in Council.

3.7 The County shall provide to the Town, upon request, true copies of the records, information and bylaws of the type described in Schedules "B" and "C" at no cost to the Town, which includes, but is not limited to, all information relating to assessment and taxation bylaws,

policies, procedures and valuations in effect from time to time in the County before and after Annexation.

3.8 Notwithstanding Section 3.7, in the event that all or part of the Annexation Territory is subject to conditions governing assessment and taxation, the County agrees to provide, at no cost to the Town, all information requested by the Town with respect to the Annexation Territory in order to facilitate the orderly and efficient transfer of the jurisdiction and administration of the Annexation Territory following Annexation within thirty (30) days of the Annexation Order, or as otherwise mutually agreed between the parties.

3.9 The parties acknowledge and agree that the Town will only make use of the information provided to the Town by the County pursuant to this Agreement in accordance with the provisions of the *Freedom of Information and Protection of Privacy Act*, R.S.A. 2000 Chapter F-25, as amended from time to time.

Part 4 County Owned Lands

4.1 The County agrees that all lands designated as Reserve, interests in land held by the County in lieu of Reserve (including but not limited to deferred reserve caveats) and lands designated as Public Utility Lot within the Annexation Territory will be transferred to the Town free and clear of all reservations, exceptions, encumbrances, charges, liens or interests whatsoever, at no cost to the Town, other than the cost of registering such transfers, within 90 days of the Effective Date of Annexation, upon the Town providing the County with such transfers, which lands are described in Schedule “D” to this Agreement.

4.2 The County covenants and agrees that it will not sell, lease, or otherwise dispose of any lands designated as Reserve or Public Utility Lot contained within the Annexation Territory owned by the County as of the date of this Agreement, which lands are described in Schedule “D” to this Agreement, or acquired by the County as Reserve or Public Utility Lot after that time.

4.3 The County agrees that any lands held by the County as registered owner, or interests in land held by the County, within the Annexation Territory that are not designated as Reserve, held in lieu of Reserve (including but not limited to deferred reserve caveats) or designated as Public Utility Lots shall not be transferred to the Town, notwithstanding that such lands are within the Annexation Territory, unless otherwise agreed to in writing by both the County and the Town.

4.4 For those lands located within the Annexation Territory that receive subdivision approval prior to the Effective Date of Annexation, the County agrees to defer all Reserve dedications to which it is entitled through the registration of a deferred reserve caveat on lands within the within the Annexation Territory.

Part 5 Annexation Territory

5.1 The Annexation Territory consists of those lands located within the County shown on the map attached as Schedule "A-1" and legally described in Schedule “A-2”.

Part 6 Roads

6.1 The Parties acknowledge and agree that the Annexation Territory includes the following roads:

(a) That portion of the undeveloped Government Road Allowance adjoining the west side of Plan 801 0142, Plan 111 3505, and SW ¼ 8-20-2-W5, excepting out the lands described in Certificate of Title No. 861 205 279

(b) That portion of Road Plan 909N adjoining the south boundary of Plan 111 3505, Block 2, Lot 1, and SW ¼ 8-20-2-W5; and that portion of Road Plan 1328JK adjoining the north boundary of NE ¼ 5-20-2-W5; forming what is known as 418th Avenue;

(c) That portion of the Government Road Allowance and Road Plan 001 1044, adjoining the west boundary of SW ¼ 9-20-2-W5 forming what is known as Highway 22;

(d) That portion of Road Plan 901 0969 identified as 'service road' located in the NW corner of NE ¼ 9-20-2 W5, forming what is known as 6th St. SE;

(e) The entirety of Road Plan 901 1745, and that portion of the Government Road Allowance adjoining the north boundaries of NE ¼ 9-20-2-W5 and Road Plan 901 1745 and the east boundary of Road Plan 901 0969, forming what is known as 402 Ave.

all of which are shown on the map attached as Schedule "E".

6.2 Upon the Effective Date of Annexation, the Town shall be responsible for the inspection, maintenance and repair of the roads identified in Section 6.1 that are under municipal jurisdiction in accordance with all statutory and common law obligations. Maintenance agreements may be negotiated, and the terms specified in a separate agreement as outlined in Part 7 of this Agreement.

6.3 The County will provide the Town with all available information pertaining to the roadways for which the Town is assuming responsibility.

6.4 The Town will ensure that reasonable access (including that for agricultural vehicles and farm machinery) will be maintained for those agricultural parcels that are currently accessed from 418th Avenue.

Part 7 Road Maintenance Agreement

7.1 The County and the Town agree that they will start to negotiate in good faith an agreement whereby the County provides construction and maintenance services for those portions of 418th Ave and 402nd Ave that are within the Annexation Territory and the Town shall pay compensation to the County for the costs incurred in providing this service.

7.2 The County and the Town agree that they will use a principle based analysis to determine appropriate compensation for the services provided.

Part 8 Effective Date of Annexation

8.1 The Town and the County agree that Annexation should occur for all purposes as soon as possible and that the Parties shall jointly request that the Municipal Government Board recommend that the Effective Date of Annexation be January 1, 2020.

Part 9 Compensation Payable to the County

9.1 In consideration of the County agreeing to the Town's annexation of the Annexation Territory on the terms set out in this Agreement, the Town agrees to pay the County the sum of one hundred and ninety dollars ($190) per Developable Acre within the Annexation Territory. Based on the agreed upon total of 583 Developable Acres, the Compensation Amount payable to the County by the Town is one hundred and ten thousand, seven hundred and seventy dollars ($110,770). The County agrees that the Compensation Amount is the total amount to be paid by the Town to the County in relation to the Annexation.

9.2 The Parties mutually acknowledge and agree that the Compensation Amount shall fully compensate the County:

(a) for the loss of municipal property taxes for existing development in the Annexation Territory; and

(b) for the costs of any and all infrastructure improvements made by the County within the Annexation Territory to the date of this Agreement.

9.3 Following the Effective Date of Annexation, the Town shall pay the County the Compensation Amount in five equal annual payments of twenty two thousand, one hundred and fifty four dollars ($22,154). The first payment shall be made on or before July 31 of the same calendar year as the Effective Date of Annexation, and each payment thereafter shall be made on or before July 31 in each of the subsequent four years. In no event shall the Compensation Amount exceed one hundred and ten thousand, seven hundred and seventy dollars ($110,770).

9.4 If any boundary adjustments are made to the Annexation Territory by the Annexation Order, the compensation payable pursuant to this Part 9.0 shall be recalculated based upon further negotiations by the Parties.

Part 10 Assessment and Taxation

10.1 To minimize the taxation impacts on both County residents and business operations located within the Annexation Territory, the County and the Town have agreed to a number of objectives as set out in this Part 10.

10.2 For taxation purposes in the year of the Effective Date of Annexation and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be assessed by the Town on the same basis as if the lands had remained in the County.

10.3 For taxation purposes in the year of the Effective Date of Annexation and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be taxed by the Town using:

(a) the municipal property tax rate established by the County; and

(b) the Town shall offer those responsible for payment of the taxes a discount of 6% for early payment of taxes for lands within the Annexation Territory on the same terms offered by the County to its taxpayers for the current tax year.

10.4 Where, in any tax year, any parcel of land within the Annexation Territory:

(a) is the subject of a subdivision or separation of title (whether by registered plan of subdivision, by instrument or any other method) whereby a new parcel of land is created (including the residual parcel), at the request of or on behalf of the landowner;

(b) is re-designated, at the request of or on behalf of the landowner, under the Town's Land Use Bylaw to another designation; or

(c) is connected, at the request of, or on behalf of the landowner, to the Town's water and/or sewer services;

(individually, a "Triggering Event"),

Sections 10.2 and 10.3 shall cease to apply to that parcel of land and any assessable improvements thereon at the end of the tax year in which the Triggering Event occurred.

10.5 Notwithstanding Section 10.4(b), re-designation of land as outlined in Section 11.1 shall not constitute a Triggering Event.

10.6 Linear property within the Annexation Territory shall be assessed by the Designated Linear Assessor and taxed by the Town on the same basis as other linear property within the Town.

10.7 The Town agrees to remit to the County any tax arrears payable to the County on the Effective Date of Annexation provided the property has not gone to tax sale or a caveat has not been registered on the title. The County agrees to provide a list of all annexed properties that are in arrears.

Part 11 Planning and Development Transition

11.1 Following the Effective Date of Annexation, planning and development of land within the Annexation Territory will continue to be subject to the County's Land Use Bylaw in place as of the Effective Date of Annexation until such time as Council for the Town amends the Town's Land Use Bylaw to include the Annexation Territory, in accordance with the statutory requirements of the Act, including but not limited to appropriate public engagement and a public hearing.

11.2 Land Use and Development within the Annexation Territory that is in compliance with the County's Land Use Bylaw as of the Effective Date of Annexation shall be permitted to continue until such time that the subject lands are re-designated or subdivided, at the request of or on behalf of the landowner, to a land use designation and/or property size that does not allow for the existing Land Use and/or Development.

11.3 Within thirty (30) days of the Effective Date of Annexation, the County will transfer all planning and development files, including, but not limited to, subdivision, rezoning, and development applications for the Annexation Territory to the Town.

11.4 Any subdivision, rezoning, or development applications which are pending as of the Effective Date of Annexation will be managed as follows:

(a) within thirty (30) days of the Effective Date of Annexation, all existing subdivision, rezoning, or development application files pertaining to lands located within the Annexation Territory shall be transferred to the Town; and

(b) subdivision, rezoning, and development application files will be evaluated by the Town on the basis of the existing County Land Use Bylaw. However, the Town will administer circulations and timing and approval processes pursuant to the Town's established procedures.

Part 12 Intermunicipal Development Plan Process

12.1 The County and the Town agree to update the Intermunicipal Development Plan ("IDP") to reflect the Annexation, and to prepare an Intermunicipal Collaborative Framework as mandated by the Province.

Part 13 Franchise Fees

13.1 The Town shall grant the landowners in the Annexation Territory a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

Part 14 Termination of Agreement

14.1 This Agreement shall terminate and be of no force and effect upon the occurrence of any of the following events, whichever shall first occur:

(a) The Town's withdrawal of its Annexation Application to the Municipal Government Board for annexation of the Annexation Territory; or

(b) Refusal of the Town's Annexation Application to annex the Annexation Territory by the Lieutenant Governor in Council.

Part 15 Notices

15.1 Any notice required to be given under this Agreement shall be given in writing and delivered to:

(a) in the case of the Town, to the Chief Administrative Officer; and

(b) in the case of the County, to the Chief Administrative Officer.

Part 16 Dispute Resolution

16.1 This Part 16 does not apply to section 3.6.

16.2 In the event that a dispute arises between the Parties concerning the terms, conditions or provisions of this Agreement, the Parties agree to attempt to negotiate a resolution to such dispute acting reasonably and in good faith. Failing such attempts at resolution, the Parties agree to submit the dispute to mediation. Should mediation fail to result in the resolution of the dispute, the Parties agree to submit the dispute to non-binding arbitration.

(a) If a dispute is submitted for mediation, the Parties shall together select a mediator whose qualifications are appropriate to the matter to be mediated. The cost of the mediator will be equally shared by the Parties.

Part 17 Recommendations to the Municipal Government Board

17.1 In furtherance of attaining the objectives contained within this Agreement, both Parties agree to request the Municipal Government Board to recommend and the Lieutenant Governor in Council to include all matters contained in this Agreement within the Annexation Order and specifically to impose the following conditions within the Annexation Order:

(a) upon the Effective Date of Annexation, the County shall transfer those lands within the Annexation Territory, as described in Schedule A-1 and Schedule A-2, together with those roads located within the Annexation Territory as described in Part 6 and Schedule E, to the Town as specified within this Agreement;

(b) compensation shall be payable from the Town to the County as specified within Part 9 of this agreement;

(c) lands within the Annexation Territory and assessable improvements thereon shall be assessed and taxed by the Town as specified within Part 10.0 of this Agreement;

(d) lands within the Annexation Territory shall be granted a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

Part 18 General

18.1 Each of the Parties hereto shall at all times undertake all such further acts and execute and deliver all such further documents as shall be reasonably required to fully perform the terms and conditions of this Agreement

18.2 The headings and paragraph numbers contained in the Agreement are for convenience and reference only and in no way define or limit the scope or intent of this Agreement or any provision of this Agreement.

18.3 This Agreement constitutes the entire Agreement of the Parties hereto with respect to the subject matter hereof, and this Agreement shall not be amended, modified or discharged except by an instrument in writing executed under the authority of each of the Parties.

18.4 No waiver by or on behalf of either Party of any breach of the covenants or conditions contained in this Agreement shall take effect or be binding upon that Party unless the same be expressed in writing under the authority of that Party and any waiver so give shall extend only to the particular breach so waived and shall not limit or affect any rights with respect to any other breach.

18.5 The preamble and Schedules attached to this Agreement form part of this Agreement.

18.6 Nothing in this Agreement is intended to nor shall be construed as fettering or restricting the lawful authority of any board, tribunal, other quasi-judicial entity, or elected municipal Council (or member of the Council), in the exercise of discretion vested in it by law.

18.7 If any provision of this Agreement is found to be illegal or unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall remain in full force and effect.

This Agreement Dated and made effective on June 1, 2019.

TOWN OF BLACK DIAMOND

June 1, 2019
Date

Per: _____

_____
Date

Per: _____

FOOTHILLS COUNTY

June 1, 2019
Date

Per: _____

_____
Date

Per: _____

Schedule A-1
Map of Annexation Territory

TOWN OF BLACK DIAMOND
PROPOSED ANNEXATION 2019

Map 1: Proposed Annexation Areas

Existing Town Boundary

Annexation Areas

Titled Parcels

①	NE8 20-2-5 (LINC: 0021242094) (in Two Parts)	6.34±ha(15.8±ac)
②	NE8 20-2-5 (LINC: 0021220447)	3.52±ha(8.70±ac)
④	SE8 20-2-5 (LINC: 0021242102)	2.35±ha(5.80±ac)
⑤	NW8 20-2-5 (LINC: 0021242128)	0.49±ha(1.20±ac)
⑥	Plan 8010142; Block 1	9.88±ha(25.41±ac)
⑧	SW8 20-2-5 (LINC: 0035035056)	35.30±ha(87.24±ac)
⑨	Plan 1113505; Block 2; Lot 1	5.73±ha(14.16±ac)
⑪	NE5 20-2-5 (LINC: 0028372308)	60.80±ha(150.23±ac)
⑫	475LK;OT (Maintenance Yard)	2.32±ha(5.74±ac)
⑭	SW9 20-2-5 (LINC: 0028372290)	4.17±ha(10.30±ac)
⑮	SW9 20-2-5 (LINC: 0028372324)	59.43±ha(146.85±ac)
⑯	SE9 20-2-5 (LINC: 0026065145)	60.90±ha(150.49±ac)
⑰	NE9 20-2-5 (LINC: 0021259346)	61.10±ha(150.98±ac)
	Subtotal (Calculated) =	***312.80±ha(772.95±ac)***

Road Plans & Road Allowances

⑦	That portion of the undeveloped Government Road Allowance adjoining the west side of Plan 801 0142, Plan 111 3505, and SW ¼ 8-20-2-W5, excepting out the lands described in Certificate of Title No. 861 205 279	0.68±ha(1.69±ac)
⑩	That portion of Road Plan 909N adjoining the south boundary of Plan 111 3505, Block 2, Lot 1, and SW ¼ 8-20-2-W5; and that portion of Road Plan 1328JK adjoining the north boundary of NE ¼ 5-20-2-W5; forming what is known as 418th Avenue	3.22±ha(7.95±ac)
⑬	That portion of the Government Road Allowance and Road Plan 001 1044, adjoining the west boundary of SW ¼ 9-20-2-W5 forming what is known as Highway 22	3.85±ha(9.51±ac)
⑱	That portion of Road Plan 901 0969 identified as 'service road' located In the NW corner of NE ¼ 9-20-2 W5; forming what is known as 6th St. SE	0.34±ha(0.84±ac)
⑲	The entirety of Road Plan 901 1745, and that portion of the Government Road Allowance adjoining the north boundaries of NE ¼ 9-20-2-W5 and Road Plan 901 1745 and the east boundary of Road Plan 901 0969; forming what is commonly known as 402 Ave	3.19±ha(7.88±ac)
	Subtotal (Calculated) =	***11.28±ha(27.87±ac)***

Sheep River

③	Portion of Sheep River Within NE, SE & SW of 8 20-2-5 (In Two Parts)	8.58±ha(21.2±ac)

Total Areas (Calculated) = 324.08±ha(800.82±ac)

TOWN OF
TURNER VALLEY

OLDMAN RIVER REGIONAL SERVICES COMMISSION

April 17, 2019
N:\Foothills-MD\Black Diamond\Black Diamond Projects\Annexation_2019.dwg

Schedule A-2
Legal Description of Annexation Territory

Map Reference	Legal Description	C of T	Area (Ac)
Titled Parcels			
20	NE 9-20-2 W5	101 236 396 +1	150.98
19	SE 9-20-2 W5	101 236 396	150.49
18	SW 9-20-2 W5	101 216 209	146.85
17	SW 9-20-2 W5	001 110 623 +2	10.3
14	NE 5-20-2 W5	001 110 623 +3	150.23
15	Plan 475LK	121 275 486 +4	5.74
10	Lot 1, Block 2, Plan 1113505	111 311 965	14.16
9	SW 8-20-2 W5	111 311 965 +1	87.24
8	Block 1, Plan 8010142	801 015 653	25.41
6	NE 8-20-2 W5	161 260 885	15.8
1	SE 8-20-2 W5	161 260 885 +1	5.8
3	NE 8-20-2 W5	891 104 921	8.7
7	NW 8-20-2 W5	971 378 878	1.2
		Total Area Titled Parcels	***772.9***
Road Plans			
11	That portion of the undeveloped Government Road Allowance adjoining the west side of Plan 801 0142, Plan 111 3505, and SW ¼ 8-20-2-W5, excepting out the lands described in Certificate of Title No. 861 205 279		1.69
12 &13	That portion of Road Plan 909N adjoining the south boundary of Plan 111 3505, Block 2, Lot 1, and SW ¼ 8-20-2-W5; and that portion of Road Plan 1328JK adjoining the north boundary of NE ¼ 5-20-2-W5; forming what is known as 418th Avenue;		8.4
16	That portion of the Government Road Allowance and Road Plan 001 1044, adjoining the west boundary of SW ¼ 9-20-2-W5 forming what is known as Highway 22;		9.68
22	That portion of Road Plan 901 0969 identified as 'service road' located in the NW corner of NE ¼ 9-20-2 W5, forming what is known as 6th St. SE;		0.84

21 & 23	The entirety of Road Plan 901 1745, and that portion of the Government Road Allowance adjoining the north boundaries of NE ¼ 9-20-2-W5 and Road Plan 901 1745 and the east boundary of Road Plan 901 0969, forming what is commonly known as 402 Ave.		6.73
		Total Area of Roads	***27.34***
Sheep River			
4	Portions of the Sheep River within NE, SE & SW of 8-20-2-W5		21.2
		Total of Sheep River	***21.2***

Total Annexation Area ***821.44***

Schedule "B"

REQUIRED ASSESSMENT RECORDS

1. The assessment roll for the Annexation Territory showing all detail required pursuant to Sections 303 and 304 of the Act.

2. The property record for all properties taxable and exempt within the Annexation Territory.

3. Assessment files relating the annexed parcels.

4. Decisions of the assessment tribunals that specifically apply to annexed parcels.

5. Farm income data for annexed parcels that qualify as farmland.

6. Details of any exemptions granted under the Act and the former Municipal Taxation Act to the annexed parcels.

7. Copies of any Bylaws, Order or Acts granting an exemption under the Act, the former Municipal Taxation Exemption Act or private Acts that specifically apply to annexed parcels.

8. Explanation of any codes used in the assessment roll or on the property record cards and other similar information.

9. Maps of the annexed area showing legal and parcel plan boundaries used for assessment purposes.

10. All procedures and policies used for the current general assessment.

11. Details of market data relied on for the current general assessment.

12. Details of any ongoing rebates of taxes under the Act.

13. Details of any assessment performed by the Chief Provincial Assessor.

14. Details of any machinery and equipment assessments.

15. The most recent Supplementary Assessment bylaw.

16. The current classification bylaw if not included in the property tax bylaw.

17. Details of equalized assessments necessary for the Town to calculate school tax rates.

18. Review of the County's equalized assessment by the Town's assessment staff from time to time, such review to include examination of the market data used and the methodology of calculation and an explanation of the same by the County.

19. All the above records and information shall be supplied concurrent with the preparation of the 2019 assessment roll for the 2020 tax year, shall be updated as of the date of Annexation or the date of assumption of responsibility for assessment by the Town, and shall be provided from time to time as necessary to permit the Town to comply with the terms and conditions of the Agreement, which this Schedule forms a part.

SCHEDULE "C"

TAX AND LEVY RECORDS AND INFORMATION

1. The current tax roll as it relates to the Annexation Territory.

2. Details of the tax levy and of arrears, if any, including any changes transferred to the tax roll such as utility and weed bills for each annexed parcel.

3. Details of any local improvement levies affecting the Annexation Territory including a copy of the bylaw, a copy of the borrowing bylaw and details, and the terms of the levy on each annexed parcel.

4. Tax recovery details for properties and arrears, properties with tax notifications, properties that have been finally acquired under the Act and the former Tax Recovery Act, and properties where the redemption period has not expired including expiry date, details of tax sale trust accounts dates, and details of any proceeds of sales that are covered by a tax sale trust account.

5. School support details on a parcel by parcel basis together with supporting records including, but not limited to, copies of any corporate school declarations.

6. The policy and bylaw for any tax discounts.

7. The policy and bylaw for penalties.

8. A list of properties owned by the County.

9. The boundaries of any tax zones that have been established for recreational, fire or other districts.

10. A record of any tax certificates that have been issued within the preceding two (2) years.

11. A copy of the property tax bylaws (mill rate bylaws), including among other things, fire and recreation districts for the current year and for the last ten (10) years.

12. A list of all properties subject to any grant, and copies of any agreements where a grant- in-lieu of taxes is to be paid.

13. A list of annexed parcels and relevant details of taxation, including procedures for linear properties.

14. A list of land owned by the County and leased to third parties including copies of all leases.

SCHEDULE "D"

RESERVE LANDS AND PUBLIC UTILITY LOTS

None.

SCHEDULE "E"
ROADS

TOWN OF BLACK DIAMOND
PROPOSED ANNEXATION 2019

Map 2: Proposed Annexation Roads

- Municipal Roads
- Provincial Roads
- Existing Town Boundary
- Annexation Areas

402 AVE

6 ST SE

418 AVE

HWY 22

SERVICE ROAD

TOWN OF
TURNER VALLEY

OLDMAN RIVER REGIONAL SERVICES COMMISSION

May 01, 2019
N:\Foothills-MD\Black Diamond\Black Diamond Projects\
Annexation_2019.dwg

Appendix C
Landowner Consents

RECEIVED
TOWN OF BLACK DIAMOND

LANDOWNER CONSENT – ANNEXATION

WHEREAS the following:

WESTERN SKY LAND TRUST SOCIETY.

[redacted]

is the registered owner of the lands legally described as:

[redacted]

And is the registered owner of the lands legally described as:

[redacted]

(together constituting the "Lands")

AND WHEREAS the Town of Black Diamond (the "Town") wishes to annex certain lands currently located in Foothills County (the "County") (the "Annexation Territory"), which includes the Lands;

AND WHEREAS the Town and the County propose to enter into an Annexation Agreement (the "Agreement") establishing the terms and conditions upon which the County is prepared to consent to the annexation of the Annexation Territory;

NOW THEREFORE the Owner hereby consents to the annexation of the Lands which are currently located in the County to the Town and acknowledges the following concessions and agrees that:

ASSESSMENT AND TAXATION

1.1 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be assessed by the Town on the same basis as if they had remained in the County.

1.2 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be taxed by the Town using:

(a) the municipal property tax rate established by the County for the current tax year; and

(b) the Town shall offer a discount of 6% for early payment of taxes on the same terms offered by the County to it is taxpayers for the current tax year.

1.3 Where, in any tax year, any parcel of land within the Annexation Territory:

(a) is the subject of a subdivision or separation of title (whether by registered plan of subdivision, by instrument or any other method) whereby a new parcel of land is created (including the residual parcel), at the request of or on behalf of the landowner;

(b) is re-designated, at the request of or on behalf of the landowner, under the Town's Land Use Bylaw to another designation; or

(c) is connected, at the request of, or on behalf of the landowner, to the Town's water and/or sewer services;

(individually, a "Triggering Event"),

Sections 1.1 and 1.2 shall cease to apply to that parcel of land and any assessable improvements thereon at the end of the tax year in which the Triggering Event occurred.

OTHER PROVISIONS

1.4 The Town shall grant to the landowners in the Annexation Territory a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

1.5 Following the Effective Date of Annexation, planning and development of land within the Annexation Territory will continue to be subject to the County's Land Use Bylaw in place as of the Effective Date of Annexation until such time as Council for the Town amends the Town's Land Use Bylaw to include the Annexation Territory, in accordance with the statutory requirements of the Act, including but not limited to appropriate public engagement and a public hearing, and any proposed amendments to the Town's Land Use Bylaw shall include the same permitted and discretionary uses for lands within the Annexation Territory as provided for in the County's Land Use Bylaw as of the Effective Date of Annexation.

1.6 Land Use and Development within the Annexation Territory that is in compliance with the County's Land Use Bylaw as of the Effective Date of Annexation shall be permitted to continue.

DATED at (municipality) Calgary, (province/state) AB, this 29 day of April, 2019

April 29, 2019
Date

Per: DUSTIN DATE, EXECUTIVE DIRECTOR

Date

Per:

LANDOWNER CONSENT – ANNEXATION

WHEREAS the following:

386809 ALBERTA LTD. OF [redacted]

is the registered owner of the lands legally described as:

[redacted]

EXCEPTING THEREOUT ALL MINES AND MINERALS

[redacted]

AND WHEREAS the Town of Black Diamond (the "Town") wishes to annex certain lands currently located in Foothills County (the "County") (the "Annexation Territory"), which includes the Lands;

AND WHEREAS the Town and the County propose to enter into an Annexation Agreement (the "Agreement") establishing the terms and conditions upon which the County is prepared to consent to the annexation of the Annexation Territory;

NOW THEREFORE the Owner hereby consents to the annexation of the Lands which are currently located in the County to the Town and acknowledges the following concessions and agrees that:

ASSESSMENT AND TAXATION

1.1 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be assessed by the Town on the same basis as if they had remained in the County.

1.2 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be taxed by the Town using:

(a) the municipal property tax rate established by the County for the current tax year; and

(b) the Town shall offer a discount of 6% for early payment of taxes on the same terms offered by the County to it is taxpayers for the current tax year.

1.3 Where, in any tax year, any parcel of land within the Annexation Territory:

(a) is the subject of a subdivision or separation of title (whether by registered plan of subdivision, by instrument or any other method) whereby a new parcel of land is created (including the residual parcel), at the request of or on behalf of the landowner;

(b) is re-designated, at the request of or on behalf of the landowner, under the Town's Land Use Bylaw to another designation; or

(c) is connected, at the request of, or on behalf of the landowner, to the Town's water and/or sewer services;

(individually, a "Triggering Event"),

Sections 1.1 and 1.2 shall cease to apply to that parcel of land and any assessable improvements thereon at the end of the tax year in which the Triggering Event occurred.

OTHER PROVISIONS

1.4 The Town shall grant to the landowners in the Annexation Territory a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

1.5 Following the Effective Date of Annexation, planning and development of land within the Annexation Territory will continue to be subject to the County's Land Use Bylaw in place as of the Effective Date of Annexation until such time as Council for the Town amends the Town's Land Use Bylaw to include the Annexation Territory, in accordance with the statutory requirements of the Act, including but not limited to appropriate public engagement and a public hearing.

1.6 Land Use and Development within the Annexation Territory that is in compliance with the County's Land Use Bylaw as of the Effective Date of Annexation shall be permitted to continue until such time that the subject lands are re-designated or subdivided, at the request of or on behalf of the landowner, to a land use designation and/or property size that does not allow for the existing Land Use and/or Development.

DATED at (municipality) Calgary, (province/state) Alberta, this 8th day of May, 2019

May 8, 2019
Date

Per: _____

_____
Date

Per: _____

AFFIDAVIT VERIFYING CORPORATE SIGNING AUTHORITY

I, Verne Thorarinson, of th[redacted]*wn/City)*, in the Province of Alberta, MAKE OATH AND SAY THAT:

1. I am the Owner *(title of position)* of 386809 Alberta Ltd. named in the within or annexed instrument.

2. I am authorized by the Board of Directors of 386809 Alberta Ltd. to execute the instrument without affixing a corporate seal.

SWORN before me at Calgary,)
in the Province of Alberta)
this 29 day of April, 2019)
)
)
A Commissioner for Oaths in and for)
Alberta)
Dennis O. Doberstein)
Barrister & Solicitor)

LANDOWNER CONSENT – ANNEXATION

WHEREAS the following:

TURNER VALLEY GOLF AND COUNTRY CLUB,

[redacted]

(the "Owner")

RECEIVED
MAY 21 20
TOWN OF BLACK DIAMOND

is the registered owner of the lands legally described as:

[redacted]

and is the registered owner of the lands legally described as:

[redacted]

EXCEPTING THEREOUT ALL MINES AND MINERALS

(the "Lands")

AND WHEREAS the Town of Black Diamond (the "Town") wishes to annex certain lands currently located in Foothills County (the "County") (the "Annexation Territory"), which includes the Lands;

AND WHEREAS the Town and the County propose to enter into an Annexation Agreement (the "Agreement") establishing the terms and conditions upon which the County is prepared to consent to the annexation of the Annexation Territory;

NOW THEREFORE the Owner hereby consents to the annexation of the Lands which are currently located in the County to the Town and acknowledges the following concessions and agrees that:

ASSESSMENT AND TAXATION

1.1 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon,

excluding linear property, shall be assessed by the Town on the same basis as if they had remained in the County.

1.2 For taxation purposes, commencing in the 2020 tax year and for twenty four (24) years thereafter, lands within the Annexation Territory and any assessable improvements thereon, excluding linear property, shall be taxed by the Town using:

(a) the municipal property tax rate established by the County for the current tax year; and

(b) the Town shall offer a discount of 6% for early payment of taxes on the same terms offered by the County to it is taxpayers for the current tax year.

1.3 Where, in any tax year, any parcel of land within the Annexation Territory:

(a) is the subject of a subdivision or separation of title (whether by registered plan of subdivision, by instrument or any other method) whereby a new parcel of land is created (including the residual parcel), at the request of or on behalf of the landowner;

(b) is re-designated, at the request of or on behalf of the landowner, under the Town's Land Use Bylaw to another designation; or

(c) is connected, at the request of, or on behalf of the landowner, to the Town's water and/or sewer services;

(individually, a "Triggering Event"),

Sections 1.1 and 1.2 shall cease to apply to that parcel of land and any assessable improvements thereon at the end of the tax year in which the Triggering Event occurred.

OTHER PROVISIONS

1.4 The Town shall grant to the landowners in the Annexation Territory a 3 year complete utility franchise fee reprieve commencing upon the Effective Date of Annexation.

1.5 Following the Effective Date of Annexation, planning and development of land within the Annexation Territory will continue to be subject to the County's Land Use Bylaw in place as of the Effective Date of Annexation until such time as Council for the Town amends the Town's Land Use Bylaw to include the Annexation Territory, in accordance with the statutory requirements of the Act, including but not limited to appropriate public engagement and a public hearing.

1.6 Land Use and Development within the Annexation Territory that is in compliance with the County's Land Use Bylaw as of the Effective Date of Annexation shall be permitted to continue until such time that the subject lands are re-designated or subdivided, at the request of or on behalf of the landowner, to a land use designation and/or property size that does not allow for the existing Land Use and/or Development.

DATED at (municipality) TURNER VALLEY, (province/state) ALBERTA, this 15 day of MAY, 2019

May 15, 2019
Date

May 15, 2019
Date

Per: _____

Per: _____

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Appendix D
Current Titles of Affected Lands

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0024 374 365	5;2;20;8;NW,NE,SW,SE	001 353 561

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
THAT PORTION OF SECTION 8
WHICH LIES WITHIN THE SOUTH BRANCH OF THE SHEEP RIVER
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: AE156 .

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
001 353 561	08/12/2000	TRANSFER OF LAND	$1,000	$1,000

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
891 218 259	23/10/1989	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. AS TO SW 1/4 ONLY "ENDORSED BY 081167138 ON 20080507" (DATA UPDATED BY: 081167192)

(CONTINUED)

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 17 DAY OF APRIL, 2019 AT 02:10 P.M.

ORDER NUMBER: 37069734

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0028 372 324	5;2;20;9;SW	101 216 209

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 9
QUARTER SOUTH WEST
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:
FIRST:
THE SOUTH 726 FEET OF THE NORTH 1518 FEET OF THE WEST
HALF OF THE WEST HALF OF THE SAID QUARTER SECTION
CONTAINING 4.45 HECTARES (11 ACRES) MORE OR LESS
SECONDLY:

PLAN	NUMBER	HECTARES (MORE OR LESS)	ACRES
ROAD	0011044	0.871	2.15

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

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 001 110 623 +5

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
101 216 209	21/07/2010	SEPARATION - LINCS		

OWNERS

[redacted]

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
111 263 501	13/10/2011	CAVEAT RE : RIGHT OF WAY AGREEMENT CAVEATOR - ATCO GAS AND PIPELINES LTD. 909 11 AVE SW CALGARY ALBERTA T2R1L8 AGENT - SEAL.
151 044 370	11/02/2015	CAVEAT RE : UTILITY RIGHT OF WAY CAVEATOR - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. C/O TOWN OF TURNER VALLEY PO BOX 330 TURNER VALLEY ALBERTA T0L2A0 AGENT - PROTERRA LANDWORKS INC.
161 159 040	09/07/2016	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:1611664

TOTAL INSTRUMENTS: 003

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0026 065 145	5;2;20;9;SE	101 236 396

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 9
QUARTER SOUTH EAST
CONTAINING 64.7 HECTARES(160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

	HECTARES	(ACRES) MORE OR LESS
A) PLAN 9411282 SUBDIVISION	3.85	9.51

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

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 101 216 209 +1

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
101 236 396	10/08/2010	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

[redacted]

(DATA UPDATED BY: CHANGE OF ADDRESS 171229984)

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
151 108 717	29/04/2015	MORTGAGE MORTGAGEE - INTERAMERICAN INVESTMENTS INC. 3220 MATHERS AVENUE VANCOUVER

(CONTINUED)

REGISTRATION NUMBER | DATE (D/M/Y) | PARTICULARS

BRITISH COLUMBIA V7V2K5
ORIGINAL PRINCIPAL AMOUNT: $1,250,000
(DATA UPDATED BY: TRANSFER OF MORTGAGE 151130585)

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0035 035 063	1113505;2;1	111 311 965

LEGAL DESCRIPTION
PLAN 1113505
BLOCK 2
LOT 1
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 5.73 HECTARES (14.16 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 5;2;20;8;SW

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 861 170 788 B .
861 170 788 A .
861 170 788

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
111 311 965	30/11/2011	SUBDIVISION PLAN		

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
7452CS .	31/12/1921	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. AS TO PORTION OR PLAN:GL46 "16.5 FT"
6735HY .	21/11/1960	CAVEAT

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		CAVEATOR - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. 909 - 11 AVENUE,S.W. CALGARY ALBERTA T2R1L8 "DATA UPDATED BY: TRANSFER OF CAVE NO 831154596"
6737HY .	21/11/1960	CAVEAT CAVEATOR - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. 909 - 11 AVENUE,S.W. CALGARY ALBERTA T2R1L8 "DATA UPDATED BY: TRANSFER OF CAVEAT 831069284"
243JP .	23/03/1966	UTILITY RIGHT OF WAY GRANTEE - RANGELAND PIPELINE COMPANY. AS TO PORTION OR PLAN:4959JK "60 FT" (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 031207303)
761 045 600	14/04/1976	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.
961 168 619	25/07/1996	CAVEAT RE : EASEMENT CAVEATOR - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. C/O BARRY G FLEECE GEODESIC SURVEYS LTD 106, 1016-5 AVE NE CALGARY ALBERTA T2A6K4 AGENT - BARRY G FLEECE
991 102 911	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:9911226
991 102 912	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:9911226
991 102 913	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		AS TO PORTION OR PLAN:9911226
031 209 537	23/06/2003	UTILITY RIGHT OF WAY GRANTEE - ATCO GAS AND PIPELINES LTD.
041 165 576	10/05/2004	DISCHARGE OF UTILITY RIGHT OF WAY 031209537 PARTIAL EXCEPT AS TO PLAN 0411044
051 462 438	06/12/2005	CAVEAT RE : UTILITY RIGHT OF WAY CAVEATOR - ATCO GAS AND PIPELINES LTD. 909 ELEVENTH AVENUE SW CALGARY ALBERTA T2R1L7 AGENT - SEAL.
061 042 398	27/01/2006	CAVEAT RE : UTILITY RIGHT OF WAY AMENDING AGREEMENT CAVEATOR - ATCO GAS AND PIPELINES LTD. 909 ELEVENTH AVENUE SW CALGARY ALBERTA
071 457 281	12/09/2007	MORTGAGE MORTGAGEE - COMMUNITY CREDIT UNION LTD. 319 CENTRE STREET SW HIGH RIVER ALBERTA T1V1M6 ORIGINAL PRINCIPAL AMOUNT: $2,000,000
071 457 282	12/09/2007	CAVEAT RE : ASSIGNMENT OF RENTS AND LEASES CAVEATOR - COMMUNITY CREDIT UNION LTD. 319 CENTRE ST HIGH RIVER ALBERTA T1V1M6 AGENT - CHARLES A DIXON
111 311 967	30/11/2011	CAVEAT RE : ROAD WIDENING CAVEATOR - MUNICIPAL DISTRICT OF FOOTHILLS. BOX 5605 HIGH RIVER ALBERTA T1V1M7

TOTAL INSTRUMENTS: 016

(CONTINUED)

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION, APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0021 242 094	5;2;20;8;NE	161 260 885

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 8
THAT PORTION OF THE NORTH EAST QUARTER
WHICH LIES TO THE NORTH WEST OF THE SOUTH BRANCH OF THE SHEEP
RIVER AS SHOWN ON THE TOWNSHIP PLAN DATED 15 AUGUST 1906
AND TO THE EAST OF THE HIGHWAY REGISTERED AS 3814JK
CONTAINING 15.8 ACRES MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 071 502 804

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
161 260 885	02/11/2016	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
751 101 744	17/09/1975	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
761 115 949	17/09/1976	CAVEAT CAVEATOR - THE CALGARY REGIONAL PLANNING COMMISSION. DEFERRED RESERVE CAVEAT
971 033 656	03/02/1997	EASEMENT OVER PORTION OF THE NE 8-20-2-W5 FOR BENEFIT OF PORTION OF THE NW 8-20-2-W5 (PLAN 8010404)

TOTAL INSTRUMENTS: 003

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0016 742 272	8010142;1	801 015 653

LEGAL DESCRIPTION
PLAN 8010142
BLOCK 1
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 10.3 HECTARES (25.41 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 5;2;20;8;SW

MUNICIPALITY: FOOTHILLS COUNTY

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
801 015 653	31/01/1980		$85,000	

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
2696JN .	22/03/1966	UTILITY RIGHT OF WAY GRANTEE - PLAINS MIDSTREAM CANADA ULC. AS TO PORTION OR PLAN:4959JK (DATA UPDATED BY: 951137916) (DATA UPDATED BY: 951137992) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 031207346) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 081067177)
751 101 744	17/09/1975	UTILITY RIGHT OF WAY

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER, SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0021 220 447	5;2;20;8;NW,NE	891 104 921

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 8
THAT PORTION OF THE NORTH HALF
WHICH LIES TO THE SOUTH EAST OF THE SOUTH BRANCH OF
THE SHEEP RIVER AS SHOWN ON THE TOWNSHIP PLAN APPROVED
AT OTTAWA 15 AUGUST 1906
CONTAINING 59.9 HECTARES (148.2 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

	PLAN	NUMBER	HECTARES	ACRES MORE OR LESS
	SUBDIVISION	2298DR	16.2	40.1 (NE1/4)
	SUBDIVISION	2391EC	2.02	5.00 (NE1/4)
	SUBDIVISION	4061EC	14.2	35.16 (NE1/4)
	SUBDIVISION	1106EH	18.2	45.00 (NE1/4)
	PARCEL 'B'	2306EB	0.113	0.28 (NE1/4)
	NUMBER 22 HIGHWAY	5020HX	0.085	0.21 (NE1/4)
	HIGHWAY	3814JK	0.089	0.22 (NW1/4)
	RIVER DIVERSION	3814JK	0.364	0.90 (NW1/4)
	CUT-OFF	3814JK	0.223	0.55 (NW1/4)

(B) THAT PORTION OF THE NORTH EAST QUARTER OF SAID SECTION 8
WHICH LIES TO THE NORTH EAST OF THE SOUTH BRANCH OF SAID SHEEP
RIVER AS SHOWN ON SAID TOWNSHIP PLAN WHICH LIES TO THE NORTH OF
SUBDIVISION 1106EH AND TO THE WEST OF SUBDIVISION 2391EC AND
PARCEL 'B' ON PLAN 2306EB

(C) THAT PORTION OF THE NORTH WEST QUARTER OF SAID SECTION 8
WHICH LIES TO THE SOUTH OF THE SOUTH BRANCH OF THE SHEEP RIVER
AS SHOWN ON THE TOWNSHIP PLAN APPROVED AT OTTAWA 15 AUGUST 1906
CONTAINING 0.486 HECTARES (1.2 ACRES) MORE OR LESS

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
891 104 921	08/06/1989			5010

(CONTINUED)

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
991 102 909	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:9911226
021 046 550	07/02/2002	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:0210398

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0021 242 128	5;2;20;8;NW	971 378 878

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 8
THAT PORTION OF THE NORTH WEST QUARTER
WHICH LIES TO THE SOUTH OF THE SOUTH BRANCH OF THE SHEEP RIVER
AS SHOWN ON THE TOWNSHIP PLAN DATED 15 AUGUST 1906
CONTAINING .486 HECTARES (1.2 ACRES) MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: TOWN OF BLACK DIAMOND

REFERENCE NUMBER: 811 012 501

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
971 378 878	18/12/1997	TRANSFER OF LAND	$1	$1

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
991 102 910	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:9911226

TOTAL INSTRUMENTS: 001

(CONTINUED)

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0028 372 290	5;2;20;9;SW	001 110 623 +2

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 9
THE SOUTH 726 FEET OF THE NORTH 1518 FEET
OF THE WEST HALF OF THE WEST HALF OF THE
SOUTH WEST QUARTER
CONTAINING 4.45 HECTARES (11 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES	(ACRES)	MORE OR LESS
ROAD	0011044	0.283	0.70	

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

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 781 165 586

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
001 110 623	28/04/2000	ROAD PLAN		

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
7335JE .	25/03/1965	RESTRICTIVE COVENANT

(CONTINUED)

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0028 372 308	5;2;20;5;NE	001 110 623 +3

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 5
QUARTER NORTH EAST
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES/ACRES MORE OR LESS	
MAINTENANCE YARD SITE	475LK	2.32	(5.74)
SERVICE ROAD	475LK	.466	(1.15)
ROAD	0011044	1.165	(2.88)

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

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 891 087 577

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
001 110 623	28/04/2000	ROAD PLAN		

OWNERS

[redacted]

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
692LM .	24/04/1972	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. AS TO PORTION OR PLAN:644LK "16.5 FT STRIP DATA UPDATED BY: TRANSFER OF UTRW NO 811068010"
861 114 360	15/07/1986	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

END OF CERTIFICATE

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0021 259 346	5;2;20;9;NE	101 236 396 +1

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 9
QUARTER NORTH EAST
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT

PLAN	NUMBER	HECTARES	ACRES
ROAD	9010969	1.27	3.13
ROAD	9011745	2.39	5.89

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 901 134 474 AA.

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
101 236 396	10/08/2010	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
891 155 131	10/08/1989	CAVEAT RE : EASEMENT CAVEATOR - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		909 - 11TH AVE. S.W., CALGARY ALBERTA AGENT - JOHN W FILDES
151 108 717	29/04/2015	MORTGAGE MORTGAGEE - INTERAMERICAN INVESTMENTS INC. 3220 MATHERS AVENUE VANCOUVER BRITISH COLUMBIA V7V2K5 ORIGINAL PRINCIPAL AMOUNT: $1,250,000 (DATA UPDATED BY: TRANSFER OF MORTGAGE 151130585)

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 5 DAY OF MARCH, 2019 AT 12:28 P.M.

ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0035 035 056	5;2;20;8;SW	111 311 965 +1

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 8
THAT PORTION OF THE SOUTH WEST QUARTER
WHICH LIES TO THE SOUTH AND EAST OF THE SOUTH BRANCH
OF SHEEP RIVER AS SHOWN ON THE TOWNSHIP PLAN APPROVED AT
OTTAWA 15 AUGUST 1906 CONTAINING 42.6 HECTARES (105.4 ACRES)
MORE OR LESS
EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES	ACRES (MORE OR LESS)
ROADWAY	909N	1.62	4.0
SUBDIVISION	1113505	5.73	14.16

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 861 170 788 B .

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
111 311 965	30/11/2011	SUBDIVISION PLAN		

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
7452CS .	31/12/1921	UTILITY RIGHT OF WAY

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. AS TO PORTION OR PLAN:GL46
6737HY .	21/11/1960	CAVEAT CAVEATOR - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED. 909 - 11 AVENUE,S.W. CALGARY ALBERTA T2R1L8 "DATA UPDATED BY: TRANSFER OF CAVEAT 831069284"
243JP .	23/03/1966	UTILITY RIGHT OF WAY GRANTEE - RANGELAND PIPELINE COMPANY. AS TO PORTION OR PLAN:4959JK (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 031207303)
761 045 600	14/04/1976	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.
961 168 619	25/07/1996	CAVEAT RE : EASEMENT CAVEATOR - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. C/O BARRY G FLEECE GEODESIC SURVEYS LTD 106, 1016-5 AVE NE CALGARY ALBERTA T2A6K4 AGENT - BARRY G FLEECE
991 102 911	19/04/1999	UTILITY RIGHT OF WAY GRANTEE - WESTEND REGIONAL SEWAGE SERVICES COMMISSION. AS TO PORTION OR PLAN:9911226
031 209 537	23/06/2003	UTILITY RIGHT OF WAY GRANTEE - ATCO GAS AND PIPELINES LTD.
041 165 576	10/05/2004	DISCHARGE OF UTILITY RIGHT OF WAY 031209537 PARTIAL EXCEPT AS TO PLAN 0411044
051 462 438	06/12/2005	CAVEAT RE : UTILITY RIGHT OF WAY CAVEATOR - ATCO GAS AND PIPELINES LTD. 909 ELEVENTH AVENUE SW CALGARY

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		ALBERTA T2R1L7 AGENT - SEAL.
061 042 398	27/01/2006	CAVEAT RE : UTILITY RIGHT OF WAY AMENDING AGREEMENT CAVEATOR - ATCO GAS AND PIPELINES LTD. 909 ELEVENTH AVENUE SW CALGARY ALBERTA
071 457 281	12/09/2007	MORTGAGE MORTGAGEE - COMMUNITY CREDIT UNION LTD. 319 CENTRE STREET SW HIGH RIVER ALBERTA T1V1M6 ORIGINAL PRINCIPAL AMOUNT: $2,000,000
071 457 282	12/09/2007	CAVEAT RE : ASSIGNMENT OF RENTS AND LEASES CAVEATOR - COMMUNITY CREDIT UNION LTD. 319 CENTRE ST HIGH RIVER ALBERTA T1V1M6 AGENT - CHARLES A DIXON
111 311 966	30/11/2011	CAVEAT RE : ROAD WIDENING CAVEATOR - THE MUNICIPAL DISTRICT OF FOOTHILLS NO. 31. BOX 5605 HIGH RIVER ALBERTA T1V1M7
161 018 399	20/01/2016	CAVEAT RE : RIGHT OF WAY AGREEMENT CAVEATOR - TURNER VALLEY GOLF AND COUNTRY CLUB. WESTEND REGIONAL SEWAGE SERVICES COMMISSION C/O TOWN OF TURNERY VALLEY PO BOX 330 TURNER VALLEY ALBERTA T0L2A0 AGENT - KELLY G STEARNS

TOTAL INSTRUMENTS: 014

(CONTINUED)

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ORDER NUMBER: 36808413

CUSTOMER FILE NUMBER: Planning

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0020 825 288	475LK;OT	121 275 486 +4

LEGAL DESCRIPTION

PLAN 475LK
MAINTENANCE YARD SITE
CONTAINING 5.74 ACRES MORE OR LESS
NE 1/4 5-20-2-W5THM
EXCEPTING THEREOUT ALL MINES AND MINERALS
AND THE RIGHT TO WORK THE SAME

ATS REFERENCE: 5;2;20;5;NE
ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 011 131 651

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
121 275 486	22/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
031 167 949	23/05/2003	MORTGAGE MORTGAGEE - HSBC BANK CANADA. 777-8 AVE SW CALGARY ALBERTA T2P3R5 ORIGINAL PRINCIPAL AMOUNT: $27,800,000

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
121 002 839	04/01/2012	AMENDING AGREEMENT AMOUNT: $34,000,000 AFFECTS INSTRUMENT: 031167949

TOTAL INSTRUMENTS: 002

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LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0021 242 102	5;2;20;8;SE	161 260 885 +1

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 2 TOWNSHIP 20
SECTION 8
QUARTER SOUTH EAST
THAT PORTION OF THE SOUTH EAST QUARTER
WHICH LIES TO THE NORTH WEST OF THE SOUTH BRANCH OF THE SHEEP
RIVER AS SHOWN ON THE TOWNSHIP PLAN DATED 15 AUGUST 1906
AND TO THE EAST OF THE HIGHWAY REGISTERED AS 3814JK
CONTAINING 5.8 ACRES MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: FOOTHILLS COUNTY

REFERENCE NUMBER: 071 502 804 +1

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
161 260 885	02/11/2016	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

[redacted]

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
751 101 744	17/09/1975	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		LIMITED.
761 115 949	17/09/1976	CAVEAT CAVEATOR - THE CALGARY REGIONAL PLANNING COMMISSION. DEFERRED RESERVE CAVEAT

TOTAL INSTRUMENTS: 002

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ORDER NUMBER: 36808413

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Appendix E
Names and Addresses of Affected Parties

NAMES AND ADDRESSES OF AFFECTED PARTIES - ORGANIZATIONS

Foothills County
Larry Spilak
Reeve
Box 5605
High River, AB T1V 1M7

Municipal Government Board
Rick Duncan
Case Manager
15th Floor, Commerce Place
10155 102 Street
Edmonton, AB T5J 4L4

Alberta Health Services, Calgary Zone
Deb Rhodes
Vice President, Corporate Services &
Chief Financial Officer
14th Floor, North Tower
10030 – 107 Street NW
Edmonton, AB T5J 3E4

Alberta Transportation, South Region
Darren Davidson
Regional Director
3rd Floor, Administration Building
909-3 Ave North
Lethbridge, AB T1H 0H5

Foothills School Division No. 31
John Bailey
Superintendent of Schools
PO Box 5700
High River, AB T1V 1M7

Christ the Redeemer Catholic Schools
Scott Morrison
Superintendent
Box 1318
Okotoks, AB T1S 1B3

Sheep River Regional Utility
Corporation
Harry Riva Cambrin
CAO
Box 5605
High River, AB TIV 1M7

Westend Regional Sewage Service
Commission
Laurie McCreary-Burke
Secretary Treasurer
Box 330
Turner Valley, AB T0L 2A0

Fortis Alberta Inc.
Merlin MacNaughton
Stakeholder Relations Manager
320 17 Avenue SW
Calgary, AB T2S 2V1

ATCO Pipelines Head Office
Jason Sharpe
Sr. Vice President & General Manager
1200, 909 11 Ave SW
Calgary, AB T2R 1L8

ATCO Gas
Mike Shaw
Vice President,
Calgary Region Operations
909 - 11 Avenue SW
Calgary, AB T2R 1L8

Pat Stier
MLA
2019 - 20 Avenue
Nanton, AB T0L 1R0

Honourable Shaye Anderson
Minister of Municipal Affairs
Room 204, Legislature Building
10080 - 97 Avenue NW
Edmonton, AB T5K 2B6

Town of Turner Valley
Todd Sharpe
CAO
Box 330
Turner Valley, AB T0L 2A0

John Barlow
MP for Foothills
P.O. Box 5448
High River, AB T1V 1M5

Plains Midstream Canada
Head Office
Suite 1400, 607 8th Ave SW
Calgary, AB T2P 0A7

Appendix F
Comments from Affected Parties

March 21, 2018

Rick Duncan, Case Manager
Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

Dear Sir:

RE: Proposed Annexation of Territory from the Municipal District of Foothills No. 31
Your File: AN17/BLAC/T-V01

In response to your letter dated March 5, 2018, requesting further information regarding the Town's proposal for consulting with the public and identifying how affected landowners will be kept informed of the progress of negotiations between the municipalities, as required by Section 116(2)(c) of the Municipal Government Act, I would like to provide the following summary of the Town's proposal for public consultation:

1. Written notification of the Town's annexation proposal to the following recipients, by way of copy of this letter and copy of the Town's Notice of Intent to Annex dated October 2, 2017:

    - Municipal District of Foothills No. 31
    - Town of Turner Valley
    - Alberta Health Services, Calgary Zone
    - Alberta Transportation, South Region
    - Foothills School Division No. 31
    - Christ the Redeemer Catholic Schools
    - Sheep River Regional Utility Corporation
    - Westend Regional Sewage Service Commission
    - Fortis Alberta Inc.
    - ATCO Pipelines Head Office
    - ATCO Gas

2. Creation of an annexation webpage on the Town of Black Diamond website, and ongoing updates as negotiations proceed; use of social media to inform the public, linking to the annexation webpage; online opinion survey of the general public on issues pertaining to annexation;

3. Information mailed to directly affected landowners, to landowners within the 'Black Diamond referral area' as defined in the Intermunicipal Development Plan, and to landowners adjacent to lands proposed for annexation but outside of the IDP referral area;

4. Information brochures mailed to residents as part of bi-monthly utility bill mailing;

5. Joint Press Releases prepared in conjunction with the MD of Foothills, to be issued quarterly;

6. Meeting(s) with individual landowners as required or requested;

7. A minimum of 1 Public Open House.

Furthermore, I would like to inform you that the Town of Black Diamond Council passed the following motion at it's February 14, 2018 meeting:

Res. 2018-89 *Moved by Councillor Sharon Hart that Council agree to amend the Intent to Annex by removing the quarter known as NE-5-20-2-W5M*

UNANIMOUSLY CARRIED

With the removal of the above-mentioned quarter section, the remaining lands proposed for annexation include the following:

Legal Description					
Quarter	**Plan**	**Title #**	**Ha**	**Ac**	**Owner**
~~Ptn NE 5-20-2-W5M~~		~~001110623003~~	~~60.749~~	~~150.23~~	~~David Hocking & Diana Hocking~~
~~Ptn NE 5-20-2-W5M~~	~~LK465, OT~~	~~121275486004~~	~~2.323~~	~~5.74~~	~~Volker Stevin Highways Ltd.~~
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	Jaygee Farms Ltd.
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	Lilyfer Poultry Farms (Black Diamond) Ltd.
NE 9-20-2-W5M		101236396001	61.04	150.98	386809 Alberta Ltd.
Total			**124.586**	**308.13**	



The rationale for annexation remains as outlined in the October 2, 2017 Notice of Intent to Annex. The Town looks forward to working collaboratively with all parties to proceed with the annexation.

Sincerely,

Sharlene Brown
Chief Administrative Officer
Town of Black Diamond

Attachments: October 2, 2017 Notice of Intent to Annex
cc:

Shayne Anderson, Minister of Municipal Affairs
Pat Stier, MLA for Livingstone-Macleod
John Barlow, MP for Foothills
Larry Spilak, Reeve, Municipal District of Foothills No. 31
Heather Thomson, Interim CAO, Town of Turner Valley
Deb Rhodes, Vice President Corporate Services, Alberta Health Services
Darren Davidson, Regional Director, Alberta Transportation, South Region
John Bailey, Superintendent of Schools Foothills, School Division No. 31
Scott Morrison, Superintendent, Christ the Redeemer Catholic Schools
Harry Riva Cambrin, CAO, Sheep River Regional Utility Corporation
Laurie McCreary-Burke, Secretary Treasurer, Westend Regional Sewage Service Commission
Merlin MacNaughton, Stakeholder Relations Manager, Fortis Alberta Inc.
Jason Sharpe, Sr. Vice President and General Manager, ATCO Pipelines Head Office
Mike Shaw, Vice President, Calgary Region Operations, ATCO Gas

October 2, 2017

Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

MD of Foothills 31
Heather Hemingway
Director of Planning
Box 5605
High River, Alberta
T1V 1M7

Dear Sir/Madam;

RE: Formal Initiation of the Town of Black Diamond Annexation Application

In accordance with Section 116 of the Municipal Government Act and pursuant to a motion of the Town of Black Diamond Council dated September 20, 2017, the Town of Black Diamond is giving written notice to the Municipal District of Foothills and the Municipal Government Board of the initiation of the proposed annexation of lands into the Town of Black Diamond.

Within the Town's current boundaries there are approximately 65 lots available for residential development and at the current rate of development it is estimated that the inventory will be exhausted within 3 years. There is a 29 acre parcel of undeveloped lands within the NW of 9-20-2-W5M forming part of the Kaiser Area Structure Plan however cost of servicing has been an economic barrier for developers. The annexation of lands as proposed with facilitate the efficient and cost effective growth of the community and is in alignment with statutory plans, alternate transportation routes and satisfy the Town's growth projections.

The lands intended for annexation are those as listed in the table below and includes the three quarter sections that are identified in the MD of Foothills, Town of Turner Valley, Town of Black Diamond Intermunicipal Development Plan, adopted by Town of Black Diamond Council as Bylaw 02-05 on June 5, 2002. Excerpt from the Intermunicipal Development Plan (Black Diamond Urban Future Growth) has been inserted below.

Legal Description					
Quarter	Plan	Title #	Ha	Ac	Owner
Ptn NE 5-20-2-W5M		001110623003	60.749	150.23	David Hocking & Diana Hocking
Ptn NE 5-20-2-W5M	LK485, OT	121276486004	2.323	5.74	Volker Stevin Highways Ltd.
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	Jaypee Farms Ltd.
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	Lilyfer Poultry Farms (Black Diamond) Ltd.
NE 9-20-2-W5M		101236396001	61.04	150.98	396806 Alberta Ltd.
Total			187.656	464.10	

The annexation proposes to include approximately 464 acres of land encompassing three quarter sections which are contiguous to the shared boundary with the Town of Black Diamond. The proposed annexation lands do not contain established residential subdivisions. There is one residence and cultivation farmland located on the NE of 5 and another four residences on the SW of 9 with the balance lands under cultivation. The NE of 9-20-2-5 is a bare quarter under cultivation. None of the lands contemplated for annexation are within the designated Flood Risk Area.



The strategy proposed for the annexation procedure is to facilitate meetings of an Annexation Committee consisting of Council members of the Town of Black Diamond and the MD of Foothills with respective staff assistance. A concurrent referral circulation and public consultation process will be undertaken in order to determine what concerns or objections may exist with respect to the annexation proposal.

In conclusion, we look forward to working collaboratively with all parties to proceed with the annexation.

Sincerely

Denice Stewart
PLANNING & DEVELOPMENT OFFICER
Town of Black Diamond

Attachments: Copy of Council Resolution

REGULAR COUNCIL
September 20, 2017

Core Strategy: Provide Safe and Effective Service
Annexation - Letter of Intent

Mayor Glen Fagan requested a recorded vote on this matter.

Moved by Deputy Mayor Mike Ross that Council agree to send a letter of intent to the Municipal government Board and the MD of Foothills for the annexation of lands as identified in the Intermunicipal Development Plan (2002). Res. 2017-411

IN FAVOUR:	AGAINST:
Mayor Glen Fagan	
Deputy Mayor Mike Ross	
Councillor Jim Deacon	
Councillor Ruth Goodwin	
Councillor Jackie Stickel	
Councillor Judy Thomson	
Councillor Brian Marconi	

UNANIMOUSLY CARRIED

From:	Jerry Lau
To:	Ruth Goodwin
Cc:	Darren Davidson; Harry Riva Cambrin; Cindy Helm; Rod Ross
Subject:	Black Diamond Annexation
Date:	October 9, 2018 11:59:07 AM
Attachments:	image001.jpg Scanned from a Xerox Multifunction Printer.pdf

---

As attached.

Thanks.

Jerry Lau, P. Eng.
Infrastructure Manager
Delivery Services – Southern Region
Alberta Transportation
Government of Alberta

Tel 403-297-8633
Fax 403-297-4706
Jerry.Lau@gov.ab.ca

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Willowglen Business Park
803 Manning Road NE, Second Floor
Calgary, Alberta T2E 7M8
Telephone: 403-297-6311
Fax: 403-297-4706
www.transportation.alberta.ca

October 9, 2018

Ms. Ruth Goodwin
Mayor
Town of Black Diamond
301 Centre Avenue West
Black Diamond, Alberta T0L 0H0

Dear Ms. Goodwin:

Subject: Proposed Annexation of Land from the Municipal District of Foothills No. 31

Thank you for your letter of September 24, 2018, advising Alberta Transportation of the proposed annexation by the Town of Black Diamond.

As you are aware, Alberta Transportation worked with the Town on a conceptual plan for the future widening of Highway 7 and Highway 22 within the Town boundary to accommodate your growth aspirations. One of the findings was the need for an access at Highway 7 @ 6th Street E, as well as at Highway 7 @ Range Road 23. For the access at Range Road 23 to operate efficiently, a bulbing of the intersection would be required along with realignment of Range Road 23. It is strongly advised that the Town extend their annexation boundary to include this road so as to avoid jurisdictional issues over operation and management as the road evolve to support the Town growth.

Also, on the west side of Town the annexation of lands between Highway 22 and the River may be difficult to provide access and may have to travel through MD of Foothills lands. The town should be aware no additional access to Highway 22 will be permitted, and therefore may wish to either annex the lands east of Highway 22 to avoid jurisdictional issues regarding access or keep the annexation south and east of the river.

If you have any further questions, please contact me at jerry.lau@gov.ab.ca or at 403-297-8633.

Yours truly,

Jerry Lau, P. Eng.
Infrastructure Manager
Alberta Transportation

cc: Darren Davidson, P. Eng., Regional Director, Alberta Transportation
Harry Riva Cambrin, CAO, MD of Foothills No. 31

Alberta

From:	Erickson, Marnie
To:	Rod Ross
Subject:	Change of Roles
Date:	April 3, 2019 11:02:26 AM
Attachments:	image001.jpg

Good morning Rod,

Thank you for providing us notification of your proposed annexation via Mike Shaw. I'd like to ask you to update your records to reflect changing roles here at ATCO. Ryan Germaine would be the corresponding contact now.

Ryan Germaine, P.Eng
Vice President, Operations, Calgary & Edmonton Regions
Natural Gas Transmission and Distribution
ATCO Pipelines & Liquids Global Business Unit
909 – 11 Avenue SW | Calgary, AB T2R 1L8
T 403-245-7749 | C 403-921-1114
ryan.germaine@ATCO.com | www.ATCO.com

Thank you for your help.

Kind regards,

Marnie Joy Erickson
Executive Assistant to Ryan Germaine
Vice President, Operations, Calgary & Edmonton Regions
Natural Gas Transmission & Distribution
Pipelines & Liquids Global Business Unit

P. 403 245 9971
C. 403 828 6703
A. 1200, 909-11 Ave SW, Calgary AB Canada T2R 1L8

ATCO.com Facebook Twitter LinkedIn



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From:	Nicolajsen, Dan
To:	Sharlene Brown
Cc:	Rod Ross; Kavanagh, David
Subject:	FW: Franchise Fees
Date:	April 12, 2019 7:35:31 AM
Attachments:	image001.jpg image002.jpg

Hi Sharlene,

Please see as below. A bit more complicated but looks like it could work.

Regards,
Dan

Dan Nicolajsen
Supervisor - Customer Service
Calgary Operations - Natural Gas Distribution
Pipelines & Liquids Global Business Unit

E. Dan.Nicolajsen@atco.com
P. 403-245-7274 C. 403-828-0533
A. 234 Don Seaman Way
Okotoks AB Canada T1S 1A8

W. ATCO.com Facebook Twitter LinkedIn

From: Oliver, Travis
Sent: Thursday, April 11, 2019 11:24 AM
To: Nicolajsen, Dan <Dan.Nicolajsen@atco.com>
Subject: RE: Franchise Fees

Hey Dan,

Here is a decision from the AUC that dealt with annexation and charging of different franchise fees.

http://www.auc.ab.ca/regulatory_documents/ProceedingDocuments/2001/2001-52.pdf#search=2001%2D52

Page 11 & 12 address annexation and the charging of different franchise fees (Proceeding 2001-052)

If Black Diamond stated in the Order-in-Council that the customers on the land that is being annexed are exempt from Franchise Fees for 3 years as suggested then I think they might be able to do it.

This would be a directive from the annexation documents and have nothing to do with our Franchise Agreement so I don't think our agreement has any say in that. Other than the size of the annexation

and if the customers located within that area are to be become ATCO customers as per clause 14) of our current agreement.

End of the day I think that the only aspect of the proposed annexation and our franchise agreement is if we will serve the area. Any other "*relaxation period*" for franchise fees paid is at the discretion of Black Diamond and should be addressed with the annexation documents/contracts.

I believe we can set it up in the system that any customer effected by the "*relaxation period*" could be exempt from franchise fees for the time period stated by Black Diamond but this is should be run by the AUMA as we are reactionary to the annexation more than anything.

Hope this helps

Travis

From: Nicolajsen, Dan
Sent: Thursday, April 11, 2019 6:37 AM
To: Oliver, Travis <Travis.Oliver@atco.com>
Subject: Fwd: Franchise Fees

Hi Travis, please the request below. Can you answer these questions?

Sent from my iPhone

Begin forwarded message:

> **From:** Sharlene Brown <SharleneB@town.blackdiamond.ab.ca>
> **Date:** April 10, 2019 at 8:33:21 PM MDT
> **To:** "Nicolajsen, Dan" <Dan.Nicolajsen@atco.com>
> **Cc:** Rod Ross <RodR@town.blackdiamond.ab.ca>
> **Subject: Franchise Fees**
>
> **Caution – This email is from an external source. If you are concerned about this message, please forward it to spam@atco.com for analysis.**
> Hi Dan
>
> How are things going, have not talked (emailed) in a very long time?? Hope things are well.
>
> Anyway need some assistance,
>
> The Town is putting forward an annexation agreement and we need some assistance on franchise agreements. The Atco Agreement does not have a clause allowing the Town to stipulate a different franchise fee percentage. Part of the agreement may be allow the annexed resident a "relaxation period" from franchise fees for a period of 3 years.

Who would I talk to in regards to this?? and how do we make this work??

I will be out of office until Monday, but wanted to get this off my plate.

Sharlene

Best Regards,

Sharlene Brown
Chief Administrative Officer
Town of Black Diamond
SharleneB@town.blackdiamond.ab.ca

Phone: 403-933-4348

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Southern Region, Calgary District
2nd Floor, 803 Manning Road NE
Calgary, Alberta T2E 7M8
Canada
Telephone 403-297-6311
www.transportation.alberta.ca

Our File: 2100/Black Diamond/Annexation-2018
Your File: AN17/BLAC/T-V01

May 18, 2018

Rick Duncan, Case Manager
Municipal Government Board
1229 91 Street SW
Edmonton AB T6X 1E9

Dear Mr. Duncan:

RE: ANNEXATION OF TERRITORY FROM MUNICIPAL DISTRICT OF FOOTHILLS NO. 31

This will acknowledge receipt of the amended annexation notice, to annex lands to the Town of Black Diamond from the Municipal District of Foothills No. 31.

Alberta Transportation has recently completed an overview of transportation impacts to the Town of Black Diamond. Among the long term improvements identified were the requirements to access Highway 7 at 6th Street E, as well as at Range Road 23.

It is recommended that the annexation boundaries be adjusted to include these roadways / intersections, to ensure these roads become the responsibility of the Town of Black Diamond to avoid jurisdictional issues over operations & management of these roads as they evolve to support growth within the Town.

If you have any questions or require additional information please contact this office.

Yours truly,

Trevor Richelhof
Development and Planning Technologist

TBR/pf

cc Town of Black Diamond
Municipal District of Foothills No. 31

Alberta Transportation

Delivery Services, Southern Region
Willowglen Business Park
803 Manning Road NE, Second Floor
Calgary, Alberta T2E 7M8
Telephone: 403-297-6311
Fax: 403-297-4706
www.transportation.alberta.ca

October 9, 2018

Ms. Ruth Goodwin
Mayor
Town of Black Diamond
301 Centre Avenue West
Black Diamond, Alberta T0L 0H0

Dear Ms. Goodwin:

Subject: Proposed Annexation of Land from the Municipal District of Foothills No. 31

Thank you for your letter of September 24, 2018, advising Alberta Transportation of the proposed annexation by the Town of Black Diamond.

As you are aware, Alberta Transportation worked with the Town on a conceptual plan for the future widening of Highway 7 and Highway 22 within the Town boundary to accommodate your growth aspirations. One of the findings was the need for an access at Highway 7 @ 6th Street E, as well as at Highway 7 @ Range Road 23. For the access at Range Road 23 to operate efficiently, a bulbing of the intersection would be required along with realignment of Range Road 23. It is strongly advised that the Town extend their annexation boundary to include this road so as to avoid jurisdictional issues over operation and management as the road evolve to support the Town growth.

Also, on the west side of Town the annexation of lands between Highway 22 and the River may be difficult to provide access and may have to travel through MD of Foothills lands. The town should be aware no additional access to Highway 22 will be permitted, and therefore may wish to either annex the lands east of Highway 22 to avoid jurisdictional issues regarding access or keep the annexation south and east of the river.

If you have any further questions, please contact me at jerry.lau@gov.ab.ca or at 403-297-8633.

Yours truly,

Jerry Lau, P. Eng.
Infrastructure Manager
Alberta Transportation

cc: Darren Davidson, P. Eng., Regional Director, Alberta Transportation
Harry Riva Cambrin, CAO, MD of Foothills No. 31

Alberta

Municipal Government Board (MGB)

1229 91 Street SW
Edmonton Alberta Canada T6X 1E9
Tel 780.427.4864 Fax 780.427.0986
E-mail: mgbmail@gov.ab.ca

NOTICE OF INTENT TO ANNEX – ACKNOWLEDGEMENT

Our File: AN17/BLAC/T-V01

April 3, 2018

Sharlene Brown
Town of Black Diamond
PO Box 10
Black Diamond AB T0L 0H0

Heather Hemingway
Municipal District of Foothills No. 31
Box 5605
309 Macleod Trail S.
High River AB T1V 1M7

Re: Proposed Annexation of Territory from the Municipal District of Foothills No. 31

This is to confirm the Municipal Government Board has received a Notice of Intent from the Town of Black Diamond to annex land from the Municipal District of Foothills No. 31.

If you require any additional information about the annexation application requirements, please feel free to contact my office. My direct line in Edmonton is (780) 422-8652, or contact me by e-mail at richard.duncan@gov.ab.ca.

Yours truly,

Rick Duncan
Case Manager

cc: Ngo, Peter, Alberta Transportation
Scheidl, Michael, Alberta Municipal Affairs
Kuzik, Lyle, Federation of Alberta Gas Co-ops Ltd.
Hunka, Dave, Fortis Alberta Inc.
Olmstead, Kevin, CP Rail System
Paterson, Fraser, Atco Gas – Calgary
Samchuk, Brad, Atco Gas - Edmonton

Municipal Government Board (MGB)

1229 91 Street SW
Edmonton Alberta Canada T6X 1E9
Tel 780.427.4864 Fax 780.427.0986
E-mail: mgbmail@gov.ab.ca

NOTICE OF INTENT TO ANNEX – ADDITIONAL INFORMATION

Our File: AN17/BLAC/T-V01

March 5, 2018

Sharlene Brown
Town of Black Diamond
PO Box 10
Black Diamond AB T0L 0H0

Heather Hemingway
Municipal District of Foothills No. 31
Box 5605
309 Macleod Trail S.
High River AB T1V 1M7

Re: Proposed Annexation of Territory from the Municipal District of Foothills No. 31

Thank you for allowing me to make a presentation during your joint annexation negotiating committee meeting on February 22, 2018. I hope I was able to provide the committee with the information it needs as it begins the annexation process.

The Municipal Government Board (MGB) has received the Town of Black Diamond's (Town) notice of intent to annex land from the Municipal District of Foothills No. 31. In order to comply with Section 116(2)(c) of the *Municipal Government Act* (*Act*) the Town must provide a proposal for consulting with the public and identify how the affected landowners will be kept informed about the progress of the negotiations between the two municipalities. In accordance with Section 116(1)(c) of the *Act*, the Town must also notify the local authorities that may be affected by the proposed annexation. It would be appreciated if you would provide the MGB with the consultation proposal as well as the names and contact information of the local authorities that will be notified by the Town.

If you require any additional information about the annexation application requirements, please feel free to contact my office. My direct line in Edmonton is (780) 422-8652, or contact me by e-mail at richard.duncan@gov.ab.ca.

Yours truly,

Rick Duncan
Case Manager

../2

Municipal Government Board (MGB)

1229 91 Street SW
Edmonton Alberta Canada T6X 1E9
Tel 780.427.4864 Fax 780.427.0986
E-mail: mgbmail@gov.ab.ca

cc: Ngo Peter, Alberta Transportation
Scheidl, Michael, Alberta Municipal Affairs
Kuzik, Lyle, Federation of Alberta Gas Co-ops Ltd.
Hunka, Dave, Fortis Alberta Inc.
Olmstead, Kevin, CP Rail System
Hervieux, Guy, Atco Gas – Sherwood Park

Municipal Government Board (MGB)

Alberta

1229 91 Street SW
Edmonton Alberta Canada T6X 1E9
Tel 780.427.4864 Fax 780.427.0986
E-mail: mgbmail@gov.ab.ca

October 22, 2018

Our File: AN17/BLAC/T-V01

David and Diana Hocking
[redacted]

Re: Town of Black Diamond Proposed Annexation

Thank you for your letter of September 21, 2018 regarding the annexation being proposed by the Town of Black Diamond (Town).

The Municipal Government Board (MGB) received an amended "notice of intent to annex" from the Town on March 21, 2018. Should the Town wish to proceed with the proposed annexation, it must develop a report that outlines the results of its negotiations/mediations with the Municipal District of Foothills No. 31, details the process used to solicit public and landowner input, and summarizes the views expressed during its consultation process. As an independent tribunal, the MGB is not involved with the negotiations/mediations between the municipalities or the consultation process.

In accordance with the *Municipal Government Act*, the MGB must conduct a hearing if it receives an objection to a proposed annexation. Your letter has been placed on file and will be brought forward should the Town submit an annexation application. The hearing process will provide you with an opportunity to express your point of view and expand upon your concerns.

If you have any questions about the annexation process, please feel free to contact me at 780-422-8652 or Richard.Duncan@gov.ab.ca.

Yours truly,

Rick Duncan
Case Manager

cc: Rod Ross, Town of Black Diamond
Heather Hemingway, Municipal District of Foothills No. 31

Municipal Government Board (MGB)

1229 91 Street SW
Edmonton Alberta Canada T6X 1E9
Tel 780.427.4864 Fax 780.427.0986
E-mail: mgbmail@gov.ab.ca

October 22, 2018

Our File: AN17/BLAC/T-V01

Darlene Paranaque
[redacted]

Re: Town of Black Diamond Proposed Annexation

This is to confirm that on October 10, 2018, the Municipal Government Board (MGB) received your objection to the annexation being proposed by the Town of Black Diamond (Town).

The MGB received an amended "notice of intent to annex" from the Town on March 21, 2018. Should the Town wish to proceed with the proposed annexation, it must develop a report that outlines the results of its negotiations/mediations with the Municipal District of Foothills No. 31, details the process used to solicit public and landowner input, and summarizes the views expressed during its consultation process. As an independent tribunal, the MGB is not involved with the negotiations/mediations between the municipalities or the consultation process.

In accordance with the *Municipal Government Act*, the MGB must conduct a hearing if it receives an objection to a proposed annexation. Your objection has been placed on file and will be brought forward should the Town submit an annexation application. The hearing process will provide you with an opportunity to express your client's point of view.

If you have any questions about the annexation process, please feel free to contact me at 780-422-8652 or Richard.Duncan@gov.ab.ca.

Yours truly,

Rick Duncan
Case Manager

cc: Rod Ross, Town of Black Diamond
Heather Hemingway, Municipal District of Foothills No. 31

From:	Rod Ross
To:	Jerry Lau
Cc:	Sharlene Brown (SharleneB@town.blackdiamond.ab.ca); Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca); Darren Davidson; Harry Riva Cambrin
Subject:	RE: Black Diamond Annexation
Date:	October 10, 2018 3:17:00 PM
Attachments:	image001.jpg Annexation Servicing Review- Final.pdf

Hi Jerry, thanks for the response regarding Black Diamond's annexation proposal.

Please find attached a servicing strategy for the Town's annexation proposal. It outlines a future road network that is largely consistent with the conceptual plan prepared by AT – it shows a collector street being developed on the 6th St. E alignment which then swings west to intersect with Hwy 22 and Willowridge Blvd. It also identifies a number of intersection upgrades that will be necessary upon full build-out of the annexation area. It is the intention that all local traffic from the annexation area will be directed to this collector road, which will then connect with local roads and the provincial highways. The town does not intend for traffic from the annexation area to have direct access onto the MD's road network. This will be addressed in detail when ASPs are prepared for the annexation lands.

The conceptual plan prepared by AT outlined development of a 'ring road' to be developed on the south and east edge of Town (using RR23 (144th St)), for the purpose of accommodating highway traffic around the Town. As was stated by Town Council when this plan was presented by AT, the Town is not prepared to construct roads to carry highway traffic, and the Annexation Servicing Study does not include this concept. The Town intends to build local roads to carry local traffic, and will ensure that future town growth does not impact the MD's road network. The Town does not support ATs recommendation that RR23 (144th St) be included in the annexation area.

Regards,

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
p. **403.933.4348** | f. **403.933.5865** | Box 10 Black Diamond, AB T0L 0H0
rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
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From: Jerry Lau [mailto:Jerry.Lau@gov.ab.ca]
Sent: Tuesday, October 09, 2018 11:59 AM
To: Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>
Cc: Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>; Cindy Helm <Cindy.Helm@gov.ab.ca>; Rod Ross

<RodR@town.blackdiamond.ab.ca>
Subject: Black Diamond Annexation

As attached.

Thanks.

Jerry Lau, P. Eng.
Infrastructure Manager
Delivery Services – Southern Region
Alberta Transportation
Government of Alberta

Tel 403-297-8633
Fax 403-297-4706
Jerry.Lau@gov.ab.ca

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http://511.alberta.ca/ab/en.html
https://twitter.com/511Alberta

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Westend Regional Sewage Services Commission

September 20, 2018

Town of Black Diamond
PO Box 10
Black Diamond, AB T0L 0H0

Attention: Rod Ross, Planning Manager

Dear Rod,

This is to advise that, at its meeting on September 18, 2018, the Westend Regional Sewage Services Commission passed a motion in support of the Town of Black Diamond's letter of intent to annex, dated March 22, 2018 and in support of the updated map of areas to be annexed provided August 29, 2018.

Please let me know if you need any additional information with respect to this matter.

Sincerely,

L McCreary-Burke

Laurie McCreary-Burke, Secretary/Treasurer
WRSSC

P.O. Box 330, Turner Valley, AB T0L 2A0
Contact: Laurie McCreary-Burke, Secretary/Treasurer
Phone: (403) 828-2177
Email: laurie@westendregionalsewageservicescommission.ca
www.westendregionalsewageservicescommission.ca

From:	Jerry Lau
To:	Rod Ross
Cc:	Sharlene Brown; Ruth Goodwin; Darren Davidson
Subject:	RE: Black Diamond Annexation
Date:	May 28, 2019 4:33:46 PM
Attachments:	image001.jpg

Hello Rod,

In order for the town to develop to the east boundary of the new annexation, they are going to need an access on Hwy 7 from RR23 to accommodate development traffic. This creates two issues and the concern from AT:

- The separation of the existing service road from Hwy 7 is inadequate (only 40m). John Infante's study identified that the service road will need to be relocated further east to make the intersection operational.

- As mostly town traffic will be using RR23, this is going to cause an issue for the County of Foothills as they would be reluctant to maintain or upgrade the road.

Without this upgrade and the town taking over RR23, traffic will use RR23 regardless and cause a safety and operational issue for all three jurisdictions. If RR23 is simply closed, this would cause capacity constraints on the other Hwy 7 intersections through town.

This has nothing to do with a perceived bypass of Town of Black Diamond.

Thanks.

Jerry

From: Rod Ross [RodR@town.blackdiamond.ab.ca]
Sent: May 27, 2019 5:19 PM
To: Jerry Lau
Cc: Sharlene Brown; Ruth Goodwin; Darren Davidson
Subject: RE: Black Diamond Annexation

Hi Jerry, the Town of Black Diamond and Foothills County have reached an agreement on annexation (see the attached map), and the Town is preparing its Report on Negotiations for submission to the Municipal Government Board. Having reached an agreement, and having the support of landowners in the annexation area, we are hoping to avoid a hearing.

In conversation with our MGB file manager about the letters from AT, he suggested we get some clarification from AT regarding the recommendation to include Range Road 23. As I outlined in my email of Oct 10 below, the Town does not want to include RR23 in the annexation area, and it has not been included in the Annexation Agreement recently approved by the Town and County. Our MGB file manager indicated that based on the letters from AT, the MGB will have to convene a hearing for the annexation, unless AT is able to clarify its position. Can you confirm whether AT has concerns regarding this annexation if RR23 is not included in the annexation area? Or, is it AT's position that there are no concerns with the annexation, but recommends that RR23 be included so that it may be developed as part of the Town's local road network?

Regards,

Rod Ross RPP, MCIP

Planning Manager
Town of Black Diamond
p. **403.933.4348**|f. **403.933.5865**|Box 10 Black Diamond, AB T0L 0H0
rodr@town.blackdiamond.ab.ca www.town.blackdiamond.ab.ca
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From: Rod Ross
Sent: Wednesday, October 10, 2018 3:23 PM
To: Jerry Lau <Jerry.Lau@gov.ab.ca>
Cc: Sharlene Brown (SharleneB@town.blackdiamond.ab.ca) <SharleneB@town.blackdiamond.ab.ca>; Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca) <R.Goodwin@town.blackdiamond.ab.ca>; Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>
Subject: RE: Black Diamond Annexation

Hi Jerry, thanks for the response regarding Black Diamond's annexation proposal.

Please find attached a servicing strategy for the Town's annexation proposal. It outlines a future road network that is largely consistent with the conceptual plan prepared by AT – it shows a collector street being developed on the 6th St. E alignment which then swings west to intersect with Hwy 22 and Willowridge Blvd. It also identifies a number of intersection upgrades that will be necessary upon full build-out of the annexation area. It is the intention that all local traffic from the annexation area will be directed to this collector road, which will then connect with local roads and the provincial highways. The town does not intend for traffic from the annexation area to have direct access onto the MD's road network. This will be addressed in detail when ASPs are prepared for the annexation lands.

The conceptual plan prepared by AT outlined development of a 'ring road' to be developed on the south and east edge of Town (using RR23 (144th St)), for the purpose of accommodating highway traffic around the Town. As was stated by Town Council when this plan was presented by AT, the Town is not prepared to construct roads to carry highway traffic, and the Annexation Servicing Study does not include this concept. The Town intends to build local roads to carry local traffic, and will ensure that future town growth does not impact the MD's road network. The Town does not support ATs recommendation that RR23 (144th St) be included in the annexation area.

Regards,

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
p. **403.933.4348**|f. **403.933.5865**|Box 10 Black Diamond, AB T0L 0H0
rodr@town.blackdiamond.ab.ca www.town.blackdiamond.ab.ca
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From: Jerry Lau [mailto:Jerry.Lau@gov.ab.ca]
Sent: Tuesday, October 09, 2018 11:59 AM
To: Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>
Cc: Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>; Cindy Helm <Cindy.Helm@gov.ab.ca>; Rod Ross <RodR@town.blackdiamond.ab.ca>
Subject: Black Diamond Annexation

As attached.

Thanks.

Jerry Lau, P. Eng.
Infrastructure Manager
Delivery Services – Southern Region
Alberta Transportation
Government of Alberta

Tel 403-297-8633
Fax 403-297-4706
Jerry.Lau@gov.ab.ca

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http://511.alberta.ca/ab/en.html
https://twitter.com/511Alberta

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From:	Rod Ross
To:	Jerry Lau
Cc:	Sharlene Brown; Ruth Goodwin; Darren Davidson; Chun Man (cman@urbansystems.ca)
Subject:	RE: Black Diamond Annexation
Date:	May 28, 2019 6:20:00 PM
Attachments:	2019-01-17-Annexation Servicing Review-R1-sealed.pdf image001.jpg

---

Thanks for this response Jerry. I'd like to address the issues you've raised:

- The annexation area is not intended to have access onto RR23 (144th St). This will be addressed in detail when Area Structure Plans are prepared for the annexed lands. ASPs adjacent to Provincial highways are, as you're aware, subject to approval by Alberta Transportation, and the department will have opportunity to address any concerns during the planning process.
- The Town is aware that the service road south of Hwy 7 will need to be relocated. This will be addressed when an Area Structure Plan is prepared for the quarter section, prior to development.
- The transportation concept show in the Annexation Servicing Review (attached) shows a local collector road that will intersect with Hwy 7 at 6th St. E, and with Hwy 22 at Willow Ridge Boulevard, in addition to intersecting with 4th Ave SE (a local road). This road will connect the annexation area to the highway network. Intersection upgrades have been identified for these intersections. The exact type of intersection has not been identified at this time, but the Town will work with AT to ensure the intersections achieve an appropriate level of service.
- RR23 will continue to function as a rural road carrying rural traffic. It will not be carrying urban traffic.
- The Town understands that the Province needs to protect the safe and effective operation of its highways. The Town believes that the transportation concept outlined in the Annexation Servicing Review will provide a safe and effective transportation systems for both the Town and the Province.
- In view of the above points, the Town does not agree with the Province's position in this matter.

I believe I was clear in my email of October 10, 2019 what the Town's position was in this regard, and I mistakenly assumed that your lack of reply indicated acceptance of the Town's position. That is clearly not the case, and I accept responsibility for not pushing for a response from you. Understanding your position now, you can be sure the Town will pursue this matter until a suitable agreement is reached.

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
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rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
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From: Jerry Lau [mailto:Jerry.Lau@gov.ab.ca]
Sent: Tuesday, May 28, 2019 4:34 PM
To: Rod Ross <RodR@town.blackdiamond.ab.ca>
Cc: Sharlene Brown <SharleneB@town.blackdiamond.ab.ca>; Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>; Darren Davidson <darren.davidson@gov.ab.ca>
Subject: RE: Black Diamond Annexation

Hello Rod,

In order for the town to develop to the east boundary of the new annexation, they are going to need an access on Hwy 7 from RR23 to accommodate development traffic. This creates two issues and the concern from AT:

- The separation of the existing service road from Hwy 7 is inadequate (only 40m). John Infante's study identified that the service road will need to be relocated further east to make the intersection operational.

- As mostly town traffic will be using RR23, this is going to cause an issue for the County of Foothills as they would be reluctant to maintain or upgrade the road.

Without this upgrade and the town taking over RR23, traffic will use RR23 regardless and cause a safety and operational issue for all three jurisdictions. If RR23 is simply closed, this would cause capacity constraints on the other Hwy 7 intersections through town.

This has nothing to do with a perceived bypass of Town of Black Diamond.

Thanks.

Jerry

From: Rod Ross [RodR@town.blackdiamond.ab.ca]
Sent: May 27, 2019 5:19 PM
To: Jerry Lau
Cc: Sharlene Brown; Ruth Goodwin; Darren Davidson
Subject: RE: Black Diamond Annexation

Hi Jerry, the Town of Black Diamond and Foothills County have reached an agreement on annexation (see the attached map), and the Town is preparing its Report on Negotiations for submission to the Municipal Government Board. Having reached an agreement, and having the support of landowners in the annexation area, we are hoping to avoid a hearing.

In conversation with our MGB file manager about the letters from AT, he suggested we get some clarification from AT regarding the recommendation to include Range Road 23. As I outlined in my email of Oct 10 below, the Town does not want to include RR23 in the annexation area, and it has not been included in the Annexation Agreement recently approved by the Town and County. Our MGB file manager indicated that based on the letters from AT, the MGB will have to convene a hearing for the annexation, unless AT is able to clarify its position. Can you confirm whether AT has concerns regarding this annexation if RR23 is not included in the annexation area? Or, is it AT's position that there are no concerns with the annexation, but recommends that RR23 be included so

that it may be developed as part of the Town's local road network?

Regards,

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rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
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From: Rod Ross
Sent: Wednesday, October 10, 2018 3:23 PM
To: Jerry Lau <Jerry.Lau@gov.ab.ca>
Cc: Sharlene Brown (SharleneB@town.blackdiamond.ab.ca) <SharleneB@town.blackdiamond.ab.ca>; Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca) <R.Goodwin@town.blackdiamond.ab.ca>; Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>
Subject: RE: Black Diamond Annexation

Hi Jerry, thanks for the response regarding Black Diamond's annexation proposal.

Please find attached a servicing strategy for the Town's annexation proposal. It outlines a future road network that is largely consistent with the conceptual plan prepared by AT – it shows a collector street being developed on the 6th St. E alignment which then swings west to intersect with Hwy 22 and Willowridge Blvd. It also identifies a number of intersection upgrades that will be necessary upon full build-out of the annexation area. It is the intention that all local traffic from the annexation area will be directed to this collector road, which will then connect with local roads and the provincial highways. The town does not intend for traffic from the annexation area to have direct access onto the MD's road network. This will be addressed in detail when ASPs are prepared for the annexation lands.

The conceptual plan prepared by AT outlined development of a 'ring road' to be developed on the south and east edge of Town (using RR23 (144th St)), for the purpose of accommodating highway traffic around the Town. As was stated by Town Council when this plan was presented by AT, the Town is not prepared to construct roads to carry highway traffic, and the Annexation Servicing Study does not include this concept. The Town intends to build local roads to carry local traffic, and will ensure that future town growth does not impact the MD's road network. The Town does not support ATs recommendation that RR23 (144th St) be included in the annexation area.

Regards,

Rod Ross RPP, MCIP
Planning Manager

Town of Black Diamond

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From: Jerry Lau [mailto:Jerry.Lau@gov.ab.ca]
Sent: Tuesday, October 09, 2018 11:59 AM
To: Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>
Cc: Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>; Cindy Helm <Cindy.Helm@gov.ab.ca>; Rod Ross <RodR@town.blackdiamond.ab.ca>
Subject: Black Diamond Annexation

As attached.

Thanks.

Jerry Lau, P. Eng.
Infrastructure Manager
Delivery Services – Southern Region
Alberta Transportation
Government of Alberta

Tel 403-297-8633
Fax 403-297-4706
Jerry.Lau@gov.ab.ca

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From:	Trevor Richelhof
To:	Rod Ross; Firoz Kara
Cc:	Jerry Lau
Subject:	RE: Black Diamond Annexation
Date:	May 28, 2019 4:24:49 PM
Attachments:	image002.png image003.jpg

Good afternoon, Rod

Further to our previous correspondence on the matter, I draw your attention to the strategies outlined in the South Saskatchewan Regional Plan, in particular the Transportation policies included in the Plan. Municipalities, in consultation with the Minister responsible for the Highways Development and Protection Act, are expected to identify the location, nature and purpose of key provincial transportation corridors and related facilities. These policies assist in creating safe, cost effective transportation systems that meet existing and future needs for economic growth, community development and diversification. The annexation of lands to the Town of Black Diamond will intensify traffic impacts to Highway 7, particularly at key intersection locations. As part of the transportation study undertaken by Alberta Transportation on behalf of the Town of Black Diamond, Range Road 23 was identified as one of the related facilities to support the Highway 7 corridor through Black Diamond, particularly to protect the safe and effective operation of the highway once additional growth in Black Diamond occurs.

In reference to your previous email, I wish to clarify that Range Road 23 would not be expected to be constructed or operated as a provincial highway, but rather it is intended to provide alternative local road access to Highway 7 from the annexed areas within the Town of Black Diamond.

The inclusion of Range Road 23 as part of the annexation from Foothills County to the Town of Black Diamond will support the annexation proposal, by protecting and preserving the safe and effective operation of Highway 7, and Highway 22 for the long term. It is unfair to expect another jurisdiction (Foothills County) to bear the expense of operating and maintaining a roadway specifically intended to support traffic from growth within the Town of Black Diamond.

Alberta Transportation's position is that including Range Road 23 within the annexation boundary is of critical importance to protect this important highway corridor.

Please feel free to contact me if you have any questions or require additional information.

Trevor Richelhof
Development / Planning Technologist
Delivery Services, Southern Region
Alberta Transportation
Government of Alberta

Willowglen Business Park
2nd Floor, 803 Manning Road NE
Calgary AB T2E 7M8

Tel 403-297-7652
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Trevor.Richelhof@gov.ab.ca
Applications/referrals: TransDevelopmentCalgary@gov.ab.ca

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Alberta-2018

From: Rod Ross <RodR@town.blackdiamond.ab.ca>
Sent: Monday, May 27, 2019 5:26 PM
To: Firoz Kara <firoz.kara@gov.ab.ca>; Trevor Richelhof <Trevor.Richelhof@gov.ab.ca>
Subject: FW: Black Diamond Annexation

Hi Firoz and Trevor, I received Jerry's out of office response and so am forwarding this on to you. Hopefully you can provide a response this week in Jerry's absence – I intend to file the annexation application this week, after which I'm gone for 3 months on parental leave; I'd really like to get this clarified before I go.

Rod

From: Rod Ross
Sent: Monday, May 27, 2019 5:20 PM
To: Jerry Lau <Jerry.Lau@gov.ab.ca>
Cc: Sharlene Brown (SharleneB@town.blackdiamond.ab.ca) <SharleneB@town.blackdiamond.ab.ca>; Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca) <R.Goodwin@town.blackdiamond.ab.ca>; Darren Davidson <darren.davidson@gov.ab.ca>
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Regards,

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
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rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
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From: Rod Ross
Sent: Wednesday, October 10, 2018 3:23 PM
To: Jerry Lau <Jerry.Lau@gov.ab.ca>
Cc: Sharlene Brown (SharleneB@town.blackdiamond.ab.ca) <SharleneB@town.blackdiamond.ab.ca>; Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca) <R.Goodwin@town.blackdiamond.ab.ca>; Darren Davidson <darren.davidson@gov.ab.ca>; Harry Riva Cambrin <HarryRiva.Cambrin@mdfoothills.com>
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Regards,

Rod Ross RPP, MCIP

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Subject: Black Diamond Annexation

As attached.

Thanks.

Jerry Lau, P. Eng.
Infrastructure Manager
Delivery Services – Southern Region
Alberta Transportation
Government of Alberta

Tel 403-297-8633
Fax 403-297-4706
Jerry.Lau@gov.ab.ca

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Appendix G
Foothills County / Town of Black Diamond /
Town of Turner Valley Intermunicipal Development Plan 2002

Municipal District of Foothills No. 31
Town of Black Diamond
Town of Turner Valley

Intermunicipal Development Plan

March 2002

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M.D. OF FOOTHILLS / TOWN OF BLACK DIAMOND / TOWN OF TURNER VALLEY

INTERMUNICIPAL DEVELOPMENT PLAN

PART 1 STATUTORY PLAN POLICIES

1.0 INTRODUCTION

1.1 PREAMBLE

The Municipal Government Act provides the legislative framework for the preparation and adoption of Intermunicipal Development Plans. Such Plans may address future land use, development and other matters of Intermunicipal concern affecting lands within the Plan boundaries as agreed to by the participating municipalities. In addition, each Intermunicipal Development Plan must include procedures for the resolution of Intermunicipal conflicts and provisions for the administration, amendment and repeal of the Plan.

The Provincial Land Use Policies support the preparation and adoption of Intermunicipal Development Plans. Section 3.0 of those Policies, which encourage municipalities to expand Intermunicipal planning efforts to address common planning issues, is quoted in **PART II - BACKGROUND** to this Plan.

Terms of Reference for the M.D. of Foothills / Town of Black Diamond / Town of Turner Valley / M.D. of Foothills Intermunicipal Development Plan were jointly prepared and were approved by the three municipalities in 1996. The three municipalities agreed that a negotiated Intermunicipal Development Plan is the preferred means of addressing Intermunicipal issues within the Plan area and that it represents the best opportunity for a continuing cooperative working relationship.

1.2 GEOGRAPHICAL CONTEXT

The M.D. of Foothills / Town of Black Diamond / Town of Turner Valley Intermunicipal Development Plan encompasses lands on both sides of the boundary separating the three municipalities (see Map 1).

Major natural features within the Plan area include the Sheep River valley running through the Town of Turner Valley and the west side of the Town of Black Diamond, the Lineham Creek valley which lies west of the Town of Turner Valley. The rest of the Plan area contains lands, which range from flat to undulating in nature.

The primary transportation routes through the Plan area include Highway 22, which provides a route north-south as it enters Turner Valley and exits through Black Diamond. Highway 7 provides access from the east to Black Diamond and Turner Valley. Alternate access to Turner Valley is from 418th and 434th Avenue (16th Avenue within the Town of Turner Valley), standard dust controlled roads, connecting to the south side of the Town.

The Intermunicipal Development Plan covers a transitional area that contains a range of development types commonly found within the three municipalities. The land surrounding the Towns in the M.D. consist of larger agricultural holdings, but also support other rural uses such as country residential development and natural resource extraction. The land contained within the Towns consists of larger urban reserve parcels and lagoons for sewage treatment.

1.3 PLAN AREA

The Intermunicipal Development Plan boundary includes those lands inside the Town of Turner Valley Corporate Limits and the Town of Black Diamond Corporate Limits which are contiguous to the shared boundary with the M.D. of Foothills and do not already contain established residential subdivisions (as of May 1, 1996); and the following lands within the M.D. of Foothills (all West of the Fifth Meridian):

Section	Township	Range
N ½ 31	19	2
NW ¼ 32		
N ½ 36	19	3
N ½ 4	20	2
N ½ 5		
SW ¼ 5		
SE ¼ 7		
N ½ 7		
W ½ 8		
Pt. E ½ 8		
E ½ 9		
SW ¼ 9		
S ½ 17		
NE ¼ 17		
S ½ 21		
NW ¼ 16		
E ½ 16		
W ½ 1	20	3
W ½ 12		
NE ¼ 12		

The Plan area encompasses approximately 6,880 acres or 278.4 square kilometres.

1.4 GOALS OF THE PLAN

1. To provide an Intermunicipal policy framework to guide future land use decisions within the plan boundaries which will take into consideration issues such as incompatible uses and manner of proposals for future development (see section 631(2)(a) of the Municipal Government Act).

2. To address requirements of the Municipal Government Act with respect to Intermunicipal conflict resolution procedures, plan administration and plan amendment or repeal procedures (refer to section 631(2)(b) of the Act).

3. To resolve issues related to circulation and referral procedures, including equality of municipal status with respect to referrals, degree of intervention and dispute resolution procedures.

4. To establish principles whereby all municipalities may consistently apply planning policies and land use bylaws within their respective jurisdictions.

5. To protect future servicing and transportation corridors and infrastructure facilities (e.g. Town of Turner Valley and Town of Black Diamond water supplies, the Westend Regional Sewage Services Commission sewage lagoon, utility right-of-ways, Hwy 22, Hwy 7 & SR 546) in the municipalities.

6. To establish principles addressing existing and dominant land uses in the plan area (e.g. Lilyfer Poultry (Black Diamond) Ltd., Sheep Creek Pit, Chase Hoffman Pit, Regional Commission Industrial Lands).

7. To recognize the historical designation of the Turner Valley Gas Plant.

8. To establish principles guiding future uses and development in the Sheep River watershed.

9. To address the relationship of the Intermunicipal Development Plan to any future annexation.

10. To address any significant issues that may be identified through the public participation process.

2.0 THE PLAN

2.1 AGRICULTURE

2.1.1 CONTEXT

Extensive areas of agricultural land are contained within the boundaries of the Intermunicipal Development Plan. Agricultural land should be protected from premature development and from inappropriate development which may negatively affect agricultural operations.

The agricultural policies contained in this Plan are consistent with the Provincial Land Use Policies, which support the protection of agricultural lands from premature conversions to other uses. Section 6.1 of those policies is quoted in PART II - BACKGROUND to this plan.

It is anticipated that lands within the Towns of Black Diamond and Turner Valley contained within the Intermunicipal Development Plan and having an agricultural use will eventually be converted to urban residential, commercial and industrial properties as the Towns grow and develop in an orderly fashion.

Within the M.D. of Foothills are extensive areas of agricultural land which the M.D. intends to conserve for a broad range of agricultural uses. Provision is also made within the M.D. of Foothills for intensive or specialized agricultural uses and for small-scale agricultural pursuits requiring separate parcels of land that are smaller in area than a full quarter section. For the purposes of this Intermunicipal Development Plan, the definition of higher capability agricultural land as contained in the M.D. of Foothills Municipal Development Plan and Land Use Bylaw will be used to evaluate agricultural land within the M.D. of Foothills.

2.1.2 AGRICULTURAL POLICIES

The following policies apply to agricultural policy areas within those portions of the Intermunicipal Development Plan located within the M.D. of Foothills.

1. Premature development of existing agricultural lands within the M.D. of Foothills should be avoided and such land should continue to be used for agricultural purposes.

2. Non-intensive agricultural uses may continue to be approved at the discretion of the M.D. in accordance with the agricultural districts of the M.D. of Foothills Land Use Bylaw.

3. Existing intensive agricultural uses may continue at the discretion of the M.D. of Foothills. Approval of any new intensive agricultural operations should only be considered subject to appropriate Intermunicipal referral and consultation.

4. The following shall continue to be permitted at the discretion of the M.D. in accordance with the agricultural districts of the M.D. of Foothills Land Use Bylaw and Municipal Development Plan policies:

    a. subdivision of the first parcel out of an unsubdivided quarter section; and

    b. subdivision of a single agricultural parcel from a parent parcel of 21 acres or more which existed in title as of 1988 September 27; or

    c. on parent parcels of 80 acres or more, subdivision of no less than 40 acres for agricultural purposes only as an exemption to the M.D. of Foothills Land Use Bylaw.

5. Notwithstanding the general intention of these Agricultural Policies, applications for other land uses will be considered in agricultural policy areas subject to meeting the evaluation criteria established in the following sections of this Plan:

    a. Country Residential Development Policies; and

    b. Rural Commercial, Industrial and Institutional Development Policies.

2.1.3 AGRICULTURAL / FUTURE URBAN DEVELOPMENT POLICIES

The following policies apply to agricultural/future urban development policy areas within those portions of the Intermunicipal Development Plan located within the Towns of Turner Valley and Black Diamond.

1. Premature development of agricultural land within the Town of Black Diamond and the Town of Turner Valley should be avoided and such land should continue to be used for agricultural purposes until urbanization occurs.

2. Non-intensive agricultural uses may continue to be approved at the discretion of the Towns of Turner Valley and Black Diamond in accordance with the Urban Reserve District of the Towns separate Land Use Bylaws.

3. Any existing intensive agricultural uses may continue at the discretion of the Towns of Black Diamond and Turner Valley. Any proposals for additional intensive agricultural operations should only be considered subject to appropriate Intermunicipal referral and consultation.

4. The following shall continue to be permitted at the discretion of the Towns in accordance with the Agricultural Transition zone of the Town of Turner Valley Land use Bylaw and Municipal Development Plan and the Town of Black Diamond Land Use Bylaw and Municipal Development Plan policies:

    a. subdivision of the first parcel out, of not more than 80 acres and not less than 20 acres, from an unsubdivided quarter section; and

    b. subdivision for extensive agricultural purposes only, which would create parcels of not less than 80 acres.

5. Notwithstanding the general intention of these Agricultural/Future Urban Development Policies, applications for other land uses will be considered in Agricultural/Future Urban Development Policy areas subject to meeting the evaluation criteria established in the following sections of this Plan:

    a. Urban Residential Development Policies; and

    b. Urban Commercial, Industrial and Institutional Development Policies.

2.2 RESIDENTIAL DEVELOPMENT

2.2.1 CONTEXT

In the M.D. of Foothills, country residential development generally occurs in a relatively dispersed form, where single-detached dwellings are built on large, privately serviced lots.

In the Towns of Turner Valley and Black Diamond, urban residential development occurs in a more compact form, where a variety of dwelling types are built on smaller lots that are serviced by the municipality.

The residential policies contained in this Intermunicipal Development Plan are intended to:

1. accommodate the forms of Residential Development within the Intermunicipal Development plan boundaries which have been agreed to by the respective municipalities; and

2. protect long-term land use and growth options for the municipalities.

2.2.2 COUNTRY RESIDENTIAL DEVELOPMENT POLICIES

1. Areas of country residential development are recognized within the M.D. of Foothills (see map 2). These areas may further develop for country residential use according to the country residential policies of the M.D. of Foothills and this Intermunicipal Development Plan.

   Country residential areas within the Intermunicipal Development Plan may ultimately be incorporated into urban development. Subdivision applications within designated areas of existing country residential development should address this potential.

   Urban Overlay of Subdivision Design Principles

   Each country residential plan of subdivision should take into consideration.

   a. conformity to country residential subdivision standards within the M.D. of Foothills and the potential for future subdivision and redevelopment to urban standards and densities;

   b. protection and provision for future servicing and transportation rights-of-way;

   c. wherever possible, creation of clustered country residential development;

d. wherever possible, provision for direct access to municipal roads without the creation of panhandle lots; and

e. where necessary, the possible preparation of a conceptual scheme relating the proposed subdivision to the future subdivision and development of the subject lands, balance lands and adjacent areas to urban standards and densities.

2. Municipal Reserve Principles

Municipal and/or school reserve should only be taken by direct dedication of land or registration on title of deferred reserve caveat. Cash shall only be taken in lieu of reserve after consultation with and agreement by the Town most directly affected by proximity. There shall be no disposition of reserve land without appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

In the even that two or more acres can be dedicated as municipal and/or school reserve, neither deferred reserve nor cash in lieu of reserve may be taken; such reserve must be taken by direct dedication of land.

3. Environmental Reserve Principles

Land that qualifies as environmental reserve under section 664(1) of the Municipal Government Act should be dedicated at the time of subdivision approval as either environmental reserve or environmental reserve easement in favour of the M.D. of Foothills.

4. Country residential development outside of designated country residential policy areas is discouraged. Nevertheless, land use redesignation applications to permit further country residential development within the M.D. of Foothills should be evaluated according to the following criteria:

a. conservation of good agricultural land;

b. impacts of development of future urban growth corridors;

c. impacts on future servicing and transportation corridors and facilities;

d. impacts on adjacent land uses within the three municipalities;

e. effects of development in environmentally sensitive or hazardous areas;

f. adequate access to municipal roads, water supply and septic systems;

g. urban overlay principles, as listed under policy 1 above; and

h. appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

5. On lands adjacent to Natural Areas as defined under Section 2.5.4 of this, each plan of subdivision should:

a. conform to the subdivision standards of the M.D. of Foothills and give due consideration to the potential for future dedication of a continuous open space system, the focus of which is to be the valley of the Sheep River;

b. address any effects of development on Natural Areas; and

c. include, where necessary, a conceptual scheme relating the proposed subdivision to any significant Natural Areas, wildlife habitat and corridors or bodies of water.

6. Any subdivision which would create more than eight country residential lots may require the preparation of an area structure plan or concept plan.

2.2.3 URBAN RESIDENTIAL DEVELOPMENT POLICIES

1. The "Kaiser" and "Willow Ridge" Area Structure Plans (Black Diamond) and "The Gateways of Turner Valley", "Okalta" and the "Dunham" Area Structure Plans (Turner Valley) are recognized as adopted by the Town of Black Diamond and the Town of Turner Valley. Development of these communities shall proceed according to the policies and densities contained in their respective plans. In addition to the area structure plans, the existing built up areas of the Towns are recognized as community plans.

2. Urban residential development within the Intermunicipal Development Plan area under the jurisdiction of the Town of Black Diamond and the Town of Turner Valley shall be approved subject to the following:

a. conformity to Town policies affecting residential development;

b. prior approval of an area structure plan or community plan;

c. consideration of impacts on adjacent land uses within the M.D. of Foothills

(i.e.: applicants may be required to address impacts on lands within the M.D. of Foothills);

d. consideration of impacts on regional and Intermunicipal transportation systems (i.e.:, the traffic impacts that development may have within the M.D. of Foothills)

e. consideration of environmental impacts (i.e.:, water quality, soil stability and natural areas); and

f. appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

3. On lands adjacent to Natural Areas as defined under Section 2.5.4 of this, each plan of subdivision should:

a. conform to the subdivision standards of the Towns and give due consideration to the potential for future dedication of a continuous open space system, the focus of which is to be the valley of the Sheep River;

b. address and effects of development on Natural Areas; and

c. include, where necessary, a conceptual scheme relating the proposed subdivision to any significant Natural Areas, wildlife habitat and corridors or bodies of water.

4. For those areas having an Agricultural/Future Urban Development land use policy, the Towns of Turner Valley and Black Diamond may approve an area structure plan or community plan for urban residential purposes. Area structure plans and community plans providing for further urban residential development should be evaluated according to the following criteria:

a. conversion of good agricultural land in the most prudent and efficient manner possible;

b. efficient and cost-effective development of servicing and transportation systems and facilities;

c. impacts of development on existing adjacent land uses within the Town adopting the plan and the M.D of Foothills ;

d. impacts caused by incompatible rural and urban uses;

e. traffic impacts within the Town adopting the plan and the M.D of Foothills ;

f. adequate access through developing areas for residents of the Town adopting the plan and the M.D of Foothills ;

g. proper protection of natural areas and continuous open space systems;

h. effects of development in environmentally sensitive or hazardous areas; and

i. appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

2.3 SPECIAL AREAS

2.3.1 CONTEXT

Within the plan boundaries, special policy areas have been identified and policies developed to recognize significant existing land uses which are expected to continue.

2.3.2 SAND AND GRAVEL MINING OPERATIONS

1. Sand and Gravel operations are located within the plan area of this Intermunicipal Development Plan. These operations should continue as interim uses, subject to compliance with all development permit conditions and reclamation requirements of Alberta Environmental Protection.

2. Certain lands within the Intermunicipal Development Plan are designated within the land use districts where gravel extraction is a discretionary use. Gravel extraction may be permitted on such lands as an interim use, subject to development permit approval and compliance with any operating or reclamation requirements of Alberta Environmental Protection.

3. When reviewing applications for land use redesignation, subdivision or development in the vicinity of existing sand and gravel operations, the three municipalities will consider the possible impacts that approval of such applications may have on both the current operations and the future viability of the mining operations.

4. In the event that existing sand and gravel operations create negative impacts such as noise, dust and truck traffic on adjacent developments the three municipalities will cooperate in negotiating conditions of approval that address the proper mitigation to be required of any such developments and, if necessary, the existing sand and gravel operations.

5. Known sand and gravel deposits within the Intermunicipal Development Plan are shown on Map 2. These deposits may be mined subject to any land use redesignation, subdivision or development permit requirements of the approving municipality and appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

6. When reviewing applications for new sand and gravel mining operations, the three municipalities will consider the possible impacts that approval of such applications may have on existing uses in the vicinity.

7. The three municipalities will cooperate with Alberta Environmental Protection to ensure the proper reclamation of any sand and gravel mining operations within this Intermunicipal Development Plan area.

2.3.3 THE TURNER VALLEY GAS PLANT

1. This Intermunicipal Development Plan recognizes the designation of the Turner Valley Gas Plant as a Historic Site (see Map 2). The site of the Turner Valley Gas Plant has potential for tourism and economic development, which would benefit the region . The Towns of Black Diamond and Turner Valley and the M.D. will cooperate to encourage the continuation of the Gas Plant as a historic site.

2. When reviewing applications for land use redesignation, subdivision or development in the vicinity of the Turner Valley Gas Plant the Town of Turner Valley will consider the possible impacts that approval of such applications may have on the future operations and viability of the Turner Valley Gas Plant as a historic site.

2.3.4 POULTRY FARM AND COMPOSTING OPERATION

1. The Lilyfer Poultry (Black Diamond) Limited Poultry farm and Composting Operation is located within the Intermunicipal Development Plan area in S.W. 09-20-02-W5, S726' / N 1518' (10.30 acres) (see Map 2). This poultry operation has been in existence for at least 20 years and has been a permitted use under the Land Use Bylaw of the Municipal District of Foothills. A Development Permit (95D 7297) was issued for poultry composting operation as accessory to the raising of broilers on the site. There is no option for renewal of the Development Permit as it is issued, it does not expire. The municipalities agree that this use may continue subject to compliance with all development permit conditions, operating permits granted by the appropriate authorities, requirements of the Headwaters Health Authority and Alberta Agriculture Food and Rural Development.

2.3.5 SEWAGE LAGOON

1. The sewage lagoon located within the northeastern sector of the Town of Black Diamond serves both the Towns of Black Diamond and Turner Valley. It is owned and operated by the Westend Regional Sewage Services Commission. It has capacity to meet the needs of both Towns for the immediate time frame. At the time of construction, the capacity of the system was designed to accommodate growth in both towns until 2011. Land is available on the existing site to provide for expansion.

2. Because of its location, adjacent to the eastern boundary of Black Diamond, residential lots and other forms of country residential development should be discouraged from being developed within the quarter section to the east or at least within 300 metres of the working area of the treatment facility.

2.3.6 HISTORIC SITES

1. Turner Valley Discovery Well – Development of Royalite # 1, also known as the Turner Valley Discovery Well, is recognized in this Plan as an important event in the history of the area. This well is situated on the Turner Valley Gas Plant site located in the Town of Turner Valley (see Map 2). The Towns of Black Diamond and Turner Valley and the M.D. of Foothills will cooperate to recognize this site.

2. Hells Half Acre – Hells Half Acre, located in the SW ¼ 7-20-2-W5M, is considered an important historic site in the region (see Map 2). The Towns of Black Diamond and Turner Valley and the M.D. of Foothills will cooperate to recognize and preserve this site.

3. Black Diamond Coal Mines – An abandoned coal mine which operated between 1899 and 1925 is located between the Town's of Turner Valley and Black Diamond and extends on either side of Highway 22, in a north-westerly /south-easterly direction (see Map 2). Although this area has not been identified as a growth area for either Town, any development within the IDP area should be cognizant of this feature. A search of the Natural Resources Archive in 1987 did not produce any maps of the mine workings. The site should be recognized and maintained as a significant historical feature of the Town's.

2.3.7 INTERMUNICIPAL GATEWAYS

1. Within this Intermunicipal Development Plan, Highways 22, 7 and 546 serve as present and future gateways connecting the M.D. of Foothills and the Towns. The municipalities agree to the principle that standards, which recognize the importance of the appearance of development (e.g., landscaping, signage, architectural treatment, screening of outside storage, etc.), should apply to lands near these intermunicipal gateways.

2. The municipalities agree to circulate for comment all land use redesignation, subdivision and development permit applications along the intermunicipal gateways in accordance with the intermunicipal referral and consultation processes provided for under Section 3.1 of this Intermunicipal Development Plan. The circulation area shall be agreed upon by the administrations of the three municipalities.

2.3.8 FRIENDSHIP TRAIL

1. The Friendship Trail, which is located in the Highway 22 right of way connecting between the Towns of Black Diamond and Turner Valley, is recognized as an important pedestrian link for all area residents. The Towns of Black Diamond and Turner Valley and M.D. of Foothills will cooperate to retain this important pedestrian facility.

2.3.9 TURNER VALLEY GOLF AND COUNTRY CLUB

1. The Turner Valley Golf and Country Club is recognized as an important tourist and recreation facility for all area residents (see Map 2). The Town's of Black Diamond and Turner Valley and M.D. of Foothills will cooperate to promote this important facility.

2.4 COMMERCIAL AND INDUSTRIAL DEVELOPMENT

2.4.1 CONTEXT

In the M.D. of Foothills, rural commercial development occurs in two basic forms; rural local commercial and rural highway commercial.

Also included within the M.D. of Foothills are rural industrial uses, which are identified in the M.D. of Foothills Land Use Bylaw.

Commercial development within the Towns of Turner Valley and Black Diamond occur in a variety of forms, including retail, service and office uses. The majority of commercial uses within the Towns are concentrated along the Highway 22 and Highway 7 corridor. The Town of Turner Valley has industrial land uses within the vicinity of the Turner Valley Gas Plant. The Town of Black Diamond has identified an area adjacent to and on the north side of Highway 7 in the north east sector which will accommodate future industrial uses. In the longer term, Black Diamond desired industrial growth direction would be to the east of the lagoon. In addition the Town has planned for a major commercial development adjacent to and on the west side of Highway 22 on its southern limits.

Institutional uses include developments of a public character such as governmental, religious, charitable, educational, health and welfare activities having a close affinity to public service. Institutional development may occur in either municipality and, within the Intermunicipal Development Plan area, is to be considered subject to the evaluation criteria contained in this Section.

2.4.2 RURAL COMMERCIAL AND INDUSTRIAL POLICIES

1. Land use redesignation applications to permit rural commercial, industrial or institutional development within the Intermunicipal Development Plan area and under the jurisdiction of the M.D. of Foothills should be evaluated according to the following criteria:

    a. conservation of good agricultural land;

    b. impacts of development on future urban growth corridors;

    c. impacts on future servicing and transportation corridors and facilities;

    d. any potential traffic impacts within either municipality;

    e. impacts on adjacent land uses within the three municipalities;

f. effects of development in environmentally sensitive or hazardous areas;

g. adequate access to municipal roads, water supply and septic systems; and

h. appropriate Intermunicipal referral and consultation as provided for under section 3.1 of this Intermunicipal Development Plan.

2. Any subdivision which would create more than five rural commercial or industrial lots may require the preparation of an area structure plan or concept plan, subject to negotiation between the Town(s) of Black Diamond and Turner Valley and the M.D. of Foothills.

2.4.3 URBAN COMMERCIAL AND INDUSTRIAL POLICIES

1. Commercial, industrial or institutional development within the Intermunicipal Development Plan area and under the jurisdiction of either Town should be evaluated according to the following criteria:

   a. conformity to the respective Town's policies affecting commercial and industrial development;

   b. prior approval of an area structure plan or community plan;

   c. impacts on adjacent land uses within the M.D. of Foothills (i.e.: applicants may be required to address impacts on lands within the M.D. of Foothills);

   d. impacts on regional and Intermunicipal transportation systems (i.e.; the traffic impacts that development may have within the M.D. of Foothills);

   e. appropriate Intermunicipal referral and consultation as provided for under section 3.1 of the Intermunicipal Development Plan.

2.5 OPEN SPACE

2.5.1 CONTEXT

Extensive natural areas are contained within the Intermunicipal Development Plan boundaries. The ecological value and recreational potential of such natural areas may be negatively affected by inappropriate development. Certain of these areas, particularly those found within the river and creek valleys, contain wildlife habitat and natural amenities of such significance that they warrant eventual protection as part of a continuous open space system.

The Intermunicipal Development Plan includes portions of the Sheep River watershed including, the Hells Half Acre Valley in the SW ¼ 7-20-2-W5M and the drainage ravine in the SW ¼ 9-20-2-W5M (see Map 1). These valleys and drainage channels and their surrounding uplands are all contained with the same watershed. The municipalities are committed to the protection of this watershed, which comprises a major water resource for the Province of Alberta.

The open space policies contained in this Plan are consistent with the Provincial Land Use Policies, which support the protection of the natural environment, water resources and historical resources. Sections 5.0, 6.3 and 6.4 of those Policies are quoted in **Part II - BACKGROUND** to this Plan.

2.5.2 OBJECTIVES

The three municipalities will cooperate to achieve the following open space objectives:

1. To preserve and enhance the natural and aesthetic quality of river and creek valleys, significant natural habitat, historical resources and scenic views.

2. To facilitate the eventual establishment of continuous open space systems in the river and creek valleys and other natural areas for the benefit and enjoyment of all Albertans.

3. To promote awareness of the river and creek valleys, other natural areas and historical resources as they relate to the overall development of the municipalities.

4. To minimize loss of life, threat to health and economic loss from flooding, unstable lands and hazardous slopes. Implementing the Canada-Alberta Flood Damage Reduction Programs designated and identified Flood Risk Area along the Sheep River in the Intermunicipal Development Plan area.

2.5.3 RIVER AND CREEK VALLEY OPEN SPACE SYSTEMS

1. The valleys surrounding escarpments of the Sheep River watershed including Lineham Creek and the drainage channel in SW ¼ 9-20-2-W5M as identified on Map 1, contain wildlife habitat and natural amenities of significant ecological value. The Towns and the M.D. will cooperate to protect these areas for eventual incorporation into an open space system. The following describes the four major components that will eventually comprise this system.

   a. Sheep River Valley

      The Headwaters of the Sheep River originate in the Misty Mountain Range on the eastern flank of the Rocky Mountains. The river flows eastward through the Highwood range in the M.D. of Foothills. It runs through the middle of the Town of Turner Valley as it moves in a northeasterly direction and forms the western boundary of the Town of Black Diamond. The Sheep River joins the Highwood River some 30 km downstream of Black Diamond. Floods usually occur in the months of mid-May to the end of June. The Flood risk area for the Towns of Turner Valley and Black Diamond have been designated by the Minister for the Environment for Canada and the Minister of Alberta Environmental Protection on September 18, 1996 in the Canada-Alberta Flood Damage Reduction Program, Black Diamond-Turner Valley Flood Risk Mapping Study.

   b. The Lineham Creek Valley

      The Lineham Creek Valley is not contained within the Plan area boundary for this Intermunicipal Development Plan, however, uses within the valley affect the upstream water quality of the Sheep River which directly affects the Towns. When evaluating applications for development, redesignation or subdivision the M.D. will consider the upstream effects of development within the Lineham Creek Valley and its potential for impact on the Towns.

   c. SW ¼ 9-20-2-W5M Drainage Channel

      This drainage channel traverses agricultural lands to the south of Black Diamond. During spring thaw and seasonal rainstorm events this channel conveys runoff waters through the Town of Black Diamond. Within the Town boundaries the channel has been rehabilitated, defined and designated Environmental Reserve. It has become an important, drainage, open space and pathway feature within the Town. When evaluating individual land use, development and subdivision applications the M.D. will consider the downstream effects or impacts on water quality,

natural areas and potential wildlife habitat that may eventually be linked to the town's open space system.

d. Hells Half Acre Valley in the SW ¼ 7-20-2-W5M

This valley is considered an important feature in that it contains the Hells Half Acre Historic site and also represents a significant natural feature connecting to the Sheep River Valley. When evaluating individual land use, development and subdivision applications the M.D. and Town of Turner Valley will consider the effects or impacts on water quality, natural areas and potential wildlife habitat.

2. Within the valleys of the Sheep River and Lineham Creek watersheds individual land use and subdivision applications should be evaluated according to impacts on natural areas and potential wildlife corridors that may eventually be linked to an open space system.

3. Land Use and development within the designated Flood Risk Area shall be regulated by the policies of the Canada-Alberta Flood Damage Reduction Program and guidelines, requirements, policies or controls adopted by each respective municipality.

4. Each respective municipality will cooperate, within the scope of municipal jurisdiction in Alberta, to protect water quality within the Sheep River watershed.

2.5.4 NATURAL AREAS

1. A Natural Area is defined as open space containing unusual or representative biological, physical or historical components, which, although it need not be completely undisturbed, either retains or has re-established a natural character.

2. The respective municipalities will give due consideration to any impacts that development may have on the Natural Areas within the Intermunicipal Development Plan boundaries.

3. Where appropriate, certain natural Areas outside of the valleys of the Sheep River and Lineham Creek watersheds, including wetlands, may eventually be linked to a continuous open space system as identified under policy 2.5.3 above.

4. Within Natural Areas, each plan of subdivision should:

   a. conform to the subdivision standards of the respective municipalities and take into consideration the potential for future dedication of a continuous open space system;

   b. address any effects of development in environmentally sensitive or hazardous areas; and

   c. include, where necessary, a conceptual scheme relating to proposed subdivision to any significant natural areas, wildlife habitat or bodies of water.

2.6 TRANSPORTATION

2.6.1 CONTEXT

The Intermunicipal Development Plan contains several key transportation links that connect the M.D. of Foothills, the Town of Black Diamond and the Town of Turner Valley. Proper planning is required to protect these links and future improvements that may be made to them. For the development of the area it is important to provide efficient and reasonable access between the Municipalities.

2.6.2 EXISTING MAJOR TRANSPORTATION SYSTEM

1. Highway 22

   Highway 22 serves as a major north-south highway within the plan area. It provides access for residents of the area to Calgary, the Crowsnest Pass and Banff. Second only to Highway 2 as a north-south corridor, Highway 22 will continue to provide for both regional and provincial traffic distributions.

2. Highway 7

   Highway 7 links the area east-west to Highway 2 and to the Town of Okotoks.

3. Secondary Highway 546

   Secondary Highway 546 connects the area to Kananaskis County. Although local use is low, tourist traffic is high during the camping season.

4. 418 Avenue

   418 Ave connects Highway 22 with the Turner Valley Golf and Country Club as well as access to the southern limits of Turner Valley. Although vehicle trips are low during the winter months, traffic volumes increase during the golfing season. As more residential development occurs within the southern sectors of both Black Diamond and Turner Valley, this road will be come a primary linkage and primary collector road.

5. 434 Avenue (M.D.) / 16 Avenue (Turner Valley)

   434 Ave is part of the MD road network providing access to areas lying SW of the Plan Area and also as a connector road between Highways 22 and 40. It also connects Highway 22 to the south portion of the Town of Turner Valley.

2.6.3 LONG TERM TRANSPORTATION NETWORK

1. Long term land use and transportation planning envisaged that a portion of Highway #7 as it enters Black Diamond from the east would be rerouted south and west to link with Highway 22 south. Any development along this corridor should be referred to Alberta Transportation and the Town of Black Diamond for review and comment.

2. Development and subdivision proposals adjacent to Highways 7 and 22 will be evaluated to ensure that traffic movements are not impeded and entrances designed in accordance with urban arterial/highway standards.

3. In order to provide for efficient development and reasonable access between the municipalities, the Towns of Black Diamond and Turner Valley and the M.D. of Foothills will endeavor to co-ordinate the planning and construction of major transportation links within the intermunicipal Development Plan area.

4. Intermunicipal notification and coordination of transportation improvements shall be undertaken in accordance with the intermunicipal referral and consultation processes provided for under Section 3.1 of this Intermunicipal Development Plan.

2.7 UTILITIES AND SERVICING

2.7.1 CONTEXT

The lands contained within this Intermunicipal Development Plan eventually drain into the Sheep River. The drainage patterns are shown on Map in PART II - BACKGROUND to this Plan.

Future urban development within the Intermunicipal Development Plan will require the provision of both sanitary and storm sewer servicing. It is generally most efficient and economical to begin construction of sewer infrastructure at lower elevations and to extend sewer lines uphill into higher catchment areas as urban development warrants. Storm sewer lines should be considered as radiating back upstream from the point of discharge, which in this area will be along the Sheep River watershed.

Although a significant period of time will pass before urban development occurs within much of the Intermunicipal Development Plan, it will be important to allow for future extensions of major storm and sanitary sewer trunks. In instances where large developments are proposed, it may be necessary to provide for such extensions through the execution of utility right-of-way easement agreements.

2.7.2 PROJECTED STORM SEWER SYSTEM

Most of the lands within the Intermunicipal Development Plan are located within the Sheep River drainage basin, although some lands do drain either directly into the Sheep River or into the Lineham Creek or the drainage channel. In rural areas within the Intermunicipal Development Plan, stormwater runoff flows through predominantly natural systems of draws, sloughs, gullies and creeks.

Urban development in this area will increase both the volume and rate of surface runoff. Increased stormwater discharge from future urban development within the Intermunicipal Development Plan will affect both river channel stability and 1:100-year flood elevations.

Storm sewer trunks will be required to carry additional stormwater away from urban areas and eventually into the River. Such trunks will generally follow the natural drainage systems and topography of the area. Existing drainage channels will be used in areas where natural drainage features are to be preserved. Stormwater management facilities such as dry ponds, wet ponds and wetlands may be used to reduce the rate of runoff and improve water quality discharge into the River. Additional studies will be required to determine the number, location and detailed design of such facilities.

2.7.3 PROJECTED SANITARY SEWER SYSTEM

Sanitary sewer catchment areas and projected sanitary sewer trunks are yet to be determined. Proposed sanitary sewer trunks are to be located to reduce potential disturbance of Natural Areas.

2.7.4 FLOOD MITIGATION

The Town of Black Diamond has adopted dyking as a method to mitigate against flooding from the Sheep River. The 1 in 100 year flood plain of the Sheep River and the chosen alignment can be reviewed in the Canada-Alberta Flood Damage Reduction Program Black Diamond-Turner Valley Flood Risk Mapping Study.

3.0 PLAN IMPLEMENTATION

3.1 CIRCULATION AND REFERRAL PROCESSES

3.1.1 CONTEXT

The Towns of Turner Valley and Black Diamond and the M.D. of Foothills agree that the mutual referral of planning applications, policy plans, studies and other information is essential to the proper administration of the Intermunicipal Development Plan. Continual communication between the three municipalities is one of the most effective means of averting or minimizing intermunicipal conflict.

Certain planning applications, policy plans, studies and other information within the MD of Foothills located generally between the Town of Black Diamond and Turner Valley are of interest to both the Town of Turner Valley and the Town of Black Diamond. Other planning applications, policy plans, studies and other information are of interest to only one of the Towns. As such referrals from the MD of Foothills to the Towns shall be in accordance with Table 1:

Table 1

Referral Area	M.D. of Foothills Referrals To:
A *(N half of 5, E half of 7 and W half of 8 located in MD)	Turner Valley and Black Diamond
B	Turner Valley
C	Black Diamond

3.1.2 REFERRALS FROM THE M.D. OF FOOTHILLS TO THE TOWNS

The M.D. of Foothills will refer the following from within the Intermunicipal Development Plan area to the Towns in accordance with Table 1:

1. all proposed area structure plans and concept plans, including proposed amendments to such plans;

2. for lands not subject to an approved area structure plan or concept plan, all applications for land use redesignation, subdivision and dedication or disposition of environmental, municipal and/or school reserves, public utility lots or road allowances and other roads; and

3. all applications for development permits, including renewals, for any of the following:

    a. intensive agricultural operations;

    b. natural resource extraction;

    c. landfills; and

    d. any development for a discretionary use along the intermunicipal gateways defined in Section 2.3.7 of the Intermunicipal Development Plan (circulation area to be agreed upon by the administrations of the three municipalities).

The M.D. of Foothills shall also refer to the Towns any available planning information with respect to lands within the Intermunicipal Development Plan area that might be requested by the Towns.

3.1.3 REFERRALS FROM THE TOWNS TO THE M.D. OF FOOTHILLS

The Towns will refer the following from within the Intermunicipal Development Plan area to the M.D. of Foothills:

1. all proposed area structure plans and community plans, including proposed amendments to such plans;

2. for lands not subject to an approved area structure plan or community plan, all applications for land use redesignation, subdivision and dedication or disposition of environmental, municipal and/or school reserves, public utility lots or road allowances and other roads; and

3. all applications for development permits, including renewals, for any of the following:

    a. intensive agricultural operations;

    b. natural resource extraction;

    c. landfills; and

    d. any development for a discretionary use along the intermunicipal gateways defined in Section 2.3.7 of the Intermunicipal Development Plan (circulation area to be agreed upon by the administrations of the three municipalities).

The Towns shall also refer to the M.D. of Foothills any available planning information with respect to lands within the Intermunicipal Development Plan area that might be requested by the M.D. of Foothills.

3.1.4 CIRCULATION TIME PERIODS

Unless otherwise agreed to by the administrations of the municipalities, the responding municipality shall have thirty days to reply to any intermunicipal circulation provided for under Sections 3.1.2 and 3.1.3 of this Intermunicipal Development Plan.

3.1.5 DECLINING TO RESPOND TO REFERRALS

In the event that a municipality does not reply within or request and extension to the maximum response period of thirty days for any intermunicipal circulation, it may be assumed that the responding municipality has no comment or objection to the referred planning document.

3.2 ADMINISTRATION, REPEAL AND AMENDMENT PROCESSES

3.2.1 PLAN ADMINISTRATION, IMPLEMENTATION AND REPEAL

1. Administration of the Intermunicipal Development Plan

   Each municipality will administer provisions of the Intermunicipal Development Plan for lands within its municipal jurisdiction using its own staff resources and will determine what decision-making authority should be delegated to the Intermunicipal Committee and to staff. The creation of intermunicipal subdivision and development authorities and intermunicipal subdivision and development appeal boards is not anticipated.

2. Implementation of the Intermunicipal Development Plan

   The Towns and the M.D. of Foothills agree to a five-year period from the date of final approval of this Intermunicipal Development Plan within which the policies will be implemented. During the five-year period, the Intermunicipal Development Plan may be amended as mutually agreed to by the municipalities.

3. Mandatory Review of the Intermunicipal Development Plan

At the end of four years from the date of final approval, both Towns and the M.D. of Foothills agree to a mandatory review of the content of the Intermunicipal Development Plan.

4. Repeal of the Intermunicipal Development Plan

After the expiration of five years from the date of final approval of this Intermunicipal Development Plan, a municipality may serve notice of termination and, on year after the service of such notice of termination, this Intermunicipal Development Plan shall no longer continue to be in force or effect and each Council shall be at liberty to repeal its bylaw adopting this Plan.

3.2.2 PLAN AMENDMENT

The Intermunicipal Development Plan may be amended from time to time subject to the agreement of the municipal Councils. The types of amendments that could be anticipated include the following:

1. Changes to Policies (Textual Amendments)

Any changes to the ext of the Intermunicipal Development Plan will require an amendment.

2. Boundary Adjustments

Any changes to the boundaries of the Intermunicipal Development Plan will require an amendment.

3. Other

Subject to the agreement of the three municipalities, this Intermunicipal Development Plan may be amended for any other purpose not listed in this Section.

3.3 INTERMUNICIPAL DISPUTE RESOLUTION

Matters affecting lands within the boundaries of the Intermunicipal Development Plan will be addressed and may be resolved at any of the following five stages:

Stage 1: Administrative Review

Stage 2: Intermunicipal Committee Review

Stage 3: Municipal Councils

Stage 4: Mediation Process

Stage 5: Appeal Process

In this Section, "initiating municipality" means the municipality in which the land that is the subject of a proposal is located. "Proposal" means a land use redesignation application, an area structure plan, an area structure plan amendment or an Intermunicipal Development Plan amendment. "Responding municipality" means the other municipality. Section 3.1 above outlines the circulation and referral processes that would apply for such proposals.

NOTE: Certain time limitations (e.g., the need to respond to a circulation request within thirty days or be deemed to have no comments) and certain legislative requirements (e.g., the need for a municipality to give written notice of its concerns to another municipality prior to second reading of certain bylaws) have to be respected. It is the responsibility of each municipality to ensure that its procedures account for these requirements.

Stage 1: Administrative Review

1. The initiating municipality will ensure that complete information addressing the relevant criteria as outlined in the Intermunicipal Development Plan is provided in support of all site-specific applications or that all statutory plan processes are sufficiently documents.

2. Upon circulation of a proposal, the administration of the responding municipality will undertake a technical evaluation of the proposal and will provide any necessary comments back to the administration of the initiating municipality.

3. The municipalities will determine whether a proposal can be processed without being referred to the Intermunicipal Committee.

4. In the even that a proposal cannot be processed at the administrative level, a municipality may refer that proposal to the Intermunicipal Committee for review.

NOTE: Each municipality will be responsible for determining the degree of discretion to be delegated to each respective administration in the review of proposals.

Stage 2: Intermunicipal Committee Review

1. In the event that a proposal is referred to the Intermunicipal Committee, a Committee meeting will be scheduled and the administrations of the municipalities will present their positions on the proposal to the Committee.

2. After consideration of a proposal, the Intermunicipal Committee may:

   a. provide suggestions back to the administrations with respect to revisions to the proposal which should be considered to make it more acceptable to the municipalities;

   b. if possible, agree on a consensus position of the Intermunicipal Committee, either in support of or in opposition to the proposal, to be presented to the Councils; or

   c. conclude that no initial agreement can be reached and that a consensus position of the Intermunicipal Committee will not be presented to the respective Councils.

3. If agreed to by the municipalities, a facilitator may be employed to help the Intermunicipal Committee work toward a consensus position.

4. If a proposal cannot be satisfactorily processed following Intermunicipal Committee review, then that proposal will be referred to the Municipal Councils.

Stage 3: Municipal Councils

1. After receiving the recommendations of the Intermunicipal Committee and the respective municipal administrations with respect to a particular proposal, each municipal Council will establish its position on the proposal.

2. If the Municipal Councils support a proposal, then the approval and, if agreed to, Intermunicipal Development Plan amendment processes can be completed. If a Council does not support the proposal, then no further action will be required.

3. If the Councils cannot agree on a proposal, then the matter may be referred to a mediation process.

4. In the event that the municipalities resort to mediation, the initiating municipality will not give approval in the form of second or third readings to appropriate bylaws until mediation has been pursued.

Stage 4: Mediation Process

1. The following will be required before a mediation process can be established:

   a. agreement by the Councils that mediation is necessary;

   b. appointment by the Councils of an equal number of Councillors to participate in a mediation process;

   c. engagement, at equal cost to the municipalities, of an impartial and independent mediator agreed to by the municipalities; and

   d. approval by the municipalities of a mediation schedule, including the times and locations of meetings and a deadline by which the mediation process is to be completed.

2. If agreed to by the municipalities, any members of the Intermunicipal Committee or administrative staff from the municipalities who are not participating directly in the mediation process may act as information resources either inside or outside the mediation room.

3. All participants in the mediation process will be required to keep the details of the mediation confidential until the conclusion of the mediation.

4. At the conclusion of the mediation, the mediator will submit a mediator's report to the municipalities.

5. If a mediated agreement is reached, then that agreement will be recommended back to the Municipal Councils for action. The Councils will also consider the mediator's report and the respective positions of the municipal administrations with respect to the mediated agreement. Any mediated agreement will not be binding on the municipalities and will be subject to the approval of the Municipal Councils.

6. If no mediated agreement can be reached or if a mediated agreement is not approved by the Councils, then the appeal process may be initiated.

Stage 5: Appeal Process

1. In the event that the mediation process fails, the initiating municipality may pass a bylaw to implement the proposal (i.e., a land use bylaw amendment, an area structure plan or an area structure plan amendment).

2. If the initiating municipality passes a bylaw to implement the proposal, then the responding municipality may appeal that action to the Municipal Government Board under the provisions of Section 690 of the Municipal Government Act.

   The responding municipality must file a notice of appeal with the Municipal Government Board and give a copy of the notice of appeal to the initiating municipality within thirty days of the passage of the disputed bylaw.

3.4 FUTURE GROWTH AND ANNEXATION

3.4.1 URBAN GROWTH AREAS

All three municipalities agree that eventual urban development within the Plan Area should proceed in the most orderly, economical and beneficial manner possible. In order to provide for continued and efficient urban development, expected growth corridors should be identified beyond current urban boundaries and special consideration given to these areas by the MD of Foothills. In reviewing land use redesignation, subdivision or development proposals in expected growth corridors, the MD of Foothills will consult with the relevant urban municipality in order to address the immediate and long-term impacts that such proposals may have on the logical growth sequence for affected municipalities.

Turner Valley

The Town of Turner Valley anticipates its long-term growth corridors to be generally towards the northwesterly and southeasterly direction. As such, the Town of Turner Valley considers the N.E. 12-20-03W5 and N 1/2 31-19-02-W5 to have greater potential to be considered for long-term annexation into the Town than other lands abutting its Town boundaries (see Map 2).

Black Diamond

The long-term growth corridors for Black Diamond are projected to be towards the southeasterly and southerly direction. The NE ¼ and SW ¼ of Section 9 are the preferred choice for growth options because of the proximity of infrastructure to service the lands. It is recognized that the intensive agricultural operation on the SW ¼ 9 does pose a short to medium term impediment to residential development. The development that is occurring in the SE ¼ Section 8, and because servicing extensions could accommodate some southward expansion into the NE ¼ 5, there is a potential for growth in this direction (see Map 2).

The time frame for development is unknown and is totally market driven. These abutting lands are recognized as having the most potential development possibilities given that the Sheep River and its flood plain and the proximity of the wastewater treatment plant pose as major impediments to residential growth in either the north or northeast directions.

3.4.2 RURAL LANDS BEYOND CURRENT URBAN BOUNDARIES

Rural land beyond current urban boundaries have been included in the Intermunicipal Development Plan in order to address such issues as expected long term urban growth corridors, incompatible uses, buffer zones and transitional areas between urban and rural development. As part of the mandatory review outline in Section 3.2.1 above, all municipalities will consider current growth trends and other factors that may affect suitability and timing of development for all lands within the Intermunicipal Development Plan.

3.4.3 ANNEXATION

The Town of Turner Valley and the Town of Black Diamond anticipate the eventual annexation of additional land. The timing of annexation will depend, among other considerations, on the pace of growth and unique land use requirements within the Towns. In addition, the relative merits of phased verses comprehensive annexation will be considered by affected municipalities. Any annexation will be based on further technical analysis and public consultation. The M.D. of Foothills and the Town's of

Turner Valley and Black Diamond will endeavour to reach an intermunicipal agreement on annexation before any application for annexation is submitted to the Municipal Government Board.

M.D. OF FOOTHILLS / TOWN OF BLACK DIAMOND / TOWN OF TURNER VALLEY

INTERMUNICIPAL DEVELOPMENT PLAN

PART II - BACKGROUND

APPENDIX

LAND USE POLICIES

Alberta Municipal Affairs

Land Use Policies

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Land Use Policies

1.0 INTRODUCTION

Land use planning is both a municipal and provincial activity. Municipalities are given responsibilities under Part 17 of the Municipal Government Act. A number of provincial departments and agencies are also involved as a result of their particular mandates. The Province's responsibility, with certain exceptions, extends to managing air, water, and renewable and non-renewable natural resources. Provincial legislation, policies, and programs for land use planning and resource management can affect municipal interests. Conversely, municipal decisions and actions affecting land use and development can impact on the success of provincial objectives designed for the benefit of all Albertans.

It is therefore important that municipal and provincial planning efforts utilize consistent approaches and pursue a high level of cooperation and coordination. It is also important that municipal planning efforts complement provincial policies and initiatives, especially as municipalities adjust to the changing planning structure and their additional responsibilities in keeping with the new planning legislation. The *Land Use Policies* are therefore being established pursuant to section 622 of the Municipal Government Act. The *Land Use Policies* supplement the planning provisions of the Municipal Government Act and the Subdivision and Development Regulation. It is expected that all municipalities will implement these policies in the course of carrying out their planning responsibilities.

There are eight sections to the *Land Use Policies*. Section 1 sets out the purpose of the *Land Use Policies* and clarifies the implementation role of municipalities. Sections 2 and 3 contain policies which are operational in nature and which relate to a municipality's general approach to planning and to municipal interaction with residents, applicants, neighbouring municipalities, provincial and federal departments and other jurisdictions. Sections 4 to 8 contain policies which address specific land use planning issues in which the Province and municipalities share a common interest.

1.1 Implementation

Each municipality is expected to incorporate the *Land Use Policies* into its planning documents and planning practices. Section 622(3) of the Municipal Government Act requires that municipal statutory plans, land use bylaws, and planning decisions and actions be consistent with the *Land Use Policies*. Section 680(2)(c) requires a subdivision and development appeal board and the Municipal Government Board[1] to be consistent with the *Land Use Policies* in determining a subdivision appeal. Section 687(3)(a) requires a subdivision and development appeal board to comply with the *Land Use Policies* in determining a development appeal.

The policies in sections 2 and 3 are particularly relevant to the design of planning programs, the formulation of statutory plans and land use bylaws, and the planning decision-making process. The policies in sections 4 to 8 have particular application to the content of statutory plans and land use bylaws, as well as to the nature of planning decisions.

The Municipal Government Act (Part 17) requires many municipalities to prepare a new municipal development plan or to review and revise an existing general municipal plan to bring it into conformance with the new legislation.[2] It also requires that all land use bylaws be reviewed and most revised.[3] Municipalities may also be embarking on the preparation of other statutory plans such as intermunicipal development plans. As existing planning documents are being reviewed and revised, and as new ones are being prepared, municipalities are required to ensure that their plans and bylaws are consistent with the *Land Use Policies*.

The Municipal Government Act (Part 17) also establishes a relationship between the *Land Use Policies* and planning decisions by municipalities.[4] The Province recognizes that not all policies are relevant to all planning decisions.

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[1] The wording of the Land Use Policies is oriented towards municipalities. Municipal Government Board decisions pursuant to Part 17 of the Municipal Government Act are also required to be consistent with their spirit, intent, and direction.

[2] See sections 632 and 707 of the Municipal Government Act.

[3] See sections 639 and 708 of the Municipal Government Act.

[4] The term is used in the broad sense and includes council, administration, designated officers, commissions, committees, boards, and authorities.

The Province also recognizes that once statutory plans and land use bylaws are consistent with the *Land Use Policies* sections 5 to 8 of the policies will have largely been implemented. Municipalities are expected to design a decision-making system which ensures that the required attention is given to all sections of the *Land Use Policies*.

1.2 Interpretation

The Province is entrusting to each municipality the responsibility to interpret and apply the *Land Use Policies* and to further elaborate on the policy initiatives in its statutory plans and land use bylaws. The policies are presented in a general manner which allows municipal interpretation and application in a locally meaningful and appropriate fashion. Municipalities and provincial departments and agencies are encouraged to consult with one another where questions on the spirit and intent of these policies arise during implementation.

The *Land Use Policies* focus on matters of public policy, not matters of law. They provide a framework for statutory plans, land use bylaws, and planning decisions. The *Land Use Policies* should be interpreted as a guide to more specific municipal policy and action, and are not intended to be the basis of legal challenges. In applying the *Land Use Policies* municipalities must assess the importance of each policy in relation to the others in light of local and intermunicipal priorities. Municipalities must have regard to the cumulative effect of all of the policies as well as to the specific effect of each policy.

2.0 THE PLANNING PROCESS

Goal

Planning activities are to be carried out in a fair, open, considerate, and equitable manner.

Policies

1. Municipalities are expected to take steps to inform both interested and potentially affected parties of municipal planning activities and to provide appropriate opportunities and sufficient information to allow meaningful participation in the planning process by residents, landowners, community groups, interest groups, municipal service providers, and other stakeholders.

2. Municipalities are expected to ensure that each proposed plan amendment, reclassification, development application, and subdivision application is processed in a thorough, timely, and diligent manner.

3. When considering a planning application, municipalities are expected to have regard to both site specific and immediate implications and to long term and cumulative benefits and impacts.

4. In carrying out their planning responsibilities, municipalities are expected to respect the rights of individual citizens and landowners and to consider the impact of any policy or decision within the context of the overall public interest.

3.0 PLANNING COOPERATION

Goal

To foster cooperation and coordination between neighbouring municipalities and between municipalities and provincial departments and other jurisdictions in addressing planning issues and in implementing plans and strategies.

Policies

1. Municipalities are encouraged to expand intermunicipal planning efforts to address common planning issues, especially where valued natural features are of interest to more than one municipality and where the possible effect of development transcends municipal boundaries.

2. In particular, adjoining municipalities are encouraged to cooperate in the planning of future land uses in the vicinity of their adjoining municipal boundaries (fringe areas) respecting the interests of both municipalities and in a manner which does not inhibit or preclude appropriate long term use nor unduly interfere with the continuation of existing uses. Adjoining municipalities are encouraged to jointly prepare and adopt intermunicipal development plans for critical fringe areas; these plans may involve lands which are in both of the adjoining municipalities.

3. Municipalities are also encouraged to pursue joint use agreements, regional service commissions and any other joint cooperative arrangements which can contribute to such intermunicipal land use planning.

4 Where two or more municipalities are affected by the operation of an airport, those municipalities are encouraged to prepare, adopt, and implement an intermunicipal development plan to jointly address airport vicinity planning issues.

5. Where two or more municipalities are located on the shores of the same lake, and development is anticipated, the municipalities are encouraged to prepare, adopt, and implement an intermunicipal development plan to jointly address lake planning issues.

6. Municipalities are encouraged to coordinate their planning activities and development approval processes with provincial resource and land management policies, such as integrated resource plans, and with provincial leasing mechanisms, such as the Alberta Tourism Recreational Lease Process.

7. Municipalities are encouraged to work directly with provincial land and resource management agencies in the development of plans and policies on issues of mutual interest. Decisions and approvals affecting land use and development on, near, or with potential to impact provincial resources[5] should be coordinated between these levels of government.

8. Municipalities are encouraged to coordinate their planning activities with those of the local school authorities to ensure that school sites are available when required.

9. Municipalities are encouraged to coordinate their planning activities with those of the regional health authorities to facilitate the development of appropriately located new health care facilities.

10. Municipalities are encouraged to coordinate their planning activities with those of First Nation Reserves, Metis Settlements, Irrigation Districts, and appropriate federal departments and agencies where issues are of mutual interest.

[5] "Provincial Resources" include water, air, provincially-owned mineral resources, fish and wildlife, beds and shores of provincially-owned water bodies and watercourses (pursuant to section 3 of the Public Lands Act), provincially-owned lands, and timber resources on provincial lands.

4.0 LAND USE PATTERNS

Goal

To foster the establishment of land use patterns which make efficient use of land, infrastructure, public services, and public facilities; which promote resource conservation; which enhance economic development activities; which minimize environmental impact; which protect significant natural environments; and which contribute to the development of healthy, safe, and viable communities.

Policies

1. Municipalities are encouraged to establish, on a municipal and on an intermunicipal basis, land use patterns which provide an appropriate mix of agricultural, residential, commercial, industrial, institutional, public and recreational land uses developed in an orderly, efficient, compatible, safe and economical manner in keeping with the general policies of this section and the more specific policies found in sections 5.0 to 8.0.

2. Municipalities are encouraged to establish land use patterns which embody the principles of sustainable development, thereby contributing to a healthy environment, a healthy economy and a high quality of life.[6]

3. Municipalities are encouraged to establish land use patterns which contribute to the provision of a wide range of economic development opportunities, thereby enhancing local employment possibilities and promoting a healthy and stable economy. In carrying out land use planning, municipalities are encouraged to complement and support provincial economic development initiatives.[7]

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[6] The Alberta Vision of Sustainable Development was endorsed by the Alberta Legislature in June 1992. A summary is found in Appendix 1. Municipalities should refer to the publications:
1. Alberta Round Table on Environment and Economy 1991 (#P5-E1).
2. Report of Alberta Round Table on Environment and Economy 1993 (#P5-E2).
3. Ensuring Prosperity, Implementing Sustainable Development 1995 (#592-E-1).
Publications are available from the Environmental Protection Information Centre, 9920 - 108 Street, Edmonton, AB T5K 2M4. Telephone: (403) 422-2079.

[7] Municipalities should refer to the publication Seizing Opportunity, Alberta's New Economic Development Strategy, available from Alberta Economic Development and Tourism, 6th Floor, 10155 - 102 Street, Edmonton, AB T5J 4L6 and to any subsequent economic development policy documents. Municipalities should discuss provincial economic development initiatives with representatives of Alberta Economic Development and Tourism, Alberta Agriculture, Food and Rural Development, Alberta Energy, and Alberta Environmental Protection.

4. Municipalities are encouraged to establish land use patterns which accommodate natural resource extraction or harvesting and processing, manufacturing and other industrial development while, at the same time, minimizing potential conflict with nearby land uses and any negative environmental impact.

5. Municipalities are encouraged to establish land use patterns which provide the opportunity for a variety of residential environments which feature innovative designs and densities, and which make efficient use of existing facilities, infrastructure and public transportation.

6. Municipalities are encouraged to establish land use patterns commensurate with the level of infrastructure and services which can be provided, regardless of whether the infrastructure and services are provided municipally, communally, individually, or by a utility company. Municipalities are encouraged to coordinate the provision of infrastructure and services with neighbouring municipalities.

7. Municipalities, within legislative limits, are encouraged to establish land use patterns which complement their municipal financial management strategies, thereby contributing to the financial health and viability of the municipality.

5.0 THE NATURAL ENVIRONMENT

Goal

To contribute to the maintenance and enhancement of a healthy natural environment.[8]

Policies

1. Municipalities are encouraged to identify, in consultation with Alberta Environmental Protection,[9] significant ravines, valleys, stream

[8] Municipalities should refer to Alberta Environmental Protection's Vision Statement, which promotes shared stewardship of the natural environment and of renewable natural resources. Copies may be obtained from the Environmental Protection Information Centre, 9920 - 108 Street, Edmonton AB T5K 2M4. Telephone: (403) 422-2079.

[9] Pursuant to section 3 of the Public Lands Act, the ownership of public lands including permanent and naturally occurring water bodies and water features rests with the Minister of Environmental Protection (AEP). Public Lands of Alberta Agriculture, Food and Rural Development is responsible for the management of these resources in the White Area. In the Green Area, the Land and Forest Service (AEP) is the management authority. Please note that throughout this document Alberta government departments are referred to by the name in common usage rather than the legal name (e.g., Alberta Environmental Protection not Department of Environmental Protection).

corridors, lakeshores, wetlands[10] and any other unique landscape area, and to establish land use patterns in the vicinity of these features, having regard to their value to the municipality and to the Province.

2. If subdivision and development is to be approved in the areas identified in accordance with policy #1 municipalities are encouraged to, within the scope of their jurisdiction, utilize mitigative measures designed to minimize possible negative impacts.[11]

3. Municipalities are encouraged to identify, in consultation with Alberta Environmental Protection, areas which are prone to flooding, erosion, landslides, subsidence, or wildfire and to establish appropriate land use patterns within and adjacent to these areas.

4. If subdivision and development is to be approved in the areas identified in accordance with policy #3 municipalities are encouraged to, within the scope of their jurisdiction, utilize mitigative measures to minimize the risk to health, to safety, and to loss due to property damage.[12]

5. Municipalities are encouraged to identify, in consultation with Alberta Environmental Protection, areas of significant fish, wildlife and plant habitat and to establish appropriate land use patterns designed to minimize the loss of valued habitat within and adjacent to these areas.[13]

6. If subdivision and development is to be approved in the areas identified in accordance with policy #5 municipalities are encouraged to, within the scope of their jurisdiction, utilize mitigative measures to minimize the loss of habitat.

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[10] Wetland areas are valued for water storage, groundwater replenishment, flow regulation, water quality control, and wildlife habitat. Municipalities should refer to Wetland Management for Alberta, an Interim Policy, 1993, available from the Environmental Protection Information Centre, 9920 - 108 Street, Edmonton, AB T5K 2M4. Telephone: (403) 422-2079.

[11] Municipalities should refer to the Environmental Reference Manual for the Review of Proposed Subdivisions in Alberta, available from the Environmental Protection Information Centre, 9920 - 108 Street, Edmonton, AB T5K 2M4. Telephone: (403) 422-2079.

[12] Municipalities should refer to the Environmental Reference Manual for the Review of Proposed Subdivisions in Alberta, available from the Environmental Protection Information Centre, 9920 - 108 Street, Edmonton, AB T5K 2M4. Telephone: (403) 422-2079.

[13] Municipalities should refer to the Canadian Biodiversity Strategy: Canada's Response to the Convention on Biological Diversity (1995) available from the Environmental Information Centre, 9920 - 108 Street, Edmonton, AB T5K 2M4. Telephone: (403) 422-2079. The Government of Alberta endorsed the strategy in January 1996.

6.0 RESOURCE CONSERVATION

6.1 Agriculture

Goal

To contribute to the maintenance and diversification of Alberta's agricultural industry.

Policies

1. Municipalities are encouraged to identify, in consultation with Alberta Agriculture, Food and Rural Development, areas where agricultural activities, including extensive and intensive agricultural and associated activities, should be a primary land use.

2. Municipalities are encouraged to limit the fragmentation of agricultural lands and their premature conversion to other uses, especially within the agricultural areas identified in accordance with policy #1.

3. Where possible, municipalities are encouraged to direct non-agricultural development to areas where such development will not constrain agricultural activities.

4. Municipalities are encouraged to minimize conflicts between intensive agricultural operations and incompatible land uses through the use of reciprocal setback distances[14] and other mitigative measures.

6.2 Non-renewable Resources

Goal

To contribute to the efficient use of Alberta's non-renewable resources.

Policies

1. Municipalities are encouraged to identify, in consultation with the appropriate provincial land management agency and the Alberta Geological Survey, areas where the extraction of surface materials (e.g., sand and gravel) should be a primary land use.

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[14] Municipalities are encouraged to utilize, in consultation with Alberta Agriculture, Food and Rural Development, the Minimum Distance Separation (MDS) method. The MDS method is applied in conjunction with the intensive livestock definition provided in the Code of Practice for the Safe and Economic Handling of Animal Manures.

2. Municipalities are encouraged to identify, in consultation with Alberta Energy, areas where the extraction of mineral resources should be a primary land use.[15]

3. Municipalities are encouraged to direct subdivision and development activity so as not to constrain or conflict with non-renewable resource development, particularly with respect to the areas identified in accordance with policies #1 and #2.

4. In addressing resource development municipalities are expected to, within the scope of their jurisdiction, utilize mitigative measures to minimize possible negative impacts on surrounding areas and land uses.

6.3 Water Resources

Goal

To contribute to the protection and sustainable utilization of Alberta's water resources, including lakes, rivers, and streams, their beds and shores, wetlands, groundwater, reservoirs, and canals.

Policies

1. Municipalities are encouraged to identify, in consultation with Alberta Environmental Protection, significant water resources within their boundaries.

2. Municipalities are encouraged to determine appropriate land use patterns in the vicinity of the resources identified in accordance with policy #1, having regard to impacts on an entire watershed as well as local impacts.

3. If subdivision and development is to be approved in the vicinity of the resources identified in accordance with policy #1, municipalities are encouraged to, within the scope of their jurisdiction, incorporate measures which minimize or mitigate any negative impacts on water quality, flow and supply deterioration, soil erosion, and ground water quality and availability. Municipalities are also encouraged to facilitate public access and enjoyment of these water features, and to protect sensitive fisheries habitat and other aquatic resources.

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[15] In the case of public land, municipalities should also consult Alberta Environmental Protection in the Green Areas and Alberta Agriculture, Food and Rural Development in the White Areas. (See also footnote #8).

6.4 Historical Resources

Goal

To contribute to the preservation, rehabilitation and reuse of historical resources, including archeological and palaeontological resources.[16]

Policies

1. Municipalities are encouraged to identify, in consultation with Alberta Community Development, significant historical resources within their boundaries.

2. Within the scope of their jurisdiction, municipalities are encouraged to contribute to the preservation and enhancement the historical resources identified in accordance with policy #1 so that those resources may be used and enjoyed by present and future generations.[17]

7.0 TRANSPORTATION

Goal

To contribute to a safe, efficient, and cost effective provincial transportation network.

Policies

1. Municipalities are encouraged to identify, in consultation with Alberta Transportation and Utilities, the location, nature and purpose of key transportation corridors and facilities.[18]

2. Municipalities are encouraged to minimize negative interactions between the transportation corridors and facilities identified in accordance with policy #1 and the surrounding areas and land uses through the establishment of compatible land use patterns.

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[16] Subject to section 28(2) and (3) of the Historical Resources Act, all archeological and palaeontological resources are owned by the Province.

[17] Municipalities may wish to utilize sections 22 and 23 of the Historic Resources Act.

[18] This includes highway corridors, railway lines, airports, and major pipelines and electrical transmission lines.

3. If subdivision and development is to be approved in the vicinity of the areas identified in accordance with policy #1, municipalities are encouraged to employ appropriate setback distances and other mitigative measures relating to noise, air pollution, and safety, to limit access, and to enter into highway vicinity agreements with Alberta Transportation and Utilities.

8.0 RESIDENTIAL DEVELOPMENT

Goal

To contribute to the development of well-planned residential communities, a high quality residential environment and to the provision of adequate and affordable housing for all Albertans.

Policies

1. Municipalities are encouraged to identify, in consultation with the local housing industry and local housing associations, the magnitude and scope of the housing need within their communities and to establish land use patterns in response to that need.

2. In establishing land use patterns municipalities are encouraged to accommodate and facilitate a wide range of housing types.

3. In responding to policies #1 and #2, municipalities are encouraged to provide intensification opportunities within developed areas where existing infrastructure and facilities have adequate capacity.

4. In responding to policies #1 and #2, municipalities are encouraged to accommodate barrier free residences for persons with disabilities and residences in which the provision of care and support for the occupants is possible.

5. In responding to policies #1 and #2, municipalities are encouraged to eliminate any barriers which inhibit the use of housing constructed off site and to accommodate manufactured and modular housing in a fashion which is in harmony with existing or proposed neighbourhood design and architectural development.

6. In responding to policy #1 and the other themes of this section, municipalities are encouraged to review, in cooperation with the land development industry, their current standards and practices with regard to neighbourhood design and residential servicing.

APPENDIX 1

Excerpt from Alberta's Vision of Sustainable Development*

Alberta, a member of the global community, is a leader in sustainable development, ensuring a healthy environment, a healthy economy, and a high quality of life in the present and the future.

Our vision encompasses all of the following elements:

The quality of air, water, and land is assured

Alberta's biological diversity is preserved.

We live within Alberta's natural carrying capacity.

The economy is healthy.

Market forces and regulatory systems work for sustainable development.

Urban and rural communities offer a healthy environment for living.

Albertans are educated and informed about the economy and the environment.

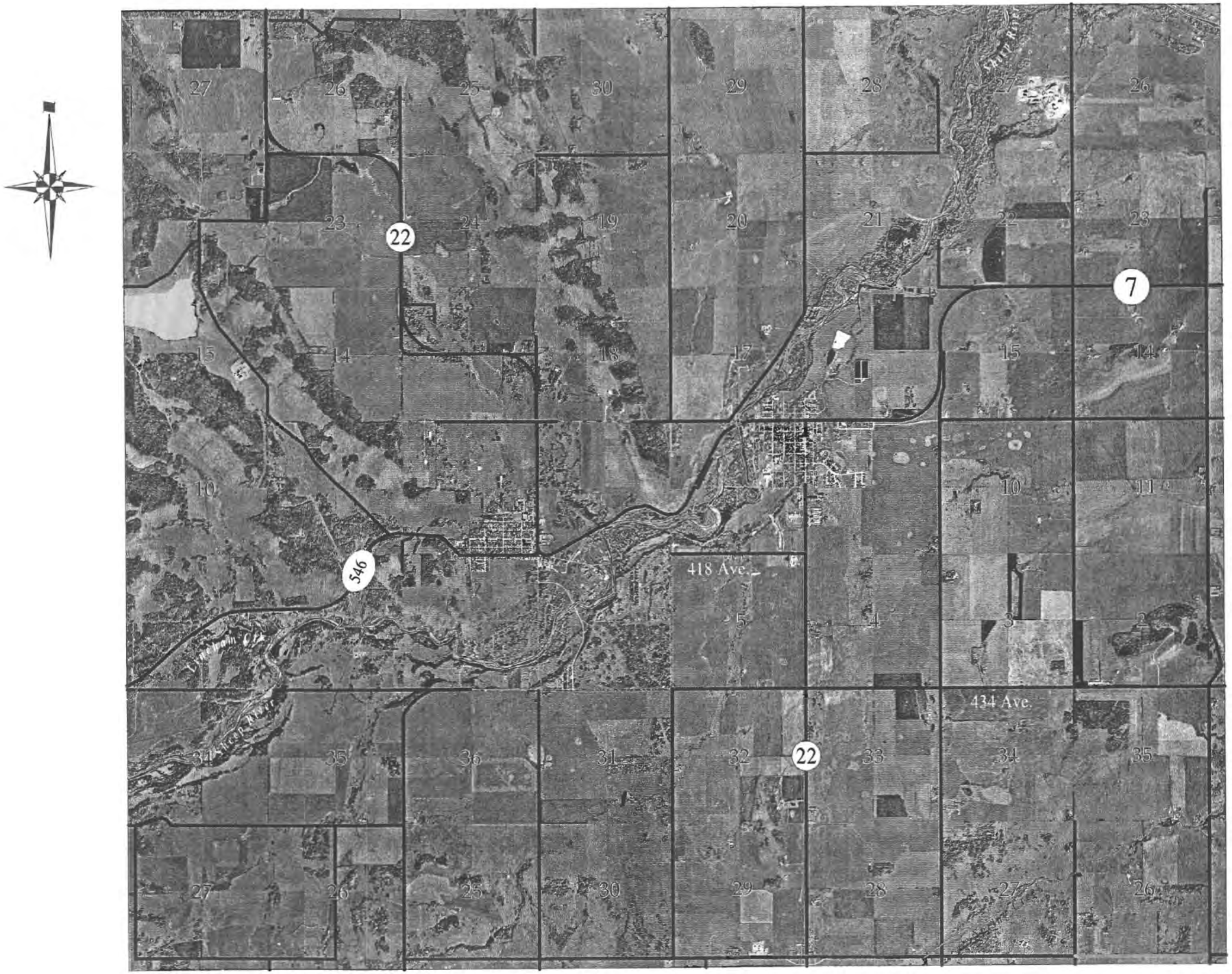
Albertans are responsible global citizens.

Albertans are stewards of the environment and the economy.

* See Section 4.0 Land Use Patterns, Policy #2

Municipal District of Foothills No.31
Town of Black Diamond
Town of Turner Valley
Intermunicipal Plan

Map 1
Geographical Context



SCALE 1:50,000

1 .5 0 1 Mile

1 .5 0 1 Kilometre

3 DEGREE TRANSVERSE MERCATOR PROJECTION NAD 83

MDF GIS/Mapping Department
Map No: mdbdtv001
Date: March 12, 2002

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Municipal District of Foothills No.31
Town of Black Diamond
Town of Turner Valley
Intermunicipal Plan

Map 2
Plan and Policy Areas

SCALE 1:50,000

1 .5 0 1 Mile

1 .5 0 1 Kilometre

3 DEGREE TRANSVERSE MERCATOR PROJECTION NAD 83

Black Diamond

Turner Valley

Sheep River

Lyncham Crk

Spring Creek

418 Ave.

434 Ave.

546

22

7

Legend

- Urban Municipality
- Agricultural Policy Area
- Country Residential Policy Area
- Black Diamond Future Urban Growth
- Turner Valley Future Urban Growth
- Intermunicipal Development Plan Area
- Black Diamond/Turner Valley Joint Referral Area
- Turner Valley Referral Area
- Black Diamond Referral Area

- ▲ 1 Existing Sand and Gravel Operations
- ▲ 2 Turner Valley Gas Plant & Discovery Well
- ▲ 3 Existing Poultry Operation
- ▲ 4 Westend Regional Sewage Facility
- ▲ 5 Abandoned Turner Valley Landfill
- ▲ 6 Hell's Half Acre
- ▲ 7 Turner Valley Golf Course
- ▲ 8 Black Diamond Coal Mines
- ▲ 9 Municipal Transfer Station

MDF GIS/Mapping Department
Map No. mdpdtv002
Date: February 25, 2002

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Appendix H
Town of Black Diamond Municipal Development Plan 2001

TOWN OF BLACK DIAMOND
BYLAW NUMBER 01-14

BEING A BYLAW OF THE TOWN OF BLACK DIAMOND, IN THE PROVINCE OF ALBERTA, TO ADOPT THE MUNICIPAL DEVELOPMENT PLAN

WHEREAS the Council of the Town of Black Diamond, Province of Alberta has the authority to adopt a Municipal Development Plan in accordance with Division 4, Section 631, R.S.A. 1994 and;

WHEREAS the Council of the Town of Black Diamond, has deemed it advisable to adopt a Municipal Development Plan;

NOW THEREFORE The Council of the Town of Black Diamond, duly assembled, hereby enacts as follows:

1) THAT Bylaw No. 78-21 is hereby rescinded.
2) THAT the Municipal Development Plan attached hereto is hereby adopted as the Municipal Development Plan for the Town of Black Diamond.
3) THAT this Bylaw shall come into effect upon the date of the final passing thereof.

READ A FIRST TIME this 5th day of September, A.D. 2001.

_____
MAYOR

_____
TOWN MANAGER

READ A SECOND TIME this 3rd day of October, A.D. 2001

READ A THIRD TIME and finally passed this 3rd day of October, A.D. 2001.

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MAYOR

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TOWN MANAGER



Municipal Development Plan

Bylaw #01 – 14

October 2001

TOWN OF BLACK DIAMOND
MUNICIPAL DEVELOPMENT PLAN
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1.0 INTRODUCTION

1.1 BACKGROUND

The Town of Black Diamond is located in the rolling foothills approximately 56 kilometers south of the City of Calgary at the junction of Highway No. 22 and 7. Black Diamond is a regional service centre, drawing residents from the larger agricultural community to its bank, hospital, senior's lodge and curling rink/ arena. Oilfields Junior/ Senior High School, C. Ian McLaren Elementary School and Education Plus educate youth to adults from Black Diamond and the surrounding areas. The library and post office provide public amenities to all residents.

One of the most important land forms affecting the direction of the town's future growth is the pronounced Sheep River valley with its surrounding topography. Its direct influence on the floodplain of the Sheep River and the contours of the lands along the west of the town require that the majority of the town's medium to long term growth be to the south and east of the existing town site.

Low lying wetland areas and the river valley affect development of the Town of Black Diamond. Development of portions of these low areas will be limited.

1.2 NEED FOR REVIEW

The current General Municipal Plan (Bylaw No. 78-21) was adopted on May 15, 1981. In the past few years, new developments have occurred in the Town of Black Diamond. Issues facing the Town of Black Diamond include commercial development, tourism development, residential development, environmental conservation and transportation. These concerns, coupled with residential growth and corresponding demand on local services warranted development of a Municipal Development Plan.

The Town of Black Diamond Council established a Municipal Development Plan/ Land Use Bylaw Task Force to oversee the preparation and development of the MDP and review of the LUB. This Task Force represents a cross-section of the community, and its members were instrumental in providing advice and feedback throughout the Plan preparation process.

Public feedback formed a key component of this planning process. In September 2000 a community workshop was held to develop planning values and a vision for the Town of Black Diamond. Subsequent community workshops in early 2001 were held to identify issues, concerns and potential

solutions in the area of land use, conservation and transportation, economic development, community services and residential development.

1.3 PURPOSE OF THE PLAN

The role of Municipal Plan is to provide policies that will direct future growth and development within the Town of Black Diamond. The Plan defines for Council, administration, developers, residents and adjacent municipalities the type and location of development acceptable to the Town. It is intended to provide a framework and guide for on-going development, while ensuring that future growth occurs in an orderly, conscientious and cost-efficient manner so that a high quality of life can be maintained for the residents of Black Diamond.

To ensure that the Municipal Development Plan remains current and responsive to change, it shall be reviewed after a period of five years (or earlier if required). Any amendments made to the Municipal Development Plan shall be in accordance with the Municipal Government ACT R.S.A. 1994, as amended.

1.4 BUDGETARY CONSIDERATIONS

The accomplishment of the goals and objectives of the Municipal Development Plan are subject to on-going budgetary considerations. The policies and programs recommended for implementation will be reviewed in light of the Town of Black Diamond's ability to pay

2.0 INTERPRETATION

2.1 MUNICIPAL GOVERNMENT ACTS

The Municipal Government Act Division 4, Section 632 R.S.A. 1994, as amended requires all urban municipalities with a population of 3500 persons must adopt a Municipal Development Plan and below 3500 may adopt a Municipal Development Plan. In addition to the Municipal Government Act, municipalities must ensure that land use planning is compatible with the Provincial land Use Policies.

The Municipal Government Act (Section 63) also outlines the basic requirements of a Municipal Development Plan as follows:

632 (2) A Municipal Development Plan:

a) must address

- *(i) the future land use within the municipality,*
- *(ii) the manner of and the proposals for future development plans,*
- *(iii) the coordination of land use, future growth patterns and other infrastructure with adjacent municipalities if there is no inter-municipal development,*
- *(iv) the provision of required transportation systems, either generally or specifically, within the municipality and in relation to adjacent municipalities, and*
- *(v) the provision of municipal services and facilities either generally or specifically.*

b) may address

- *(i) proposals for the financing and programming of municipal infrastructure,*
- *(ii) the coordination of municipal programs relating to physical, social and economic development of the municipality,*
- *(iii) environmental matters within the municipality,*
- *(iv) the financial resources of the municipality,*
- *(v) the economic development of the municipality, and*
- *(vi) any other matter relating to the physical, social or economic development of the municipality.*

c) may contain statements regarding the municipality's development constraints, including the results of any development studies and impact analysis, and goals, objectives, targets, planning policies and corporate strategies.

2.2 DEFINITIONS

1) "**Amenity"** means an aesthetic or other physical characteristics that enhance the desirability of any environment, and may include such things as natural areas, landscaping, views or recreational facilities.

2) **"Bottom of Slope"** means a point (line) where the general trend of the slope changes from greater than 15 percent to less than 15 percent and remains at less than 15 percent. The bottom of the slope may, but does not necessarily, coincide with the lowermost break-line or topographic discontinuity between the valley wall or coulee slope and the valley bottom.

3) **"Bottom of Slope Setback Line"** means a line, approved by the Development Authority, defining the minimum setback in metres on the valley or coulee floor from the bottom of the slope line, providing for property integrity and public safety concerns along the bottom of the slope. The distance of the line from the bottom of the slope will vary in accordance with approved geo-technical study recommendations.

4) **"Buffer Strip"** means a parcel of land, dense vegetation and/or berming located between two land uses, which may be incompatible or required for visual or sound attenuation. The buffer strip shall be designed to effectively separate and/ or protect one type of land use or development from the other.

5) **"Built up area"** means areas that have been zoned as commercial, industrial or residential and expansion of existing land uses and structures within the agricultural district.

6) **"Coulee"** means a water carved channel, natural drainage course or gully that feeds into a major drainage area.

7) **"Critical Habitat"** means a place that provides a particularly important environment for an organism; for example, coulees are a critical habitat for many plant species.

8) **"Development"** means modifications to the landscape, building modifications, changes in use or intensity of use of land or buildings defined in the Town of Black Diamond Land Use Bylaw.

9) **"Development Authority"** means the Town of Black Diamond Municipal Planning Commission, or the Subdivision and Development Appeal Board, or the Planning/ Development Officer or Council, as the context requires.

10) **"Development Lot Line"** means a line, established by survey at the applicant's expense and acceptable to the Development Authority, which subsequently is registered on a plan of subdivision or other instrument that determines the extent of development in relation to a top of bank and/ or bottom of slope or the top of the bank setback line.

11) **"Environmentally Sensitive Land"** means those lands upon which development is likely to be subjected to/ or cause one or more of the following impacts:

a) hazardous land conditions;
b) major cumulative impacts resultant from the occurrence or recurrence of harmful action;
c) degradation of the environment and reduction in natural and ecological diversity;
d) destruction or severe damage to biotic communities such as tree stands, wetlands, nesting and breeding areas.

12) **"M.D.", Municipal District", "M.D. of Foothills", or "Municipal District of Foothills"** means the municipality of the Municipal District of Foothills, as defines by the Act.

13) **"Pollution"** means anything, at the discretion of the Act that causes or may cause contamination, damage or disturbance in accordance with the provisions to current environmental legislation.

14) **"Top of the Bank"** means the point (line) where the general trend of the slope changes from greater than 15 percent to less than 15 percent and remains at less than 15 percent, as determined by a geo-technical study. It may (but does not necessarily) coincide with the uppermost valley break-line or the slope edge defining the most distinct break or topographic discontinuity in the slope between the upper plateau and valley wall or coulee slope.

15) **"Top of Bank Setback Line"** means a line, approved by the Development Authority, defining the minimum setback in metres from the top of the bank line, providing property integrity and public safety concerns along the top of bank. The distance of the setback line from the top of the bank will vary in accordance with approved geo-technical study recommendations.

16) **"Town", "Black Diamond", or "Town of Black Diamond"** means the municipality of the Town of Black Diamond, as defined by the Act.

2.3 PLANNING AREA

The policies set forth in this Municipal Development Plan apply to all lands contained within the municipal boundaries of the Town of Black Diamond.

2.4 FLEXIBILITY

It is intended that the boundaries of land use classifications and the location of future development concepts as shown in this Plan be considered as approximate only and not absolute. Any minor adjustments or variances that may be necessary to land use classes and location of future facilities will not require an amendment of this plan.

3.0 RELATED PLANS

Council has adopted a number of detailed statutory area plans for specific areas. These statutory planning documents must be consistent with the policies contained within this Plan. The Town of Black Diamond Land Use Bylaw is an important statutory planning tool used to implement this Plan's policies on a detailed and site specific basis. The following have been adopted as policy of Council and should be considered in conjunction with is Plan:

Statutory Documents:

- Town of Black Diamond Land Use Bylaw 98-14
- Willow Ridge Area Structure Plan;
- Kaiser Area Structure Plan.

Other Planning Documents:

- Black Diamond Economic Development Plan –1992;
- Diamond Valley Tourism Plan 1998
- Town of Black Diamond Sanitary Sewer Collection System Analysis and Water System Analysis –1999.
- Town of Black Diamond – Old Downtown Redevelopment Concept Plan, 2000;
- Black Diamond Main Street Project 2000;

4.0 PLANNING VALUES/ VISION

During the Municipal Development Plan process, a community workshop was held to develop a vision and establish planning values. The following is the vision statement that was developed as a result of this workshop:

" *Rooted in a strong heritage of community pride and Western Culture, Black Diamond offers a blend of positive small town atmosphere and values with the challenge of establishing a thriving sustainable community.*
Black Diamond supports a balance of opportunities for commerce and economic development with a commitment to protect and enhance its natural setting in the Sheep River watershed.
Black Diamond strives to create a safe and healthy community by encouraging its residents to participate in achieving the benefits of ***health, education, recreation, and culture*** *for all community members and visitors."*

The planning values provided a foundation that guided the preparation of the Municipal Development Plan.

- **Positive Small Town Atmosphere**

The Town of Black Diamond takes pride in its artistic culture, friendliness and small town charm. Black Diamond's small town atmosphere will be preserved and enhanced.

- **Respect for the Environment**

The Town of Black Diamond's clean air, natural setting and environment is the foundation for Black Diamond's quality of life. The Town of Black Diamond will protect these natural assets through preservation and environmentally sound development.

- **Heritage Appreciation**

The Town of Black Diamond is tied to its history and heritage. This history and heritage will be preserved and enhanced through planning processes.

- **Healthy Economic Growth**

Diversification and healthy economic growth are encouraged within the context of a vision for economic development. The Town of Black Diamond will promote appropriate commercial and low impact industrial development. The success of present business operators and entrepreneurs will be advocated while working towards a diversified economic base.

5.0 POLICY AREAS

5.1 DIRECTION OF FUTURE GROWTH

With the Sheep River Valley acting as a development boundary to the North and West of Town of Black Diamond, any future growth will be to the East and South.

Land that is generally developed on the west of the Town, west of the Sheep River, will be shown as Urban Reserve Areas as will all adjacent land to the current Town boundaries. Council will consider land use policies, regarding development of this area and additional when and if annexation should occur.

5.2 MUNICIPAL DEVELOPMENT PLAN PHILOSOPHY

The philosophy of the Municipal Development Plan has evolved through community workshops, research, discussion and debate. The philosophy of the Town of Black Diamond Municipal Development Plan is to:

- Guide change, identify expectations for future land use changes, subdivisions and development by providing clear direction to the existing community, developers, Council and Municipal Administrators;
- Plan for responsible and balanced growth;
- Mitigate between different land uses; and
- Minimize development impacts on the environment particularly with respect to watershed issues.

5.3 MUNICIPAL DEVELOPMENT PLAN GOALS

In order to provide direction in developing specific land use policies, it is necessary to develop a sense of achievable goals. Taking into consideration the planning values and vision the Municipal Development Plan policies were developed based on the following goals:

a) To ensure that all future development and redevelopment efforts are of the highest possible quality in order that the Town will continue to be an attractive environment in which to live and work.

b) To provide and maintain a variety of housing types in order to accommodate current and future residents.

c) To provide opportunities for future industrial/ commercial development in the Town of Black Diamond.

d) To encourage and promote the redevelopment and revitalization of the downtown commercial area and downtown fringe neighbourhoods.

e) To continue to encourage and promote the development of recreational, tourist and cultural facilities in the Town of Black Diamond.

f) To control the location and timing of future development to ensure that it can be serviced in an economically responsible manner.

6.0 DEVELOPMENT CONSTRAINTS AND ENVIRONMENTAL PROTECTION

6.1 INTRODUCTION

Escarpment areas, flood risk areas and environmentally sensitive areas are significant development constraints that will reduce and/or eliminate the suitability of certain lands for development. Of particular importance to the Town of Black Diamond is the Sheep River.

6.2 OBJECTIVES

a) To identify and protect environmentally significant and ecologically sensitive areas that contribute to the maintenance of natural processes and the quality of urban environment, including escarpment areas, watercourses and significant views and vistas.

b) To ensure that public access to unique areas, including lands adjacent to watercourses and escarpment areas, is retained.

c) To recognize environmental responsibilities and to strive to achieve and maintain the highest environmental standards possible.

d) To identify lands that have inherent natural/, cultural and/ or recreational value and to maintain and enhance the natural quality of such environments for human passive and/ or active recreational use.

e) To minimize potential flood damage in all areas that are subject to flooding.

f) To maintain high standards of surface and groundwater quality within the Sheep River watershed through sound environmental planning and protection.

6.3 ENVIRONMENTAL PROTECTION POLICIES

Municipal Environmental Impact Statement

a) A municipal environmental impact statement (MEIS), prepared by a qualified environmental consultant, will be required to be submitted with all development and subdivision applications adjacent to watercourses and escarpments. The MEIS should address the following key elements:

- A description of existing environmental conditions, the proposed development and the significance of potential short and long term environmental impacts, including impacts of construction and operating activities;
- Identification of appropriate and feasible mitigative measures including land use planning, project design, construction techniques and operational practices to reduce or eliminate potentially adverse effects on the environment, including for example:
  - fish and wildlife and associated habitat
  - vegetation
  - surface and bedrock geology
  - soils and terrain
  - surface and groundwater quantity and quality
  - air quality
  - visual resources
  - View shed
  - Archeological
  - land and resource use
  - cultural and heritage resources
  - cumulative impacts on the above

- Identification of residual impacts, monitoring requirements, and need for more extensive environmental impact assessment work.

Construction Management Plans

b) Developers of proposed multi-unit residential developments for large subdivisions, and recreational and industrial developments adjacent to watercourses and major escarpments will be required to submit as a Component of the Development Agreement and Engineering Drawings, a site-specific construction management plan that outlines environmental protection measures including but not limited to:

- Erosion control, vegetation protection, and pesticide and herbicide control;
- Environmental mitigation and monitoring measures to be undertaken by the developer;
- Reclamation and re-vegetation plans.

Storm Water Management Plan

c) Developers of proposed multi-unit residential developments, large subdivisions, recreational, commercial and industrial developments will be required to implement a storm water management plan. The cost to prepare the plan will be borne by the developer and will include, but not necessarily be limited to, the following:

- Flooding hazards;
- Existing drainage features;
- Storm water related environmental issues (first flush effects, stockpile snow melt, soil erosion);
- Minor and major system design criteria (1:100 year event, return period, calculation of flows, rainfall intensity, description of the proposed system);
- Design criteria for flows originating off-site;
- Erosion and sediment control especially in escarpment areas;
- Operation and maintenance costs.

Environmental Site Assessments

d) Where there is reason to believe that there is a possibility of site contamination by virtue of previous land use, physical site evidence, geographic location, municipal databases, landowner disclosure or other sources of information, the Town of Black Diamond will require the applicant for a land use re-designation or a development permit, to provide an Environmental Site Assessment (ESA) according to guidelines developed by the Canadian Standards Association. A qualified professional engineering environmental consulting firm will prepare the

ESA.

A phased approach for investigating site contamination will include:

- Phase 1: Screening;
- Phase 2: Investigation;
- Phase 3: Remediation and Risk Management

Wildlife Corridors and Habitat as Planning Issues

e) The protection of viable wildlife corridors and habitat patches for ungulates, carnivores and other wildlife is a valid and important land use planning consideration in the Town of Black Diamond. Specific land use districts, conservation easements and other implementation tools may be used to ensure protection of wildlife corridors and habitat areas.

Environmental Monitoring

f) Accurate baseline data will be established and incorporated into an annual monitoring program that will track the environmental status of the Town of Black Diamond. Appendix E.

Storm Water Master Plan

g) The Town is encouraged to develop and implement a Master Plan

6.4 WATERCOURSE AND WATER QUALITY POLICIES

Floodway and Flood Fringe Restrictions

a) Development within the established floodway and flood fringe of all watercourses, as designated by the Canada-Alberta Flood Reduction Program shall be restricted and limited to uses such as natural areas, parks, trails and essential utilities that do not impede flood discharge. No development will be allowed other than in existing built up area.

Watercourse Improvements

b) The Town will seek means to improve the Sheep River watercourse and maintain its natural characteristics.

Access to Watercourses

c) To ensure public access to watercourses is retained, a reserve dedication will be required adjacent to the watercourses at the time of subdivision. The width of reserve land will vary depending on the results of an MEIS which will determine the significance of habitat, ecology. geo-technical stability, floodplain and open space/ trail system requirements. The general configuration of reserve adjacent to the watercourse will be established at the area structure plan or outline plan of a subdivision stage.

The width of the reserve is encouraged to be at least 15 metres and be composed of municipal and environmental reserves in accordance with the Act.

Erosion Control and Water Quality

d) Major escarpments are prone to erosion caused by urban development surface runoff. In order to protect water quality, development will be required to mitigate erosion and the potential for increased debris runoff into watercourses.

Groundwater Issues

e) Potential groundwater concerns will be identified as part of the Area Structure Plan, Conceptual Scheme or Area Redevelopment Plan process. Appropriate guidelines will be established for proposed development upon aquifers or lands having capacity for groundwater recharge.

6.5 ESCARPMENT PROTECTION POLICIES

Respect Natural Topography

a) Natural topography should be respected. Grading large flat terraces in order to expand the developable area is not permitted. Smaller terraces and stepped retaining walls may be accepted. In addition, grading or altering topographic features (e.g. knolls, ridge lines, bedrock, outcrops, cliffs, ravines and wetlands) will be avoided

6.6 ENVIRONMENTAL ENHANCEMENT POLICIES

Promotion of Environmental Initiatives

a) The Town of Black Diamond, in conjunction with local interest groups, shall promote environmentally responsible initiatives such as:

- Recycling and waste reduction programs;
- Reduced use of chemical herbicides and pesticides through the introduction of integrated pest management plan;
- The protection of natural area buffers within and between development areas;
- Incorporation of water saving features in new developments;
- Encouragement of water saving features in developed areas.

Native Trees

b) Native trees, shrubs and grasses should be retained or re-planted and indigenous landscaping should be incorporated where appropriate.

Environmental Sensitivity

c) Construction of new transportation facilities that would negatively effect environmentally sensitive areas will be avoided.

Environmental Advisory Committee

d) The Town of Black Diamond should consider the establishment of an environmental advisory committee with primary responsibility in the area of environmental monitoring and review of policies.

7.0 RESIDENTIAL

7.1 BACKGROUND

Since the 1979 General Municipal Plan was developed, Black Diamond has seen a growth of approximately 37%.

The most immediate pressure for development is the attractiveness of the Town of Black Diamond as a “bedroom” community. Housing starts over the past few years have been a result of people seeing Black Diamond as a safe, friendly community.

The present land inventory within the existing Town boundaries should be sufficient to meet the growth needs of the community for the immediate future.

The predominant housing form within the Town of Black Diamond is single detached that makes up approximately 82% of the total housing inventory. Mobile homes is the second largest housing form (8.8%) followed by duplex/ triplex/ quadruplex, collective dwellings and apartments.

7.2 OBJECTIVES

a) To promote and provide the development of safe, attractive and functional neighbourhoods that will meet the household accommodation needs of a full range of socio-economic groups.

b) To maintain the general character and stability of established residential areas while allowing for a limited amount of higher density infill residential development and redevelopment in selected appropriate locations.

c) To develop in a manner that will lead to a variety of land use patterns, while enhancing the Town of Black Diamond’s positive small town atmosphere.

d) To protect residential neighbourhoods by providing adequate separations from adjacent incompatible land uses.

e) To promote development of a community in which residents can live and work locally.

7.3 EXISTING AND GENERAL RESIDENTIAL POLICIES

Future Development

a) Future residential development should be in accordance with the Future Land Use Map.

In-fill/ Redevelopment

b) Where possible, vacant lots in the existing town should be developed and old or dilapidated buildings redeveloped as permitted under the Town's Land Use Bylaw. This would maximize the use of existing utility and transportation systems.

c) The design of in-fill housing will be sensitive to the character and scale of the surrounding area.

Multi-Family

d) Any multi-family developments such as apartments and townhouses shall be spaciously designed so that Council's policy of an "uncrowded" atmosphere in the Town is implemented. Where possible, these uses should be located close to schools, parks and collector roads.

e) Within the older built up part of Town, multiple dwelling residential development should reflect the character of the existing block faces, with respect to style architecture, scale and site layout. Protection of privacy, provision for adequate additional vehicle parking (guest and recreational vehicles) and sufficient landscaped amenity space for residents will be encouraged.

Multi-family Adjacent to Downtown

f) All new multi-residential buildings adjacent to downtown Black Diamond will meet multi-family guidelines as defined in the Town of Black Diamond Old Downtown Redevelopment Concept Plan.

Mixed Use

g) The introduction of residential dwellings located above commercial and industrial use will be supported in the downtown, and light industrial areas.

Density

h) Density range will be 6 – 7 units per gross acre.

On-site Parking

i) Adequate on-site parking is required for residential development of all types.

C.P.T.E.D.

j) Subdivision design should incorporate the Principles of Crime Prevention Through Environmental Design as outlined in Appendix C

Land Competition

k) In order to enhance consumer choice and competition, a range of residential development areas should be available for development in order to encourage competitively priced dwellings.

7.4 SPECIAL NEEDS HOUSING POLICIES

Special Needs Housing

a) The Town of Black Diamond will encourage suitable housing opportunities and convenient community services for residents having special housing requirements.

Inter-Governmental Cooperation

b) The Town of Black Diamond will cooperate with senior governments and private agencies to assist in providing housing to meet the needs of seniors and economically, socially, physically or mentally challenged residents.

8.0 ECONOMIC DEVELOPMENT

8.1 INTRODUCTION

The Town of Black Diamond is located at the junction of Highway #7 and Highway #22 in the foothills of the Rocky Mountains. The town's economic history was founded on the oil and mining industries. Today, although the Town of Black Diamond still benefits from the oil industry and the Town continues to have a strong agricultural base. This continues to provide a close economic and cultural tie with the agricultural community. The provision of educational and health services, a growing artistic community and tourism – a result of being the "Heart" of the Cowboy Trail – enhances the strength of the Town.

This section is intended to provide direction for commercial, industrial and tourism.

In the 1979 GMP it was stated that "*The Town welcomes all ranges of commercial activities and will provide areas for commercial expansion while maintaining the existing main business area."*

With respect to industry it was stated that *"The Town wishes to attract a range of industries which will provide new employment opportunities and help contribute to the strength of the local economy."*

8.2 OBJECTIVES

a) To accommodate a variety of commercial, industrial and tourism opportunities within the Town of Black Diamond.

b) To create a climate conducive to economic development.

c) To strengthen the existing commercial/ industrial tax base by accommodating appropriate new clean environmentally conscious development in the commercial, industrial and tourism sectors to meet the needs of residents and visitors.

d) To reinforce the downtown as the primary retail area.

e) To promote and reinforce Black Diamond as the "Heart" of the Cowboy Trail.

8.3 GENERAL COMMERCIAL POLICIES

Future Development

a) Future commercial development shall occur in accordance with the Land Use map.

Central Business District

b) The Central Business District shall remain as the civic, social, retail, professional and entertainment heart of Black Diamond.

c) Immediate small scale retail development will be channeled into the existing Central Business District by renewing old properties and infilling vacant lots.

d) Council will examine the possibility of expanding the Central Business District (C.B.D.) when land for further commercial development is not available within the existing C.B. District. At present there appears there will be sufficient land to meet short to medium term commercial (C.B.D.) requirements**.**

Highway Commercial

e) Commercial development to serve the travelling public will be eventually located in the Highway Commercial sites adjacent to Highway No. 22 and 7. Access into these sites will be via a service road and the location and number of accesses onto the Highway will be subject to approval by Alberta Transportation.

f) A high standard of appearance is desired along Highway No. 22 and 7 in order to establish a positive visual image of Black Diamond along these corridors.

Design Guidelines

g) New buildings and renovations to existing buildings should follow the design principles of the Main Street program and design guidelines.

8.4 GENERAL INDUSTRIAL POLICIES

Future Development

a) Future industrial development should be in accordance with the Future Land Use Map.

Industries not Permitted

b) New industries that create air pollution, negative environmental impacts or noxious odors will be discouraged to locate in the Town of Black Diamond.

Central Business District

c) Existing industrial activities in the Central Business District will be encouraged to relocate to new industrial sites as they become available.

9.0 HERITAGE PRESERVATION

9.1 INTRODUCTION

Heritage appreciation efforts look to the preservation and rehabilitation of significant heritage buildings and to the development of new built form and urban environments that respond to the community's past.

Throughout Alberta's history, the downtown core has represented the heart and soul of the community life and has played an important role in commercial, cultural and social development. The architectural character of downtown Black Diamond is reflective of those early times.

With it small frame buildings of wood siding and false fronts, downtown Black Diamond is an example of an early generation, \'93boomtown\'94 Alberta Main Street of which few survive today. This distinctive character is part of the Town's history and an asset that the community wishes to protect and promote. To this end successful new development should balance historical continuity and integrity with design vitality and originality.

In 1999, the Town of Black Diamond became a partner in the Alberta Main Street Programme. The Alberta main Street Programme helps communities to capitalize on their historical resources and reinforce the image of downtown has a hub of activity.

9.2 OBJECTIVES

a) To encourage the conservation and retention of historic resources in Black Diamond, as well as encourage the adaptive re-use of significant residential, commercial and industrial sites.

b) To recognize the importance of Black Diamond's multi-faceted heritage in creating its unique sense of place and strategic advantage.

c) To reinforce and promote architectural aesthetics which reflect Black Diamond's unique natural environment, heritage and sense of place.

9.3 HERITAGE PRESERVATION POLICIES

Design Guidelines

a) The Town of Black Diamond will implement the architectural design guidelines developed through the Black Diamond Main Street Project.

Partnerships

b) The Town of Black Diamond will cooperate with other levels of government, private agencies and individuals in the preservation of historic and archaeological resources.

Building Restoration

c) In partnership with the Alberta Main Street Programme, the Town of Black Diamond will encourage owners of significant historic/ heritage buildings to restore their buildings to their original appearance.

Street Naming

d) The Town of Black Diamond will encourage developers to use the names of local significance in the naming of streets and subdivisions.

10.0 PARKS, OPEN SPACE, SCHOOLS, RECREATION AND CULTURAL FACILITIES

10.1 INTRODUCTION

In keeping with the Town of Black Diamond's vision of maintaining a healthy community and offering a high quality of life its, residents are provided with a wide variety of educational facilities, community facilities and programs. Recreational facilities include parks, playgrounds, arena, curling rink, ball diamonds, sport fields, library and civic centre.

There are also active community services, cultural, religious and volunteer organizations active in the community.

10.2 OBJECTIVES

a) To provide parks and recreational facilities to serve the needs of residents and visitors.

b) To ensure the development of a comprehensive recreation network including trails, recreation facilities, open space and parks, heritage resources and natural areas.

c) To develop a trail system along water bodies, escarpments, and through the open space network.

d) To meet community needs through the development of a Recreation and Culture Master Plan.

10.3 PATHWAY POLICIES

Pathway System

a) In all cases, priority will be placed on providing parks and walkway facilities that will require a minimum of maintenance and ensure accessibility**.**

b) A walkway / bikeway system will be developed along lands in the flood risk area. The walkway/ bikeway will then be linked to the school sites and parks within the Town and to the Town of Turner Valley. Bikeways will be for the use of non-motorized bikes only**.**

Environmental Responsibility

c) Trail development shall be directed away from areas that are ecologically sensitive and the environment must be protected in all trail development activities.

Path Design

d) Major and minor pedestrian paths and bicycle routes shall give consideration to safety and linked to local destinations. Appendix C

Regional Pathways

e) The Town of Black Diamond will cooperate, where appropriate, with other municipalities, government agencies in the development of inter-municipal regional pathways.

10.4 OPEN SPACE POLICIES

Parks Hierarchy

a) An integrated hierarchy of active and passive parks and recreation facilities will be provided in order to meet the needs of the residents. Appendix D provides an overview of park types and development standards.

b) The park in the north of the Town will be maintained in its natural state due to heavy tree cover and the presence of wildlife.

Public Access to Water bodies

c) Provision for public access to permanent water bodies and natural drainage features will be incorporated into subdivision plans, provided it does not negatively impact sensitive natural areas.

Preserving Natural Vegetation

d) Through responsible site planning and design, the Town will maintain natural vegetation and site features throughout the open space system.

Public Access to Viewpoints

e) Public access to scenic vistas and view points will be encouraged by incorporating such sites into the parks and open space network.

Community Maintenance

f) Where appropriate, the Town of Black Diamond encourages community involvement in the maintenance of parks.

10.5 MUNCIPAL RESERVES AND SCHOOL POLICIES

Municipal Reserve Dedication

a) Municipal reserves planned in new housing areas should be located central to the neighbourhoods they serve; this would provide a sizeable parcel that will accommodate varied recreational needs. Smaller parks with play equipment will also be required for the young children.

b) Not withstanding 10.5 (a), the municipal reserve may be used for trails where the trail is part of a larger multi-purpose reserve site and where no other method of securing the land is acceptable to the Town of Black Diamond.

Money-in-lieu/ Deferral

c) Municipal reserve shall be provided by land dedication through the subdivision process. Were impractical to do so, money in lieu of deferral may be considered.

d) The provision of municipal reserve shall be directed firstly to accommodating school and joint use community recreational facilities and secondly to amenity areas such as parks and playgrounds.

Joint Use

e) The joint use of proposed community facility sites for parks and schools will be mutually agreed upon by all School Board and the Town of Black Diamond through a "Joint Use Agreement".

10.6 RECREATION AND CULTURE POLICIES

Meeting Local Needs

a) The Town's development philosophy for recreation and leisure programs should be focused upon meeting local resident demands.

Cultural Program

b) The Town shall endeavour to provide cultural resources, programs, experiences and facilities that effectively serve a population with varied cultural interests and backgrounds.

User Supported Facilities

c) The development of public recreational and cultural facilities should generally be based upon the commitment of users to raise funds, support capital development costs,

and support operational costs through user fees.

11.0 COMMUNITY AND EMERGENCY SERVICES

11.1 INTRODUCTION

As indicated previously, the Town of Black Diamond's vision is to maintain a healthy community and offer a high quality of life.

Fire and emergency services protection is available with a volunteer fire department. The R.C.M.P. and Town of Black Diamond Special Constable/ By-law Enforcement Officer provide policing.

11.2 OBJECTIVES

a) To ensure that an appropriate level of public emergency services are provided to meet the demands of growth.

b) To ensure that a wide range of community services are provided for community residents.

c) To ensure the provision of health, welfare and social services are affordable and accessible to residents of Black Diamond.

d) To be committed to community based services with a focus on early intervention/ prevention.

11.3 COMMUNITY SERVICES POLICIES

Family and Community Support Services

a) The Town of Black Diamond supports Family and Community Support Services. (FCSS)

Library Services

b) The Town will provide library services as required to meet growth in public demand and evaluate financial options for improving the quality and quantity of library holdings and services.

Hospital and Extended Care

c) The Town will participate with the Regional health Authority to ensure an appropriate level of hospital services including extended care services for seniors.

11.4 EMERGENCY SERVICES POLICIES

Emergency Services

a) The Town, commensurate with available capital resources, will endeavour to provide fire, and disaster emergency services to meet the needs of residents. The Town will work with the Foothills Emergency Services in the provision of ambulance and emergency medical services.

Emergency Response Plan

b) The Town will ensure that the Emergency Response Plan/ Disaster Services Plan is periodically reviewed and adjusted for new population growth and development.

Police Protection

c) The Town will cooperate with the Royal Canadian Mounted Police to ensure that the level of police protection and facilities is appropriate to meet community needs.

12.0 TRANSPORTATION AND UTILITIES

12.1 INTRODUCTION

The Town of Black Diamond will continue to ensure that transportation and utility infrastructure is provided to balance the requirements for environmental protection, economic efficiency and accommodation of new population, commercial and industrial growth.

The water is provided from a series of wells treated and stored in a reservoir with a capacity of 4,546,000 litres (1,000,000 gals). Sanitary sewer treatment is through lagoons.

The Town has kept up with change through the upgrade of municipal offices and upgrade of maintenance equipment.

12.2 OBJECTIVES

a) To provide for the safe and efficient movement of people, goods and vehicles.

b) To provide residents with a well-developed transportation network.

c) To ensure that utility systems are upgraded and expanded in an environmentally sensitive and fiscally responsible manner to coincide with future growth.

12.3 TRANSPORTATION POLICIES

Highway Commercial

a) All new Highway Commercial sites will require a service road system. Direct access from each site onto the highway shall not be permitted

Residential Areas

b) New residential areas will be designed to minimize through traffic.

Staging of Roadway Improvement

c) Major improvements and expansions to the roadway system shall be staged to coincide with development or to relieve existing traffic congestion and safety problems in the system.

Developer Pay

d) The developer will fund new transportation linkages and

associated infrastructure that is required as a direct result of new development.

12.4 UTILITY POLICIES

Future Upgrading

a) Future utility upgrading will be programmed to accommodate projected land use and population density.

Developer Responsibility

b) All developers will be fully responsible for servicing their land and the related utility upgrading costs.

Design Standards

c) All utility servicing infrastructure will comply with Town of Black Diamond Engineering Design Standards.

Cost Recovery

d) Prior to approval of major utility extensions or upgrading, the Town will ensure that all construction and operating costs to accommodate growth will be recovered from benefiting users and/or landowners.

13.0 POLICY REVIEW

The areas identified as policy review on the land use concept map contains lands that may have particular development issues that need to be addressed before designation and future development can occur. Council wishes to exercise particular control through site specific land use proposals adopted under a Direct Control District and Public Consultation process.

14.0 REGIONAL COOPERATION

14.1 INTRODUCTION

In 1996 a draft Intermunicipal Development Plan was developed that involved the Town of Black Diamond, Town of Turner valley and the MD of Foothills.

As well, initial amalgamation discussions have been held between the Town of Black Diamond and the Town of Turner Valley.

Within this context it will be essential to identify common objectives on a regional bases.

14.2 OBJECTIVES

a) To promote cooperation, on-going consultation and dialogue and sharing of information amongst the Town of Black Diamond, Town of Turner Valley and the MD of Foothills.

b) To ensure coordination and consistency in the land use, economic development and environmental protection policies of the Town of Black Diamond, Town of Turner Valley and MD of Foothills.

c) To ensure orderly and cost efficient expansion.

14.3 REGIONAL COOPERATION POLICIES

Intermunicipal Development Plan

a) Cooperate with the Town of Turner Valley and the MD of Foothills in the preparation of the Intermunicipal Development Plan.

Referral of Land Use

b) Where land use and development proposals within the Town are deemed to have an impact on an adjacent jurisdiction, the Town will refer such proposals to the appropriate adjacent jurisdiction for review and comment.

Mandatory Referral Area

c) Cooperate with adjacent jurisdictions to establish a reciprocal system of mandatory referrals for all land use and development applications in close proximity to the Town boundary.

15.0 IMPLEMENTATION AND MONITORING

15.1 IMPLEMENTATION

Responsibility for the implementation of the Town of Black Diamond Municipal Development Plan lies with Town Council, committees of Council, administration and the residents of Black Diamond through their active involvement. Decisions with respect to Land Use Bylaw amendments, development permits and subdivisions must conform to this plan.

15.2 MONITORING

Plan monitoring and review will occur on a regular basis in order to ensure that development is being effectively guided by the Plan policies. It is anticipated that major reviews of the policies and objectives of this document will be initiated within five to ten years after the date of Plan adoption. Amendments to this Plan may also be necessary in response to changing development trends, unanticipated external forces or changes in community priorities. As the primary planning document guiding future developments within the Town of Black Diamond, this Plan must continue to reflect the goals and aspirations of the community as changes occur.

15.3 OBJECTIVES

a) To ensure the implementation of the plan proceeds in a coordinated and cost-effective manner.

b) To provide for monitoring, review and updating of the Municipal Development Plan from time to time.

c) To involve citizen's in monitoring the Town of Black Diamond's quality of life.

d) To anticipate the rate of growth in order to minimize negative financial impacts on the Town of Black Diamond.

e) To minimize capital expenditures on infrastructure through the promotion of efficient patterns of development.

15.4 IMPLEMENTATION ROLES AND RESPONSIBILITIES POLICIES

Town Council

a) Town will adhere to the policies and objectives of this plan.

b) Consult with its administrative staff, committees of Council, and any necessary provincial or federal personnel in the implementation of this plan.

c) Ensure that the goals and objectives of this Plan are consistent with changing community needs and aspirations.

Assignment

d) Assign specific tasks to various boards, agencies and ad-hoc citizen committees related to the implementation, monitoring and review of specific Plan policies.

Public Role

e) Council will encourage public participation in municipal decision making in a manner that does not conflict with the objectives and policies contained within this plan.

15.5 LOCAL AREA PLAN POLICIES

Conformity with MDP

a) All future statutory area plans, including revisions to existing statutory planning documents will conform to the objectives and policies of the Black Diamond MDP.

Changes to the MDP

b) Changes to the MDP should demonstrate substantial benefit to the community, be supported by the community (in Council's view), not cause unacceptable impact to the community:

c) Area Structure Plans and/ or Conceptual Schemes of subdivisions shall address, but not necessarily limited to:
- sequence of development;
- specific land uses;
- general location of public open space;
- General location of schools and community services, where applicable;
- Population density

- Visual impact assessment;
- Design guidelines and architectural controls;
- Location of buffer zones;
- Any reasonable additional information.

15.6 MUNICIPAL FINANCE POLICIES

New Funding Sources

a) Work with senior governments to identify sources of funding for infrastructure and other community needs.

Financial Performance

b) Endeavour to meet or exceed established provincial guidelines for municipal financial performance.

Duplication of Services

c) Cooperate with adjacent municipalities and other authorities to avoid duplication of municipal services.

APPENDIX A

COMMUNITY PROFILE

DEMOGRAPHICS

The following chart profiles the demographics for the Town of Black Diamond based on the census conducted in the community in 2000. A total of 697 household were surveyed.

Males	891
Females	925
Unknown	41
Total	**1857**

Age	Male	Female	Total
Unknown	66	51	117
0-2	19	23	42
2-5	38	39	77
6-10	67	58	125
11-15	82	70	152
16-20	66	60	126
21-25	37	30	67
26-35	90	104	194
36-45	161	169	330
46-55	117	102	219
56-65	71	74	145
66-75	42	53	95
76-85	21	55	76
85+	14	37	51
TOTAL	**891**	**925**	**1857**

Length of Residence (for those over 20 years of age)

Time in Black Diamond	**Count**	**Percentage**
Unknown	43	3.6
Less than 1 year	141	12.0
1 to less than 2 years	102	8.7
2 to less than 5 years	188	16.0
5 years or more	703	59.7
TOTAL	**1177**	100.0

HOUSING TYPES

Type	Count
Single detached (or suite in single detached)	570
Duplex Units	16
Triplex/ Quadruplex Units	34
Mobile Homes	61
Collective dwellings, apartments, attached to non-residential, other mobile dwellings	15
TOTAL	**697**

Range of Housing options – It was identified that the provision of a wide range of housing options to suit all ages and income was important.

EMPLOYMENT BASE

Employment Category	Count
Full-time	557
Part-time	122
Seasonal	18
Post Secondary Student	7
Unemployed (seeking work)	14
Unemployed	12
Homemaker	59
Retired	288
Other	18
Unknown	82
TOTAL	**1177**

Location of Work	COUNT	PERCENTAGE
Black Diamond	197	28.3
Calgary and surrounding areas	222	31.9
Turner Valley/ Millarville/ MD	83	11.9
Okotoks/ High River/ Longview	90	12.9
Bragg Creek/ Priddis	15	2.2
Rest of Alberta	10	1.4
No usual Place	72	10.3
Outside Alberta	8	1.1
TOTAL	**697**	**100.0**

ECONOMIC BASE

Historically the economic base in the Town of Black Diamond and the surrounding area has primarily been associated with the petroleum industry and farming/ ranching activities.

Industry worked in for the 697 full-time and seasonal workers.

Industry	Count
Agriculture	21
Utilities/ Oil and Gas	52
Food Processing	20
Food and Beverage	35
Retail	73
Hotel/ Motel	9
Transportation	54
Construction	122
Health/ Government/ Education	114
Professional	45
Manufacturing	20
Other	121
Unknown	11
TOTAL	**697**

Economic diversification – The public identified the importance of economic diversification to sustain local employment and maintain the local population.

Lack of available land – Through the community workshop issue identification process, there was concern with respect to readily available and serviced land to attract light industrial operators.

Promotion, retention and growth of current business – Concern was expressed through the community workshop with respect to encouraging local shopping as a major goal and to support and maintain our infrastructure.

Tourism - The participants identified tourism as a key component within the economic development framework and given our historical resources.

APPENDIX B

TOWN OF BLACK DIAMOND
MUNICIPAL DEVELOPMENT/ LAND USE REVIEW TASK FORCE

AND

INDIVIDUALS WHO HELPED IN THE PREPARATION OF THIS PLAN

MUNICIPAL DEVELOPMENT PLAN/
LAND USE BYLAW REVIEW TASK FORCE

Noreen Hatchard – Chair
Member at Large

Robert Smulders
Member at Large

Glenis Currie
Economic Development Committee

Bruno Coats
Member at Large

Kenneth McIntosh
Member at Large

Joseph Patterson
Recreation Board

Rolly Magee
Mayor

Sandra Farr-Jones
Municipal Planning Commission

Marvin Garriott
Councilor

Jane Toews
Councilor

Town Staff

Dianne Kreh – Municipal Administrator
Karl Nemeth – Municipal Planner
Fraser Shaw – Coordinator – Main Street Alberta Project

APPENDIX C

PRINCIPLES OF CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (C.P.T.E.D.)

More detailed information is found in “Design Guide for a Safer City”, City of Edmonton Planning and Development (1995) and “Calgary Safety Audit Handbook”, City of Calgary.

The basic criteria for C.P.T.E.D. is three-fold:

1. Awareness of surrounding environment.

People should be able to see and understand surrounding environment through unobstructed sight lines, adequate lighting and avoidance of hidden places.

2. Visibility by others.

Create the ability to be seen by others and create a sense of ownership through maintenance and management of the built environment.

3. Finding help.

The ability to communicate, find help or escape when in danger through improved signs and designs.

A. SIGHT LINES

The inability to see what is ahead along a route due to sharp corners, walls, earth berms, fences, bushes or pillars is a serious impediment to the feeling of being safe. Large columns, tall privacy fences, overgrown shrubbery and thick barriers adjacent to pedestrian paths could shield an attacker. Dense landscape screens, insets adjacent to paths and long fences that cut off a way to escape a place, could act as entrapments.

Guidelines

1. *Design Visibility.* The design of the built environment should allow for clear sight lines.

2. *Modify Sight lines.* Sharp “blind” corners should be avoided, especially on stairs or corridors.

3. *Problematic Spaces.* Visibility should be taken into account when designing or planning spaces where risk to personal safety is perceived to be high

4. *Future Sight line Impediments.* Landscaping should be planned and trimmed along walkways to maintain an unobstructed view.

B. LIGHTING

Sufficient lighting is necessary for people to see and be seen. Light affects human behaviour. Too much, too little or coloured light has different effects. It takes a few seconds to adapt to a change in light intensity and light colour. Lighting must be planned and evaluated in terms of the use and behaviour it promotes or deters.

Guidelines

1. *Minimum Standards.* Pedestrian walkways, back lanes and access routes open to public spaces should be lit so that a person with normal vision is able to identify a face from a distance of 15 metres. Inset spaces, signs, entrances should be lit.

2. *Necessity of lighting/ improper lighting.* The paths or spaces not intended for nighttime use should remain unlit to avoid giving a false sense of security or impression of use.

3. *Consistency of lighting.* Lighting should be uniformly spread to reduce contrast between shadows and illuminated areas.

4. *Designing* for nighttime use. Project proposals should take into account the nighttime use of the outdoor spaces specifying the type, placement and intensity of lighting.

5. *Protection* of lighting. Light fixtures should be protected against casual vandalism.

6. *Placement* of lighting. Lighting should also be directed on the walkways and possible entrapment spaces rather than on roads only.

7. *Maintenance.* Bushes and trees that block the light should be trimmed. Lighting fixtures should be maintained in a clean condition and promptly replaced if burnt or broken.

C. PREDICTABLE ROUTES

Predictable routes offer no alternative for pedestrians. An attacker can predict where pedestrians will end up once they are on the path.

Guidelines

1. *Visibility of predictable Routes.* If there is a need for the predictable route, it should be designed to incorporate visibility.

2. *Location of predictable routes near entrapment spots.* If there is an entrapment spot or isolated area within 50 – 100 metres of the end of the predictable route, it should be modified or eliminated.

3. *Natural surveillance.* Natural surveillance of the predictable route should be encouraged.

4. *Sight* lines. If a pedestrian cannot see what is on or at the end of a predictable route, lighting should increase the visibility.

5. *Lighting.* Predictable routes should be adequately and uniformly lit.

6. *Alternative route sign*. An alternative well-lit and/ or frequently traveled route should be signed at the entrance.

D. ENTRAPMENT SPOTS

Entrapment spots are small, confined areas near or adjacent to well-traveled routes that are shielded on three sides by some barriers, such as walls or bushes.

Guidelines

1. *Elimination of entrapment spot.* If there is an entrapment spot adjacent to a main pedestrian route i.e. hidden area below or above grade, private dead alley, walled area or storage area, it should be eliminated.

2. *Visibility.* It is preferable to have natural surveillance. However, if an entrapment area is unavoidable, this area should be well lit.

3. *Escape route and help.* Design should provide for an opportunity to escape and find help.

APPENDIX D

PARK TYPES AND PROPOSED GUIDELINES FOR DEVELOPMENT

Park Type	Local Tot Lot	Neighbourhood Park	Community Park
Park Description	♦ Intended for local day use by adjacent residents ♦ Caters to users within a comfortable walking distance	♦ The neighbourhood park can contain a wide range of passive and active recreation facilities. ♦ Introduces public open space into the neighbourhood and a public gathering place.	♦ Provides high levels of recreation activities for community wide use. ♦ Caters to structured recreational activities and tournament play.
Size	0.5-1 acre	4.0 acres	10 - 20 acres
Catchment Area	0.5 – 1 KM	2 – 3 KM	5 Km radius or greater
Target User	♦ Pre-school children ♦ Seniors and the less ambulatory	♦ School aged children ♦ Pre-school children ♦ Adults residents	♦ All residents for active and passive recreation ♦ Local sports organizations
Common Activities	♦ Structured but unprogrammed ♦ Playground activities ♦ Walking, sitting, viewing ♦ Informal and passive	♦ Informal or passive ♦ Some field sports ♦ Hard surface court activities ♦ Walking/ jogging ♦ Structured and programmed	♦ League and tournament play ♦ Public gathering ♦ Special community events ♦ Informal and passive recreation ♦ Schools/ education facilities
Facilities	♦ Park furniture ♦ Play structures ♦ Site lighting for safety and security		♦ Play fields, tennis courts ♦ Bleachers ♦ Storage for sports and maintenance equipment ♦ Public washrooms ♦ Site lighting

APPENDIX E

ENVIRONMENTAL MONITORING PROGRAM

Environmental Monitoring Program

The Environmental Monitoring Program is based on some of the principles of a Sustainable Community:

- In a Sustainable Community individual rights are respected and community responsibilities are recognized;
- In a Sustainable Community the integrity of the natural systems will be maintained or improved;
- In a Sustainable Community the responsibility for future environmental health is acknowledged;
- In a Sustainable Community all human and natural needs are respected and conflict is resolve through consensus building;
- In a Sustainable Community, the residents understand there are limits to growth.

To measure progress towards sustainability, it is important that indicators be developed. The indicators will tell you which direction a system, such as environmental is going; up or down, forward or backward, getting better or worse or staying the same.

Samples of indicators are as follows:

a) **Results:** Where possible, indicators should measure results rather than efforts. Results more accurately measure achievement than does information about programs and expenditures.

b) **Accessibility:** Indicator data should be relatively easy to gather and analyze at regular intervals (a year, two years, three years etc)

c) **Documentation:** Indicators need to come from reliable sources, such as official records or research.

The following are goals, objectives and indicators the Town of Black Diamond may consider in developing an environmental monitoring program.

1.0 COMMUNITY AWARENESS

Goal: Provide the opportunity for all members of the community to understand the goals, principles and benefits of environmental sustainability.

Objective and Indicators:

a) Encourage education and media coverage of environmental sustainability, with particular emphasis on what is happening in our community.

# of environmental sustainability focused courses and activities offered in the community.
# of environmental sustainability related articles in community newsletters and local media.
# of environmental sustainability related educational/ consciousness raising activities offered each year in the community; numbers participating.

b) Residents will have opportunities to enjoy Black Diamond/s natural resources.

hectares parkland and open space
kilometres of recreational trails in the community

2.0 WASTE

Goal: To eliminate or reduce the wasteful use of resources and the production of unrecyclable waste byproducts of human activity.

Objectives and Indicators:

a) Recycle usable materials.

kilograms of solid waste landfilled per capita per year.
kilograms of usable material entering landfills.
kilograms of mature compost generated in the region.

a) Minimize the use and unsafe disposal of hazardous material

kilograms of hazardous waste collected for disposal at designated sites.

b) Individuals have a personal responsibility to limit waste.

% or # of individuals participating in waste reduction efforts.

c) Use water efficiently

Per capita water use.

3.0 NATURAL ENVIRONMENT

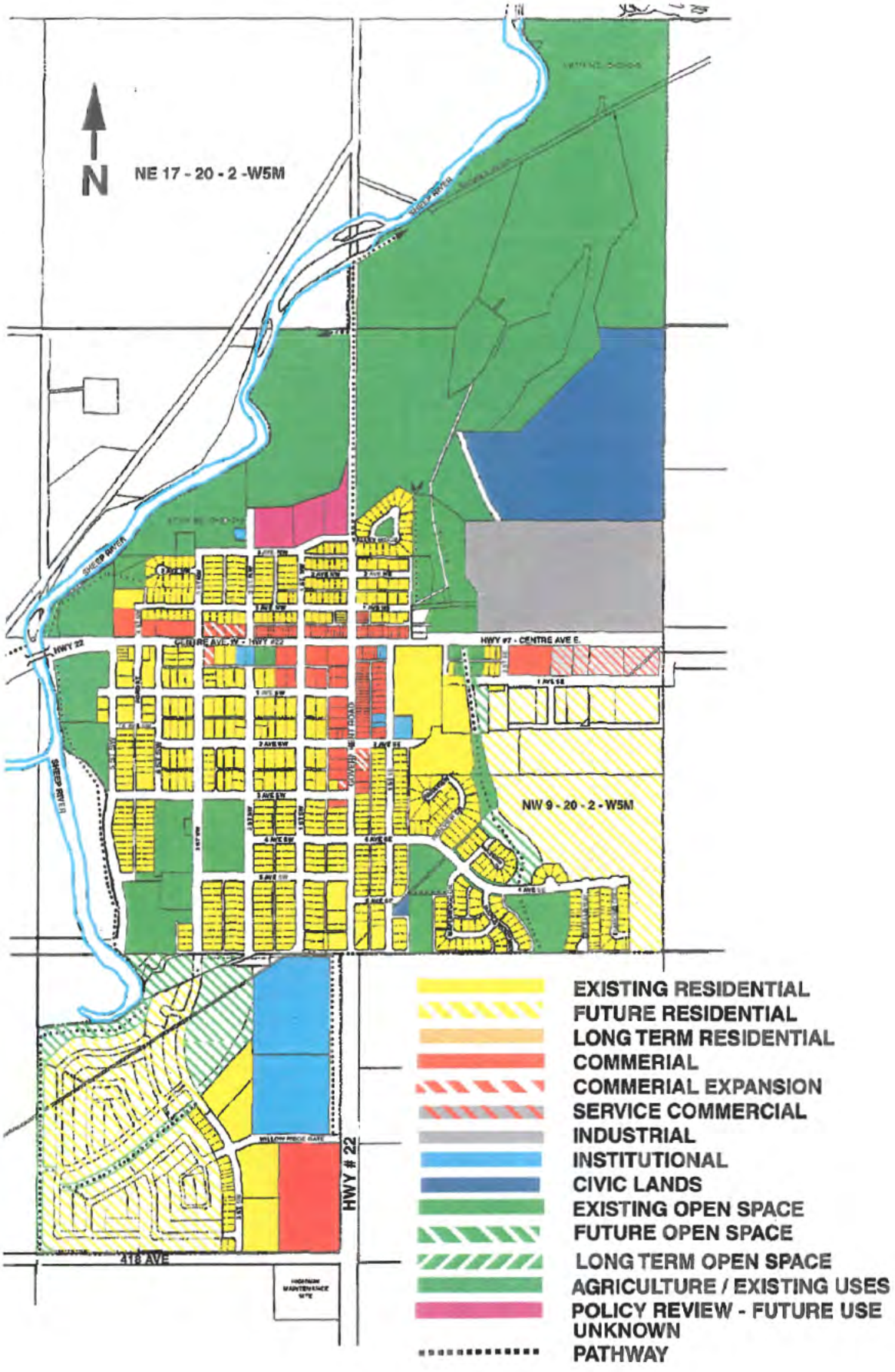
Goal: To protect where possible the long-term integrity of ecosystems and their component parts including air, soil, and aesthetics.

Objective and Indicators.

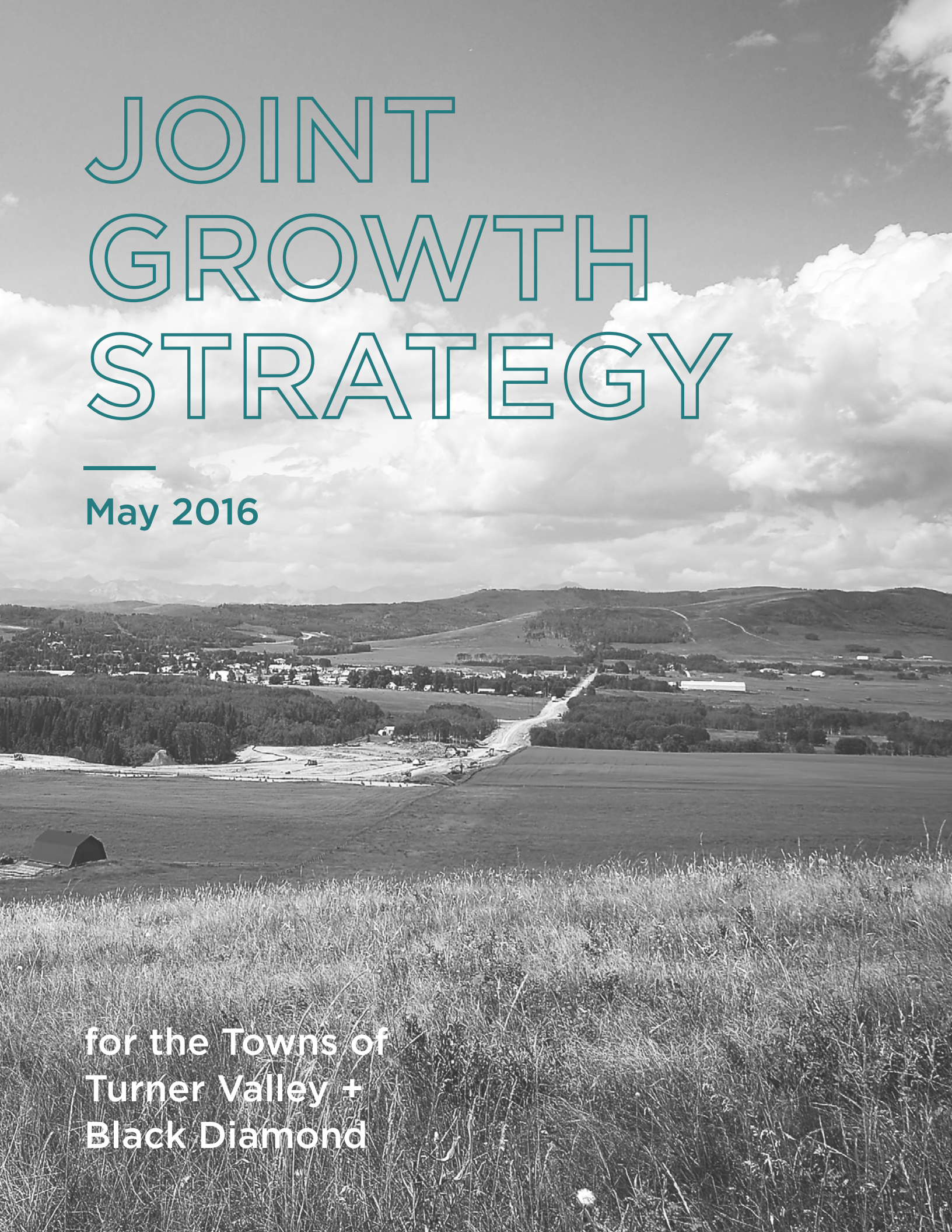
a) Water quality and quantity are sufficient to support the community's population

Water quality parameters (sediment, dissolved oxygen etc)
Total annual water use by sector (residential, commercial, industrial etc)
Nitrate in groundwater
Erosion

LAND USE CONCEPT
BLACK DIAMOND MUNICIPAL DEVELOPMENT PLAN
BYLAW 2001-14
ADOPTED OCTOBER 3, 2001



Appendix I
Town of Turner Valley & Town of Black Diamond Joint Growth Strategy 2016



JOINT GROWTH STRATEGY

May 2016

for the Towns of
Turner Valley +
Black Diamond

Turner Valley + Black Diamond JOINT GROWTH STRATEGY

Prepared for

Town of Black Diamond
Town of Turner Valley

Project Team

PROJECT + PLANNING LEAD: O2 Planning + Design Inc.
GROWTH FORECASTING: Coriolis Consulting Corp.
TRANSPORTATION + CIVIL ENGINEERING: Urban Systems
CIVIL ENGINEERING: MPE Engineering Ltd.

O2

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1 An Overview

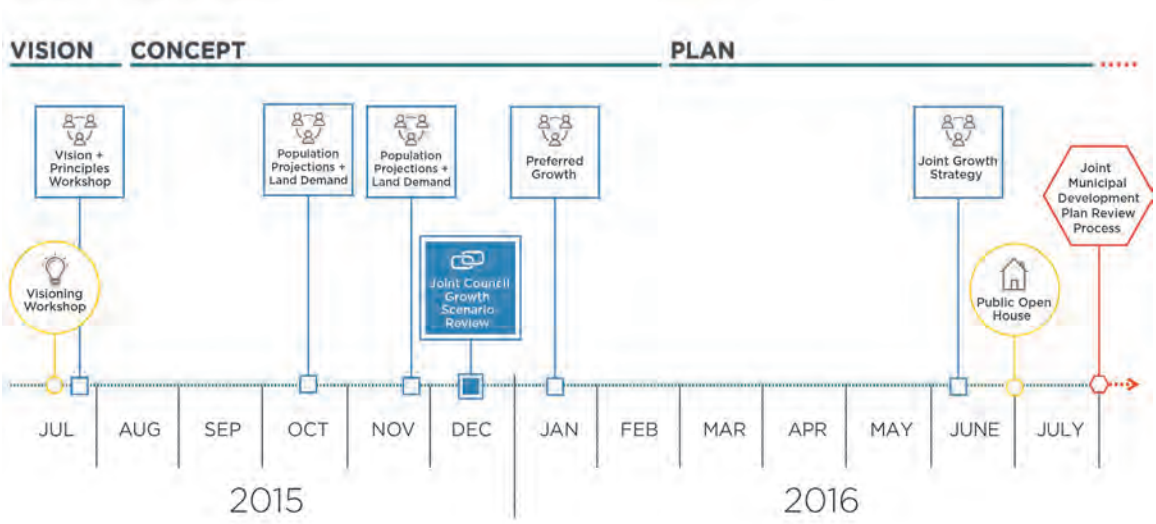
Overview

The Turner Valley and Black Diamond Joint Growth Strategy (the Joint Growth Strategy) is a coordinated effort between the two towns to define and plan for a shared vision of long-term growth. The vision in the Joint Growth Strategy will become the foundation for the Towns to review and update their Municipal Development Plans (MDPs), plan and coordinate future infrastructure investments, and work with the Municipal District of Foothills No. 31 (the MD of Foothills) to review and update the *Intermunicipal Development Plan*. As the towns have limited capacity for future growth within their existing boundaries, the Joint Growth Strategy will also inform future annexation processes.

The development of the Joint Growth Strategy included an assessment of: land needs (based on expected population growth), land suitability, and associated implications for infrastructure servicing. The Joint Growth Strategy illustrates efficient, responsible, and sustainable scenarios of future growth over the next 60 years. This document and process was guided by the Joint Advisory Committee (the Committee), a committee specially formed of members from the towns' councils to examine growth scenarios without considering town boundaries as constraints. The Joint Growth Strategy presents three scenarios of growth, the last of which the Committee has identified as the preferred scenario — a scenario that embodies the towns' vision and principles for future growth.

FIGURE 1. PROJECT PROCESS TIMELINE

This figure illustrates the project process, including major milestones, engagement events, and workshops.



Project Process

The Towns of Turner Valley and Black Diamond approached this project with a long history of collaboration and partnership. Through mutual interests and shared benefits, the Towns aim to define a shared vision for the long-term growth of Turner Valley and Black Diamond, and in doing so inform the joint review of the Towns' MDPs.

The development of a shared and inclusive vision for the Joint Growth Strategy, evolved through work with the two Town Councils, the Committee, and the public. Refer to Figure 1. Project Process Timeline for an overview of the project process.

Engagement with the public and the Committee throughout the project process was informed by a set of Planning Principles that were identified at the beginning of the project to ensure a successful process. These principles are based on best practices and standards in the planning field. Throughout the project process, the Joint Growth Strategy upheld the following Planning Principles to be a process that was:

- **Comprehensive.** All significant options and impacts are explored.
- **Efficient.** The process should not waste time or money.
- **Logical.** Each step leads to the next.
- **Balanced.** Outcomes consider fiscal and environmental sustainability.
- **Resilient.** Diversified land base for changing demographics and economies.
- **Integrated.** Short-term decisions support strategic, long-term goals.
- **Inclusive.** People affected by the plan have opportunities to be involved.
- **Transparent.** Everyone involved understands how the process operates.
- **Informative.** Results are understood by affected stakeholders.

The public provided input largely in the beginning of the project, through two Community Visioning Workshops, both held on July 14, 2015. Roughly 70 people attended these workshops, which were designed to: (1) understand valued community places and characteristics, (2) identify areas of concern and opportunities for improvement, and (3) develop shared growth goals, principles, and vision. As a result, several key ideas arose from the workshops. For the 30-year vision of the towns, workshop participants want to see Turner Valley and Black Diamond become:

- A thriving, self-sustained community.
- A community with a small town feel, close-knit neighbours, and an active cultural scene.
- A community that is a leader in innovation and sustainability.
- A community with well-designed, diverse, and connected neighbourhoods and open spaces.
- Two towns that become one – "Diamond Valley."

In parallel to this engagement with the public, the Committee also provided input and feedback throughout the project, including two events: a Vision and Principles Workshop, and a Growth Scenario Review, held in July and December of 2015, respectively. Together, ideas from the public and the recommendations from the Joint Advisory Committee were the basis for the development of the Joint Growth Strategy's Vision and Principles, and informed the development of the growth scenarios, as well as the recommendation of the preferred scenario.

Vision + Principles

The Vision and Principles were developed based on input received during the community visioning session and the first Joint Advisory Committee Meeting held on July 21, 2015.

Vision

In 2075, Black Diamond and Turner Valley are innovative, self-sustained and inclusive communities with strong western roots and a long history of partnership and cooperation. Nestled in the foothills of the Rocky Mountains, the Towns are joined by the Sheep River Valley and the Cowboy Trail, providing a range of opportunities for residents and visitors alike to access and enjoy the area's many amenities, open spaces, views and natural landscapes. Together, the Towns provide a high quality of life for all residents, supported by an active and close-knit community; a thriving and diverse local economy; healthy and connected ecosystems; and efficient infrastructure that enables sustainable growth and development well into the future.

Principles

Jurisdictional Neutrality. The development of the Joint Growth Strategy is a cooperative effort intended to serve both the Town of Black Diamond and the Town of Turner Valley. To accommodate future population and employment growth within the most suitable areas, the planning process assumes jurisdictional neutrality and assesses the entire study area. Additionally, any intent of individual landowners to develop their property is not considered in the allocation of future growth.

Equity + Inclusivity. The development and implementation of the Joint Growth Strategy is based upon a long history of partnership and cooperation. The planning process is committed to ensuring that future costs and benefits are equitably distributed between the Town of Black Diamond and Town of Turner Valley. The process is transparent and works to build consensus-based solutions that respect the needs and perspectives of all stakeholders.

Efficiency. The Joint Growth Strategy aims to increase servicing efficiency and reduce the cost of accommodating future growth. To achieve efficiency, the planning process identifies servicing overlaps, integrates opportunities for shared infrastructure and establishes a strategy for the prioritization of future growth areas.

Sustainability. A sustainable approach to planning considers economic, social, and environmental implications in an integrated and responsible manner. The Joint Growth Strategy will support economic vitality and complete communities, and will ensure the needs of the present are met while preserving the welfare of future generations. Environmentally significant areas and natural ecological resources will be maintained and conserved.

Flexibility + Resilience. The long-term success of both Black Diamond and Turner Valley depends on their ability to evolve and adapt to changing realities. The Joint Growth Strategy incorporates flexible scenarios that respond to both local and regional growth factors.

Local Knowledge. The Joint Growth Strategy is developed in consultation with both communities, with input from municipal staff, key stakeholders and local residents integrated at each stage of the planning process.

Report Approach and Content

The growth of cities and towns is affected by a variety of factors, including municipal, regional, and provincial policies; land tenure; infrastructure; housing preferences; changing land demands; and physical and fiscal limitations. To ensure an integrated and coordinated planning approach between the Towns and within a regional context, a consistent evaluation framework was used throughout the land assessment and scenario development processes, guaranteeing that all planning challenges were addressed.

To illustrate the process and highlight the growth scenarios, the Joint Growth Strategy is comprised of the following content:

- **Local Context** provides an overview of:
    a. The Towns' **policy framework**, which includes existing policy documents and plans, for both the local and regional context.
    b. A **land supply assessment** that provides an analysis of the available land supplies within the Study Area in order to determine key opportunities and constraints. In this assessment, areas are identified that (a) are vulnerable and warrant preservation and protection, and (b) are most suitable for future development, i.e. free from physical and regulatory constraints.
    c. A brief glance at the **infrastructure capacity** in the Study Area, including transportation, potable water, stormwater, and wastewater, as well as the methodology and assumptions for the assessment of development impacts on these infrastructure servicing systems.
- **Projected Land Needs** is a summary of projected land requirements to support population growth over 30- and 60-year planning horizons. Subsequently, this section also includes the impacts of future population growth on residential, commercial, and industrial land demand.
- **Scenarios for Growth** provides an overview of the three scenarios of growth: Scenario 1: Two Towns Grow Together, Scenario 2: Two Towns Grow Apart, and Scenario 3: Joint Advisory Committee Direction. In this section, the overall scenario concept (land uses and land area), as well as infrastructure needs and costs, are included for each scenario and compared among all three.
- The document concludes with **Considerations for Future Growth Planning**, including a general phasing for the growth based on servicing and land use considerations.
- Additionally, **four appendices** are included to provide more detail on the Joint Growth Strategy results, including the land demand projection analysis and infrastructure assessments for all three scenarios.



Context

Context

Located in southern Alberta, within the MD of Foothills, the Town of Turner Valley and the Town of Black Diamond are approximately half a mile apart, both located along the Sheep River. The Study Area for the Joint Growth Strategy includes the two towns and roughly 65.5 adjacent quarter sections of land within the MD of Foothills. The location of the two towns within the region is illustrated in Figure 2. Growth Study Area.

Named after the first settlers in the area, Turner Valley was incorporated as a town in 1930. Further down the Sheep River, the Town of Black Diamond was named after the nearby high grade yielding coal mine. In 1914, a discovery of the first major natural gas and oil field in Alberta sparked the development of both towns through the mid-1940s, until the field was depleted and the industry shifted further north in Alberta. Today, both are small, thriving towns within Calgary's urban fringe that capitalize on recreation-oriented activities and tourism along the Cowboy Trail – the 700km north-south route along Highway 22.

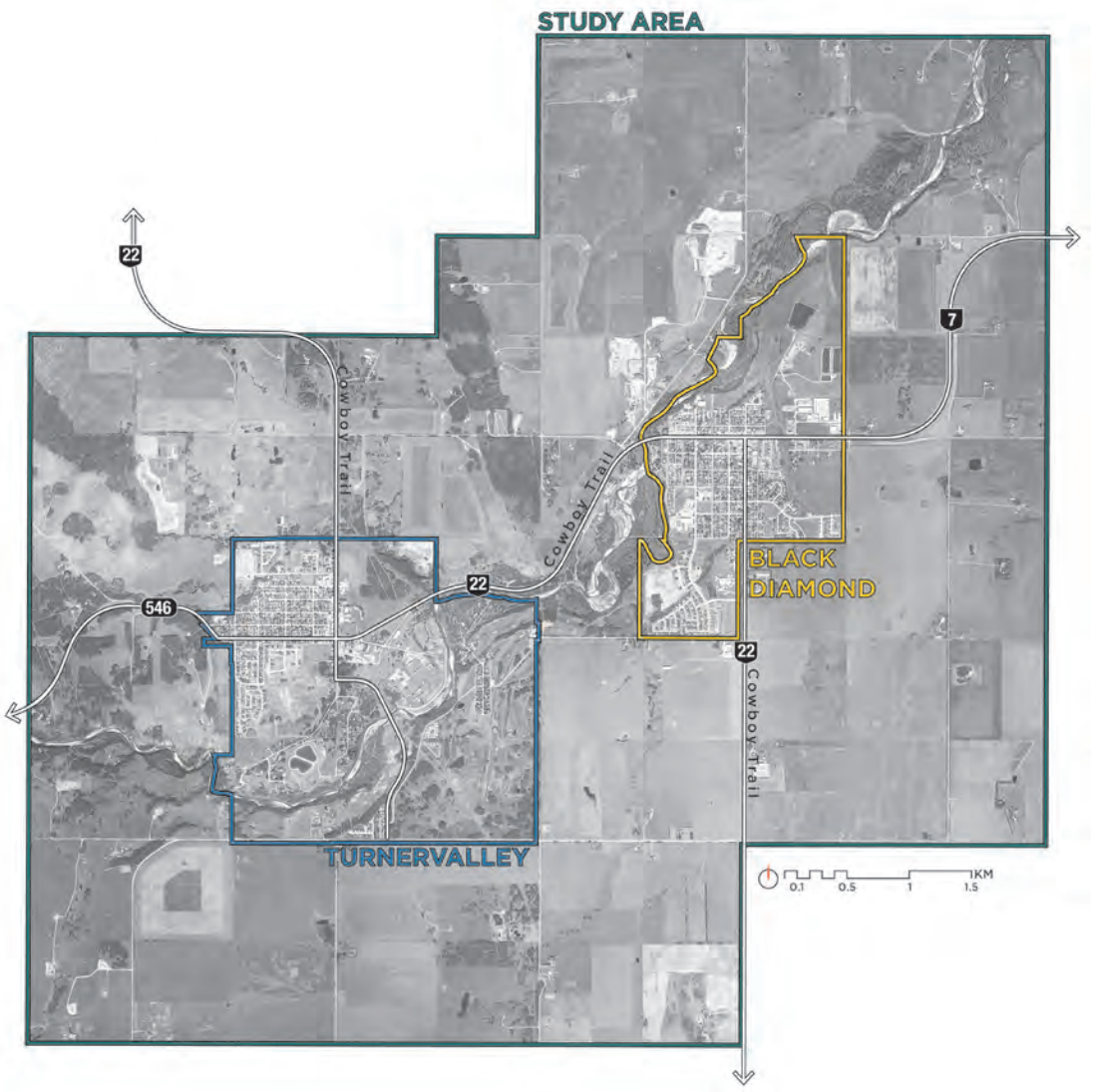


FIGURE 2. GROWTH STUDY AREA

This map illustrates the boundaries of both towns, as well as the defined study area for the development of the growth strategy.

Policy Framework

In Alberta, planning policy and enabling legislation provide for a system where responsibilities for current and long-term planning are shared between the provincial and municipal governments. Broad goals and objectives, and legal requirements for land uses and associated plans are established at the provincial level, while municipal governments are responsible for adopting detailed land use policies through Municipal Development Plans (MDPs), Area Structure Plans (ASPs), Land-Use Bylaws, and other documents. Additionally, regional agreements – largely the Calgary Regional Partnership – have an influence on planning decisions in the two towns.

Provincial Land Use Policy and Planning

At the provincial level, two documents are the most pertinent to local planning for Turner Valley and Black Diamond: the *Municipal Government Act* and the *South Saskatchewan Regional Plan*. However, there are a number of other laws and regulations that also impact local planning, including the *Public Lands Act*, the *Subdivision and Development Regulation*, and the *Environmental Protection and Enhancement Act*, among others.

Municipal Government Act (MGA)

The *Municipal Government Act* (MGA) is the primary legislative document for enabling municipal authority and municipalities' formal operating procedures, including a detailed framework for land use decision-making at the local level. Part 17 (Planning and Development) of the MGA outlines components of land use management at the municipal level, including:

- Planning authorities;
- Development plans;
- Land use bylaws;
- Development levies and conditions;
- Land subdivision and conditions for approvals;
- Reserve lands (environmental, municipal, and school); and
- Appeals processes.

The MGA also establishes statutory development plans as tools for providing local land use and development decision-making. Statutory plans recognized under the MGA include the following:

- **Intermunicipal Development Plans (IDPs)** are agreements between two or more municipalities, primarily in place to manage fringe areas on boundaries of urban and rural municipalities, and/or to manage natural features shared between multiple jurisdictions.
- **Municipal Development Plans (MDPs)** are required by the MGA for all municipalities with a population of 3,500 or more, and act as the primary policy document for establishing municipal land use policies.
- **Area Structure Plans (ASPs)** establish, for new growth / development, the general land use, transportation, and servicing elements of areas within a municipality.
- **Area Redevelopment Plans (ARPs)** provide guidance on planning policies for areas within a municipality where there is already existing development, and redevelopment is already occurring or is likely to occur.

These statutory plans must address all required components specified in Division 4, Part 17 of the MGA, regarding the content, notification and public consultation processes, and consistency with other statutory plans.

The Alberta Land Stewardship Act and the South Saskatchewan Regional Plan

The *Alberta Land Use Framework* (the Framework) was adopted in 2008, under the *Alberta Land Stewardship Act* (ALSA), as a new approach to manage land and natural resources in the province. The Framework's primary purpose is to achieve key, long-term economic, environmental, and social goals. In accordance with the ALSA, and as part of the Provincial goal to develop seven regional plans for the

province, the *South Saskatchewan Regional Plan* (SSRP) was completed and approved in 2014. As part of the SSRP plan area, the Towns of Turner Valley and Black Diamond must consider and be consistent with SSRP goals and policies when making planning and development decisions. The SSRP and the ALSA have the following implications for the planning and growth of the two towns:

- **Regional plans are binding on local governments,** and all statutory plans must conform to the policies outlined in corresponding regional plans, as well as any sub-regional or issue-specific plans developed under these regional plans.
- **Conservation easements** may be granted to local governments by landowners under the ALSA for the protection, conservation, and enhancement of the environment, aesthetic values, or agriculture.
- **Conservation directives** may be imposed by the Province as part of a regional plan to "protect, conserve, manage, and enhance environmental, natural scenic, aesthetic, or agricultural values" by restricting the use of the land. However, landowners may be eligible for compensation for any subsequent reductions in property value.
- Regional Plans may also include provisions for **conservation off-sets**, where the adverse effects of activities, such as development, may be required to be balanced by approved improvements in a "conservation area." These improvements can be used to assign "stewardship units" to a landowner, which may be traded on an exchange established by the Province.
- The conservation off-set system also allows for the creation, by local authorities, of **transfer of development credits programs**.

?

Gross residential acre *is the acreage of land available for residential development including allowances for roads, municipal reserves, stormwater management, and community services, but excluding non-developable areas (environmental reserve, expressways, railways and lands unsuitable for development) and regional land uses.*

Calgary Regional Partnership

Established in 1999 to facilitate sustainable growth and coordinated development in the Calgary region, the Calgary Regional Partnership (CRP) is a voluntary regional organization of 13 municipalities. Program areas for the CRP include regional initiatives in watershed protection, regional transit and transportation, economic development, land use planning, and regional infrastructure, among others. The *Calgary Metropolitan Plan* (CMP) is the main effort by the CRP to coordinate regional land use planning and other initiatives among member municipalities. As members of the CRP, the Towns of Turner Valley and Black Diamond agree to align their planning and policy development with the goals and policies of the CMP. For the purposes of coordinating long-term growth, there are several specific policy statements in the CMP that have direct impact on the development of the Joint Growth Strategy, including the following:

- **Priority Growth Areas.** The CMP identified specific areas as "Priority Growth Areas" to accommodate future, sustainable growth at urban levels of density. The Priority Growth Areas include some areas within the current boundaries of Turner Valley and Black Diamond.
- **Density and intensification requirements.** Member municipalities should work to achieve residential densities of 8 to 10 units per gross residential acre, with at least 25% of new growth accommodated by redevelopment of existing areas. Turner Valley and Black Diamond do not have a history of intensification, but have rather focused on maintaining their small town atmospheres. Therefore this intensification target will not be included as a factor in determining the amount of residential land needed for future growth. However, the Towns will seek to meet the minimum density target over the next several decades.
- **Development form and location.** New development in Priority Growth Areas should be compact, mixed-use, walkable activity centres, and residential development should be located near local and regional transit.

Local Land Use Policy and Planning

The planning documents relevant to the development of the Joint Growth Strategy are limited, and include just a handful of land use policy and planning documents. Despite their close proximity, the two Towns both operate and function as independent, distinct communities, with their own set of goals and planning documents. However, planning coordination between the two Towns, as well as the MD of Foothills, is achieved through the Intermunicipal Development Plan (IDP). Additionally, this Joint Growth Strategy is also an effort on the part of the Towns to coordinate their planning efforts and maintain a symbiotic relationship between the two towns. Relevant plans and their pertinence to the Joint Growth Strategy are outlined in the following pages.

Municipal Development Plans

Municipal Development Plans (MDPs) are the primary planning documents for municipalities, providing overarching goals for the community, as well as land use planning policies and strategies for future development. While these MDP goals, planning policies, and strategies influenced the development of the Joint Growth Strategy, the subsequent update of these MDPs through a joint planning process, in turn, respond to and help carry forward the Joint Growth Strategy. The two relevant existing MDPs include:

- The *Town of Turner Valley Municipal Development Plan* was approved in 2004 with five planning values in mind: community aesthetics, small town atmosphere, appreciation for heritage, environmental stewardship, and governance.
- The *Town of Black Diamond Municipal Development Plan* was approved in 2001 and is centred around four similar planning values, including positive small town atmosphere, respect for the environment, heritage appreciation, and healthy economic growth.

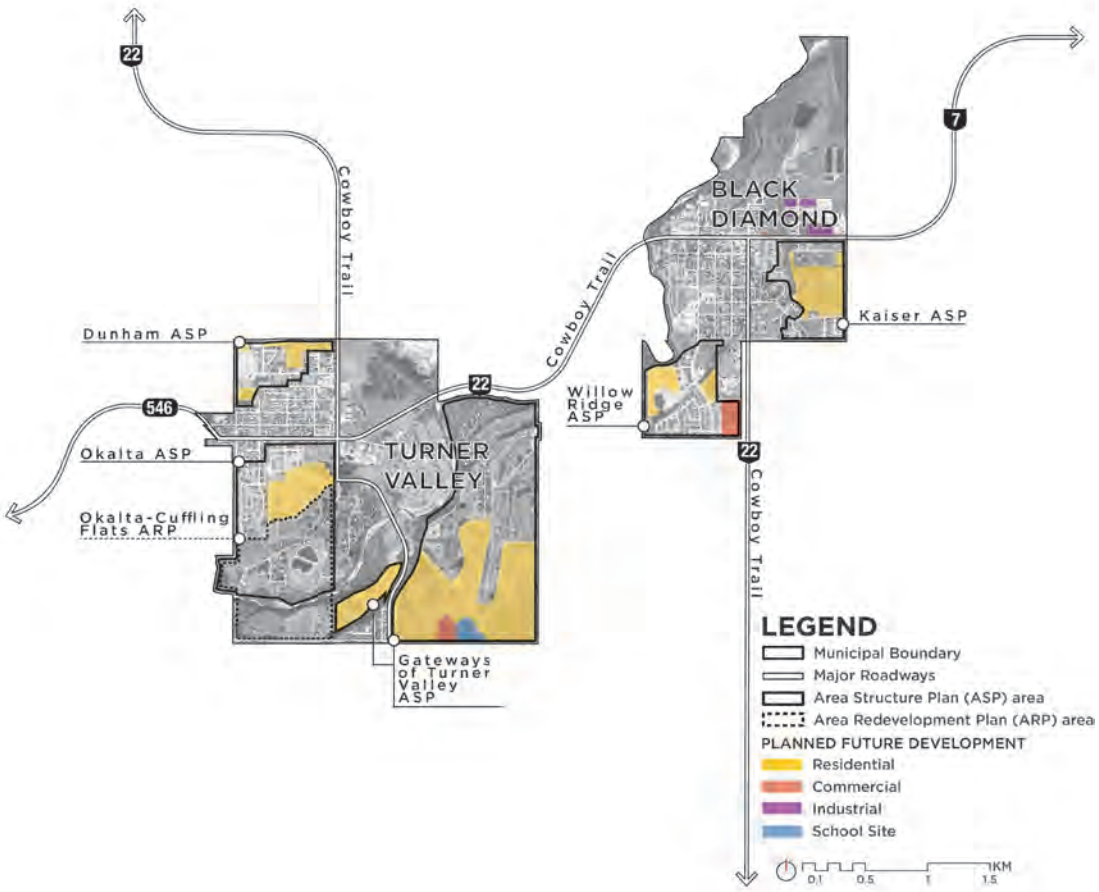
Area Structure/Redevelopment Plans

Within Turner Valley and Black Diamond, there are four pertinent Area Structure Plans (ASPs) and one Area Redevelopment Plan (ARP) (refer to Figure 3. Current Planned Growth for the Two Towns) that helped inform future land use needs and the Joint Growth Strategy. These relevant plans are as follows:

- The *Dunham Area Structure Plan* (1999), a plan for the northwest corner of Turner Valley that is only partially built out, and is comprised primarily of future residential.
- The *Gateways of Turner Valley Area Structure Plan* (2007) is a large portion of the southeast of Turner Valley, adjacent to the Turner Valley Golf Club, that has yet to be developed. The ASP is comprised primarily of proposed residential development, but also contains future commercial and institutional (school) uses.
- The *Okalta Area Structure Plan* (1995) is a partially undeveloped plan for a large area on the western side of Turner Valley just north of the Sheep River. Proposed future development within this ASP is residential uses.
- Within the same area, the draft *Okalta-Cuffling Flats Area Redevelopment Plan* (2015) is a revised plan for the southern, undeveloped portion of the Okalta ASP and the area of land across the Sheep River adjacent to the southern town boundary. The concept for this ARP is a mix of residential densities, with proposed environmental reserve and municipal reserve land, as well as proposed public utility land to accommodate the raw water reservoir.
- The *Kaiser Area Structure Plan* (pending – 2016) is an ASP in-progress for an area of land on the eastern boundary of Black Diamond.
- The *Willow Ridge Area Structure Plan* is largely built out, with the exception of an 11 acre commercial parcel on Highway 22.

FIGURE 3. CURRENT PLANNED GROWTH FOR THE TWO TOWNS

This map illustrates existing ASPs and planned development for the two towns. These future land uses were used to guide the development of the growth strategy.



Intermunicipal Development Plan

The *MD of Foothills / Town of Black Diamond / Town of Turner Valley Intermunicipal Development Plan* was adopted in 2002 by the three partnering municipalities. For the purposes of the Joint Growth Strategy, the IDP provides insight as to the current level of coordination, any potential areas of conflict (as well as areas of future growth), and the collective vision for the border areas of the three municipalities. The IDP has ten identified planning goals, which are as follows:

1. To provide an intermunicipal policy framework to guide future land uses decisions within the plan boundaries which will take into consideration issues such as incompatible uses and manner of proposals for future development (see section 631(2)(a) of the Municipal Government Act).
2. To address requirements of the Municipal Government Act with respect to Intermunicipal conflict resolution procedures, plan administration and plan amendment or repeal procedures (refer to section 631(2)(b) of the Act).
3. To resolve issues related to circulation and referral procedures, including equality of municipal status with respect to referrals, degree of intervention and dispute resolution procedures.
4. To establish principles whereby all municipalities may consistently apply planning policies and land use bylaws within their respective jurisdictions.
5. To protect future servicing and transportation corridors and infrastructure facilities (e.g. Town of Turner Valley and Town of Black Diamond water supplies, the Westend Regional Sewage Services Commission sewage lagoon, utility right-of-ways, Hwy 22, Hwy 7 and SR 546) in the municipalities.

6. To establish principles addressing existing and dominant land uses in the plan area (e.g. Lilyfer Poultry (Black Diamond) Ltd., Sheep Creek Pit, Chase Hoffman Pit, Regional Commission Industrial Lands).
7. To recognize the historical designation of the Turner Valley Gas Plant.
8. To establish principles guiding future uses and development in the Sheep River watershed.
9. To address the relationship of the Intermunicipal Development Plan to any future annexation.
10. To address any significant issues that may be identified through the public participation process.

Along with a review and update of the town's MDPs, an important next step in the implementation of the Joint Growth Strategy will be the review and update of the IDP.

Land Supply Assessment

Identifying the most appropriate lands to support additional growth is necessary, given the gross land requirements to support projected growth over the next 30 and 60 years. To guide recommendations for growth, land in the study area was evaluated for residential, industrial, and commercial uses according to two primary strategies of spatial analysis:

- The **Defensive Strategy** illustrates vulnerable areas that warrant preservation and protection. This analysis highlights areas with key ecological or landscape functions, or where development would require significant modification of the natural landscape to be feasible.
- The **Offensive Strategy** focuses on development hazards or constraints, and areas most suitable for future development and growth. This analysis highlights characteristics that would make the siting of development in an area more or less desirable, with different impacts dependent on the land use: residential, commercial, and industrial.

DEFENSIVE STRATEGY

WATERWAYS + WATERBODIES

WETLANDS

VEGETATED AREAS

STEEP SLOPES

HISTORICAL RESOURCE AREAS

OFFENSIVE STRATEGY

FLOOD HAZARD AREAS

STEEP SLOPES

POTENTIALLY CONTAMINATED SITES

ENERGY INFRASTRUCTURE

SERVICING INFRASTRUCTURE

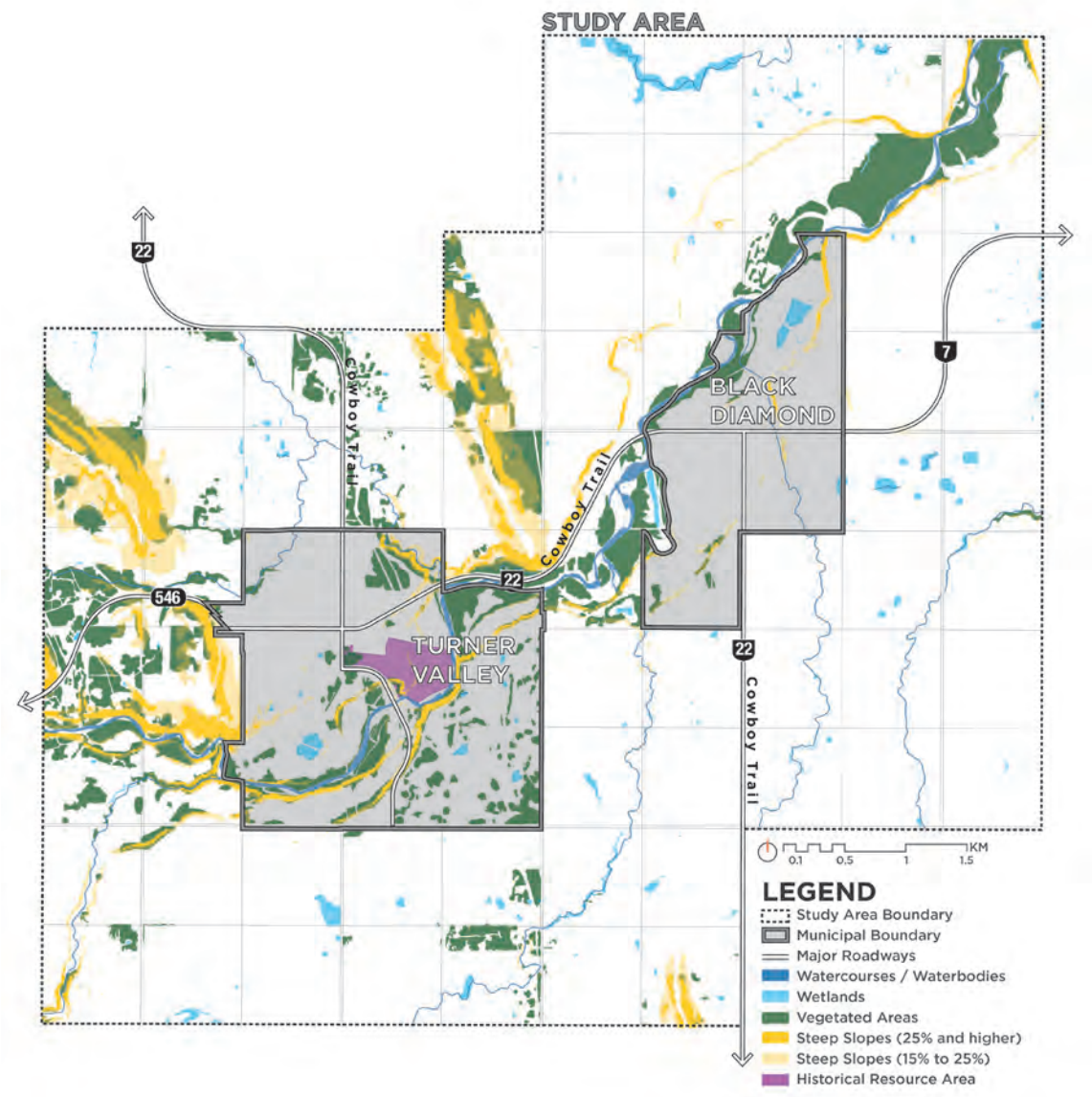
Defensive Strategy

The Defensive Strategy highlights environmentally vulnerable areas and environmental constraints to future development through the spatial analysis of five key factors (refer to Figure 4. Defensive Strategy). These five factors are areas that need to be protected from development, and include:

1. **Waterways and Waterbodies.** This data was provided by the Towns, and consists of the Sheep River and several small tributaries, as well as a MGA-enabled, 6 metre riparian setback from all the watercourses. While 6 metres is the minimum that the Towns can claim as Environmental Reserve, the Towns should also consider the widely used 50 metre setback in planning and designing development adjacent to waterways and waterbodies. Riparian areas, at the interface of land and a waterway, provide critical habitat for plant and wildlife communities. Protecting waterways and their riparian areas is crucial to ensuring buffers from excessive silt and surface run-off pollution, aiding in waterway bank stabilization, providing food, nutrient, and organic matter to the waterway, allowing areas for waterway channel migration, and helping to ensure the overall ecological health and productivity of the waterways.

FIGURE 4. DEFENSIVE STRATEGY

The defensive strategy consists of a spatially analysis of important environmental, historical, and culturally significant factors. This map highlights these areas that should be protected from development, or require specific development considerations.



2. **Wetlands.** Wetlands within the study area were identified (and digitized) based on multiple sets of imagery (in order to account for different seasons and data years). Wetlands are important to include within the defensive strategy as the preservation and management of wetlands is crucial for maintaining watershed health, environmentally significant habitats, and wildlife connectivity. Wetlands act as development constraints, with *Alberta's Wetland Policy* regulating how wetlands are managed in the province to minimize loss and degradation of wetlands, while allowing for continued growth and economic development. Additionally, as critical habitats for wildlife (especially birds), legislation around species-at-risk and migratory birds further protect wetlands.

3. **Vegetated Areas.** Vegetated areas include forested areas, shrubland, and forested riparian areas, all of which were identified (and digitized) in the same process as wetlands, using multiple sets of imagery. Vegetated areas provide wildlife habitat and connectivity, and help mitigate a series of side effects of development, including run-off, slope/soil erosion, air pollution, etc.

4. **Steep Slopes.** Slopes of 15% or more were highlighted due to their higher risk of erosion and instability. These areas are incorporated in the defensive strategy to protect environmentally at-risk areas from development.

5. **Historical Resource Areas.** There is only one historical resource area within the study area, the Turner Valley Gas Plant. A National and Provincial Historic Site, the Turner Valley Gas Plant began with the first drilling onsite in 1913 (oil was struck in 1914). The site was acquired by Alberta Culture in 1988 and designated a Provincial Historic Resource in 1989 and a National Historic Site in 1995 on the basis that the plant, equipment, and processes are of provincial, national, and international significance to the history of industrial technology.

Offensive Strategy

The Offensive Strategy illustrates constraints and hazards that make development more or less desirable through the spatial analysis of five key factors (refer to Figure 5. Offensive Strategy). These five key factors limit or prohibit development, and include:

1. **Flood Hazard Areas**. Since the 1970s, the Province of Alberta has produced (and updated) flood hazard studies and mapping to delineate flood hazard areas along streams and lakes. The last review and update of flooding hazards in the Study Area was completed in 1992, and illustrates areas within three main zones to be protected (to various degrees) from new development:

    - Floodway – the portion of flood hazard area where flows are the deepest, fastest, and most destructive. Typically includes the main channel of a waterway and a portion of the adjacent overbank area.
    - Flood Fringe – the portion of flood hazard area outside of the floodway, where water is generally shallower and flows more slowly than in the floodway.
    - Overland Flow – Areas within the flood hazard area, but outside of the floodway and may include special areas of the flood fringe.

    As demonstrated during the 2013 flood, development within floodways and flood fringe areas is not recommended; even development within some areas of overland flow put development at risk of flooding. Therefore, these areas act as a development constraint, and cannot be recommended as areas for future development. While development is still permitted within flood fringe and overland flow areas (with some stipulations), under provincial legislation, new development in floodways is prohibited.

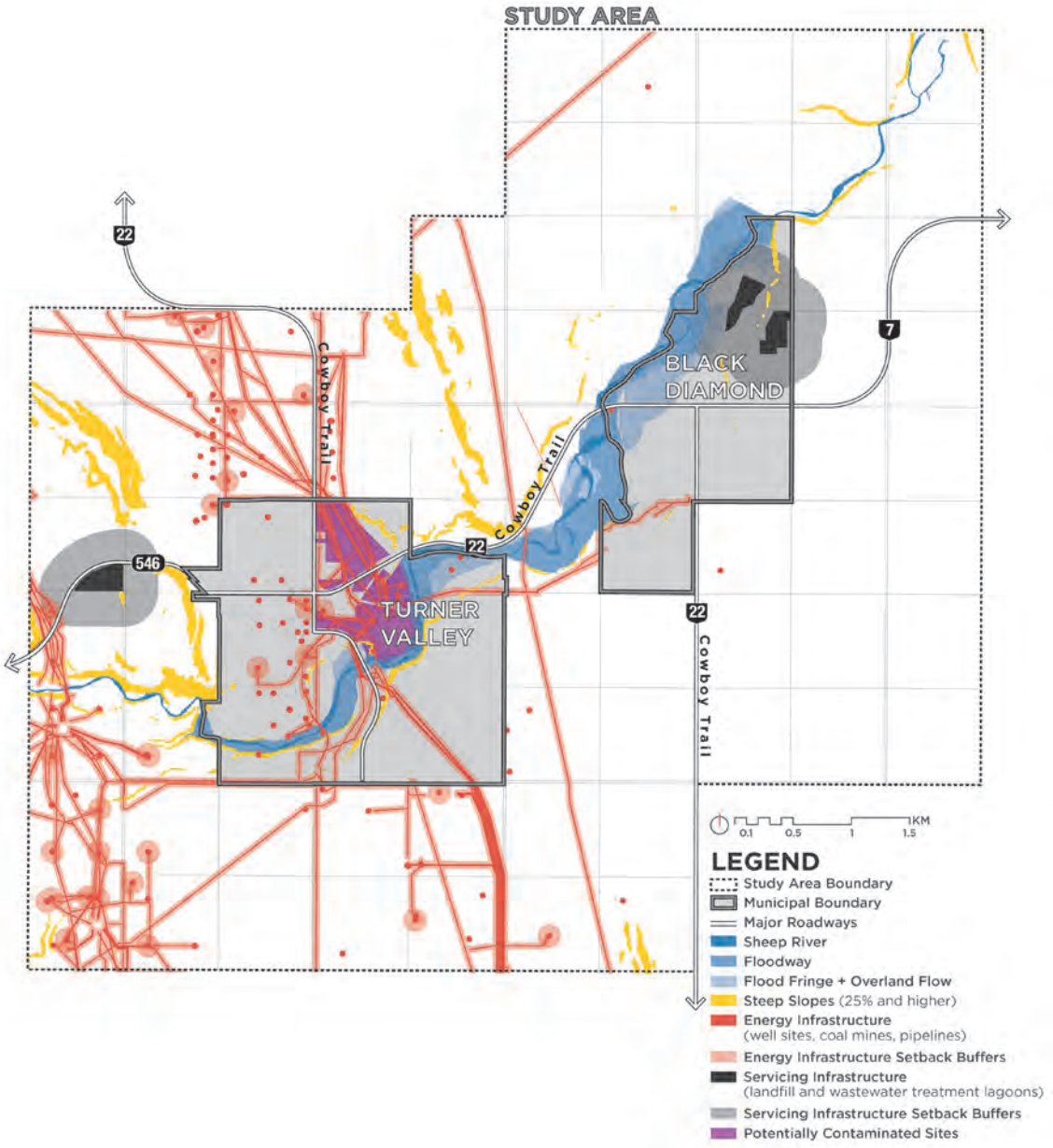
2. **Steep Slopes.** Steep slopes, those 25% or greater, are considered development constraints, as development on these slopes is costly and highly infeasible. While some uses are more feasible on steep slopes than others (residential is more acceptable on a steeper slope than commercial and industrial, because it is a less intensive use), building on these slopes is typically too costly (due to design and construction fees, as well as servicing) to warrant development.

3. **Potentially Contaminated Area.** Potentially contaminated areas (i.e. brownfields) are sites that are either likely or confirmed to have ground contaminants, typically due to a prior industrial use on the site, such as heavy manufacturing or processing plants. These types of areas create constraints for development because they require remediation or reclamation prior to new development to ensure not only the health of residents or workers, but the environmental health of the area. Remediation or reclamation projects can be costly and take several decades to complete, so development of these areas is often not considered cost-effective, or may take too much time and planning. The one identified, potentially contaminated area is the identified Turner Valley Gas Plant and an area to the north, where additional operations previously took place.

4. **Energy Infrastructure.** Energy infrastructure includes coal mines, pipelines, well sites, and other oil and gas facilities. Data received from Alberta Energy Regulator depicts a number of active and inactive operations throughout the area, primarily in and around Turner Valley. In line with provincial and federal policy, active well sites are given a 100 metre setback buffer and abandoned wells are given a 5 metre setback buffer, while safety zones for active and inactive pipelines require a 30 metre setback buffer. As a safety measure, development within these setback areas is prohibited.

FIGURE 5. OFFENSIVE STRATEGY

The offensive strategy consists of a spatial analysis of constraints, as well as hazards that make development more or less desirable. This map highlights areas with development limitations due to policies and regulations, as well as environmental constraints, such as flood plains and steep slopes.



5. **Servicing Infrastructure.** There are two main land uses within the study area that act as development constraints: a non-operating landfill with a required 300 metre setback buffer and wastewater treatment lagoons with required 300 metre setbacks buffers. Within these setback areas, development is prohibited due to a variety of reasons, including health and safety concerns, as well as both activities being considered noxious uses.

Conclusions

The illustration of the two strategies combined highlights the overlaps in areas of environmental vulnerability and physical constraints to future development (refer to Figure 6. Land Supply Assessment). Consequently, several key conclusions can be drawn to inform development within potential growth areas:

» Areas close to the Sheep River are highly sensitive for a variety of reasons (including environmental hazard and legally required setback buffers), and should be avoided for development when possible. It is recommended that the bulk of this area surrounding the Sheep River be designated as park and

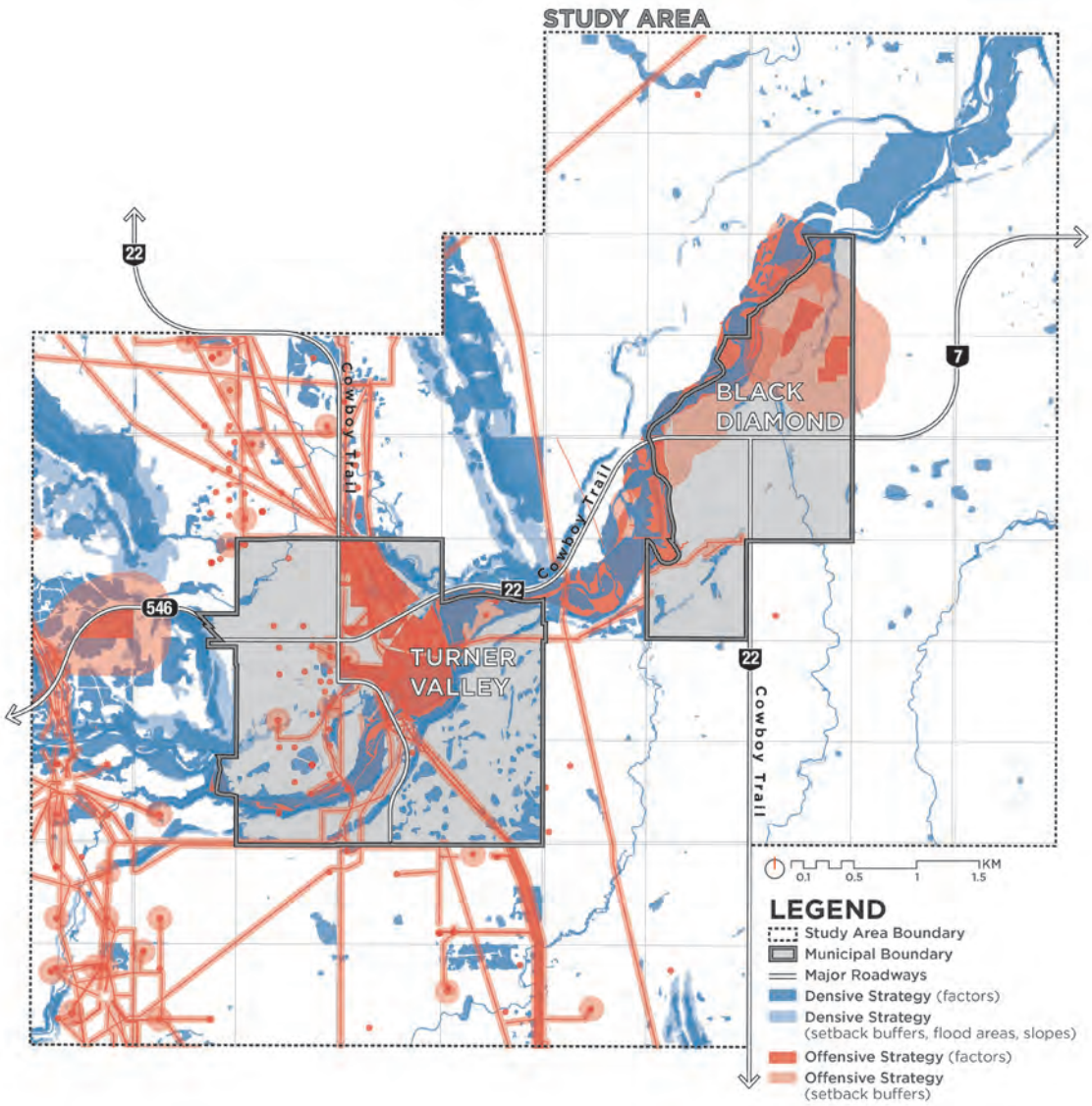


FIGURE 6. LAND SUPPLY ASSESSMENT

Merging the results of the defensive and offensive strategies, this map demonstrates areas with the most development potential, i.e. unfragmented, unconstrained quarter sections.

open space to minimize environmental risks, such as flooding and slope erosion, and meet pipeline setback requirements.

» Areas to the north and west of Turner Valley are much more heavily constrained than areas to the south and east of the town. It is recommended that these areas to the north and west of Turner Valley largely remain rural, as the limited land available for development in these areas is significantly fragmented.

» With large areas of unconstrained land there is significant development potential south and southeast of Black Diamond, and to the east of Turner Valley.

» The feedback during public engagement supports the defensive strategy: residents value and wish to protect the river and waterways; the open, natural environment; and the towns not only as a gateway to Kananaskis, but as a part of the foothills landscape. These defensive strategy factors are also consistent with the Joint Growth Strategy's Vision and Principles, and are inherent to the towns' sense of place and identity.

Existing Infrastructure Capacity

Servicing needs for each scenario (see Part 4) were completed based on existing infrastructure capacity and several baseline assumptions for additional population demand and land development. The following section explores both the existing infrastructure in the study area, as well as the general methodology of analysis of the four infrastructure systems – transportation, potable water, stormwater, and wastewater – that will be significantly impacted by future growth.

Transportation

Context

Three main roads make up both the regional and local road network for Turner Valley and Black Diamond: Highway 22, Highway 7, and Highway 546. Highways 22 and 7 function as both local arterials for the two towns but also connector roads to the region: these two highways both support most of the towns' local commercial services and serve as their "main streets." Highway 546, while also a major arterial for Turner Valley, is mainly considered the gateway road to the Sheep River Valley, providing access to Sheep River Provincial Park. As Highway 546 does not receive a regular amount of heavy road traffic (as it is not a through road, though it does act as an excellent bicycle route), this roadway was not a focus of the transportation analysis. The towns' growth would most heavily impact Highways 22 and 7, the two-lane roadways, with two highways class corridors.

Highway 22 (also known as the Cowboy Trail) is a significant north-south link for the two towns, stretching from Mayerthorpe to the north and Pincher Creek in south, but it is also the primary connection between Black Diamond and Turner Valley. Whereas Highway 22 is a two lane corridor adjacent to residential, agricultural, and commercial land uses, the majority of Highway 7 is limited to acreage developments and businesses. Highway 7 provides an east-west connection, originating in Black Diamond and ultimately connecting to Highway 2. Due to the two highways' heavy use as scenic, regional connections, additional growth of the towns would greatly influence traffic patterns and the capacity of these two highways.

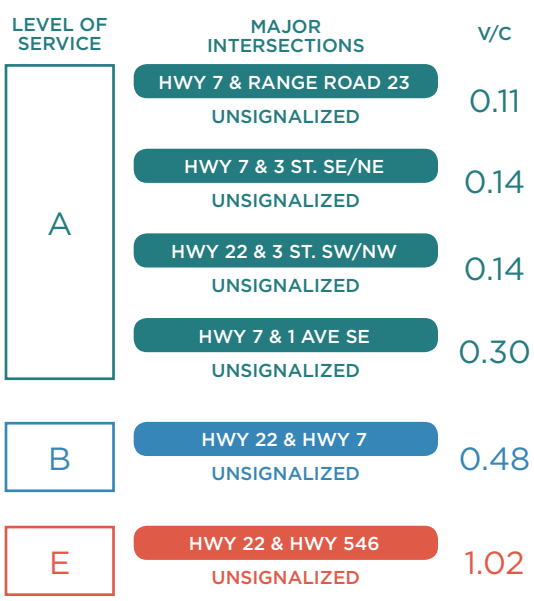
Analysis Methodology

Future traffic volume is the most significant component in determining future transportation impacts of the towns' growth. For the transportation analysis of these growth scenarios, the approximate number of single family units (based on density requirements) in the proposed residential growth areas is evaluated to determine impacts on the volume to capacity ratio (v/c ratio). The v/c ratio indicates the amount of congestion for each lane group; ratios greater than or equal to 1 indicate that the intersection is operating at or above capacity. (Alberta Transportation generally finds v/c ratios of 0.90 or less acceptable.) Necessity for upgrades to the existing road network are determined based on the functional carrying capacity and a v/c ratio greater than 0.90.

Initial traffic analysis on the existing network illustrates that additional capacity is available during the peak period. However, one study intersection in Turner Valley (Highway 546 and Highway 22) currently exceeds capacity during the afternoon peak period. Refer to Figure 7: Afternoon Intersection Level of Service for a summary

FIGURE 7. AFTERNOON INTERSECTION LEVEL OF SERVICE

In a traffic analysis, several key intersections were assessed to determine their current capacity and potential for growth. Only one intersection, that of Highway 22 and Highway546, shows a serious capacity issue.



of intersection analysis during the afternoon period (it should be noted that not all intersections are accounted for due to data deficiencies). This initial baseline analysis illustrates that the existing transportation network has capacity to accommodate at least some additional growth.

For the transportation analysis, the following assumptions and conclusions were made for each scenario:

1. To be conservative, it was assumed that 100% of trips generated will be personal vehicle trips. However, future studies should evaluate the travel mode share within the study areas to determine a more accurate representation of how people move in the communities.
2. Carrying capacity is a function of accessibility and provides an estimate of the number of vehicles a roadway can accommodate. Functional carrying capacity for a corridor is assumed as follows: 800 vehicles per hour per lane for collector and arterial corridors, and 1,800 vehicles per hour per lane for freeway corridors.
3. Widening the Highway (Highways 7 and 22) within Black Diamond's downtown core and Turner Valley will be a significant challenge, as the surrounding areas include existing on-street parking, businesses, institutions (such as Turner Valley's library, RCMP office, and fire hall), and some homes, all of which front the road near (and within) the boundaries of the two towns.
4. Potential improvements to the network include intersection upgrades and options to either widen the existing road network to support the additional growth volumes or build new links. It was determined that widening the highways to increase the capacity would be a last resort, due to the challenges associated with widening, including the impact on existing residents, businesses, and institutions, and the removal of on-street parking.
5. To allow maximum connectivity and access, it is recommended that any proposed major roads should be modeled after the grid network.

In addition to the set of transportation assumptions and conclusions, the following points should be noted for the transportation analysis. Refer to *Appendix B: Joint Growth Strategy Transportation Conceptual Analysis* for the complete methodology and results of the transportation analysis.

- Data for transportation analysis was made available from Alberta Transportation and the Town of Black Diamond. It is important to note that the Town of Turner Valley did not have recent data on its major roads and will require additional evaluation as proposed improvements are taken into consideration.
- The estimated improvement costs provided in this study only account for the new road alignment and locations where traffic signals may be required; property and other impacts have not been accounted into the costing exercise.
- This transportation analysis should only be used for comparison purposes; its use as a planning level cost estimate for budgetary or construction purposes is not appropriate. Should cost to construct or detailed cost estimates be required, a functional study or detailed design exercise should be completed as the next stage in the process. Additionally, more consideration will need to be given to determine appropriate roundabout or traffic signal treatment, as well as an additional traffic impact assessment to select the appropriate treatment to ensure that operational, safety, and property requirements are met.

Potable Water

Context

In collaboration with regional partners and the Province of Alberta, the Town of Turner Valley provides potable water to residents of both Turner Valley and Black Diamond. The two towns receive potable water from the water treatment plant in Turner Valley, which is distributed by the Sheep River Utilities regional transmission main installed in 2013 after the flood.

Analysis Methodology

Calculations for impacts on the potable water system estimated water consumption and flow rates for all land uses to determine total sanitary demands for each growth scenario. These estimates were based on typical factors in other, nearby communities, and industry standards. Future potable water servicing estimates and associated infrastructure upgrade costs were based on the following assumptions:

1. Average Daily Demand (ADD) is 315 litres/capita/day.
2. Maximum Daily Demand (MDD) is 2.2 x ADD.
3. Peak Hour Demand (PHD) is 4 x ADD.
4. Potable Water Storage Requirements include:
    a. For Turner Valley, fire protection requires 2,000 imperial gallons (Igal) for 2 hours, so 240,000 Igal.
    b. For Black Diamond, minimum required fire protection flow is 197 L/s (estimated from the Fire Underwriters Survey for Black Diamond (2013).
    c. For Turner Valley, Equalization Storage requires 25% of MDD.
    d. For Turner Valley, Emergency Storage requires 15% of ADD.
5. The alignment of a twin line is currently assumed to follow close to the current alignment, but this will require review to confirm that adequate right-of-way exists.
6. The existing water license has not been reviewed in detail, and will likely not support the full build-out of the growth scenarios.

It is important to note that the recommendations for each scenario are not exhaustive. Moving forward to provide a conceptual design would require further detailed review of existing site conditions and a detailed development plan. Refer to *Appendix C: Joint Growth Strategy Water, Wastewater, and Stormwater Conceptual Analysis* for the complete methodology and results of the potable water analysis.

Stormwater

Context

The ultimate, main receiving body of stormwater for the two towns is the Sheep River. Currently, the two towns have a series of retention ponds and outfalls to manage stormwater release into the river through identified drainage courses. These facilities are typically designed in conjunction with new development to service a new (or expanded) catchment area.

Analysis Methodology

In all scenarios, stormwater will be managed at strategic locations by means of stormwater detention facilities (wet or dry ponds), located based on the existing ground contours. These facilities will attenuate post-development stormwater flow and release into their respective outlets (located based on existing drainage contours) at the pre-development rate. Where possible, the ponds and outlets are adjacent to receiving drainage courses that mimic natural (pre-development) drainage patterns. Additionally, it is anticipated that at some locations, ditches will have to be created to discharge stormwater into a watercourse.

Future stormwater flow estimates and associated infrastructure upgrade costs were based on several assumptions, including the following:

1. Maximum runoff storage is 550 cubic metres/hectare.
2. Maximum allowable release to the river is 6.5 litres/second/hectare.
3. Inlet and outlet costs are dependent on minor system design and tie-in conditions, as well as potential water quality treatments.
4. Landscaping costs were assumed to include some wetland plantings around the perimeter of the pond, but no park features or pathways.

5. The cost for the storm pond includes the pond and outlet piping only; no additional piping to service the catchment areas is included (as the drainage system for each catchment would be specified during the detailed design stage).

It is important to note that the recommendations for each scenario are not exhaustive. Moving forward to provide a conceptual design would require further detailed review of existing site conditions and a detailed development plan. Furthermore, catchment and pond layouts will need to be verified through a Master Drainage Plan (MDP) and a Regional Plan or Section Plan, including hydrogeological reports, geotechnical reports, and biophysical inventory and environmental assessment reports. Refer to *Appendix C: Joint Growth Strategy Water, Wastewater, and Stormwater Conceptual Analysis* for the complete methodology and results of the stormwater analysis.

Wastewater

Context

The Westend Regional Sewage Services Commission (established in 1994 by Regulation of the Government of Alberta) supplies wastewater services for Turner Valley and Black Diamond. The Westend facilities are composed of the following: the Turner Valley lift station and 180 acres of property in Black Diamond that houses the Black Diamond lift station (and equipment), the sewage lagoons, the blower building, and the transfer station.

Wastewater from both towns is treated at the Westend wastewater treatment plant in Black Diamond, sent via the Westend Sanitary Forcemain (re-aligned in 2013 after the flood) that has a capacity of 134 L/s. In Black Diamond, the forcemain transitions to a gravity main that runs north through the town to the lagoons. At the time of its installation, this gravity main was sized for future growth (with a total capacity of 280 L/s), and is used to convey additional flows when possible.

Analysis Methodology

Calculations for impacts on the wastewater system estimated future flows from all land uses (including inflow and infiltration) to determine total sanitary demands for each growth scenario. Future flow estimates and associated infrastructure upgrade costs were based on a several assumptions, including the following:

1. Average Daily Flow (ADF) is 264 litres/capita/day.
2. Maximum Daily Flow (MDF) is equal to 2.2 x ADF.
3. Peak Hour Flow (PHF) is equal to 5 x ADF.
4. The wastewater treatment costs assume that the Westend Regional Wastewater Commission lagoon system will be upgraded to a mechanical tertiary treatment plant in order to meet high quality effluent standards from the Foothills Regional Wastewater Collaborative (FRWWC) study (to be completed in early 2016). This option will require a receiving environmental study to confirm that the Sheep River has adequate capacity to receive these flows.
5. Piping within Turner Valley town boundary is not included in the cost calculations, as it is assumed that the trunk mains will be installed by the subdivision developers.
6. Piping wastewater to Okotoks or another regional plant was not reviewed as an option, but is under review in the FRWWC study.

It is important to note that the recommendations for each scenario are not exhaustive. Furthermore, moving forward to provide a conceptual design would require further detailed review of existing site conditions and a detailed development plan. Refer to *Appendix C: Joint Growth Strategy Water, Wastewater, and Stormwater Conceptual Analysis* for the complete methodology and results of the wastewater analysis.



3 Projected Land Needs

Projected Land Needs

Projected land needs are the necessary amount of land to accommodate and support anticipated population growth in Turner Valley and Black Diamond. Future land needs for Turner Valley and Black Diamond over the next 60 years are based on an analysis of future population growth and its impact on the demand for residential, commercial, and industrial lands. Population growth and the associated land needs were calculated over two time periods: a 30-year, short-to-medium term (2015 to 2045) forecast, and a 60-year, long-term (2045 to 2075) forecast.

Note that this section provides a summary of the methods and results of this analysis. A more comprehensive review is provided in *Appendix A: Land Demand Projection Analysis*, which presents a detailed rationale for the analytical approach, as well as calculations of land demand using alternative assumptions from those presented here.

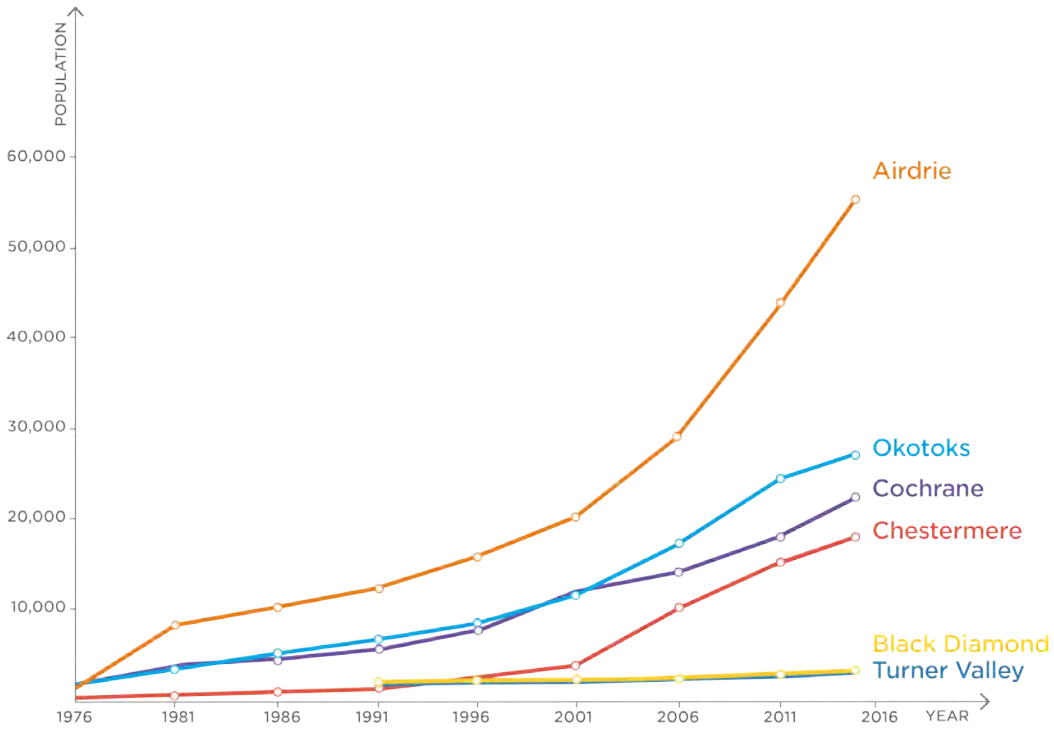
Current Trends

Within the Calgary Regional Partnership (CRP) region, several of the communities closest to Calgary – Airdrie, Cochrane, Okotoks, and Chestermere – have experienced rapid growth in recent years (refer to Figure 8. Historic Population Growth in the Region) and are expected to continue to grow. These communities just outside of Calgary are closely linked to Calgary's growth, which is illustrated in the mirroring of Calgary's significant population boom over in the last two decades in the city's neighbouring communities over the past decade.

As two towns just a little further away from Calgary, Turner Valley and Black Diamond (along with High River) are expected to experience a similar jump in population, as Calgary and the region's economy continues to grow. Furthermore, several key factors make Turner Valley and Black Diamond highly desirable places to live. These two towns are set in a natural, rural landscape with historical and unique town character; are close to both recreational opportunities and Calgary's commercial and employment resources; and are working with the Calgary Regional Partnership to establish a

FIGURE 8. HISTORIC POPULATION GROWTH IN THE REGION

This figure depicts population growth in Turner Valley, Black Diamond, and other regional cities over the past several decades.



commuter bus service that would provide public transit to neighbouring communities. Additionally, Highway 2A (around Okotoks) is a major industrial corridor that provides a significant employment node for the area, even more so as it continues to grow. These factors, as well as many others, such as the completion of the Calgary ring road, regional employment opportunities, and appeal as places to raise a family or retire, result in development pressures and opportunities for the two towns.

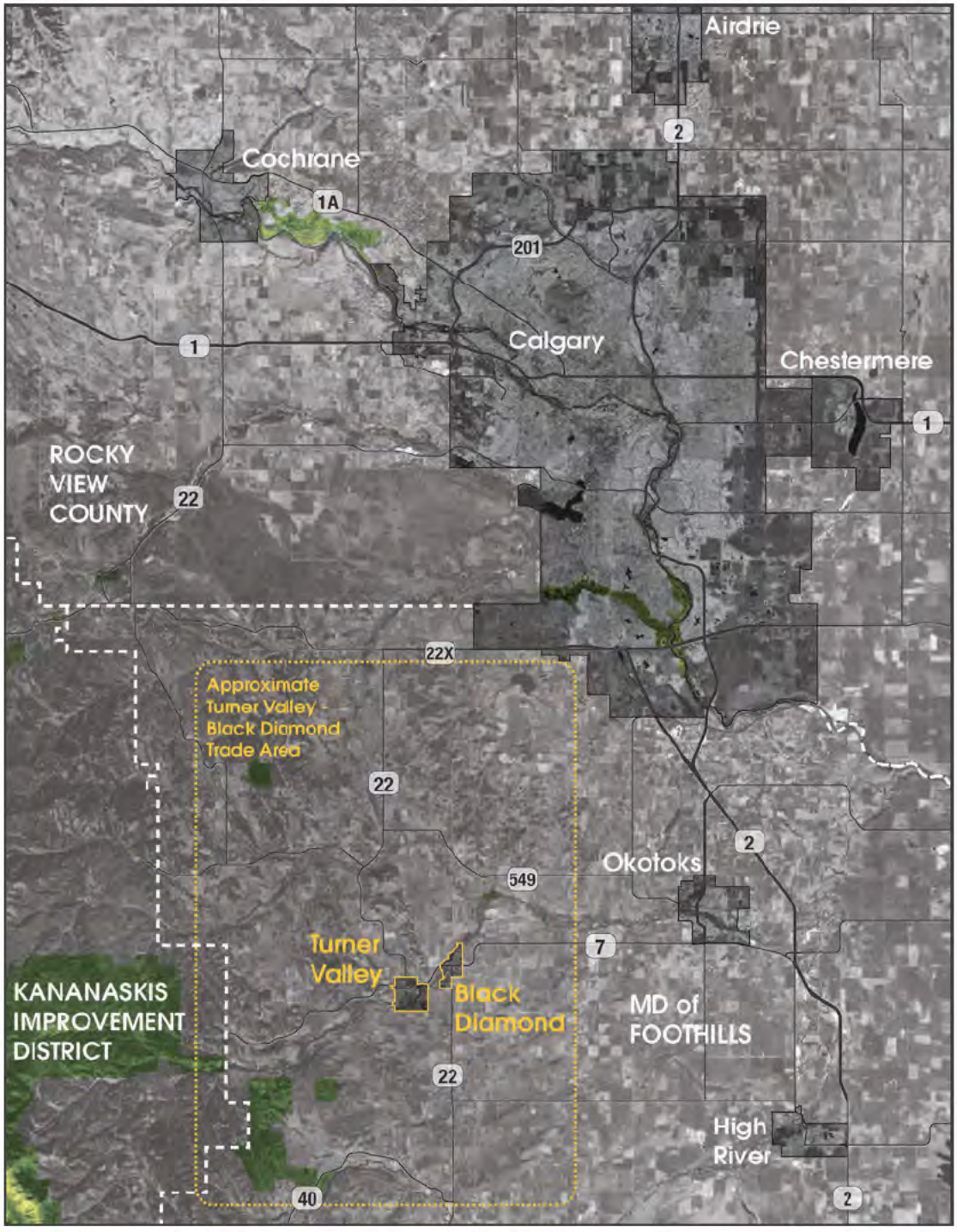


FIGURE 9. TURNER VALLEY AND BLACK DIAMOND IN THE REGION

The assumed trade area for Turner Valley and Black Diamond is depicted in the map to the left. While the bulk of the population lives within Turner Valley and Black Diamond, there are almost 4,000 rural residents who are considered within Turner Valley and Black Diamond's trade area, i.e. an additional 4,000 people who would go to Turner Valley and Black Diamond to shop.

Population Forecasts

A key input in predicting future residential, commercial, and industrial growth forecasts is an estimate of the future population for the area. The 2015 populations for both towns – 2,511 in Turner Valley (according to a 2015 municipal census) and 2,577 in Black Diamond (estimated based on the most recent federal census and additional housing units from 2011 to 2015) – serve as the starting point for this 60-year population forecast.

Key Assumptions

Making use of historical and regional growth trends, as well as other forecasts, the population forecast employed several key assumptions, as described below.

1. Over the long term, available forecasts suggest a slowing rate of growth in the Calgary region. It is estimated that the overall population growth in the Calgary region will average 1.4% per year from 2015 to 2045 and 0.8% per year from 2045 to 2075 (based on Calgary Metropolitan Plan forecasts). This slowing trend was incorporated into the forecasts to assume that growth rates in Black Diamond and Turner Valley would also slow over the 60-year forecast period.
2. Two forecast trends were used for population growth in Turner Valley and Black Diamond:

- **"Lower" growth trend** that is based on the trajectory of past population growth trends in the two towns (and incorporates a slowing growth rate over the long term, as per assumption #1).
- **"Higher" growth trend** that assumes a slightly increased rate of growth in each town, compared to past trends (with a slowing growth rate over the long term, as per assumption #1). This trend was considered because it is possible that Turner Valley and Black Diamond will face increased residential growth due to a variety of factors, such as:
  - In Calgary, single-family home prices are increasing, which could shift purchasers who are interested in single-detached homes out of Calgary and into the surrounding communities, including Turner Valley and Black Diamond.
  - The planned completion of the Southwest Ring Road will improve road connections to Calgary, and will likely make commuting from Turner Valley and Black Diamond to parts of Calgary more convenient.
  - Okotoks has experienced rapid growth and urbanization over the past decade, resulting in increased densities and congestion. Buyers who are looking for a new home in a smaller town south of Calgary may increasingly consider Turner Valley and Black Diamond, rather than Okotoks.

FIGURE 10. POPULATION FORECASTS 2015 TO 2075

This figure illustrates the low and high growth population projections for Turner Valley, Black Diamond, Turner Valley and Black Diamond (Total), and the Trade Area over the next 60-years. Refer to Appendix A for detailed tables and descriptions of these projections.

	Lower Growth Trend			Higher Growth Trend		
	2015	2045	2075	2015	2045	2075
Turner Valley	2,511	5,140	9,541	2,511	5,949	12,785
Black Diamond	2,577	5,275	9,792	2,577	6,105	13,121
Turner Valley + Black Diamond	5,088	10,415	19,333	5,088	12,053	25,906
Trade Area (Rural)	3,863	4,264	4,707	3,863	4,264	4,704
Trade Area (Total)	8,951	14,679	24,040	8,951	16,317	30,613

It is assumed that population growth in the surrounding rural parts of the commercial trade area will continue to average about 0.33% per year over the long-term, matching the recent pace of population growth in these areas. Refer to *Figure 9. Turner Valley and Black Diamond within the Region* for an illustration of the towns' trade area.

Forecast

The two forecast trends suggest that the population of Turner Valley will grow between 9,500 and 12,800 people by 2075, while Black Diamond's population is expected to reach between 9,800 and 13,100 residents by 2075. In total, the two towns are expected to reach a population of 19,300 to 25,900 over the next 60 years. Refer to *Figure 10. Population Forecasts 2015 to 2075* for a breakdown of this expected population growth. These population forecasts estimate that **the two towns will gain an additional 14,245 to 20,918 people over the 60-year time frame.** Given the accelerated growth of communities within the region, the growth scenarios were developed with the higher growth trend in mind, as the higher growth trend is most likely to occur. How this growth translates to residential, commercial, and industrial land demand is explored in the following sections.

Residential Land Demand

Projected residential land needs were calculated based on a housing demand forecast, by unit type (single-detached, semi-detached, and apartment). This forecast reflects the likely density of future residential development in the towns, and is based on population forecasts and past residential development trend indicators in Turner Valley, Black Diamond, and the Calgary metropolitan area, as well as the goal to meet the density targets of the CRP.

Land Supply

As illustrated in *Figure 3. Current Planned Growth for the Two Towns*, Turner Valley has a total of 263.9 acres of land available for urban development, of which 257.5 acres are designated for residential development. Whereas Black Diamond has approximately 84.5 acres of land available for urban development, of which 64.4 acres is designated for residential development. This available residential land can accommodate a total of 1,860 units at an average residential density of 5.85 units per gross acre in Turner Valley and 5.5 units per gross acre in Black Diamond (under the assumption that these areas will likely be developed within the next 20-30 years). As small towns with a unique sense of place, neither town has a history of intensification, so it is unexpected for the two towns to accommodate additional growth within the existing residential development through intensification.

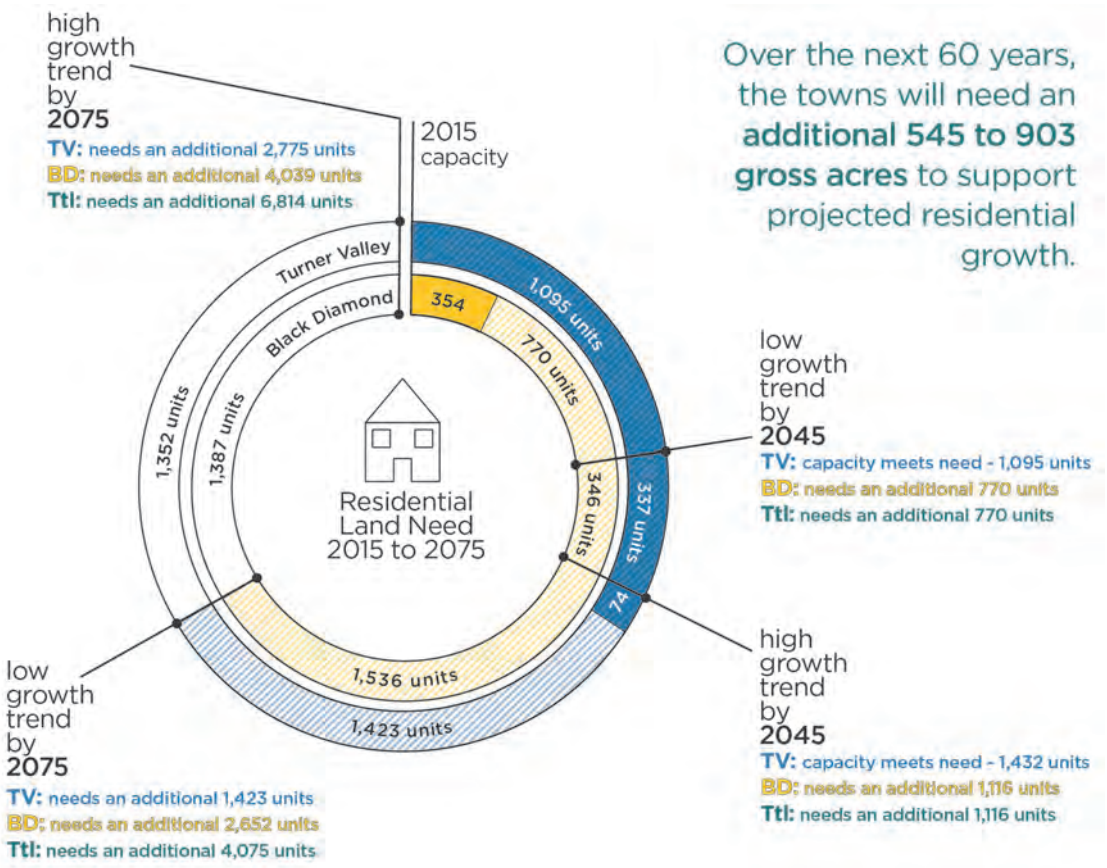


FIGURE 11. ASSUMPTIONS OF SHIFTS IN RESIDENTIAL UNIT TYPE, 2015 TO 2075

This figure illustrates the assumed shift in the proportion of the three main residential unit types in the towns: single-detached, attached, and apartment.

FIGURE 12. RESIDENTIAL LAND NEED 2015 TO 2075

This chart depicts the two towns' existing capacity for future residential development, as well as, the towns' expected residential need based on the low and high growth trends.



Key Assumptions

Several key assumptions were made in the steps to forecast residential land demand, including the following:

1. Average household size is used (with the population growth forecasts) to generate the total estimated number of households (the first step in forecasting residential land demand). For these forecasts, an average household size of 2.4 was assumed, to match the average household size of the towns in the 2006 and 2011 federal censuses.

2. A forecast of residential unit by type is calculated based on the total growth of the number of households and an assumed housing type split. The current (from 2005 to 2014) housing type split is: 75% single-family detached, 15% semi-detached / rowhouse, and 10% apartment. Turner Valley and Black Diamond will likely continue to be suburban satellite communities in the Calgary Region over the forecast period and, while single-detached units are likely to account for a decreasing share of total housing demand over the long-term, it is assumed that single-detached homes will remain the primary housing type. Over the 60-year time period, it is assumed that multi-family development will make up a slightly increasing share of total housing as preferences change and to help the towns meet the CRP density targets, resulting in a shift of housing types to a split of: 65% single-detached, 15% attached, and 20% apartment by 2075. Refer to Figure 11. Assumption of Shifts in Residential Unit Type 2015 to 2075.

3. The amount of additional land (in terms of gross residential acres, which takes into account allowances for roads, municipal reserves, stormwater management, and community services) is based on an overall assumed residential density per acre for new development. Based on input from the towns, assumed overall average gross residential densities are:

   - 5.5 units per acre from 2015 to 2035
   - 6.5 units per acre from 2036 to 2045
   - 8.0 units per acre from 2046 to 2075

4. This results in an average of 5.85 units per acre for the first half of the forecast period (30 years). While significantly different from the existing average residential density in Turner Valley and Black Diamond, these densities reflect the towns' aspirations to achieve higher residential densities over time.

Forecast

The residential forecasts estimate that the combined housing demand in Turner Valley and Black Diamond will average in the range of: 74 to 97 additional units per year from 2015 to 2045, 124 to 192 additional units from 2045 to 2075. Over the 60-year timeframe this means an additional 5,900 to 8,700 units will be added to Turner Valley and Black Diamond. Based on the shift in housing types, the remaining residential capacity within two towns' existing boundaries, and the assumption for an increasing density target, residential forecasts estimate that combined, the towns will need an additional 132 to 191 acres to accommodate residential development from 2015 to 2045, and an additional 413 to 712 acres to accommodate residential development from 2045 to 2075. Over the 60-year planning timeframe **the towns will need an additional 545 to 903 acres (outside of the towns' existing boundaries) to accommodate the expected population growth from 2015 to 2075.** Refer to Figure 12. Residential Land Need 2015 to 2075. In the three scenarios, the full range of expected residential land demand is explored in order to determine the potential and costs of growing to different extents.

Commercial Land Demand

Currently, Turner Valley and Black Diamond are comprised of locally-oriented retail and service businesses that meet the day-to-day needs of residents in the towns and nearby surrounding rural areas, such as a grocery store, pharmacy, convenience stores, liquor stores, restaurants/cafes, bank, pubs, laundromat, and gas stations. There are no regionally-oriented retail and service businesses in the two towns, as these kind of businesses tend to locate in major commercial centres or in locations with convenient vehicular access to a large regional or sub-regional trade area population (often 50,000 customers or more). However, businesses in Turner Valley and Black Diamond serve residents of the two towns, plus residents of the surrounding local areas. The estimated population of the trade area as of 2011 was 8,352, with an average annual incremental growth of 159 people per year since 2006. The boundaries of the primary commercial trade area for the two towns is south of Priddis, north of Longview, west of the mid-point between Black Diamond and Okotoks, and east of Sheep River Provincial Park in Kananaskis. Refer to Figure 9. Turner Valley and Black Diamond in the Region.

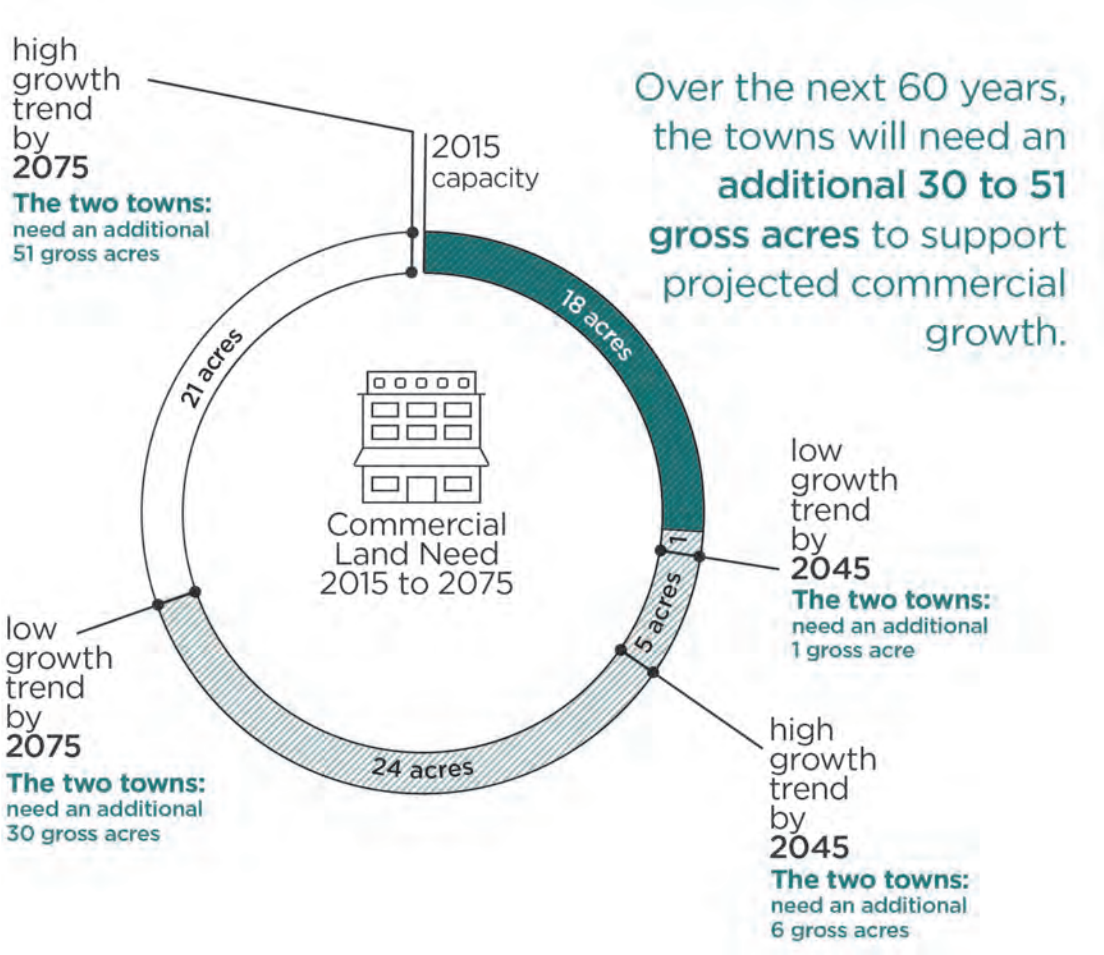
Future requirements for commercial land in Turner Valley and Black Diamond were calculated in three steps: (1) an analysis of current businesses in the towns, (2) the existing floor space per capita ratio for the towns and for the trade area, and (3) speculation of the future roles of the two towns as commercial centres over the 60-year forecast period. Using these components, and average density of development assumption, the forecast of future commercial floor space growth is translated into an estimate of commercial land requirements.

Land Supply

As shown in Figure 3. Current Planned Growth for the Two Towns, Turner Valley has a total of 263.9 acres of land available for urban development, of which 6.4 acres are designated for commercial development. In contrast, Black Diamond has approximately 84.5 acres of land available for urban development, of which 11.6 acres is designated for commercial development. The total available commercial land for the two towns is 18 acres.

FIGURE 13. COMMERCIAL LAND NEED 2015 TO 2075

This chart depicts the towns' joint existing capacity for future commerical development, as well as their expected commercial land need based on low and high growth trends.



Key Assumptions

For this forecast, a series of assumptions were made in order to estimate future commercial land requirements for the two towns, these assumptions include the following:

1. It is estimated that Turner Valley and Black Diamond have a ratio of 27 square feet per capita, based on trade area population estimates of 8,951 and the commercial floor space inventory of 238,435 square feet.
2. Furthermore, it is estimated that the 27 square feet per capita is broken up as: 20 square feet per capita capita of locally-serving retail and service floor space and 6 to 8 square feet per capita of locally-serving office space. This estimate is based on the following series of factors and assumptions:

- Communities (in western Canada) tend to support about 20 square feet per capita of local convenience-oriented retail and services.
- Communities (in western Canada) tend to support about 25 square feet per capita of regional destination or comparison retail space.
- Smaller communities (in western Canada) that are not regional business centres tend to support about 6 to 10 square feet per capita of local-oriented office space.
- Based on the existing patterns of commercial development in Turner Valley, Black Diamond, Okotoks, and Calgary:
  - The two towns are likely retaining almost all of their local convenience retail and personal services demand.

- The trade area residents likely visit Calgary and Okotoks for almost all of their regional destination and comparison shopping.
- The two towns likely retain a share of their locally-oriented office business demand, however Calgary and Okotoks is absorbing some of the towns' demand.

3. The two towns are not likely to attract regionally-oriented retail and service businesses over the forecast period, however they will continue to attract additional retail and service businesses that serve local and nearby rural area residents. Therefore, as the local trade area population grows (due to residential development), the demand for locally-oriented retail and personal service businesses will grow, so it is assumed that the trade area will continue to support the 27 square feet of retail, service, and office space per capita, and this growth will be focused within the two towns rather than the surrounding rural areas.
4. An assumed average density for new commercial development is a Floor Area Ratio (FAR) of 0.30 on net developable land area.
5. An assumed allocation of 35% of gross land area for municipal reserves, environmentally sensitive areas, roads, and stormwater management.

Forecast

Population projections estimate that the trade area will grow from 8,951 people (2015) to between 24,040 and 30,613 by 2075. From these population estimates, the potential commercial floor space growth is a total of 411,000 to 588,000 square feet by 2075. Based on these population forecasts, the estimated floor space per capita ratio, and an assumed commercial development density, total gross commercial land requirements indicate 48 to 69 acres of commercial land is required by the year 2075; an additional 19 to 24 acres of land by 2045, and 30 to 45 acres between 2045 and 2075. Refer to Figure 13. Commercial Land Need 2015 to 2075. Based on current capacity (the roughly 18 acres of commercial land left for development in the two towns), an additional 30 to 51 acres outside of the towns' existing boundaries are required to accommodate market-driven commercial growth over the forecast period. However, **given the likelihood of the higher growth scenario occurring and pressure around securing commercial land, 51 acres (rather than 30) is used as a target for additional commercial land for the three scenarios.**

Industrial Land Demand

As of 2015, there was a total of about 96,900 square feet of industrial space in Turner Valley and Black Diamond (half of which is located in JKR Business Park in Black Diamond). This industrial development has largely occurred over the past 30 years, and based on recent building permit data, there has been little industrial development in more recent years. Demand for industrial development has likely been limited due to the lack of a direct, major highway corridor connection and other locations (such as the Highway 2 corridor to Okotoks) attracting a significant amount of industrial development.

Currently, industrial space in the two towns is occupied by businesses that mainly serve the businesses and residents of the local trade area, such as building material suppliers, automotive sales and services, trades workshops, professional services, mini-storage, and recycling and waste disposal services. There are few businesses that serve the regional, provincial, or broader markets.

Land Supply

As shown in Figure 3. Current Planned Growth for the Two Towns, the current ASPs and planned future development for Turner Valley has no available land for industrial development, and Black Diamond has only 8.5 acres available for industrial development.

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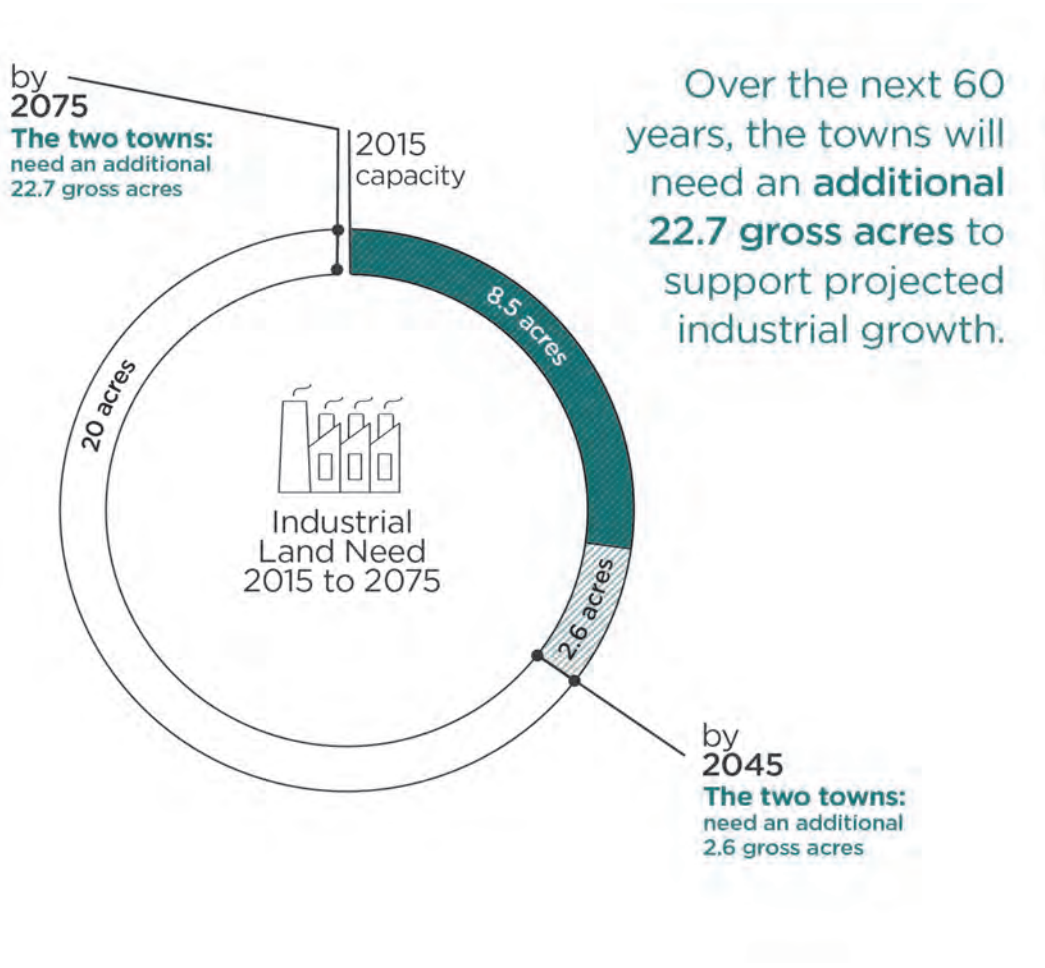
Floor area ratio *is the ratio of the total gross floor area of all buildings on a parcel to the area of the parcel.*

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Net developable land area *is the area of land available for development excluding non-developable areas (environmental reserve, expressways, railways and lands unsuitable for development).*

FIGURE 14. INDUSTRIAL LAND NEED 2015 TO 2075

This chart depicts the towns' joint existing capacity for future industrial development, as well as, their expected industrial land need.



Key Assumptions

Several assumptions were made in the industrial land demand forecast, including the following:

1. Turner Valley and Black Diamond will remain suburban communities in the Calgary Region, with its share of regional employment remaining stable over time.
2. Calgary is likely to continue to capture the largest share of regional employment growth. The large amount of vacant industrial-designated land in North/ Northeast and Southeast sectors of Calgary will continue to accommodate the vast majority of industrial development in the Calgary Region.
3. Okotoks and the Highway 2A Industrial Corridor play a large role in the industrial market outside of Calgary, and will continue to capture most of the industrial businesses that require convenient access to the regional highway system and wish to be located south of Calgary.
4. The average density for new industrial development will be 0.25 FAR on the net developable land area.
5. An assumed allocation of 35% of gross land area for municipal reserves, environmentally sensitive areas, roads, and stormwater management.

	2015 to 2045		2045 to 2075		Total 2015 to 2075	
	Lower	Higher	Lower	Higher	Lower	Higher
Residential Turner Valley	–	–	178	347	178	347
Residential Black Diamond	132	191	235	365	367	556
Residential Total	132	191	413	712	545	903
Commercial Total	1	6	30	45	30	51
Industrial Total	3	3	20	20	23	23
Total Land Needs	135	199	463	778	598	977

FIGURE 15. LAND REQUIREMENTS FOR GROWTH IN TURNER VALLEY AND BLACK DIAMOND

This figure illustrates the required additional land (outside of the existing towns' boundaries) based on the projected land needs for residential, commerical, and industrial uses. For the purposes of developing the scenarios, the low growth trend was used as the minimum land required (the demand) while the high growth trend was used to identify the amount of additional land that could be considered in the scenarios for strategic, contingency purposes.

Forecast

Based on these assumptions, it is unlikely that Turner Valley and Black Diamond will attract a significant number of industrial businesses that serve regional, provincial, or broader markets. Future industrial floor space growth in the two towns is expected to mainly be linked to the overall pace of growth in the towns, and is therefore expected to grow by average of about 2% per year. Therefore, it is expected that Turner Valley and Black Diamond will need an additional 11 acres of industrial land by 2045 and another 20 acres by 2075, totalling an additional 31 acres of required industrial land over the entire forecast period. Refer to Figure 14. Industrial Land Need 2015 to 2075. Given the towns' existing industrial capacity, **the two towns will need an additional 23 acres (outside of the towns' existing boundaries) to accommodate the expected industrial growth over the next 60 years.**

Land Requirements

At the time of this study, the two towns have a total of 349 acres of land available for urban development within their existing town boundaries, approximately 85 acres in Black Diamond and 264 acres in Turner Valley. Existing ASPs and development plans that have identified future land uses for this available land (as illustrated in Figure 3. Current Planned Growth for the Two Towns) determines the remaining capacity for growth for each town and therefore the additional land use need for each town (refer to Figure 15. Summary of Land Requirements for Turner Valley and Black Diamond. In addition to this existing capacity for growth, forecasts determine that the two towns need **an addition of between 545 to 903 acres of residential land, 51 acres of commercial land, and 23 acres of industrial land** to accommodate future population growth. In the scenarios, land identified for development beyond these targets, is contingency land; strategic land supply in case growth goes beyond what is expected by the higher growth trend. These land requirement estimates, in conjunction with the land supply assessment and infrastructure capacity, are the basis for the development of the three scenarios, in guiding the amount of land to allocate per land use.



Scenarios for Growth

Scenarios for Growth

Overview of Growth Scenarios

The development of the growth scenarios was informed by multiple perspectives, factors, and inputs, such as the vision and principles, as well as the growth forecasts; land requirements; defensive and offensive strategies; town staff, public, and stakeholder input and direction; and Calgary Metropolitan Plan implementation. Additionally, a set of planning principles were used to guide and evaluate the three scenarios.

SCENARIO 1 Two Towns Grow Together

SCENARIO 2 Two Towns Grow Apart

SCENARIO 3 Joint Advisory Committee Direction

Development of the Growth Scenarios

Scenario Components

For each concept, the same general land use approach was applied, consisting of two major components: "demand" and "strategic" land uses. Demand areas are intended to accommodate the land requirements identified by the land needs projections. Whereas the strategic areas act as contingency land to satisfy the potential for growth beyond the higher growth forecasts, as well as logical border completions, when needed. However, the approach for identifying demand and strategic land area targets varied slightly based on each land use type and local context and needs. A brief description of the eight land use types and their intention is provided below.

- **Residential** land use areas were identified to accommodate the growth forecast range of between 545 and 903 acres. While each scenario provides different options of where this residential development might go, they all meet comprise of at least 545 acres of residential land.
- **Residential – Strategic** areas are contingency lands that can satisfy a potentially higher rate of growth, though is more generally applied for logical border completions with respect to quarter sections and parcels.
- **Commercial** land use areas were identified to accommodate the higher growth forecast as there was general consensus on the need for extra land area than the lower forecast called for as a precautionary measure to ensure healthy and fiscally sustainable economic development for the towns.
- **Commercial – Strategic** was not identified for all scenarios, only in Scenario 2 and primarily to serve as transition buffer between employment lands residential development, should the need arise.
- **Employment** land areas were identified to meet the industrial land need forecast.

- **Employment – Strategic** consists of identified lands as a contingency land supply. In case a large format store or other major employment centre (i.e. business park) requires a substantial area of land, the towns will have a strategic employment land holding to be able to accommodate potential job centres of any size.
- **River Valley – Strategic** is identified in all three scenarios as a key component to providing connectivity between the towns, ensuring ecological health for the area, preserving environmentally sensitive areas, and promoting the integration of a parks and open space network within future development. The size of this area varies across all three scenarios to account for a variety of options, such as the incorporation of the Friendship Trail, extension across and north of the river, and the inclusion of existing MD of Foothills country residential development.
- **Gateway – Strategic** land areas are identified at major gateways to Turner Valley, where future development could potentially occur. These areas act as contingency land for future commercial and/or employment land uses, as needed, while ensuring the quality of major entrances to the town.



Scenario Evaluation

Together, the Vision and Principles guided the development of the three growth scenarios and the evaluation of their success in meeting the towns' vision for future growth. The Joint Growth Strategy Principles were used to evaluate the scenarios and planning process, beyond just the assessment of the scenario's infrastructure servicing costs. These Principles act as a check, to ensure that planning best practices and context are also considered in the evaluation of the scenarios. In evaluating the scenarios the following questions were asked of each scenarios:

1. Is the scenario **jurisdictionally neutral**, does it assess the potential of the entire study area regardless of boundaries?
2. Is the scenario **equitable and inclusive**, are the future costs and benefits equitably distributed between the towns?
3. Is the scenario **efficient**, does it promote servicing efficiency and reduce the cost of accommodating future growth?
4. Is the scenario **sustainable**, are environmentally significant areas and natural resources maintained and conserved, while supporting economic vitality and complete communities?
5. Is the scenario **flexible and resilient**, does it have the ability to evolve and adapt to changing realities to respond to both local and regional growth factors?
6. Is the scenario representative of **local knowledge**, was it developed in consultation with both communities and input from all parties?

Scenario 1: Two Towns Grow Together

This scenario is comprised of two distinct iterations, however, both revolve around the idea that the two towns grow together, leveraging shared infrastructure and development to reduce costs, facilitate compact growth, and strengthen the two towns shared vision and sense of community.

Scenario 1A

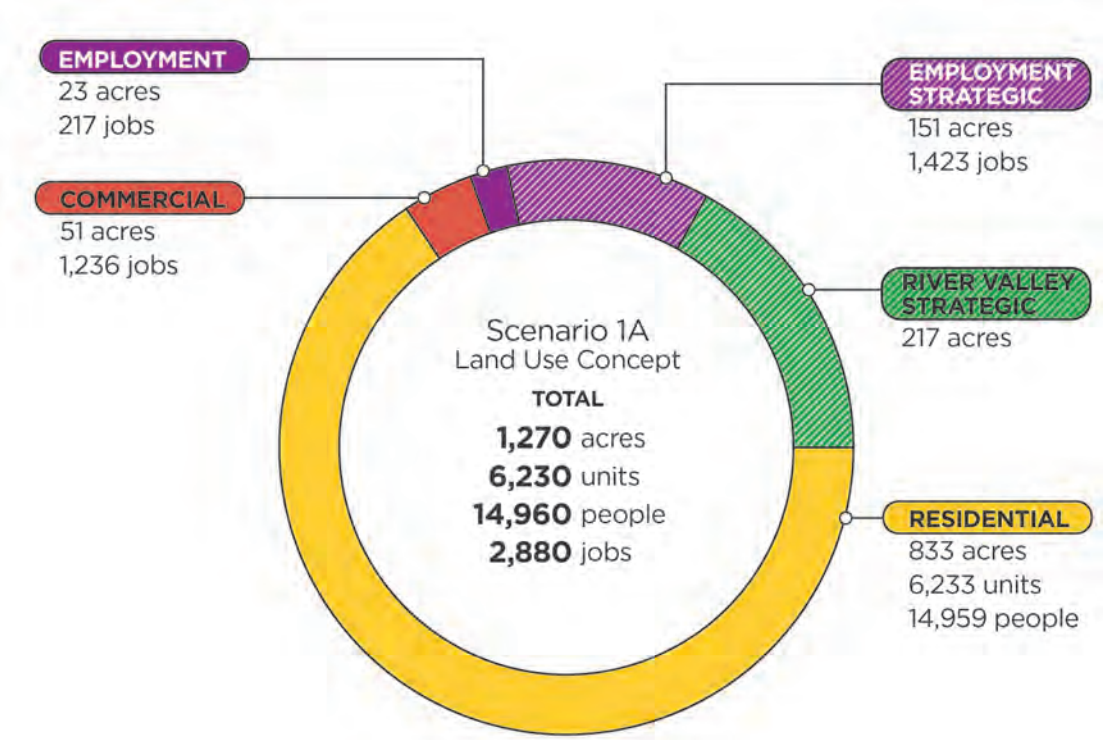
Concept

Scenario 1A serves to create indistinguishable borders, with future growth concentrated in the least constrained lands, including a substantial amount of strategic employment land, as well as an area of River Valley Lands to create an environmental and open space connection between the two towns. In this scenario, growth area lands total 1,270 acres (the equivalent of 8.0 quarter sections), which supports approximately 14,960 people and 2,880 jobs. Refer to Figure 16. Scenario 1A Concept Statistics. The concept for this scenario was based on several key ideas as identified in Figure 17. Scenario 1A Concept, and summarized below.

- Builds off of the Gateways of Turner Valley ASP to expand residential development west of the town (1), thereby complementing adjacent uses and capitalizing on road network accessibility.
- Locates additional residential development (2) adjacent to existing residential communities, creating continuity.
- The continuation of commercial development (3) along Highway 22, making use of existing infrastructure and accessibility.
- Provides a new commercial node (3) to service new residential populations.

FIGURE 16. SCENARIO 1A CONCEPT STATISTICS

This chart depicts the acres per land use type for Scenario 1A, as well as their associated population and job estiamtes.



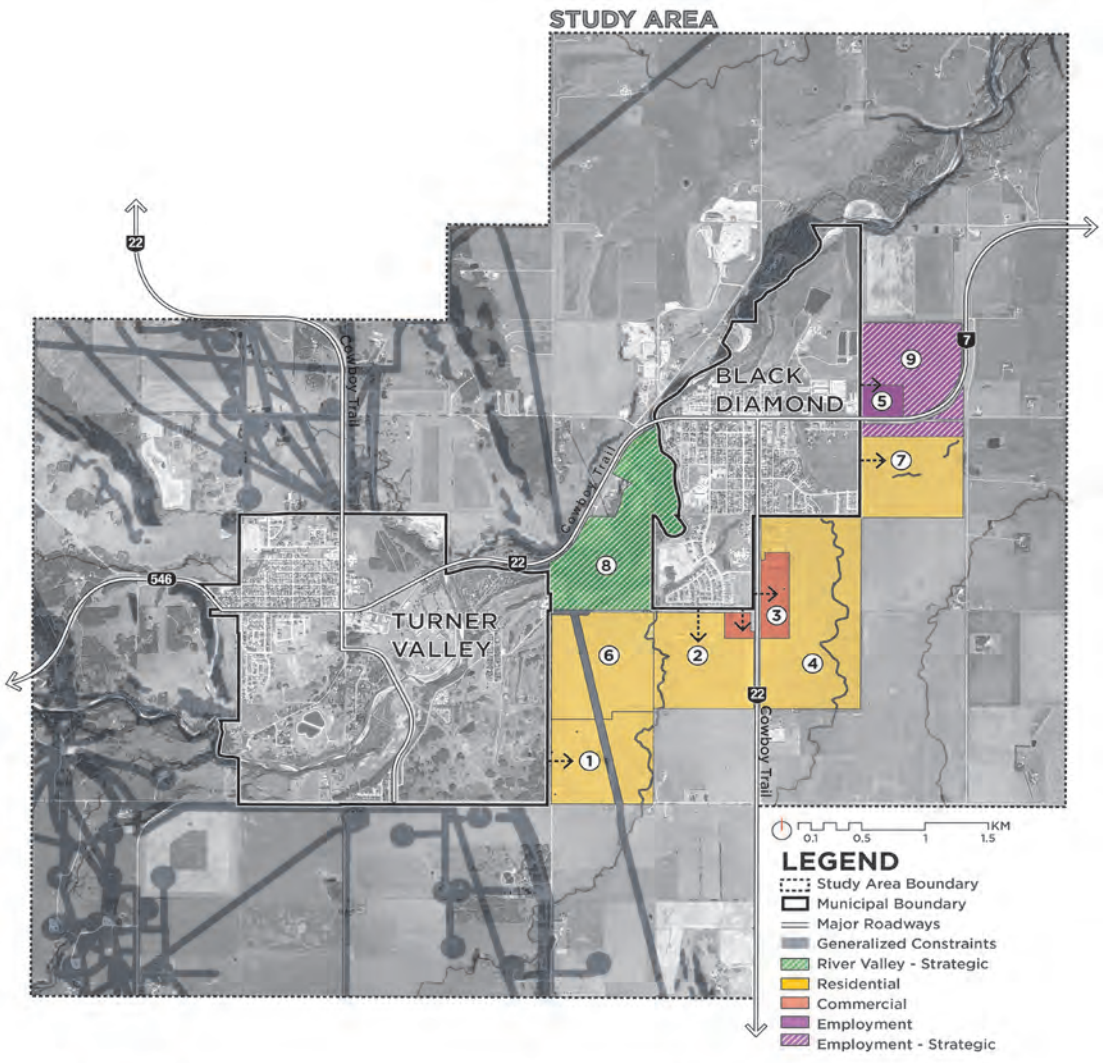


FIGURE 17. SCENARIO 1A CONCEPT

This map depicts Scenario 1A's land use concept, highlighting the major ideas as described in the narrative.

- A logical extension east and south of Black Diamond in areas (4) that allow for a contiguous town border and development in areas of minimal constraints.
- Industrial development (5) along Highway 7 to capitalize on the Highway's access to Highway 2.
- A continuation of similar uses (5) to create continuity and minimize conflicts.
- Allocation of residential lands (6) to accommodate some (though not all) of the population in the high growth scenario.
- Residential development (7) on area adjacent to planned Black Diamond residential growth area (Kaiser ASP).
- Green infrastructure (8) to preserve Sheep River as a major open space connection, excluding the existing country residential development.
- Strategic employment lands (9) based on adjacent uses, proximity to Highway 7, and the benefits of flanking Highway 7 on both sides for consistent, dual frontage.

Infrastructure Servicing

The total infrastructure and servicing cost of Scenario 1A is $203.9 million (including $41.0 million as contingency and $26.9 million for engineering fees). This scenario is the middle for total infrastructure cost and for total cost per acre, at $193,120 per acre. Refer to Figure 18. Scenario 1A Infrastructure Servicing Costs.

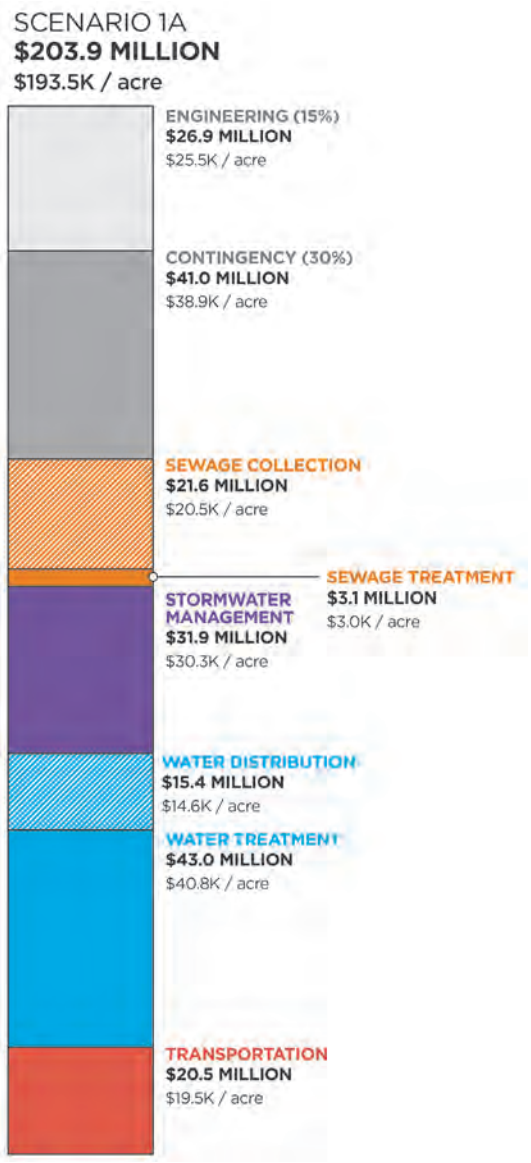


FIGURE 18. SCENARIO 1A INFRASTRUCTURE SERVICING COSTS

This figure provides a breakdown of the infrastructure costs associated with the development of Scenario 1A, and the cost per acre.

TRANSPORTATION

The total estimated transportation costs for Scenario 1A are $20.5 million, $19,420 per acre of development (this does not include extra for contingency or engineering fees). However, potential terrain challenges may increase project cost. The estimated magnitude of traffic growth on the existing highways is between 4 and 18. Transportation network investments include the following (refer to Figure 19. Scenario 1A Transportation Concept):

- 13 (seven existing, six new) intersection improvements along the proposed and existing network.
- 7.4 km of additional road required to support the growth scenario.

POTABLE WATER

The total estimated potable water costs for Scenario 1A are $58.4 million, $55,310 per acre of development (this does not include extra for contingency or engineering fees). As in all scenarios, it will be necessary to secure sufficient water license capacity and twin of the distribution transmission main from Turner Valley to Black Diamond. Also, there will be a need to upgrade source capacity, the treatment plant, and the pumps in TV Water Treatment Plant to increase flow from Turner Valley to the potable water reservoir in Black Diamond. Additional upgrades include the following (refer to Figure 20. Scenario 1A Potable Water Concept):

- Reservoir upgrades and an additional reservoir will be required to accommodate additional storage.
- Replace reservoir pump station.
- Upsize the distribution pipe from the reservoir to the distribution system.
- A new PRV station to manage the system pressures.
- Add a booster station to increase flow.
- Various distribution mains to loop the system to provide adequate pressure, flow, and redundancy.

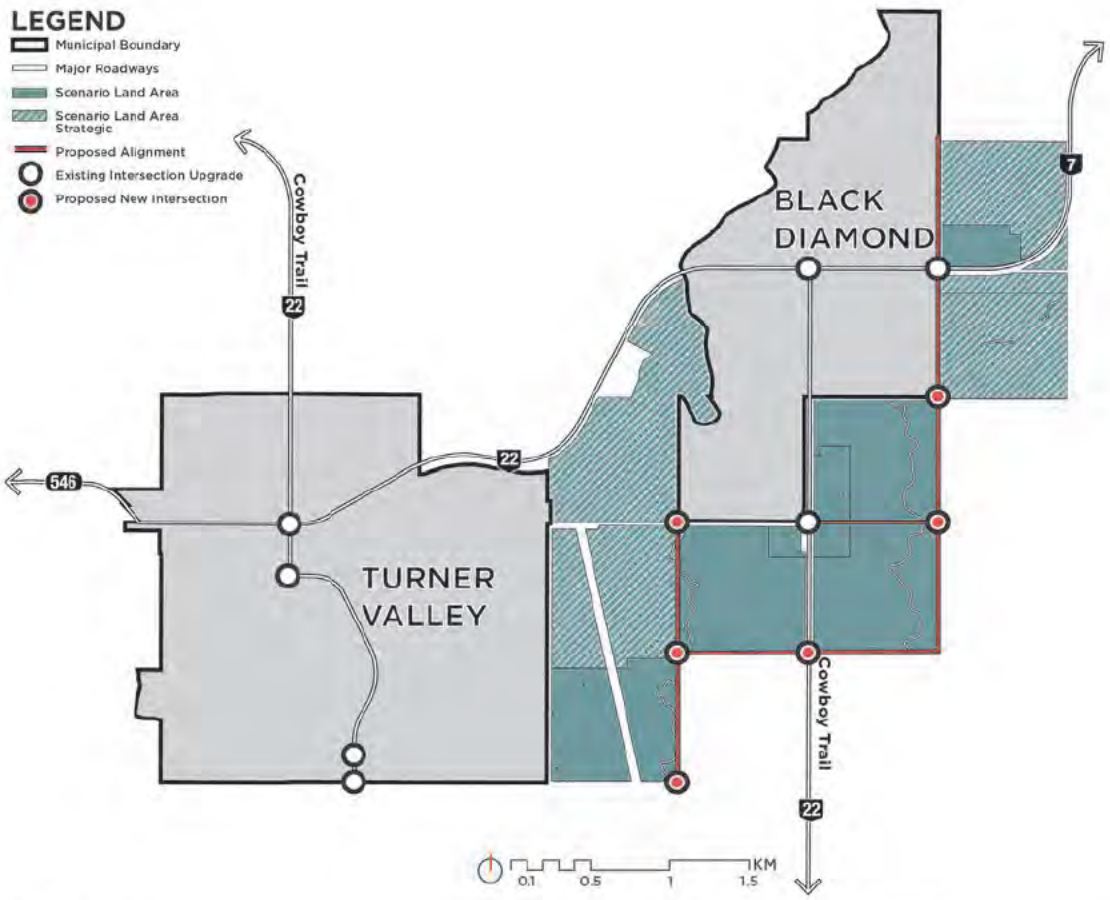


FIGURE 19. SCENARIO 1A TRANSPORTATION CONCEPT

This figure illustrates the transportation concept for Scenario 1A, including a proposed alignment, additional intersections, and intersection upgrades.

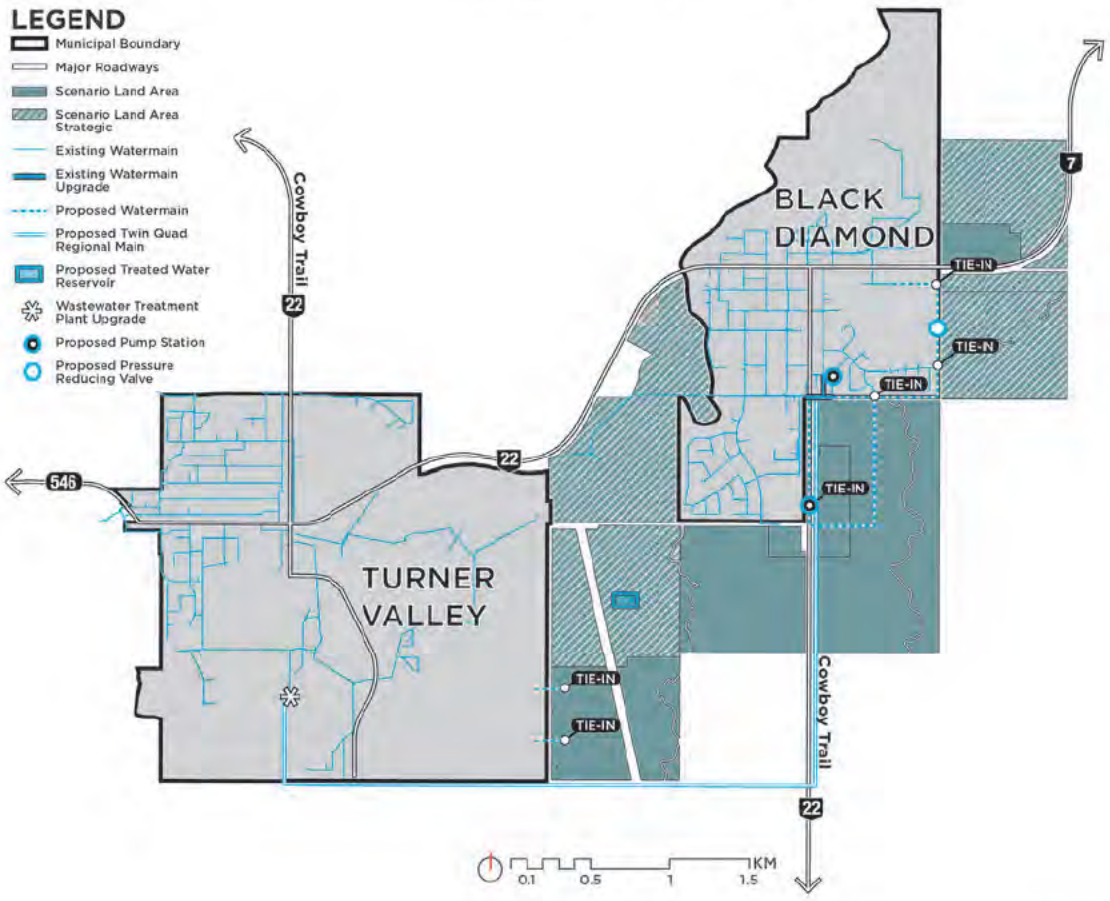


FIGURE 20. SCENARIO 1A POTABLE WATER CONCEPT

This figure illustrates the potable water concept for Scenario 1A, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 1A.

STORMWATER

The total estimated stormwater costs for Scenario 1A are $21.6 million, $20,460 per acre of development (this does not include extra for contingency or engineering fees). Based on existing contours, nine catchments, each with a stormwater detention facility, are proposed to attenuate storm flow for Scenario 1A. Stormwater detention facilities will generally discharge into the existing creeks nearby. However, a drainage ditch and an outfall from the north pond to the Sheep River and a ditch from the east pond to the nearby creek will be required. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways. Additionally, one southwest pond will require a drainage connection to the south pond, or the creek, and the northwest pond will drain west along the existing highway ditch, which may require expanding the ditch. Refer to Figure 21. Scenario 1A Stormwater Concept.

WASTEWATER

The total estimated wastewater costs for Scenario 1A are $35.0 million, $33,180 per acre of development (this does not include extra for contingency or engineering fees). As in all scenarios, wastewater flow from TV will connect into the BD system via the existing Westend Regional Sewage Service Commission (WRSSC) transmission main. Wastewater infrastructure investments for Scenario 1A include the following (refer to Figure 22. Scenario 1A Wastewater Concept):

- A new 375 mm gravity line will carry the flow from the TV/BD boundary and connect into the new Wastewater Treatment Plant.
- A new effluent outfall will be needed.

Evaluation

The concept for Scenario 1A meets all six of the Principles, by executing several beneficial strategies. This scenario builds from existing land use patterns to create contiguous residential communities, strengthen the existing Highway 22 commercial corridor, provide commercial services to the new residential communities (with the expanded Highway 22 commercial area), and flank both sides of Highway 7 with like uses (employment lands). Also, by excluding the existing country residential from the River Valley – Strategic land area, the Towns are ensuring that they have no obligation for providing municipal services. Furthermore, the development areas are largely, unconstrained lands areas free from environmental or development concerns. However, there is the potential conflict between the adjacent residential and employment land uses near Highway 7, which should both areas be fully developed, would need careful planning and design guidance to mitigate this conflict and ensure livability for the community's residents.

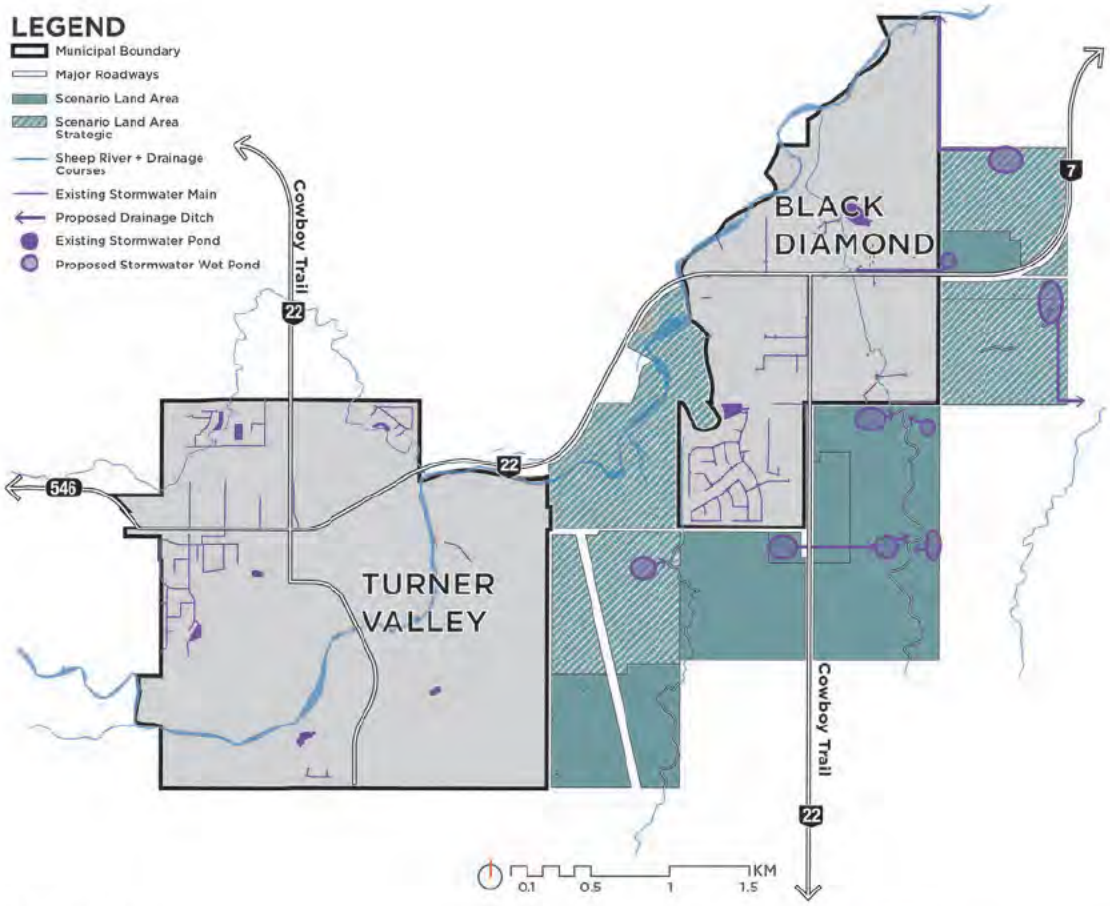


FIGURE 21. SCENARIO 1A STORMWATER CONCEPT

This figure illustrates the stormwater management concept for Scenario 1A, including proposals for additional drainage ditches and stormwater ponds that would be required with the proposed development in Scenario 1A.

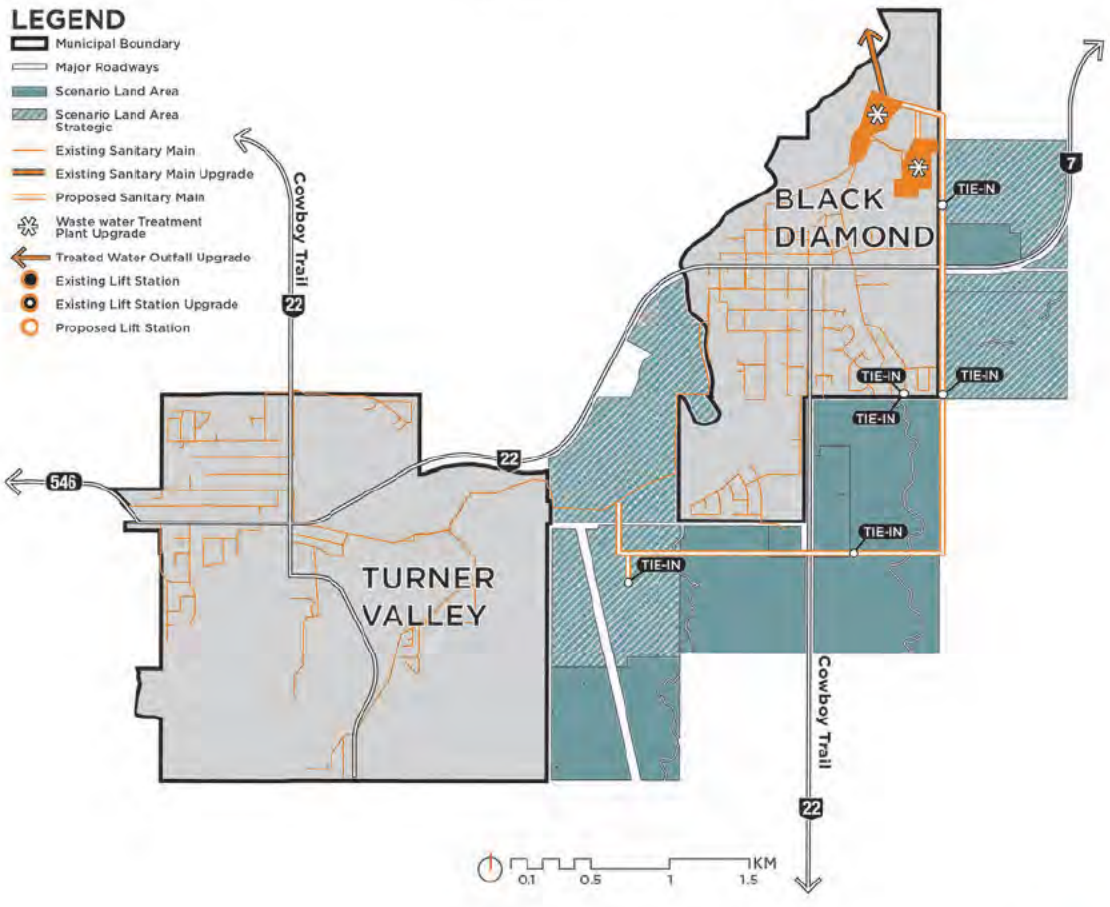


FIGURE 22. SCENARIO 1A WASTEWATER CONCEPT

This figure illustrates the wastewater concept for Scenario 1A, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 1A.

Scenario 1B

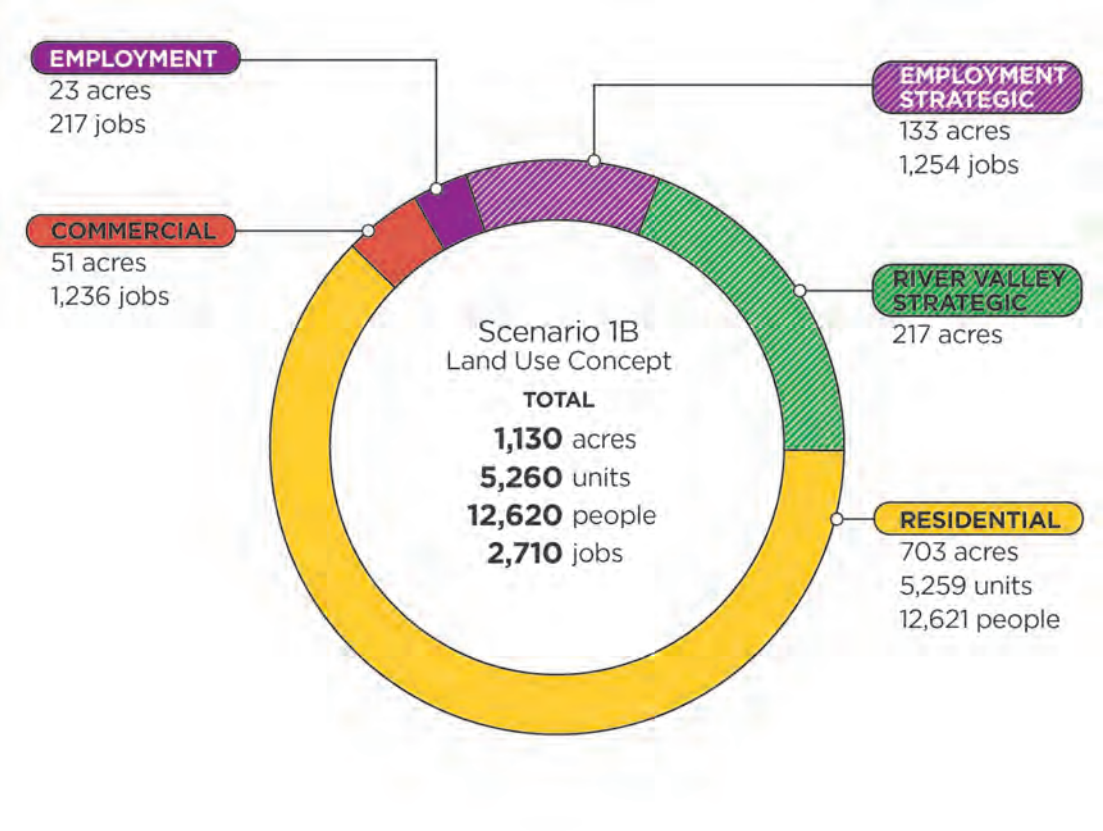
Concept

Similar to Scenario 1A, Scenario 1B also creates indistinguishable borders, with future growth concentrated in the least constrained lands, and an area of River Valley Lands between the two towns to create an environmental and open space connection. Additionally, in this scenario, there is also a new commercial node along Highway 22. However, the concentration of Employment Lands is located along Highway 22 instead of Highway 7. In this scenario, growth area lands total 1,130 acres (the equivalent of 7.0 quarter sections), which supports approximately 12,620 people and 2,710 jobs. Refer to Figure 23. Scenario 1B Concept Statistics. The concept for this scenario was based on several key ideas as identified in Figure 24. Scenario 1B Concept, and summarized below.

- Builds off of the Gateways of Turner Valley ASP to expand residential development west of the town (1), thereby complementing adjacent uses and capitalizing on road network accessibility.
- Locates additional residential development (2) adjacent to existing residential communities, creating continuity.
- The continuation of commercial development (3) along Highway 22, making use of existing infrastructure and accessibility.
- Provides a new commercial node (3) to service new residential populations.
- A logical extension east and south of Black Diamond in areas (4) that allow for a contiguous town border and development in areas of minimal constraints.

FIGURE 23. SCENARIO 1B CONCEPT STATISTICS

This chart depicts the acres per land use type for Scenario 1B, as well as their associated population and job estiamtes.



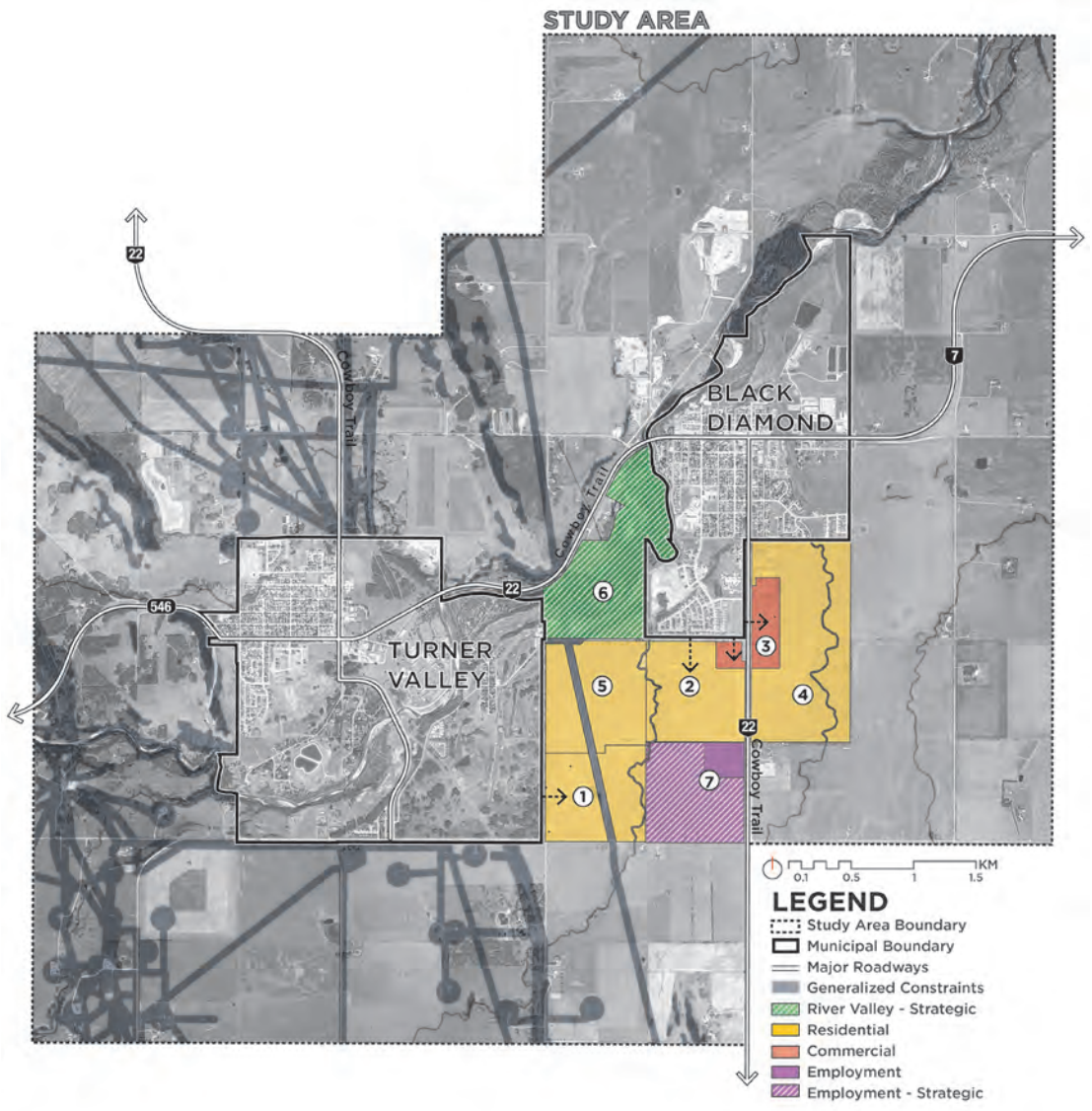


FIGURE 24. SCENARIO 1B CONCEPT

This map depicts Scenario 1B's land use concept, highlighting the major ideas as described in the narrative.

- Allocation of residential lands (5) to accommodate some (though not all) of the population in the high growth scenario.
- Green infrastructure (6) to preserve Sheep River as a major open space connection, excluding the existing country residential development.
- Shifts industrial and strategic industrial to the southern extent of the concept (7), as an extension of Highway 22 corridor, and exploring appropriateness of Highway 22 as a trucking and good movements corridors.

Infrastructure Servicing

The total infrastructure and servicing cost of Scenario 1B is $174.5 million (including $35.2 million as contingency and $22.8 million for engineering fees). This scenario is the second least expensive for total cost of infrastructure investments, and has a total cost per acre of $192,130 per acre. Refer to Figure 25. Scenario 1B Infrastructure Servicing Costs.

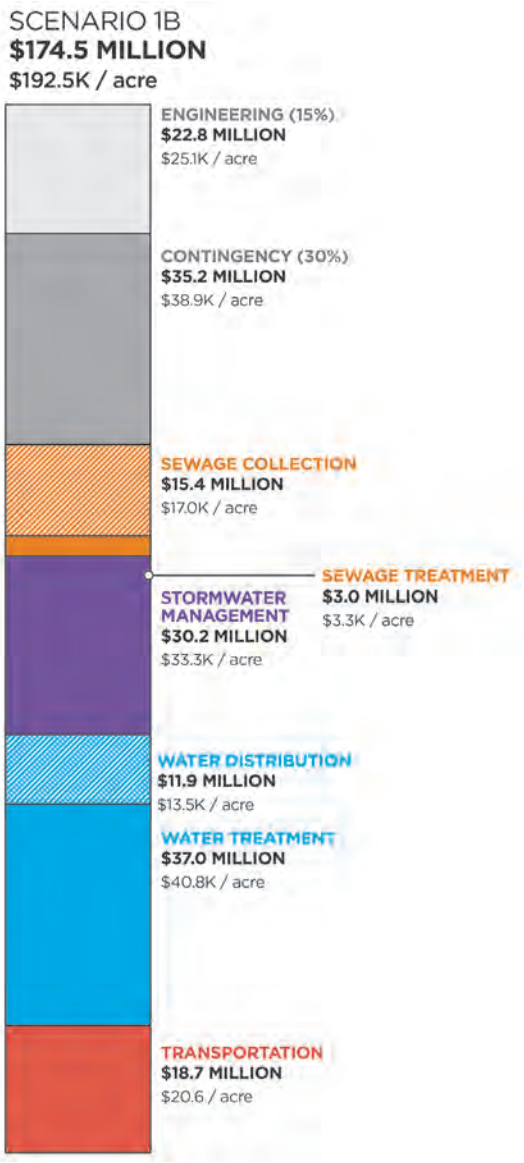


FIGURE 25. SCENARIO 1B INFRASTRUCTURE SERVICING COSTS

This figure provides a breakdown of the infrastructure costs associated with the development of Scenario 1B, and the cost per acre.

TRANSPORTATION

The total estimated transportation costs for Scenario 1B are $18.7 million, $20,570 per acre of development (this does not include extra for contingency or engineering fees). The estimated magnitude of traffic growth on the existing highways is between 4 and 18. Transportation network investments include the following (refer to Figure 26. Scenario 1B Transportation Concept):

- 13 (seven existing, six new) intersection improvements along the proposed and existing network.
- 6.6 km of additional road required to support the growth scenario.

POTABLE WATER

The total estimated potable water costs for Scenario 1B are $48.9 million ($53,870 per acre of development (this does not include extra for contingency or engineering fees). As in all scenarios, it will be necessary to secure sufficient water license capacity and twin of the distribution transmission main from Turner Valley to Black Diamond. Also, there will be a need to upgrade source capacity, the treatment plant, and the pumps in TV Water Treatment Plant to increase flow from Turner Valley to the potable water reservoir in Black Diamond. Additional upgrades include the following (refer to Figure 27. Scenario 1B Potable Water Concept):

- Reservoir upgrades and an additional reservoir will be required to accommodate an additional storage.
- Replace reservoir pump station.
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy.

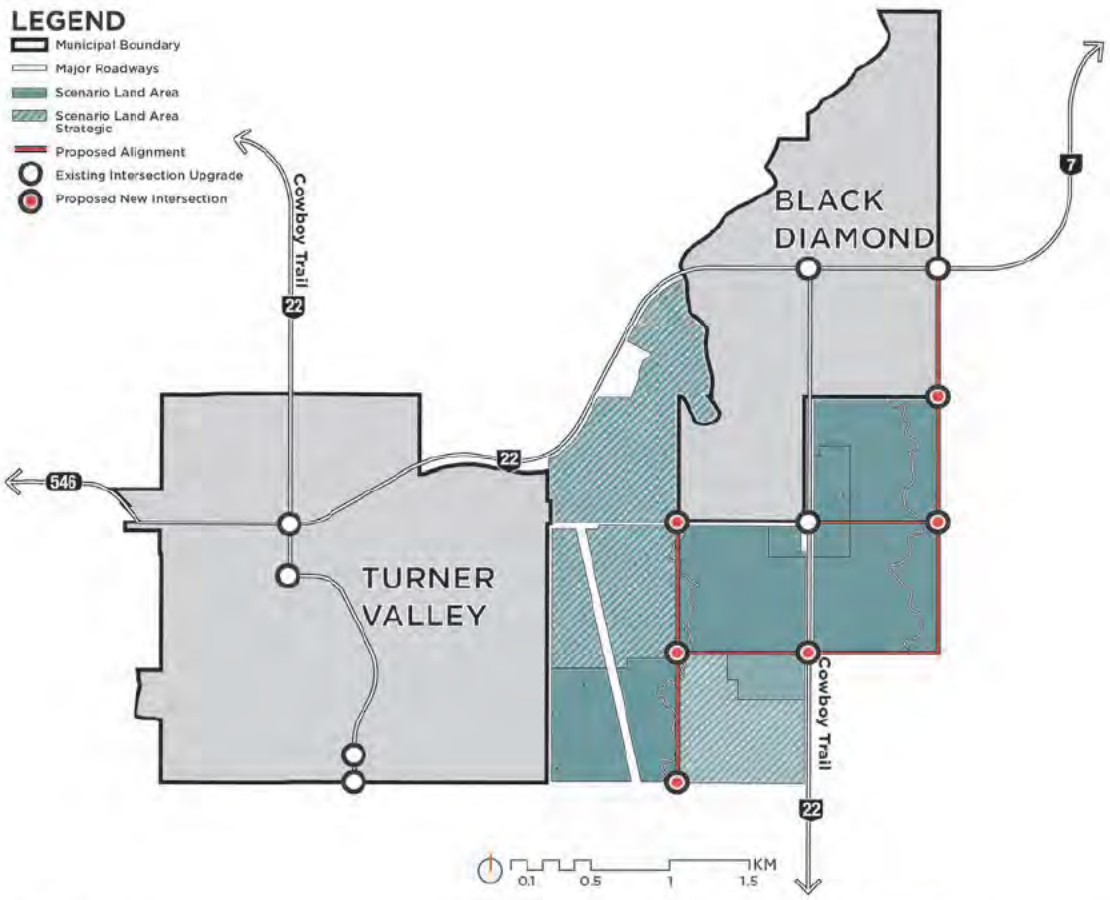


FIGURE 26. SCENARIO 1B TRANSPORTATION CONCEPT

This figure illustrates the transportation concept for Scenario 1B, including a proposed alignment, additional intersections, and intersection upgrades.

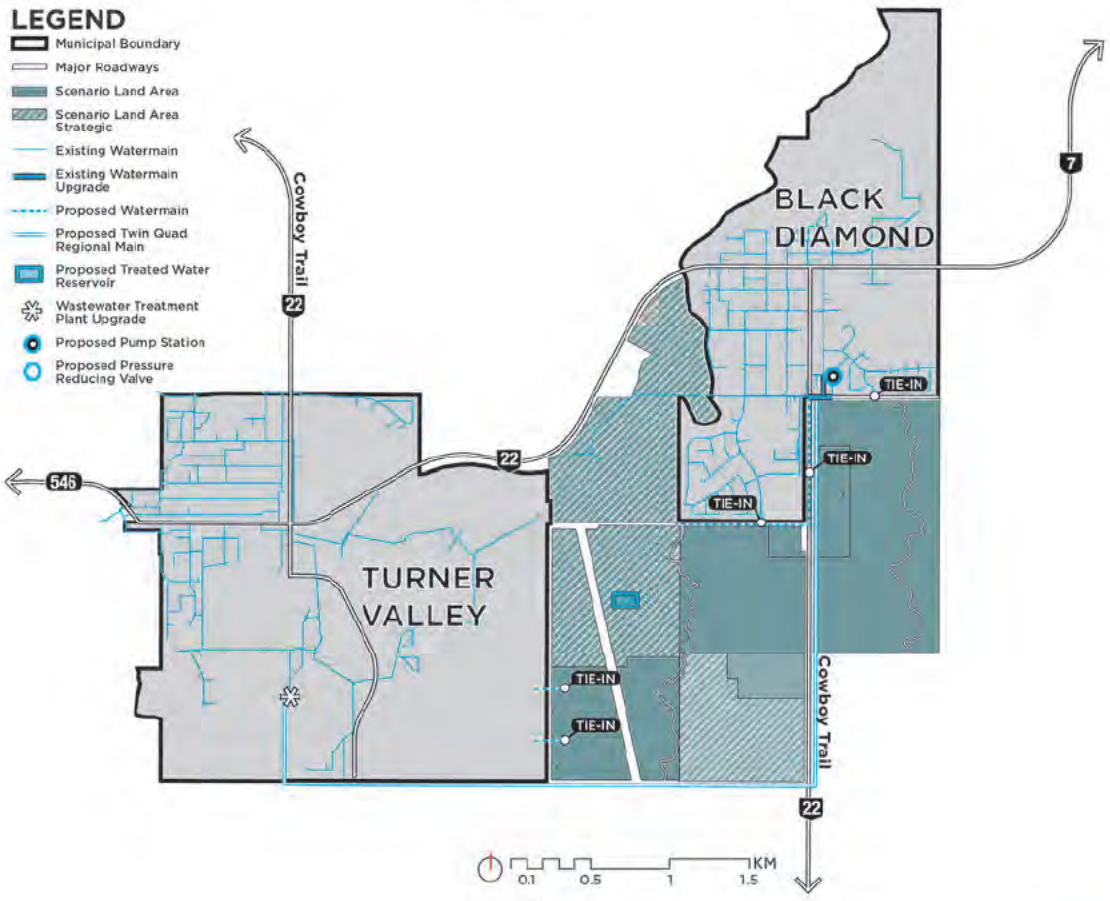


FIGURE 27. SCENARIO 1B POTABLE WATER CONCEPT

This figure illustrates the potable water concept for Scenario 1B, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 1B.

STORMWATER

The total estimated stormwater costs for Scenario 1B are $15.4 million ($17,000 per acre of development (this does not include extra for contingency or engineering fees)**.** Based on existing contours, seven catchments, each with a stormwater detention facility, are proposed to attenuate storm flow for Scenario 1B. Stormwater detention facilities will generally discharge into the existing creeks nearby. However, a southwest pond will require a drainage connection to the adjacent south pond, or the creek. Refer to Figure 28. Scenario 1B Stormwater Concept.

WASTEWATER

The total estimated wastewater costs for Scenario 1B are $33.2 million ($36,560 per acre of development (this does not include extra for contingency or engineering fees)**.** As in all scenarios, wastewater flow from TV will connect into the BD system via the existing Westend Regional Sewage Service Commission (WRSSC) transmission main. Wastewater infrastructure investments for Scenario 1B include the following (refer to Figure 29. Scenario 1B Wastewater Concept):

- A 375 mm gravity line will carry the flow from the TV/BD boundary and connect into the new Wastewater Treatment Plant.
- A new effluent outfall will be needed.

Evaluation

The concept for Scenario 1B meets all the Principles. This scenario builds from existing land use patterns to create contiguous residential communities and provide commercial services to the new residential communities (with the expanded Highway 22 commercial area), it is a fairly cost efficient concept with easily serviced and accessible residential development. Also, by excluding the existing country residential from the River Valley – Strategic land area, the Towns are ensuring that they have no obligation for providing municipal services. Furthermore, the development areas are largely, unconstrained lands areas free from environmental or development concerns and allows for ample strategic residential land to flexibly adapt and accommodate growth beyond the low growth scenario.

However, there are several caveats to this concept that make it a less desirable option. First, the shift of employment lands (7) to the south of the towns in this concept is both not very efficient for servicing and land use continuity, but also creates even larger potential land use conflicts between the surrounding residential areas. Additionally, access along Highway 7, where the employment lands were located in Scenario 1A is more desirable (it's a more major corridor) than Highway 22 access, and the single frontage along Highway 22 will pose challenges for managing development along the corridor and coordination between the MD and the towns. Finally, this scenario is far from meeting the high growth trend forecast, which is an additional goal for the Towns.

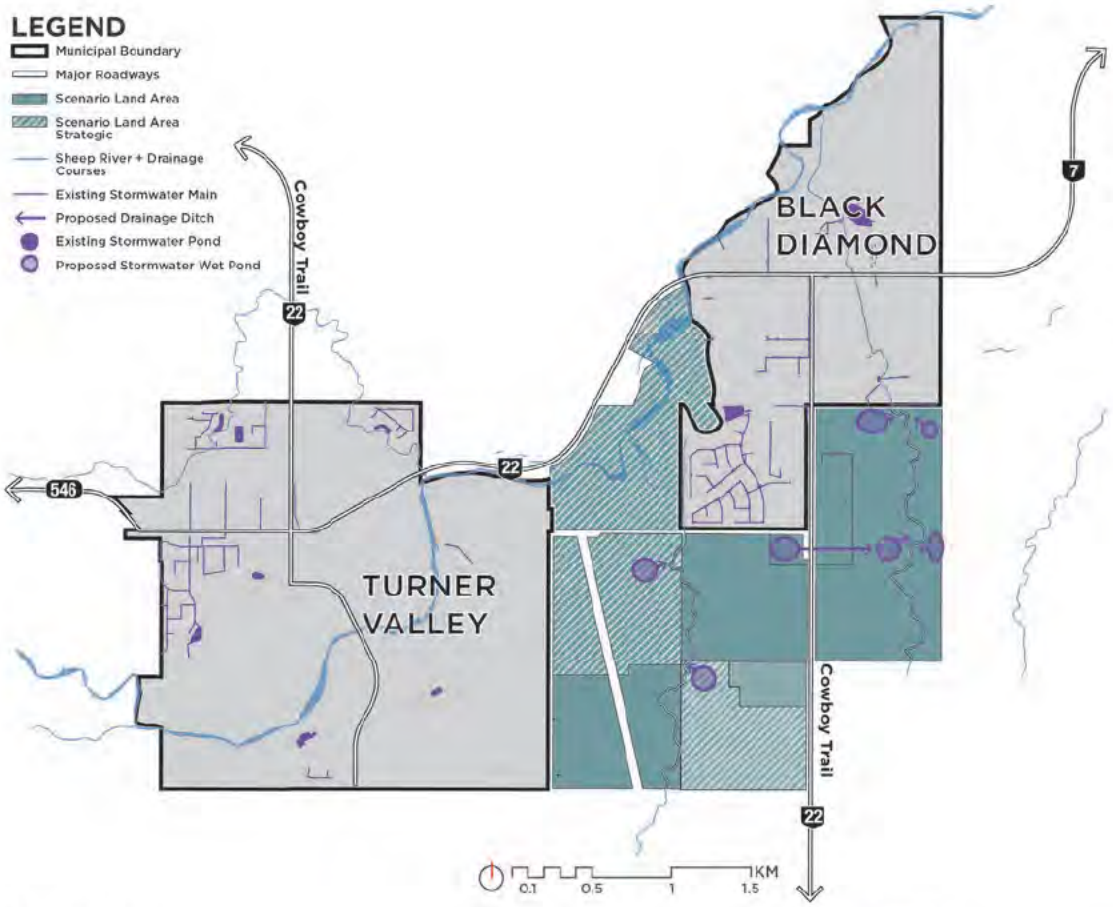


FIGURE 28. SCENARIO 1B STORMWATER CONCEPT

This figure illustrates the stormwater management concept for Scenario 1B, including proposals for additional drainage ditches and stormwater ponds that would be required with the proposed development in Scenario 1B.

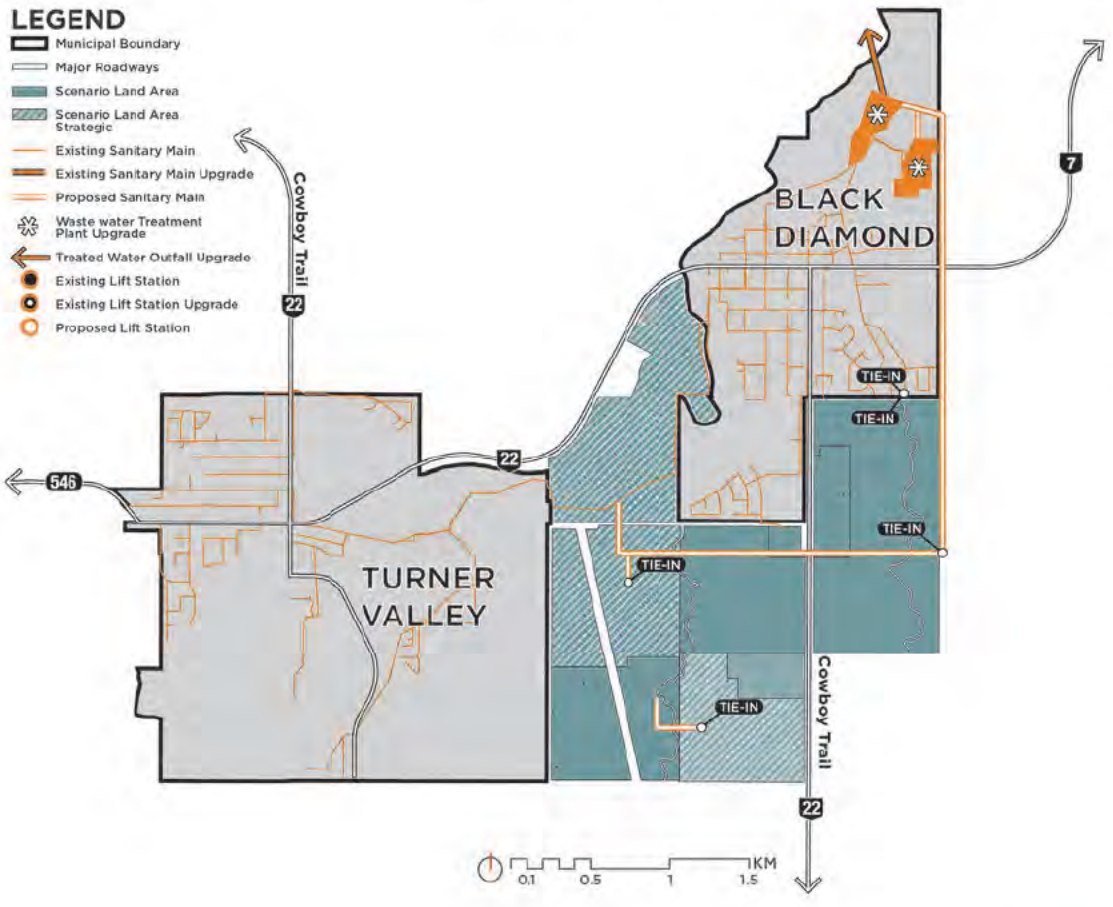


FIGURE 29. SCENARIO 1B WASTEWATER CONCEPT

This figure illustrates the wastewater concept for Scenario 1B, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 1B.

Scenario 2: Two Towns Grow Apart

In Scenario 2, also comprised of two iterations, the two towns grow apart as separate and distinct communities, with the only an environmental and open space as a shared border. A continued sharing of infrastructure will be feasible under the two iterations of this scenario, however, servicing of new development will not be as efficient as under Scenario 1.

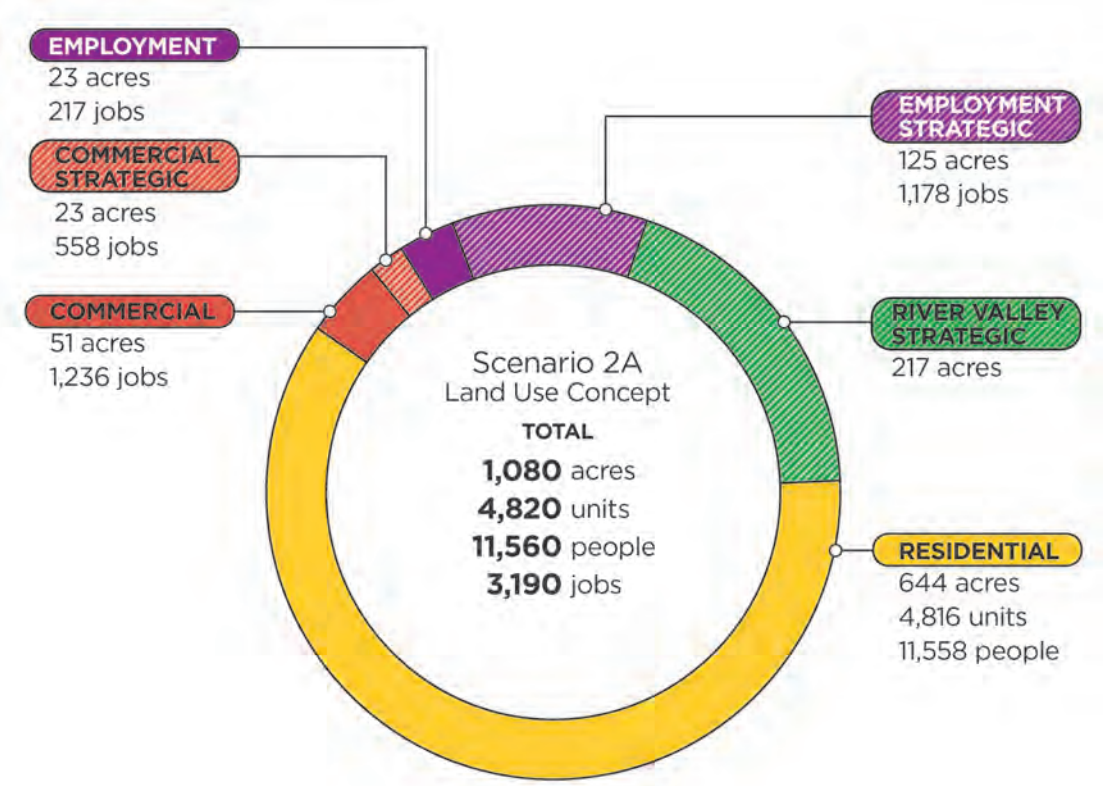
Scenario 2A

Concept

In Scenario 2A, the two towns will be linked by an environmental and open space connection. Future growth is to the east of Black Diamond and the south of Turner Valley. There is a concentration of Employment Lands along Highway 7 (similar to Scenario 1A) and a creation of new commercial nodes along Highway 22 and Highway 7. Additionally, there is a modest supply of contingency land for additional commercial and employment land growth. In this scenario, growth area lands total 1,080 acres (the equivalent of 6.8 quarter sections), which supports approximately 11,560 people and 3,190 jobs. Refer to Figure 30. Scenario 2A Concept Statistics. The concept for this scenario was based on several key ideas as identified in Figure 31. Scenario 2A Concept, and summarized below.

FIGURE 30. SCENARIO 2A CONCEPT STATISTICS

This chart depicts the acres per land use type for Scenario 2A, as well as their associated population and job estiamtes.



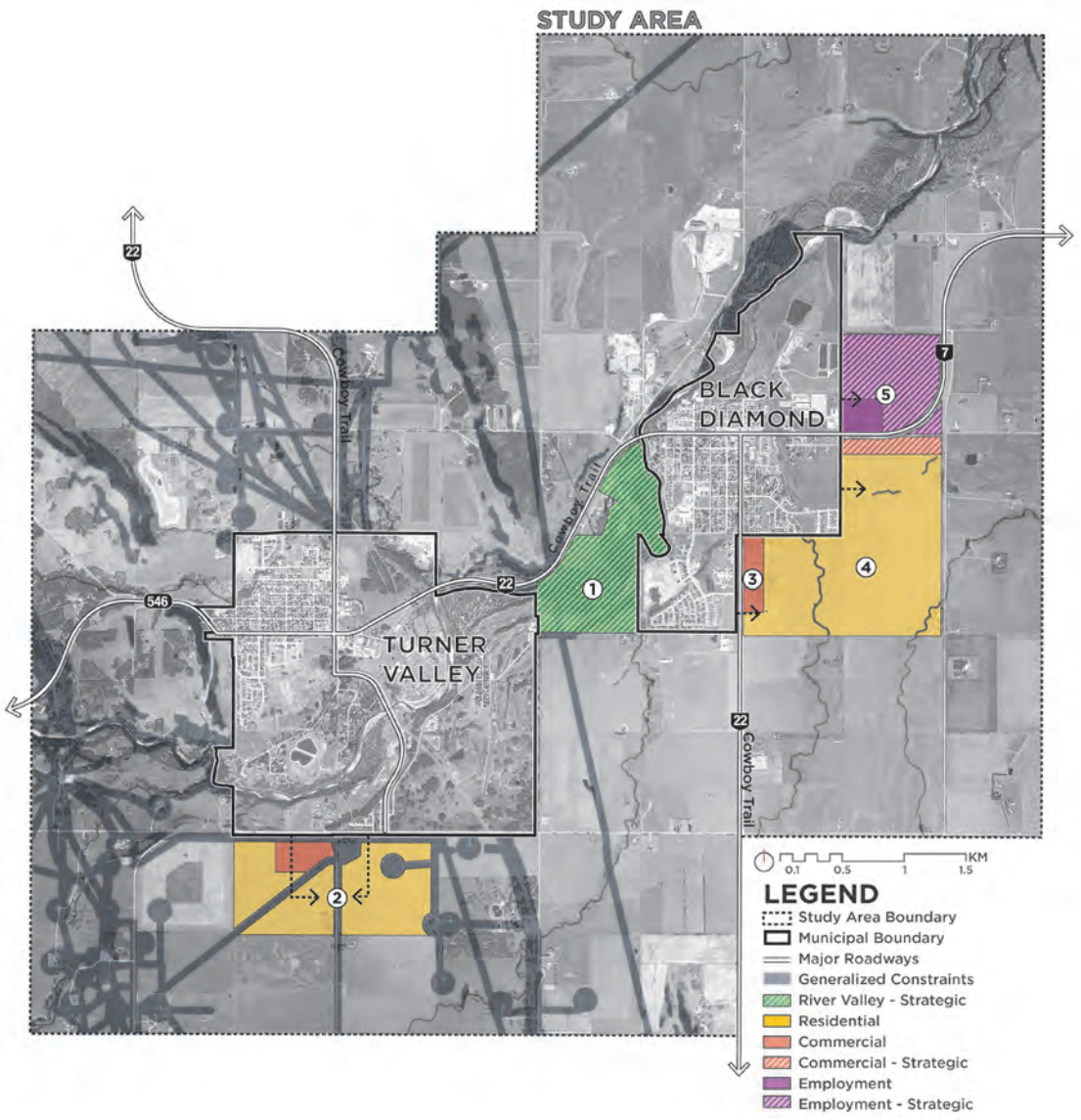


FIGURE 31. SCENARIO 2A CONCEPT

This map depicts Scenario 2A's land use concept, highlighting the major ideas as described in the narrative.

- Green infrastructure (1) to preserve Sheep River as a major open space connection, excluding the existing country residential development. This area is the connective "green tissue" joining the towns.
- Logical extension of Turner Valley ASP future development plans in areas (2) that are the least constrained by environmental and development concerns.
- Provides a new commercial node (3) to service new residential populations, with contingency strategic commercial lands along the south side of Highway 7 that also act as a transition buffer between the employment lands and residential.
- Locates additional residential development (4) adjacent to existing residential communities, creating continuity.
- Industrial development (5) along Highway 7 to capitalize on the Highway's access to Highway 2, as well as a continuation of similar uses to create continuity and minimize conflicts.

Infrastructure Servicing

The total infrastructure and servicing cost of Scenario 2A is $172.7 million (including $34.6 million as contingency and $22.7 million for engineering fees). This scenario is the least expensive for total cost of infrastructure investments, but has a total cost per acre – $199,150 per acre – that is the second most expensive. Refer to Figure 32. Scenario 2A Infrastructure Servicing Costs.

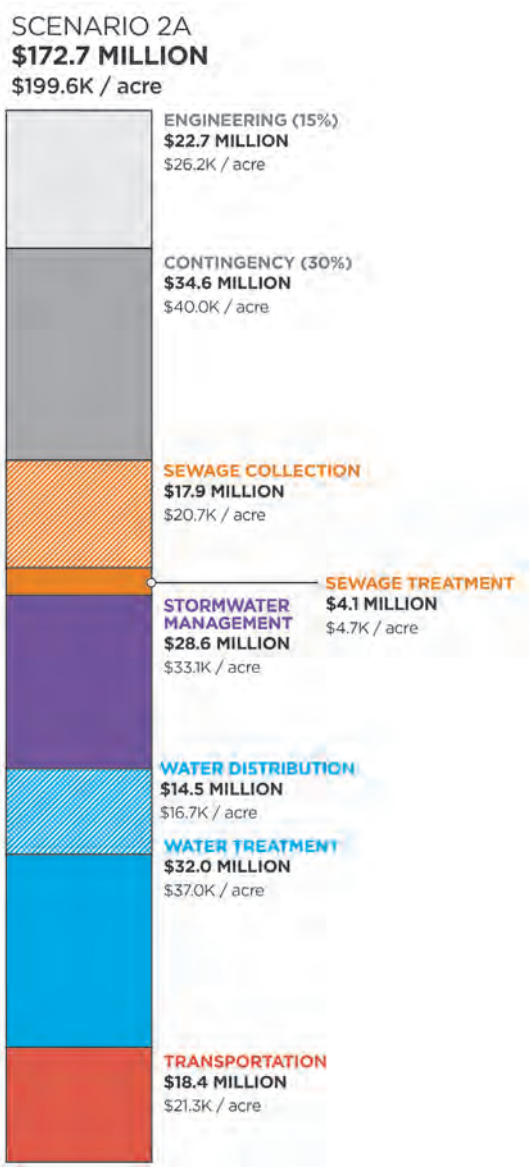


FIGURE 32. SCENARIO 2A INFRASTRUCTURE SERVICING COSTS

This figure provides a breakdown of the infrastructure costs associated with the development of Scenario 2A, and the cost per acre.

TRANSPORTATION

The total estimated transportation costs for Scenario 2A are $18.4 million ($21,250 per acre of development (this does not include extra for contingency or engineering fees). However, potential terrain challenges may increase project cost. The estimated magnitude of traffic growth on the existing highways is between 5 and 12. Transportation network investments include the following (refer to Figure 33. Scenario 2A Transportation Concept):

- 12 (nine existing, three new) intersection improvements along the proposed and existing network.
- 6.6 km of additional road required to support the growth scenario.

POTABLE WATER

The total estimated potable water costs for Scenario 2A are $46.5 million ($53,590 per acre of development (this does not include extra for contingency or engineering fees). As in all scenarios, it will be necessary to secure sufficient water license capacity and twin of the distribution transmission main from Turner Valley to Black Diamond. Also, there will be a need to upgrade source capacity, the treatment plant, and the pumps in TV Water Treatment Plant to increase flow from Turner Valley to the potable water reservoir in Black Diamond. Additional upgrades include the following (refer to Figure 34. Scenario 2A Potable Water Concept):

- Reservoir upgrades and an additional reservoir will be required to accommodate an additional storage.
- Replace reservoir pump station.
- A new pump station required to boost flow.
- Two new PRV stations to manage the system pressures.
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy.

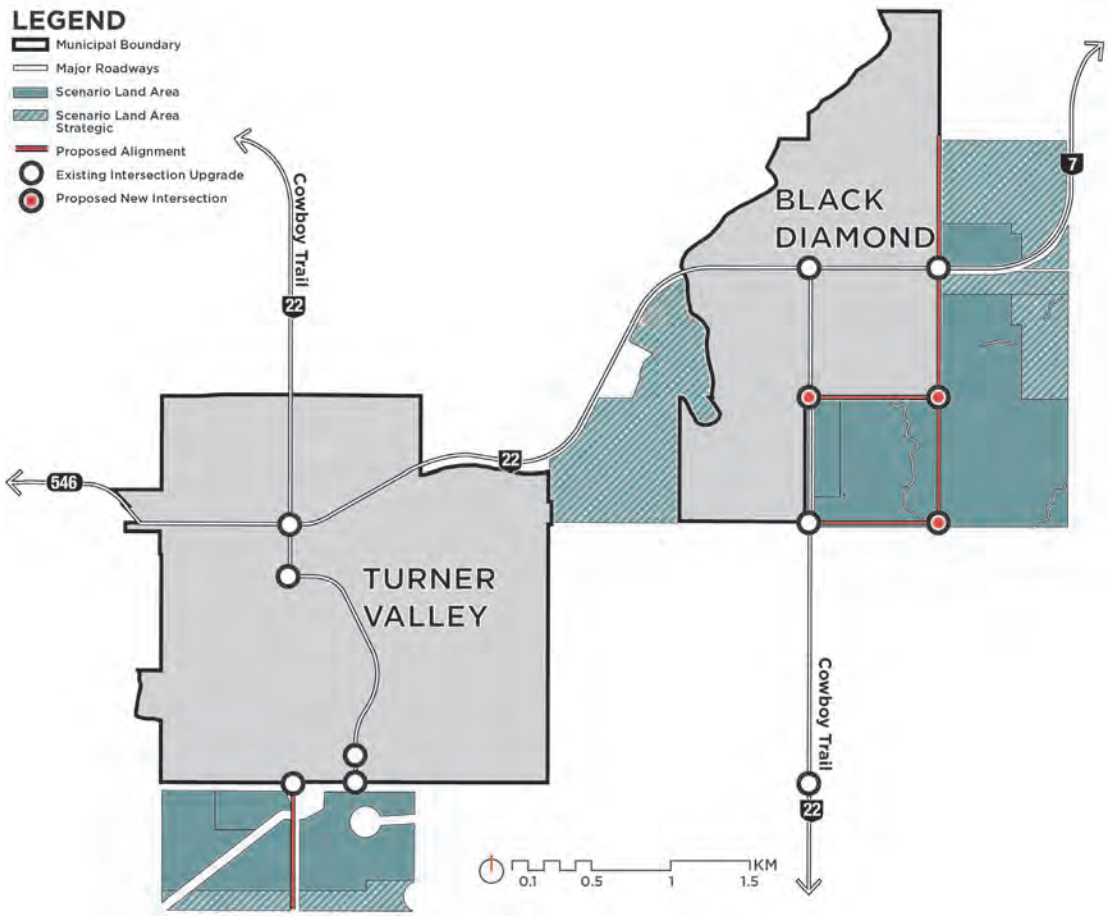


FIGURE 33. SCENARIO 2A TRANSPORTATION CONCEPT

This figure illustrates the transportation concept for Scenario 2A, including a proposed alignment, additional intersections, and intersection upgrades.

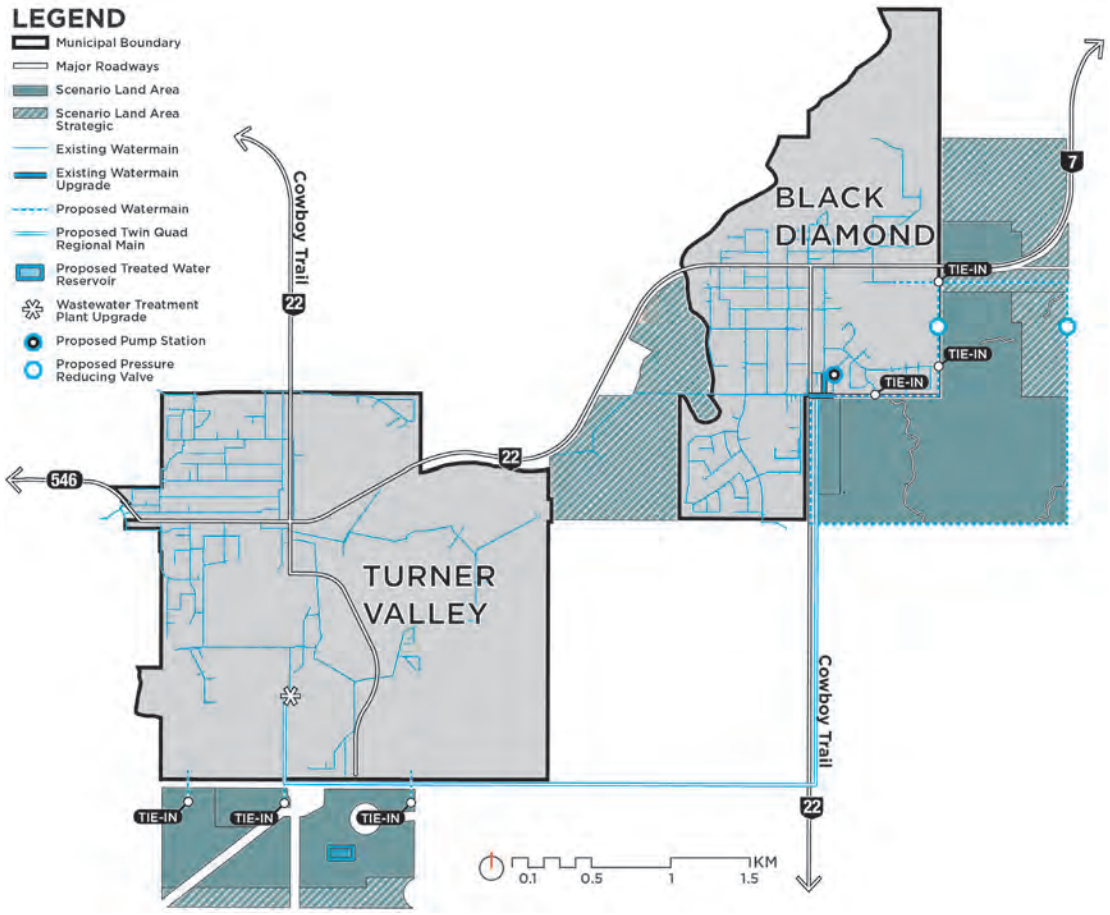


FIGURE 34. SCENARIO 2A POTABLE WATER CONCEPT

This figure illustrates the potable water concept for Scenario 2A, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 2A.

STORMWATER

The total estimated stormwater costs for Scenario 2A are $17.9 million ($20,650 per acre of development (this does not include extra for contingency or engineering fees)**.** Based on existing contours, eight catchments, each with a stormwater detention facility, are proposed to attenuate storm flow for Scenario 2A. Stormwater detention facilities will generally discharge into the existing creeks nearby. However, pond drainage routes are as follows (refer to Figure 35. Scenario 2A Stormwater Concept):

- The north pond will require a drainage ditch and outfall to the Sheep River. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The east pond will require a drainage ditch to the adjacent southeast pond, or the creek.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

WASTEWATER

The total estimated wastewater costs for Scenario 2A are $32.7 million ($37,660 per acre of development (this does not include extra for contingency or engineering fees)**.** As in all scenarios, wastewater flow from TV will connect into the BD system via the existing Westend Regional Sewage Service Commission (WRSSC) transmission main. However, connections to the south of Turner Valley are not possible due to planned development accounting for existing capacity. Wastewater infrastructure investments for Scenario 2A include the following (refer to Figure 36. Scenario 2A Wastewater Concept):

- A 375 mm gravity line will carry the flow from the TV/BD boundary and connect into the new Wastewater Treatment Plant.
- A new effluent outfall will be needed.

Evaluation

The concept for Scenario 2A meets all but one of the Principles. The placement of residential to the south of Turner Valley makes this concept less flexible and less resilient. Not only is the area highly fragmented due to existing oil and gas infrastructure, which will impact the viability and design quality of development, but the development in this direction is also restricted should the town need to grow even more in the future. Furthermore, this concept provides little strategic lands, which limits the towns' ability to adapt and evolve to any change in local and regional growth factors and could result in the need for a second annexation, should the higher growth scenario occur. Another concern of this concept is the addition of commercial to the south of Turner Valley (2). This new commercial node could pose a threat to the vitality of Turner Valley's downtown, by adding a third commercial node for the town and further diluting the draw of each commercial node. Additionally, given its size and position between residential, employment lands, and the highway, the strategic commercial area south of Highway 7 will need careful design consideration, depending on the type of commercial and trip generation.

The concept provides logical extension of residential development in unconstrained, easily serviced, and accessible areas, as well as logical extension of employment lands in areas adjacent to existing industrial with access to Highway 22. However, though this scenario meets the lower range of residential land requirements, it is well below the higher growth forecast, which could pose a challenge should the high growth forecast occur, which is more likely. The drawbacks to this plan are substantial and make this a less favorable option, though it is a thorough exploration of all the options of future development.

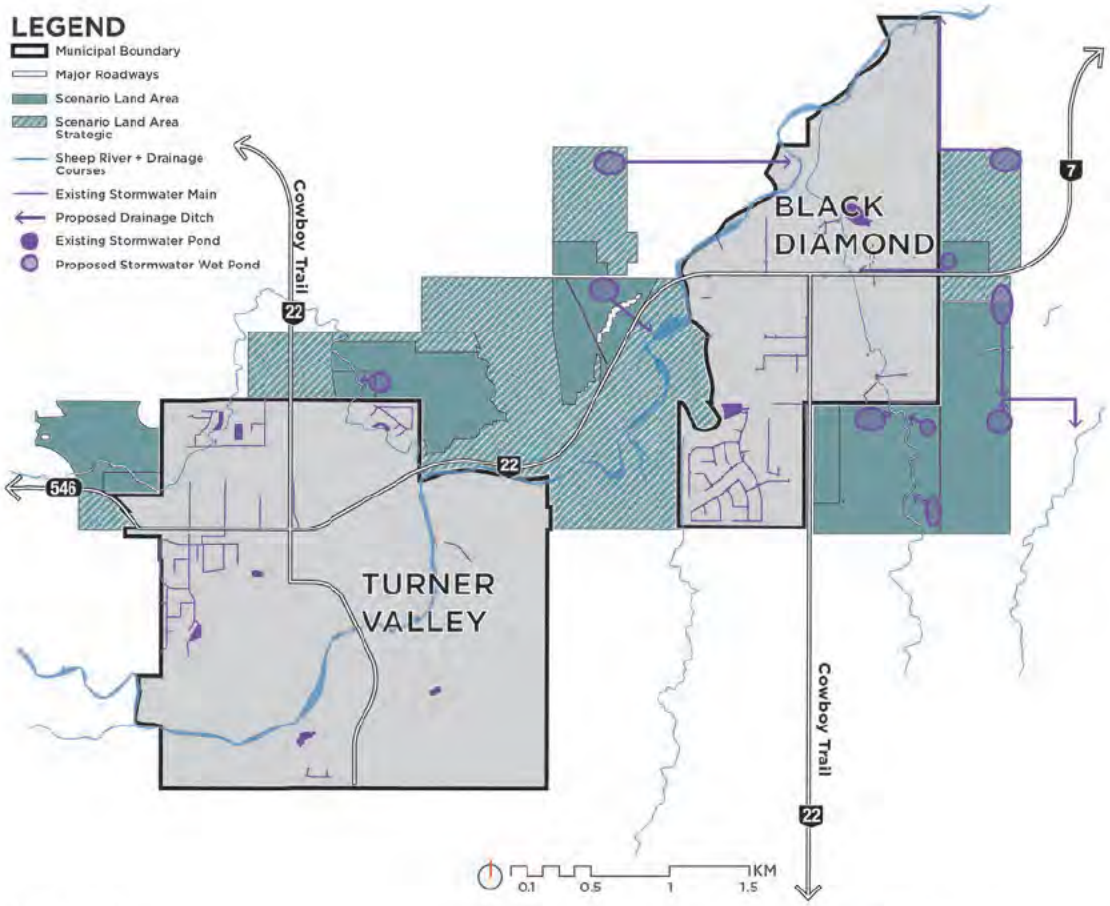


FIGURE 35. SCENARIO 2A STORMWATER CONCEPT

This figure illustrates the stormwater management concept for Scenario 2A, including proposals for additional drainage ditches and stormwater ponds that would be required with the proposed development in Scenario 2A.

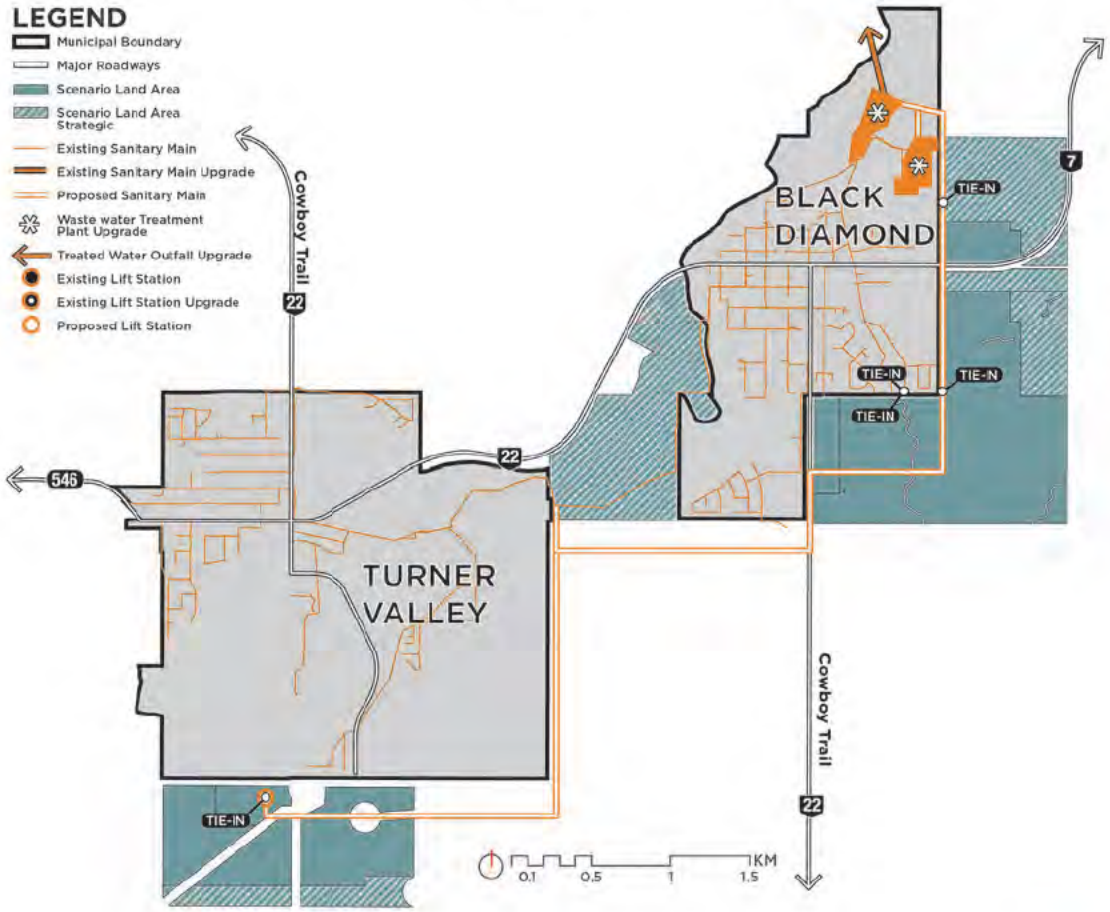


FIGURE 36. SCENARIO 2A WASTEWATER CONCEPT

This figure illustrates the wastewater concept for Scenario 2A, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 2A.

Scenario 2B

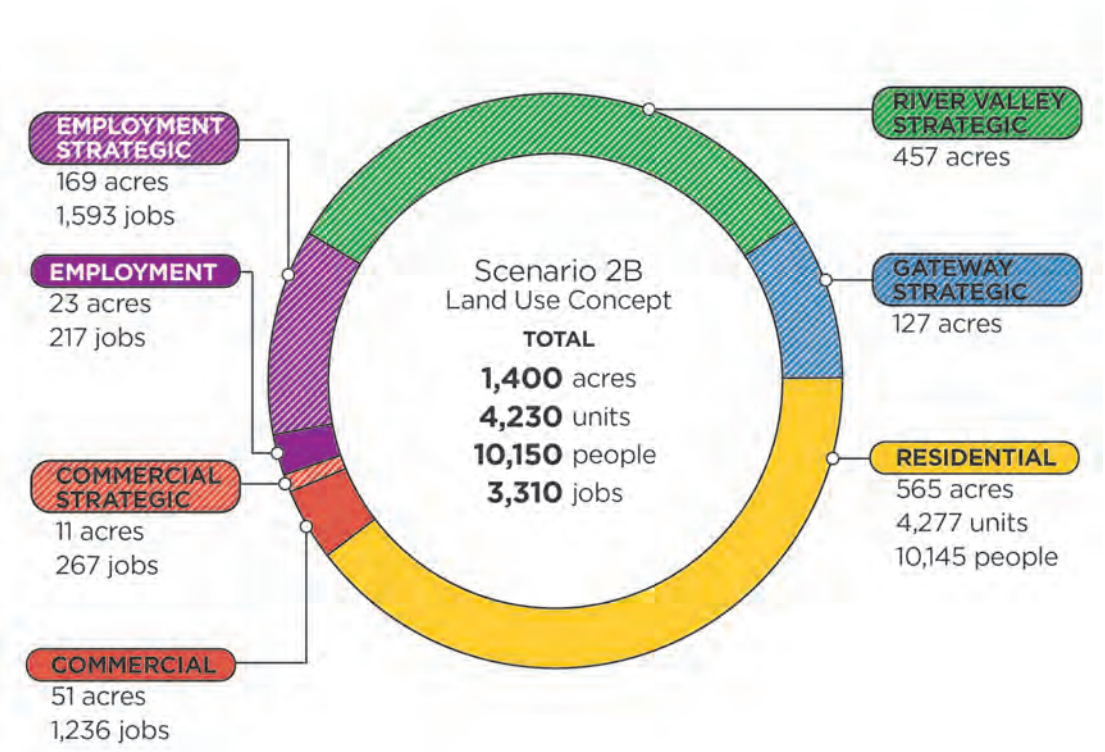
Concept

While growth for Black Diamond in this scenario is fairly similar to Scenario 2A, growth around Turner Valley is significantly different. Instead of growth on the south side of Turner Valley (as is the case in Scenario 2A), Scenario 2B shifts this growth to the north of the town, in the form of smaller, residential growth areas. Additionally, this scenario allows for a more substantial environmental and open space connection between the two towns, covering lands on both sides of the river. Furthermore, this scenario establishes two employment land areas, with the creation of smaller local commercial nodes and strategic gateway areas. In this scenario, growth area lands total 1,400 acres (the equivalent of 8.8 quarter sections), which supports approximately 10,150 people and 3,310 jobs. Refer to Figure 37. Scenario 2B Concept Statistics. The concept for this scenario was based on several key ideas as identified in Figure 38. Scenario 2B Concept, and summarized below.

- A significantly expanded green network moves across Highway 22 to provide open space connectivity between the towns, as well as the growth to the north, while helping to preserve Sheep River. This area would also absorb the existing country residential development.
- Residential development builds upon planned communities currently proposed in the MD of Foothills, north of Sheep River.
- Industrial demand lands split into two areas, one (3) building from the industrial uses currently in the MD of Foothills and one (4) building from the existing Black Diamond industrial development and Highway 7 access.
- Locates additional residential development (5) adjacent to existing residential communities, creating continuity, however amount is reduced due to the shifted residential to the north, (2) and (7).

FIGURE 37. SCENARIO 2B CONCEPT STATISTICS

This chart depicts the acres per land use type for Scenario 2B, as well as their associated population and job estiamtes.



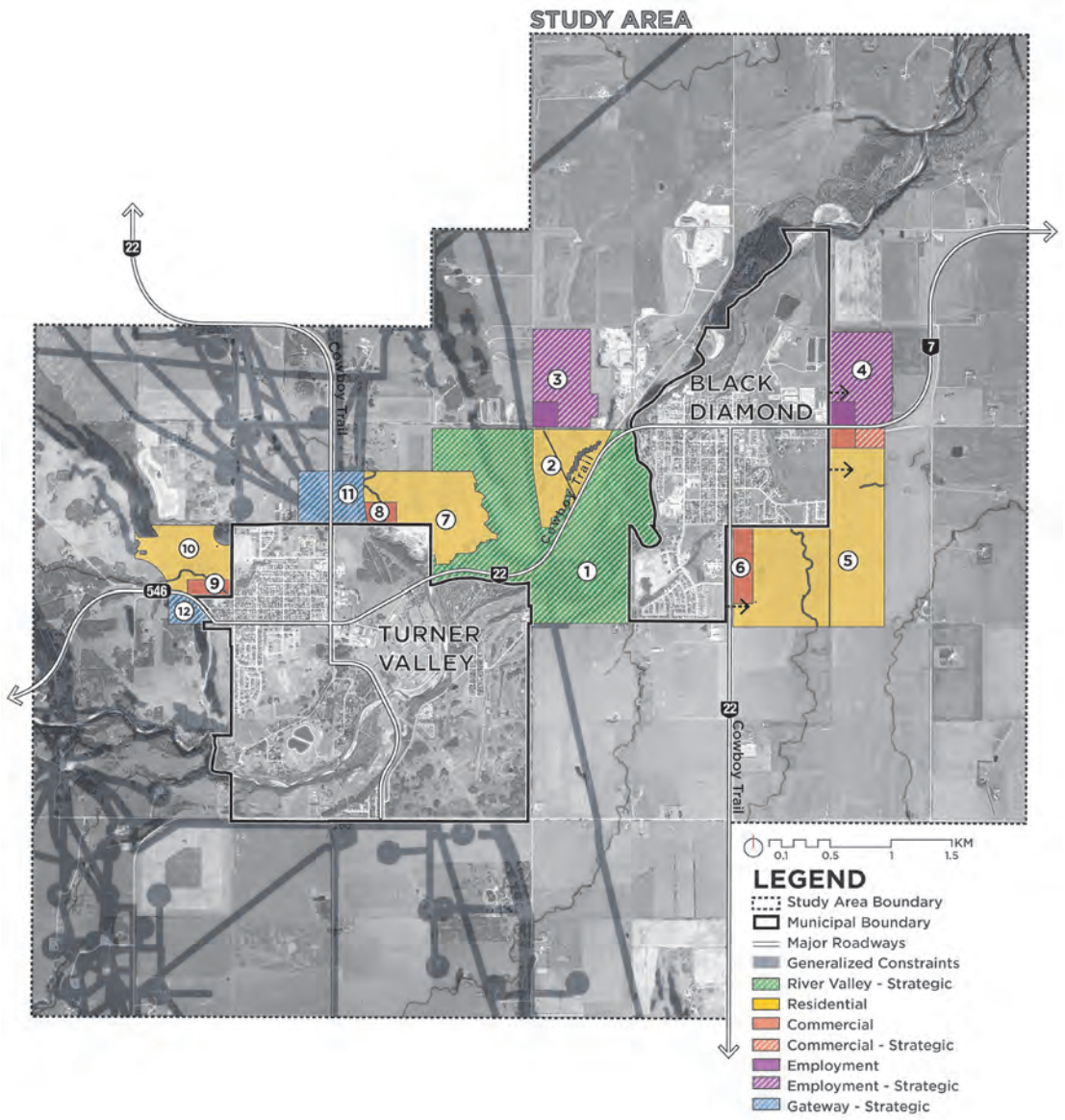


FIGURE 38. SCENARIO 2B CONCEPT

This map depicts Scenario 2B's land use concept, highlighting the major ideas as described in the narrative.

- Provides a new commercial node (6) to service new residential populations, with contingency strategic commercial lands along the south side of Highway 7 that also act as a transition buffer between the employment lands and residential.
- Turner Valley growth directed to the north and northwest (7) and (10), with (7) exploring the option of unconstrained, stand-alone lands north of existing development, and (10) building off of planned future ASP development as well as existing residential.
- New commercial nodes (8) and (9) support the expansion of residential development.
- The important gateway lands and entrance into Turner Valley (11) are highly constrained with no anticipated use, but should these constraints be removed in the future, these areas could be highly valuable for commercial or institutional purpose and should therefore be strategically held.
- A small extension (12) on the south side of Highway 546 to bring Turner Valley municipal infrastructure into the town boundaries.

Infrastructure Servicing

The total infrastructure and servicing cost of Scenario 2B is $204.9 million (including $41.3 million as contingency and $26.8 million for engineering fees). Both the second most costly for infrastructure investments, this scenario also has the highest total cost per acre, $249,550 per acre. Refer to Figure 39. Scenario 2B Infrastructure Servicing Costs.

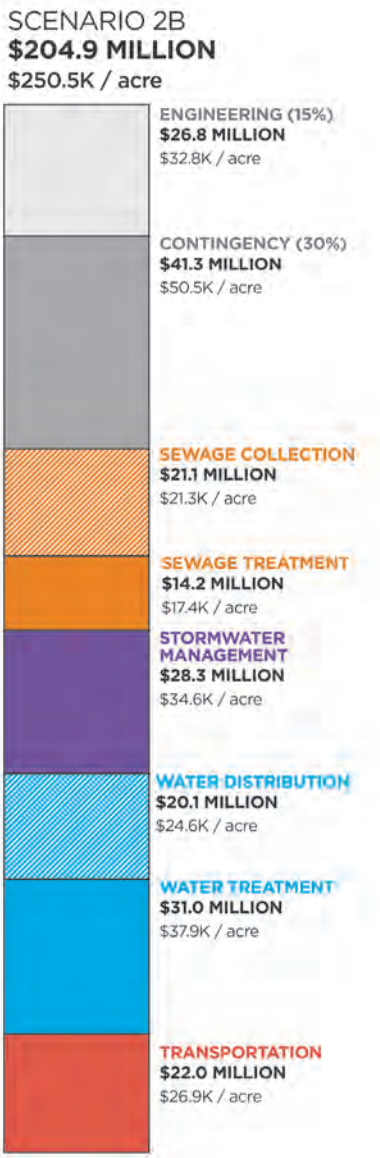


FIGURE 39. SCENARIO 2B INFRASTRUCTURE SERVICING COSTS

This figure provides a breakdown of the infrastructure costs associated with the development of Scenario 2B, and the cost per acre.

TRANSPORTATION

The total estimated transportation costs for Scenario 2B are $22.0 million ($26,850 per acre of development) (this does not include extra for contingency or engineering fees). However, potential terrain challenges may increase project cost. The estimated magnitude of traffic growth on the existing highways is between 6 and 11. Transportation network investments include the following (refer to Figure 40. Scenario 2B Transportation Concept):

- 14 (eight existing, six new) intersection improvements along the proposed and existing network.
- 8.1 km of additional road required to support the growth scenario.

POTABLE WATER

The total estimated potable water costs for Scenario 2B are $51.1 million ($62,240 per acre of development) (this does not include extra for contingency or engineering fees). As in all scenarios, it will be necessary to secure sufficient water license capacity and twin the distribution transmission main from Turner Valley to Black Diamond. There will be a need to upgrade source capacity, the treatment plant, and the pumps in TV Water Treatment Plant to increase flow from Turner Valley to the potable water reservoir in Black Diamond. Additional upgrades include the following (refer to Figure 41. Scenario 2B Potable Water Concept):

- Reservoir upgrades and an additional reservoir will be required to accommodate an additional storage.
- Replace reservoir pump station.
- Upsize the distribution pipe from the reservoir to the distribution system.
- A new dedicated transmission watermain to carry flow from reservoir across the river.
- A new booster station to boost flow.
- One pipeline river crossing to convey from Black Diamond.
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy.
- Four new PRV stations to manage the system pressures.

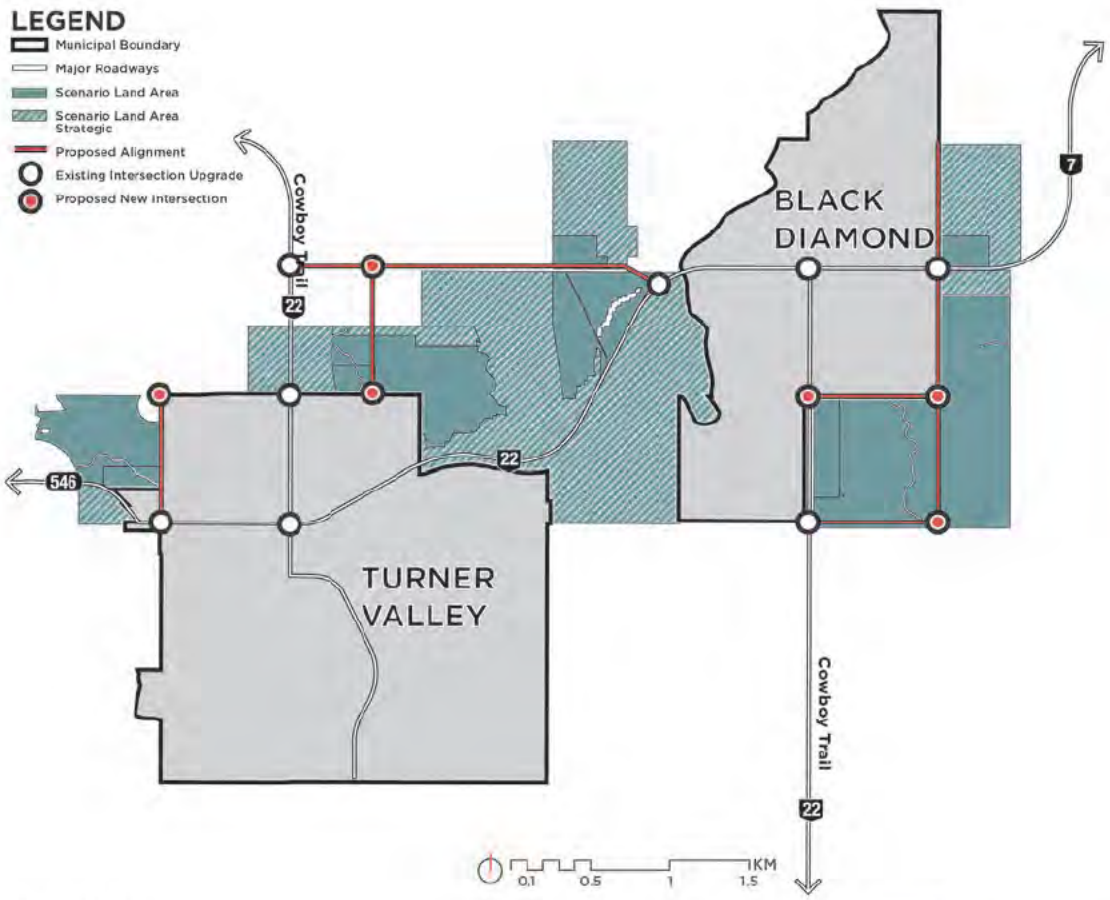


FIGURE 40. SCENARIO 2B TRANSPORTATION CONCEPT

This figure illustrates the transportation concept for Scenario 2B, including a proposed alignment, additional intersections, and intersection upgrades.

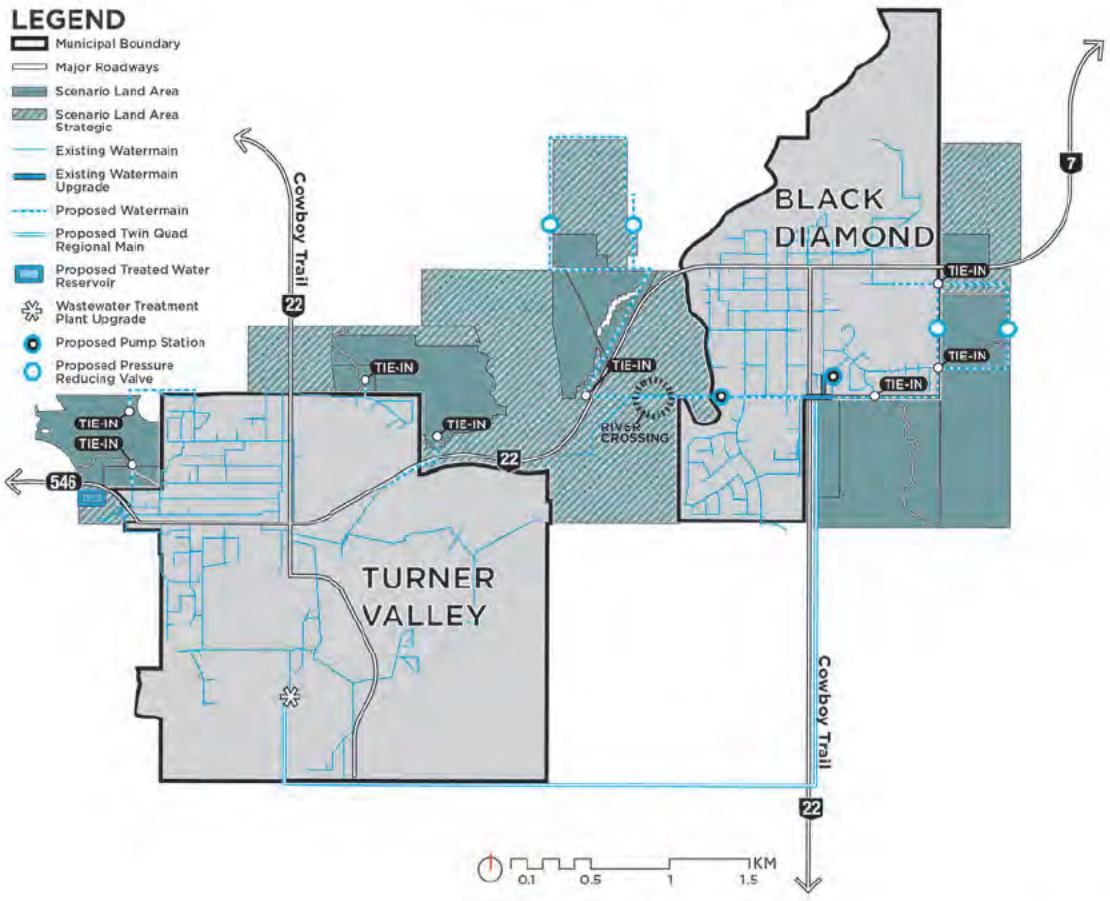


FIGURE 41. SCENARIO 2B POTABLE WATER CONCEPT

This figure illustrates the potable water concept for Scenario 2B, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 2B.

STORMWATER

The total estimated stormwater costs for Scenario 2B are $21.1 million ($25,680 per acre of development (this does not include extra for contingency or engineering fees)**.** Based on existing contours, eleven catchments, each with a stormwater detention facility, are proposed to attenuate storm flow for Scenario 2B. The drainage courses of the additional ponds are as follows (refer to Figure 42. Scenario 2B Stormwater Concept):

- The south ponds will discharge into the existing creek nearby.
- Three ponds to the north will require drainage ditches and outfalls to the sheep river. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The two ponds to the east will require drainage ditches to the nearby creek. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

WASTEWATER

The total estimated wastewater costs for Scenario 2B are $42.5 million ($51,790 per acre of development (this does not include extra for contingency or engineering fees)**.** As in all scenarios, wastewater flow from TV will connect into the BD system via the existing Westend Regional Sewage Service Commission (WRSSC) transmission main. Wastewater infrastructure investments for Scenario 2B include the following (refer to Figure 43. Scenario 2B Wastewater Concept):

- A new 300 mm gravity line to carry the flow from the TV/BD boundary North and connect into the new Wastewater Treatment Plant.
- A new 250 mm gravity line to carry flow from under the river to the new Wastewater Treatment Plant.
- Existing lift station and lines in Turner Valley will require upgrades.
- A new lift station will be required to service the land north of Turner Valley.
- A new effluent outfall will be needed.

Evaluation

While a thorough exploration of future development options, the concept for Scenario 2B fails to meet half of the Principles. This concept is not efficient, it has the highest cost for infrastructure servicing and is also comprised of illogical development extensions that create isolated patches of development (2), (3), and (7), and call for annexation of halves of quarter sections. Furthermore, this concept is not sustainable. While it does protect a larger River Valley land area, the isolation of residential communities and developments does not promote economic or social vitality. Finally, this concept is not flexible or resilient. It provides just meets the lower growth land requirements, which could result in the need for a second land annexation, should a higher growth scenario occur, or local or regional growth patterns shift.

Additional challenges for this concept include: additional commercial nodes for Turner Valley that could compete the downtown, a missed opportunity to extend the employment lands (4) along Highway 7 for continued access, the identification of gateway lands (11) that are highly constrained with limited potential for development, and a land use conflict between the adjacent residential (2) and employment land (3) uses to the west of Black Diamond. This concept does provide some benefits, such as controlling both sides of Highway 22 and the entry to Turner Valley with the gateway lands (11) and making use of easily serviced lands for residential development (10) to the northwest of Turner Valley. However, the drawbacks to this concept significantly outweigh the benefits, such that this scenario is a highly infeasible option.

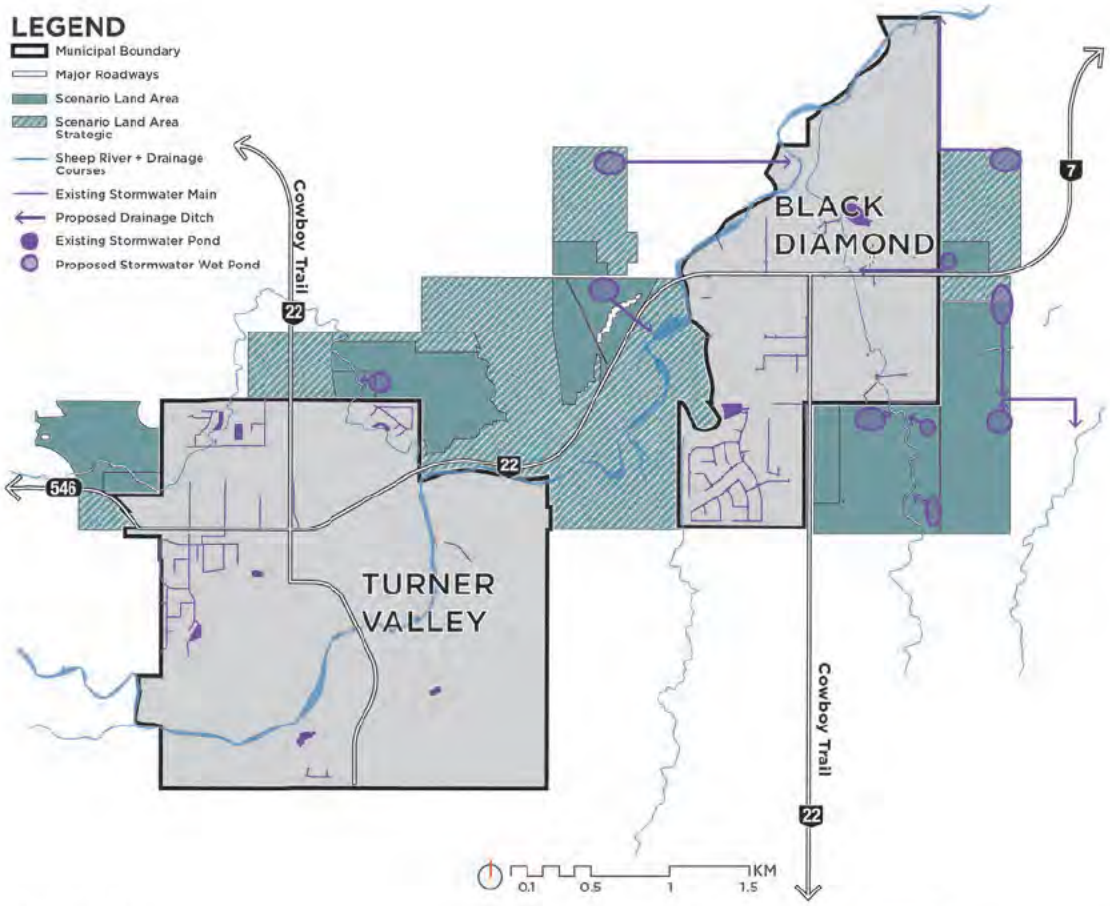


FIGURE 42. SCENARIO 2B STORMWATER CONCEPT

This figure illustrates the stormwater management concept for Scenario 2B, including proposals for additional drainage ditches and stormwater ponds that would be required with the proposed development in Scenario 2B.

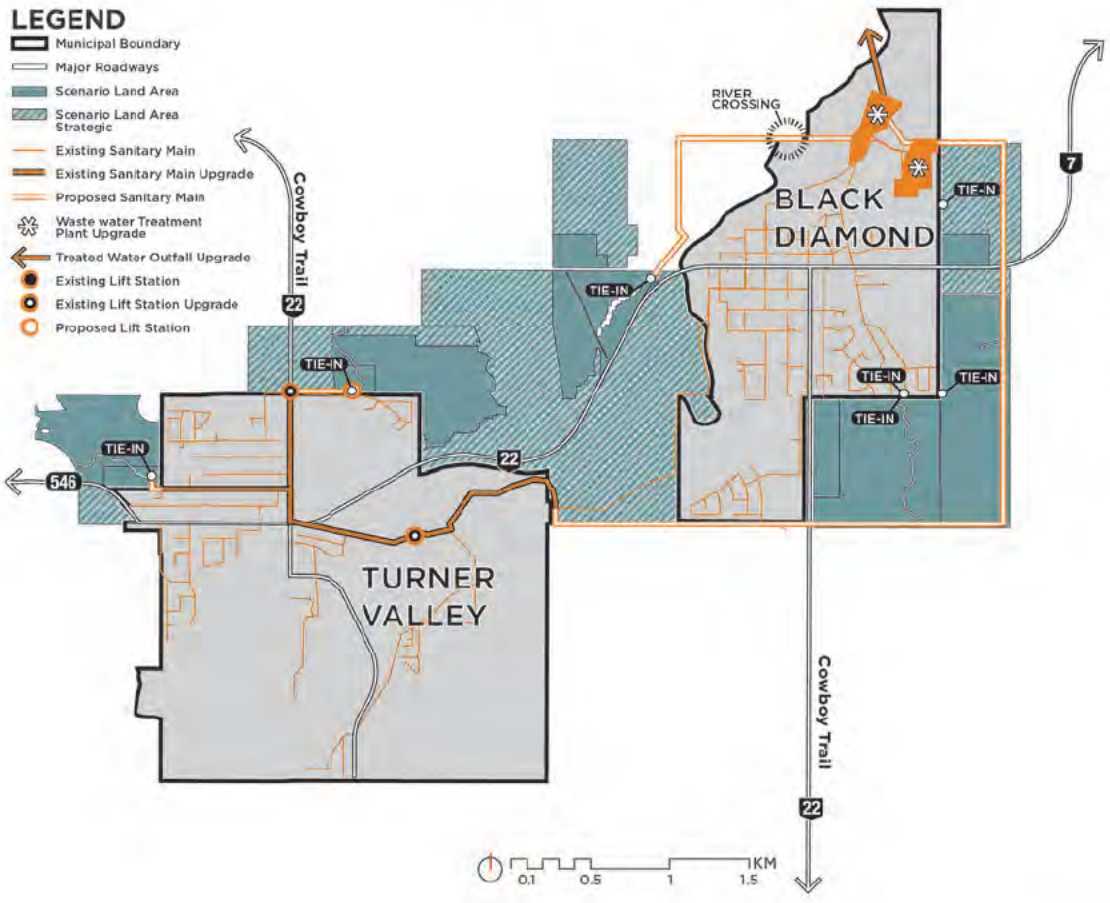


FIGURE 43. SCENARIO 2B WASTEWATER CONCEPT

This figure illustrates the wastewater concept for Scenario 2B, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 2B.

Scenario 3: Joint Advisory Committee Direction

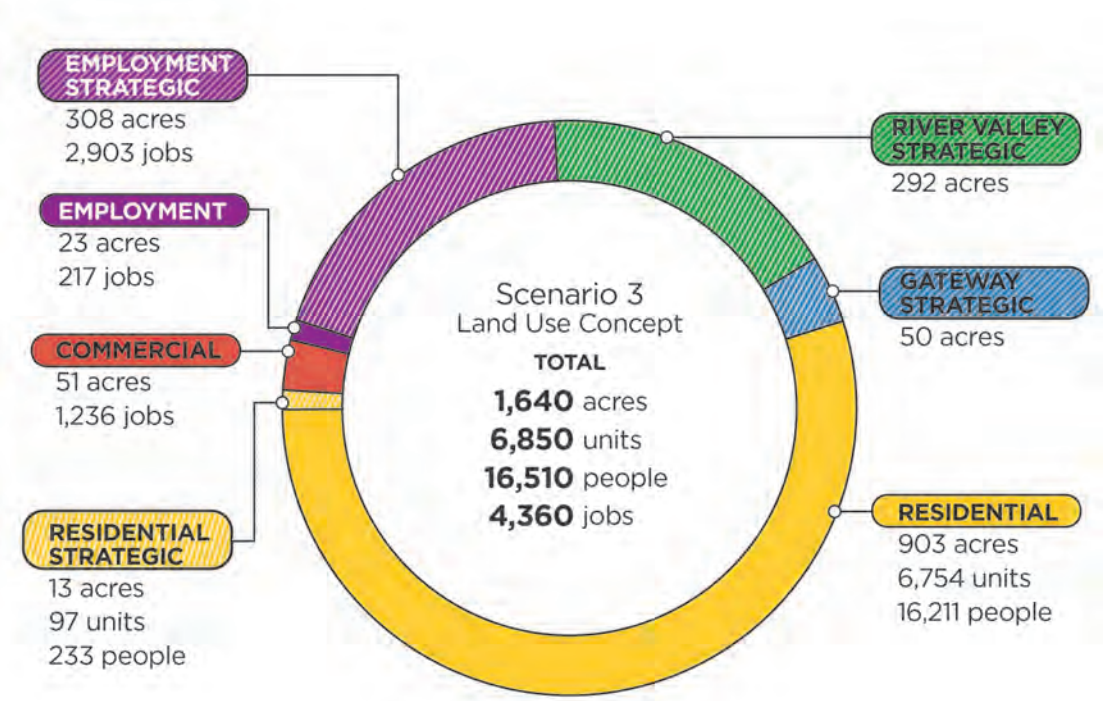
Concept

Scenario 3 is based primarily on Scenario 1A, with a strategy of the two towns growing together. However, some elements from Scenario 2B, specially, the location of Turner Valley development, were included in Scenario 3. The concept for Scenario 3 is indistinguishable borders, with expanded River Valley Lands to create an important environmental and open space connection between the towns, while maintaining highway control. The bulk of residential development is concentrated in the area between the two towns, with a new commercial node along Highway 22, and a concentration of employment lands along Highway 7. Additionally, contingency residential and gateway lands have been identified along the northwest border of Turner Valley. In this scenario, growth area lands total 1,640 acres (the equivalent of 10.3 quarter sections), which supports approximately 16,510 people and 4,360 jobs. Refer to Figure 44. Scenario 3 Concept Statistics. The concept for this scenario was based on several key ideas as identified in Figure 45. Scenario 3 Concept, and summarized below.

- Builds off of the Gateways of Turner Valley ASP to expand residential development west of the town (1), thereby complementing adjacent uses and capitalizing on road network accessibility.
- Locates additional residential development (2) adjacent to existing residential communities, creating continuity.
- The continuation of commercial development (3) along Highway 22, making use of existing infrastructure and accessibility.
- Provides a new commercial node (3) to service new residential populations.
- A logical extension east and south of Black Diamond in areas (4) that allow for a contiguous town border and development in areas of minimal constraints.
- Industrial development (5) along Highway 7 to capitalize on the Highway's access to Highway 2.

FIGURE 44. SCENARIO 3 CONCEPT STATISTICS

This chart depicts the acres per land use type for Scenario 3, as well as their associated population and job estiamtes.



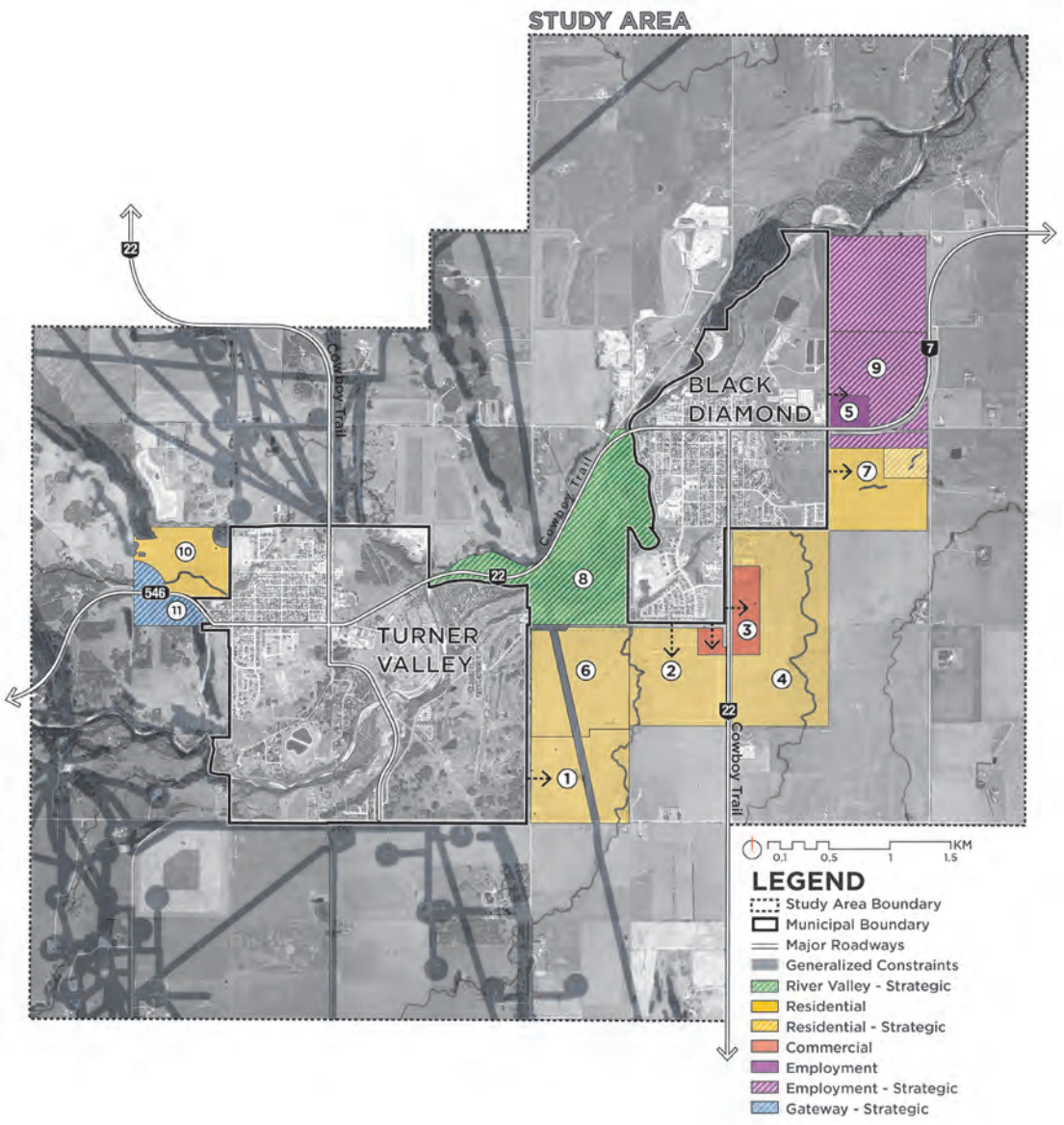


FIGURE 45. SCENARIO 3 CONCEPT

This map depicts Scenario 3's land use concept, highlighting the major ideas as described in the narrative.

- A continuation of similar uses (5) to create continuity and minimize conflicts.
- Allocation of additional residential lands (6) to accommodate the population in the high growth scenario.
- Residential land (7) on area adjacent to planned Black Diamond residential growth area (Kaiser ASP).
- Green infrastructure (8) to preserve Sheep River as a major open space connection. In this scenario, this open space area is expanded to the north side of Highway 22 to include Friendship Trail; as a result, the existing country residential is included.
- Strategic employment lands (9) based on adjacent uses, proximity to Highway 7, and the benefits of flanking Highway 7 on both sides for consistent, dual frontage.
- As some of the least constrained lands north of Turner Valley (10), this area provides development value as residential land in close proximity to Turner Valley's downtown.
- Bring municipal infrastructure into the town boundary with a strategic gateway land area (11), as well as strategically hold a potential gateway opportunity (this town entrance is a primary access point to Kananaskis).

Infrastructure Servicing

The total infrastructure and servicing cost of Scenario 3 is $214.9 million (including $42.9 million as contingency and $28.6 million for engineering fees). Note that infrastructure servicing for Scenario 3 does not account for the northernmost quarter section to the east of Black Diamond, as updated estimates were not available at the time of publication. While the most costly for infrastructure investments, this scenario, at $187,980 per acre, has the lowest total cost per acre. Refer to Figure 46. Scenario 3 Infrastructure Servicing Costs.

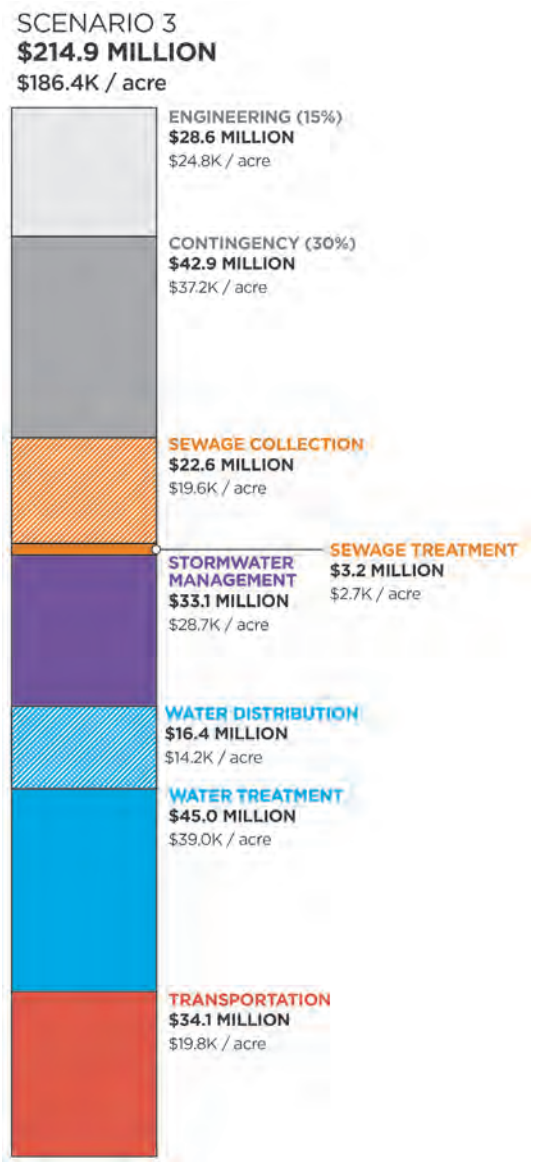


FIGURE 46. SCENARIO 3 INFRASTRUCTURE SERVICING COSTS

This figure provides a breakdown of the infrastructure costs associated with the development of Scenario 3, and the cost per acre.

TRANSPORTATION

The total estimated transportation costs for Scenario 3 are $22.8 million ($19,950 per acre of development (this does not include extra for contingency or engineering fees). The estimated magnitude of traffic growth on the existing highways is between 5 and 18, requiring the widening of four stretches of Highways 7 and 22, and a variety of infrastructure investments. Transportation network investments include the following (refer to Figure 47. Scenario 3 Transportation Concept):

- 15 (eight existing, seven new) intersection improvements along the proposed and existing network.
- 8.2 km of additional road required to support the growth scenario.

POTABLE WATER

The total estimated potable water costs for Scenario 3 are $61.4 million ($53,720 per acre of development (this does not include extra for contingency or engineering fees). As in all scenarios, it will be necessary to secure sufficient water license capacity and twin of the distribution transmission main from Turner Valley to Black Diamond. Also, there will be a need to upgrade source capacity, the treatment plant, and the pumps in TV Water Treatment Plant to increase flow from Turner Valley to the potable water reservoir in Black Diamond. Additional upgrades include the following (refer to Figure 48. Scenario 3 Potable Water Concept):

- Reservoir upgrades and an additional reservoir will be required to accommodate an additional storage.
- Replace reservoir pump station.
- Upsize the distribution pipe from the reservoir to the distribution system.
- A new PRV station to manage the system pressures.
- Add a booster station to increase flow.
- Provide various distribution mains to loop the system to provide adequate pressure, flow and redundancy.

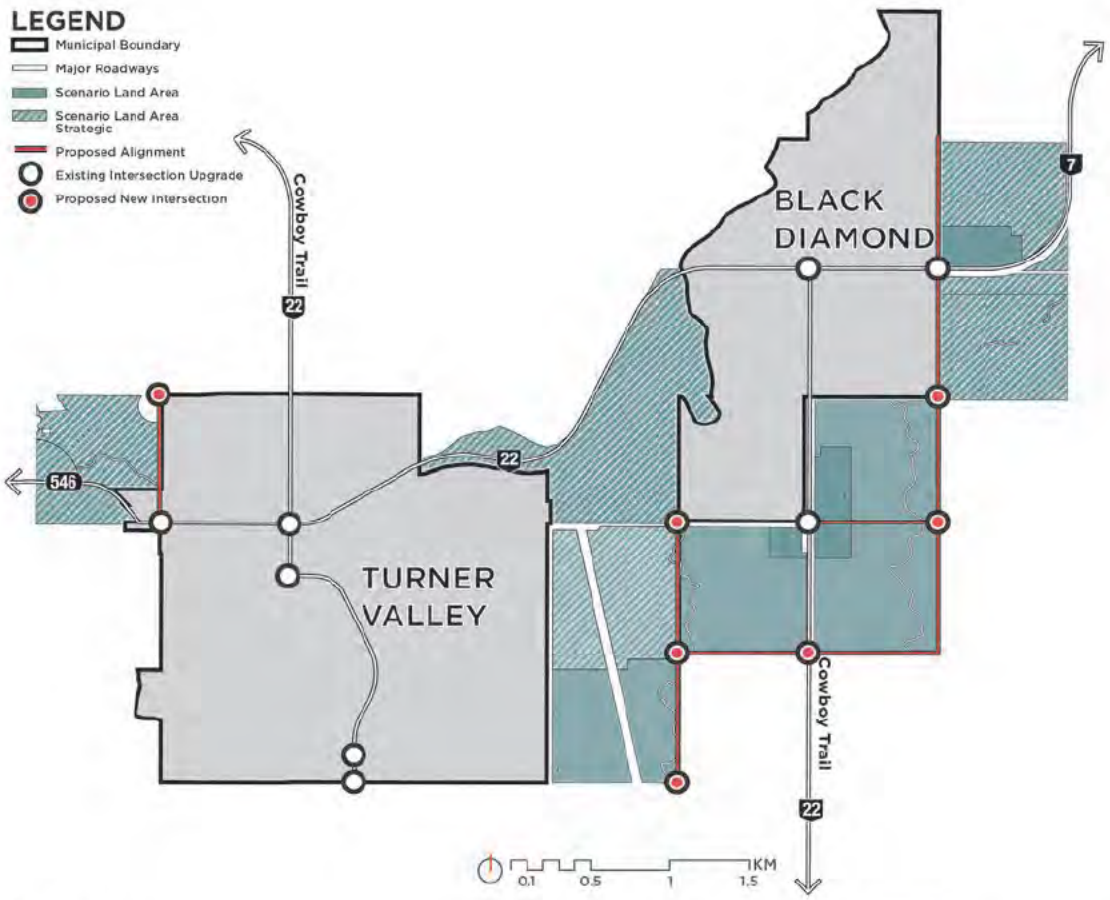


FIGURE 47. SCENARIO 3 TRANSPORTATION CONCEPT

This figure illustrates the transportation concept for Scenario 3, including a proposed alignment, additional intersections, and intersection upgrades.

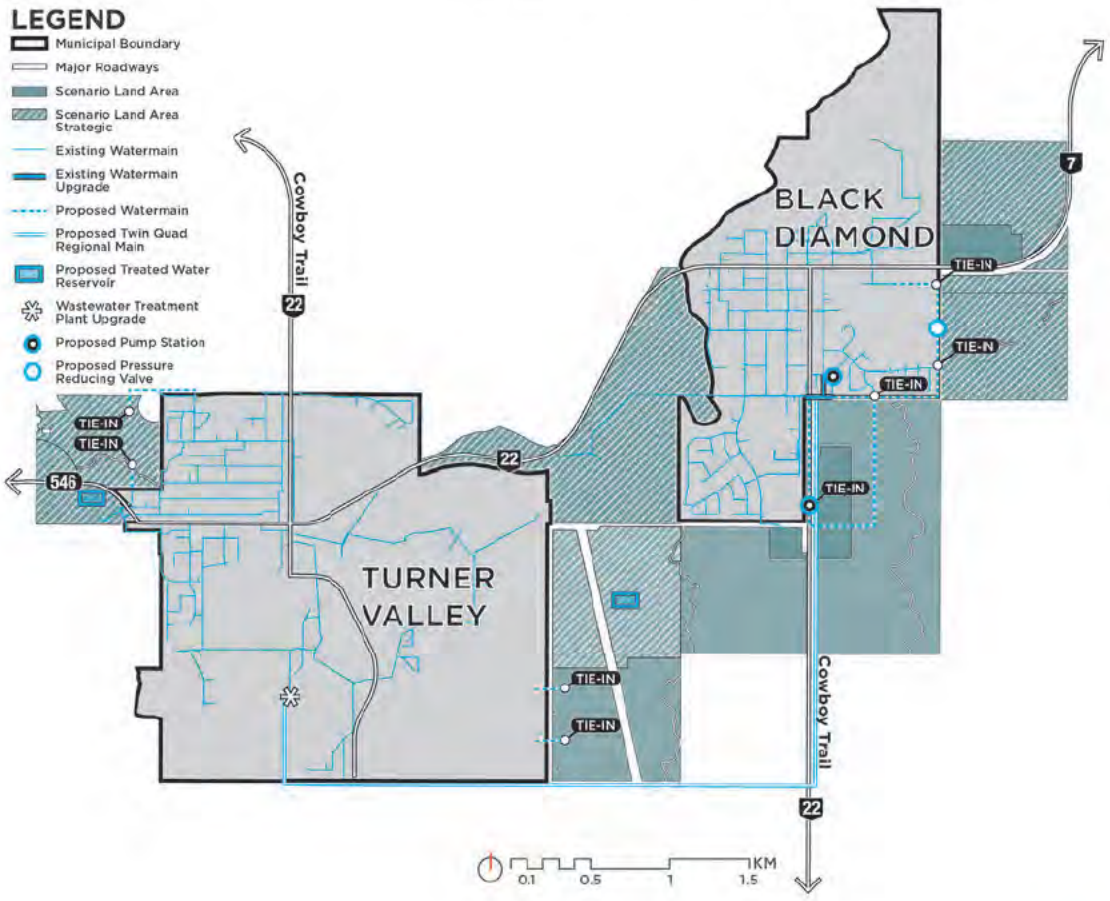


FIGURE 48. SCENARIO 3 POTABLE WATER CONCEPT

This figure illustrates the potable water concept for Scenario 3, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 3.

STORMWATER

The total estimated stormwater costs for Scenario 3 are $22.6 million ($19,770 per acre of development (this does not include extra for contingency or engineering fees)**.** Based on existing contours, nine catchments, each with a stormwater detention facility, are proposed to attenuate storm flow in this scenario. Stormwater detention facilities will generally discharge into the existing creeks nearby. Additionally, a drainage ditch and an outfall from the north pond to the Sheep River and a ditch from the east pond to the nearby creek will be required. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways. One southwest pond will require a drainage connection to the south pond, or the creek. The northwest pond will drain west along the existing highway ditch (this may require expansion of the ditch). Refer to Figure 49. Scenario 3 Stormwater Concept.

WASTEWATER

The total estimated wastewater costs for Scenario 3 are $36.3 million ($31,720 per acre of development (this does not include extra for contingency or engineering fees)**.** As in all scenarios, wastewater flow from TV will connect into the BD system via the existing Westend Regional Sewage Service Commission (WRSSC) transmission main. Additionally, a new Wastewater Treatment Plant will be required to treat the flow to HQ criteria. New infrastructure investments also include: a 400 mm gravity line to carry the flow from the TV/BD boundary to the north, connecting into the new Wastewater Treatment Plant, and a new effluent outfall. Refer to Figure 50. Scenario 3 Wastewater Concept.

Evaluation

The concept for Scenario 3 meets all six of the Principles, by executing several beneficial strategies. This scenario builds from existing land use patterns to create contiguous residential communities, strengthen the existing Highway 22 commercial corridor, provide commercial services to the new residential communities (with the expanded Highway 22 commercial area), and flank both sides of Highway 7 with like uses (employment lands). However, there is the potential conflict between the adjacent residential and employment land uses near Highway 7, which should both areas be fully developed, would need careful planning and design guidance to mitigate this conflict and ensure livability for the community's residents. Similar considerations would need to be given in the IDP for the southern border of the concept along Highway 22 to ensure that development at the major entry is representative of the town and community vision. Finally, the extension of the River Valley lands to the north side of Highway 22 includes the Friendship Trail in the integral open space network, however it also means that the existing country residential development would be incorporated into the towns and would need to be considered for future integration as the towns grow.

The development areas are largely, unconstrained lands areas free from environmental or development concerns and allows for ample strategic residential land to accommodate growth beyond the low growth scenario. Furthermore, the incorporation of strategic gateway land holdings (11) to the northwest of Turner Valley that will strategically gain control of a town entryway. Finally, this is the only scenario that meets the higher growth forecast for residential land requirements. Overall, the concept provides a significant amount of strategic employment lands and residential growth areas, which will aid the towns' adaptability for future changes and reduce the potential need for a second land annexation.

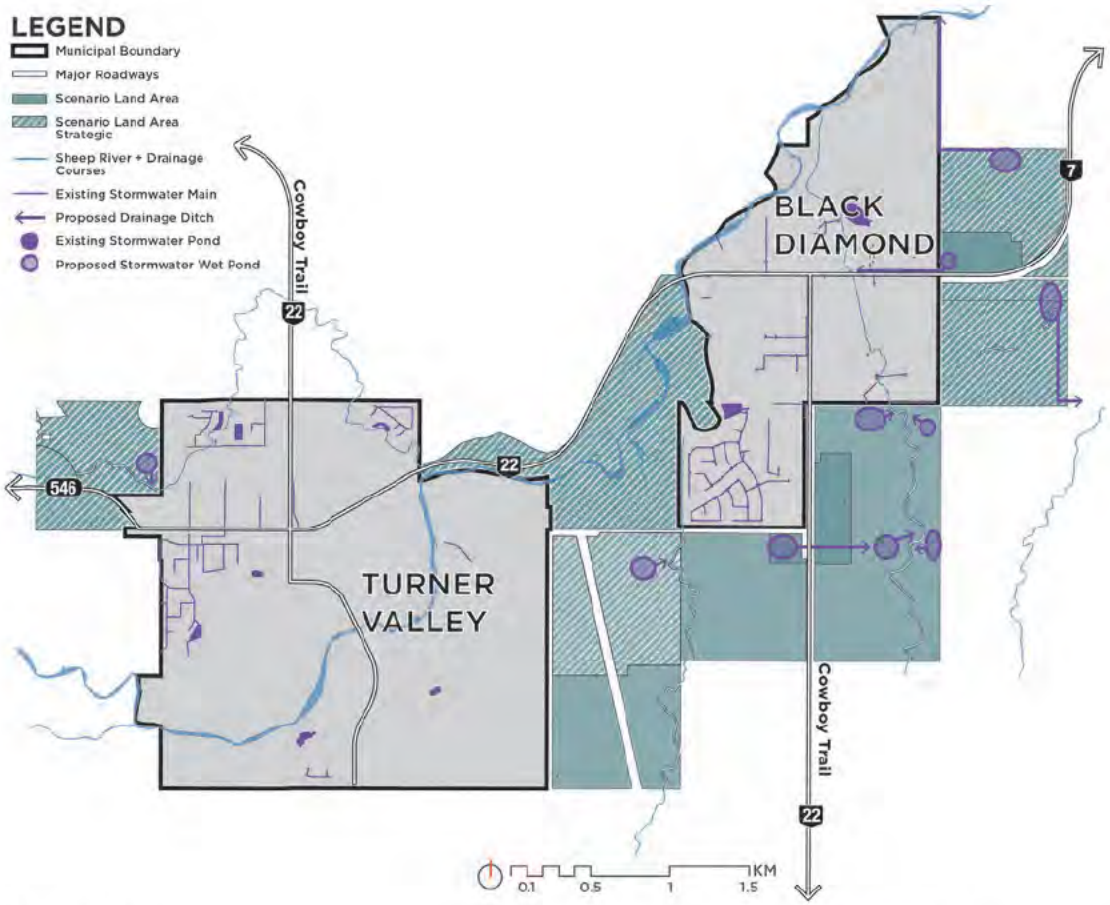


FIGURE 49. SCENARIO 3 STORMWATER CONCEPT

This figure illustrates the stormwater management concept for Scenario 3 including proposals for additional drainage ditches and stormwater ponds that would be required with the proposed development in Scenario 3.

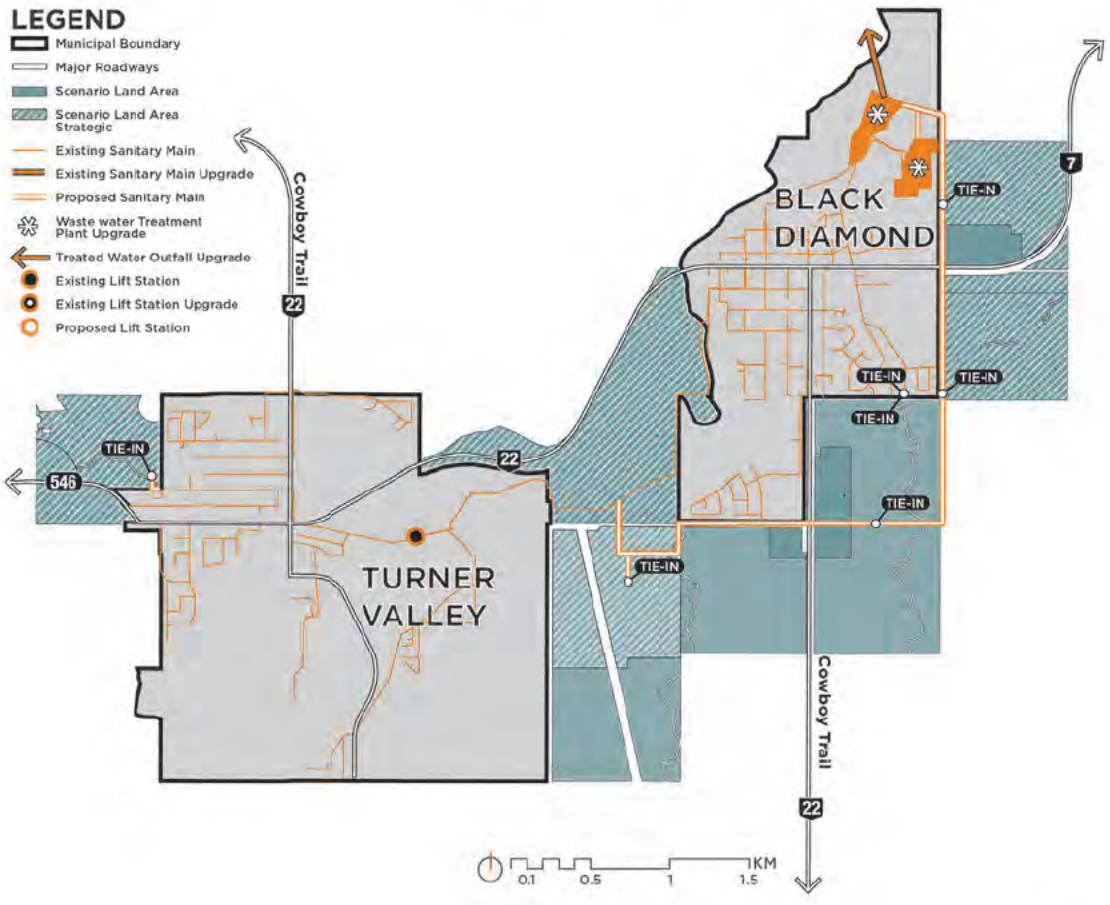


FIGURE 50. SCENARIO 3 WASTEWATER CONCEPT

This figure illustrates the wastewater concept for Scenario 3, including proposals for additional servicing infrastructure and upgrades to existing infrastructure, all of which would be required with the proposed development in Scenario 3.

Conclusions

As compromise between Scenarios 1 and 2, and in order to reach the preferable higher growth forecast for residential land, Scenario 3 was ultimately the preferred scenario by the Joint Advisory Committee. Representing the largest additional land area, largely due to additional residential, river valley lands, and strategic employment lands, Scenario 3 represents a vision where the two towns can grow together. The Scenario 3 concept plans for the higher growth forecast in a manner that upholds the Joint Growth Strategy's Vision and Principles, while also strategically ensuring future flexibility and adaptability of the concept, refer to Figure 51. Comparison of Scenarios: Land Uses. Additionally, while Scenario 3 has the highest cost implications for infrastructure servicing, the cost per acre is significantly the lowest, refer to Figure 52. Comparison of Scenarios: Infrastructure Costs. As the preferred scenario by the Committee, considerations for future growth planning, including phasing and recommendations for next steps, in the following section are for Scenario 3, the preferred scenario.

FIGURE 51. COMPARISON OF SCENARIOS INFRASTRUCTURE COSTS

This chart compares the total cost of infrastructure servicing to the cost per acre (of development). As a result, while Scenario 3 is the most expensive scenario, it is also the most cost efficient, with the lowest cost per acre.

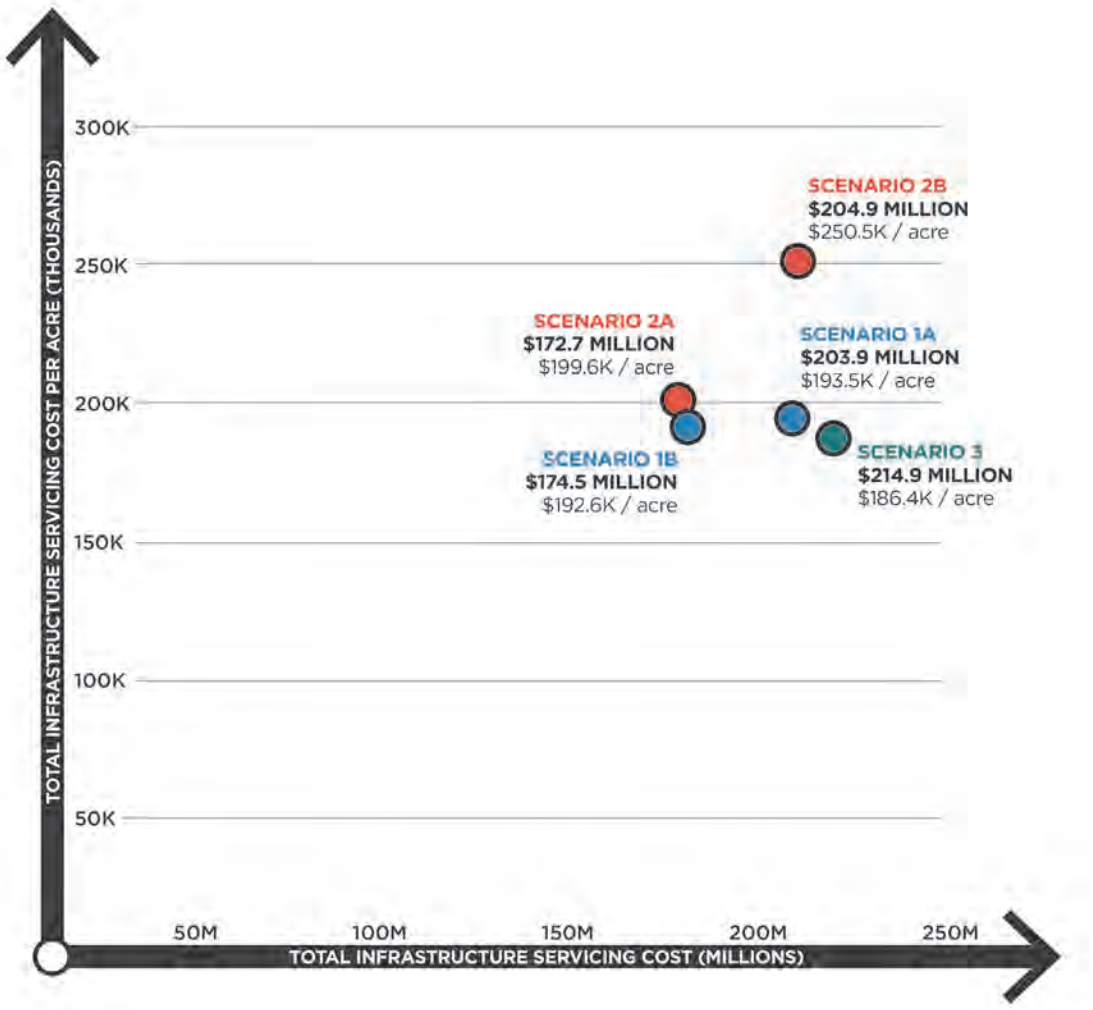




FIGURE 52. COMPARISON OF SCENARIOS LAND USES

These charts provide a summary comparison of the land uses of the three scenarios.



Considerations for Future Growth Planning

Considerations for Future Growth Planning

The final results of this report provide a foundation for future planning efforts to support long-term growth in the Towns of Turner Valley and Black Diamond. Proposed areas for growth, recommended approaches for servicing, and financial impacts should inform future efforts to extend the boundaries of the towns.

The Preferred Scenario

The preferred scenario is a future land use strategy for development over the next 60 years; it's a long-term vision for growth. Therefore, the general identification and understanding of how this growth occurs over the long term is an important component to the towns' long-term planning. Based primarily on existing servicing capacity, the ease of extensions, and logical alignments and linkages, a general phasing strategy can be outlined for Scenario 3, as follows (refer to Figure 53. Phasing Concept for Scenario 3).

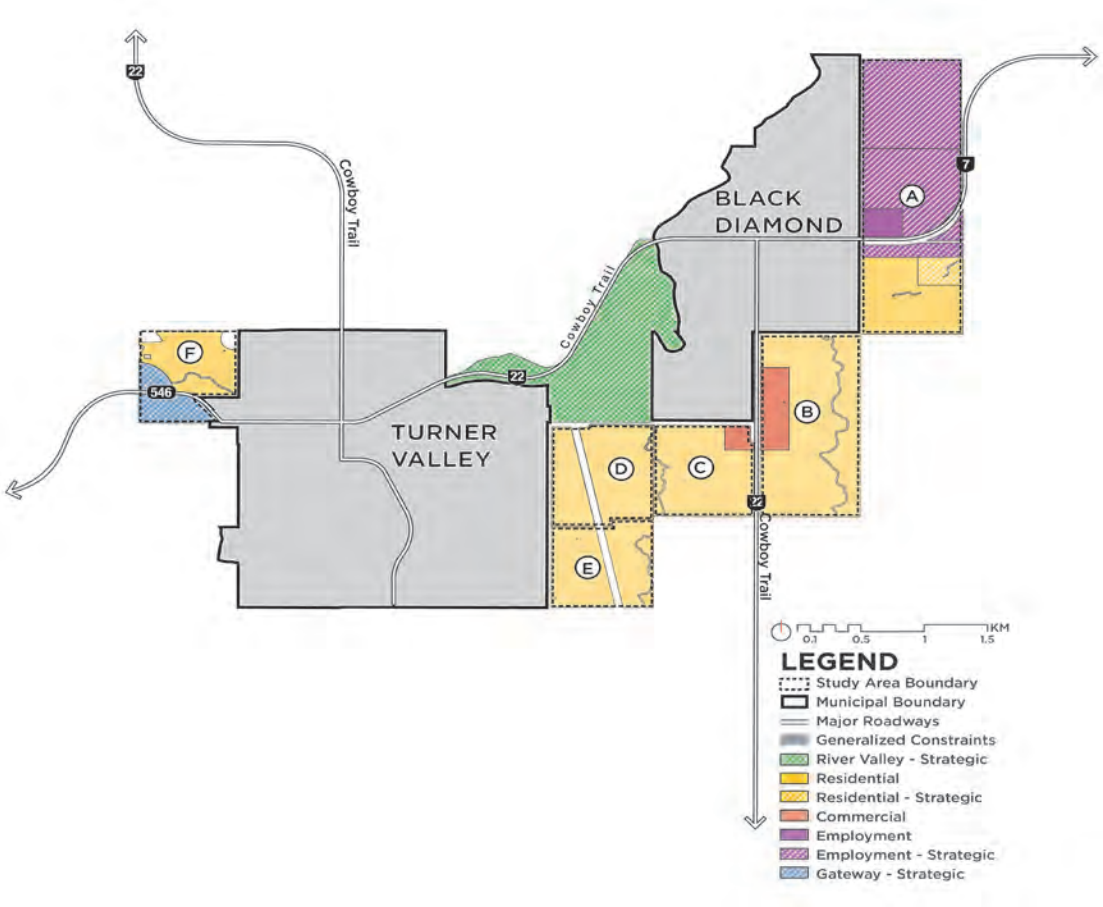
For growth outside of Black Diamond, it is recommended that development should first extend to the three quarter sections to the east (Area A), followed by two quarter sections to the south (Area B), and lastly to a final quarter section to the south (Area C).

For growth outside of Turner Valley, there are two phasing options:

1. If the southeast Turner Valley gateway is not already built, then the quarter section south of Black Diamond (Area C) should be developed first, as all municipal services are accessible within the existing subdivision (in Black Diamond) and can easily be extended south. This quarter section would be

FIGURE 53. PHASING CONCEPT FOR SCENARIO 3

This map depicts the recommended phasing of Scenario 3 development from Turner Valley and Black Diamond, including the two options for Turner Valley.



followed by the area directly to the west of Area C (Area D) and finally the quarter section just south of Area D (Area E) would be developed last.

2. If the southeast Turner Valley gateway is already built, then the north (Area D) and south (Area E) quarter sections can be developed at anytime.

It is important to note, for both options (1 and 2), the development of the strategic gateway area to the northwest of Turner Valley is an independent section (Area F). This area can be developed at anytime as it is not affected by development in Black Diamond and can be connected, relatively easily, to existing servicing. Refer to Appendix D: Scenario 3 Future Growth Phasing for further detail regarding servicing and infrastructure extensions for each quarter section.

Finally, as Turner Valley has significantly more existing capacity for residential development compared to Black Diamond (257.5 acres versus 64.4 acres, respectively), Black Diamond is more likely to extend beyond its town boundaries first.

Future Development Recommendations

The fulfillment of the Joint Growth Strategy Vision will transpire over 60-years, with development of the preferred scenario occurring in phases subject to market demands and the towns' needs. Therefore, in order to uphold the intent of the Joint Growth Strategy's concept and vision for the future of Turner Valley and Black Diamond, it is important that several key planning and design ideas are employed over the next several decades of town planning and development. Based largely on the Calgary Regional Partnership's Greenfield Tool Box, the following key planning and design ideas for future development are intended to help create complete communities with equitable, easy access to parks and open space as well as their daily, local needs.

Create active, vibrant communities and public realm spaces through methods, such as:

- *Complete Streets* increase the capacity of a transportation network by providing a physical environment that facilitates and encourages mobility by all modes of transit: vehicle, transit, bicycle, and foot (refer to The Greenfield Tool Box).
- Connective Street Pattern Design addresses the connectivity, safety, and traffic challenges of greenfield street networks, while helping to incorporate public spaces and green infrastructure throughout the site plan (refer to The Greenfield Tool Box).
- *Block and Lot Standards* set a framework for the physical structure and massing of future development and intensification to determine a strategy for integration with the local context and the needs for civic investment in infrastructure and the public realm (refer to The Greenfield Tool Box).
- *Traffic Calming* promotes a more walkable and bikeable community by addressing the impacts of traffic on neighbourhoods (typically in regards to traffic speed) through methods, such as: curb extensions, raised or textured crosswalks / speed bumps, signage, and street trees (refer to The Greenfield Tool Box).

Foster cohesive communities with strong social ties and involvement by:

- Design for the *Neighbourhood Unit* to create synergies among land uses, activate the public realm, and create opportunities for housing and mobility choice, all resulting in a community with a clear place identity (refer to The Greenfield Tool Box).
- Provide opportunities for community involvement throughout planning and design processes to both inform concepts, but also to identify community priorities.

Build sustainable communities by encouraging the following programs and planning techniques:

- *Agricultural Urbanism and Local Food Production* to physically and programmatically integrate a local sustainable food culture and system into the towns' environment and communities, through programs such as: community gardens, farmers markets, farm-to-table start-up, and educational events or school programs (refer to The Greenfield Tool Box).
- *Low Impact Development (LID)* techniques use green infrastructure to reduce the upfront, capital costs of stormwater infrastructure and minimize long-term utility costs, as well as provide spaces for recreational opportunities and improve the overall aesthetic of the built form (refer to The Greenfield Tool Box).
- *Ecological Infrastructure Modeling (EIM)* is used at a regional or sub-regional scale to identify ecologically sensitive areas and thereby guide the design and shape of greenfield site plans (refer to The Greenfield Tool Box).
- *Greenway and Open Space Networks* can be used to define not just the physical framework of a greenfield community but also instill a sense of community identity and character. Additionally, these spaces provide mobility and recreation opportunities, as well as provide habitats for natural systems, while integrating constructed green infrastructure (refer to The Greenfield Tool Box).
- *Xeriscaping* is the careful selection of plant and landscape design to reduce the use of water, fertilizers, and pesticides in gardens, parks, and open spaces (refer to The Greenfield Tool Box).

Next Steps

Following the completion of this study, several key steps are important for the implementation of this shared vision for growth. Future work by the Town and stakeholders should include:

» **Proceed** with amalgamation process that is currently underway.

» **Integrate** the two current MDPs (pending amalgamation of the two towns) and align the new MDP with the future land use vision of the Joint Growth Strategy, including recommended annexations and general phasing strategy.

» **Coordinate** with the MD of Foothills to revise the current Intermunicipal Development Plan (IDP) based on the preferred scenario, and continue with the process for annexation in coordinated efforts with the MD of Foothills.

» **Consult** the public and stakeholders on future planning and potential development levies. The community should be involved and provided opportunities for comments and feedback regarding future growth planning, particularly in the development of annexation plans and Area Structure Plans. Additionally, to determine the best structure and approach to financing future infrastructure needs, local development interests should also be consulted.

» **Complete** additional infrastructure studies (transportation, potable water, and wastewater) to coordinate long-term capital planning, and provide more detail to ensure fiscal sustainability.

» **Develop** Area Structure Plans for newly annexed areas to provide more detailed concepts for growth and guidelines for land development.

Turner Valley +
Black Diamond

JOINT GROWTH STRATEGY



Appendices

A Population Projections and Forecasts of Future Land Requirements

B Joint Growth Strategy Transportation Analysis

Joint Growth Strategy Transportation Analysis - Scenario 3

C Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis

Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis - Scenario 3

D Joint Growth Strategy - Scenario 3 Phasing

Appendix A

Population Projections and Forecasts of Future Land Requirements



Inputs to the Turner Valley and Black Diamond Joint Growth Strategy:

Population Projections and Forecasts of Future Land Requirements

Draft
18 January 2016

Prepared for:
Town of Turner Valley and Town of Black Diamond

By:
coriolis
CONSULTING CORP.

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1.0 Introduction

1.1 Scope of Work

The Town of Turner Valley and the Town of Black Diamond are preparing a Joint Growth Strategy to provide a coordinated and shared vision for the long-term growth of the two Towns. The vision in the Joint Growth Strategy will become the foundation for the Towns to individually review and update their Municipal Development Plans and to work together with the Municipal District of Foothills No. 31 to review and update the Inter-Municipal Development Plan. It will also inform future annexation processes, as the Towns have limited capacity for further growth within their existing boundaries.

The Towns retained a team led by O2 Planning + Design Inc. to assist with preparing the Joint Growth Strategy. Coriolis Consulting Corp. was included on the team to provide population projections and forecasts of future land requirements by major land use (residential, commercial, and industrial) for two 30 year periods: 2015 to 2045 and 2045 to 2075. This report documents our analysis and forecasts.

1.2 Professional Disclaimer

This document may contain estimates and forecasts of future growth and urban development prospects, estimates of the financial performance of possible future urban development projects, opinions regarding the likelihood of approval of development projects, and recommendations regarding development strategy or municipal policy. All such estimates, forecasts, opinions, and recommendations are based in part on forecasts and assumptions regarding population change, economic growth, policy, market conditions, development costs and other variables. The assumptions, estimates, forecasts, opinions, and recommendations are based on interpreting past trends, gauging current conditions, and making judgments about the future. As with all judgments concerning future trends and events, however, there is uncertainty and risk that conditions change or unanticipated circumstances occur such that actual events turn out differently than as anticipated in this document, which is intended to be used as a reasonable indicator of potential outcomes rather than as a precise prediction of future events.

Nothing contained in this report, express or implied, shall confer rights or remedies upon, or create any contractual relationship with, or cause of action in favor of, any third party relying upon this document.

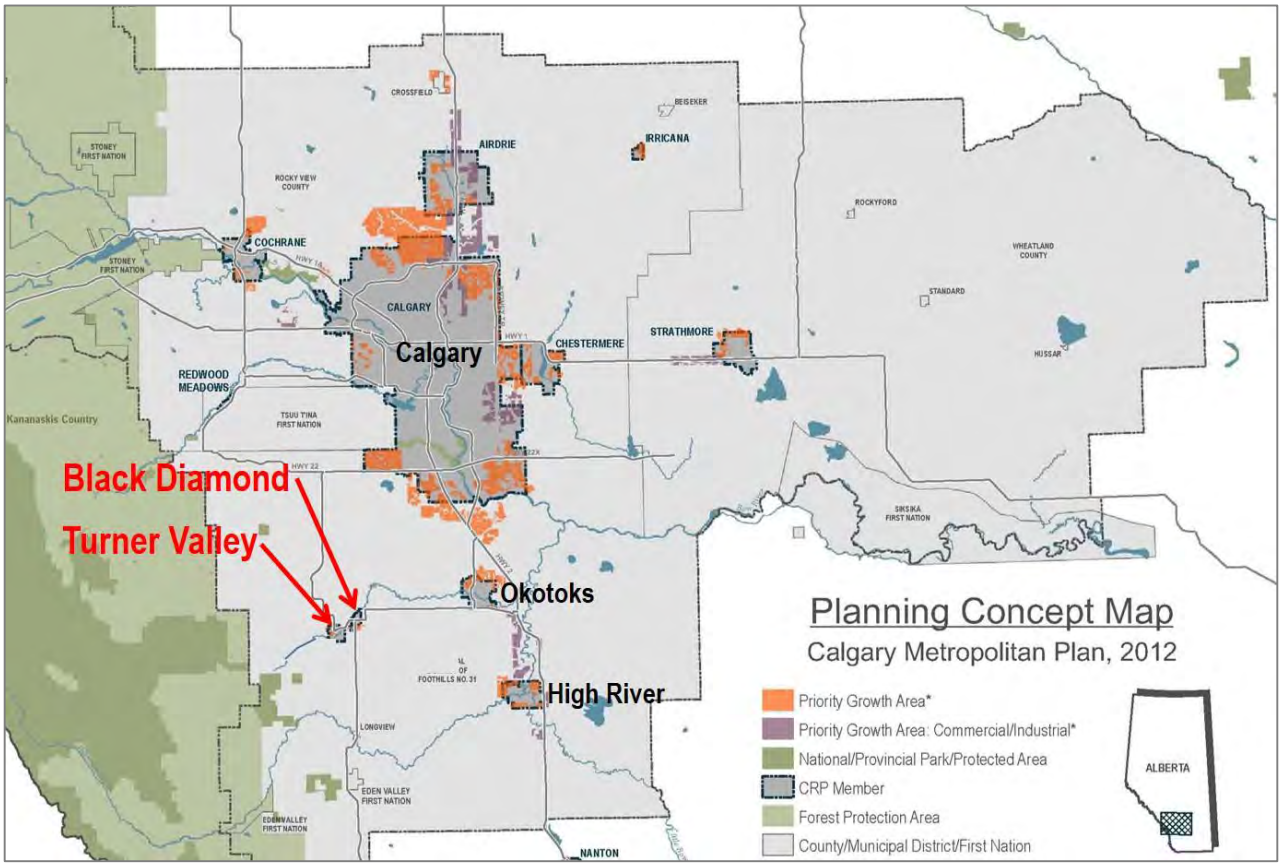
In no event shall Coriolis Consulting Corp. be liable to the Town of Turner Valley, the Town of Black Diamond, or any third party for any indirect, incidental, special, or consequential damages whatsoever, including lost revenues or profits.

2.0 Location and Context

Turner Valley and Black Diamond are located in close proximity to each other (with their boundaries as close as 800 metres in some locations), along the Sheep River. The Towns are southwest of Calgary, west of Okotoks, and northwest of High River (see Exhibit 1). Both of the Towns are part of the Calgary Regional Partnership, which is a collaborative network of 14 municipalities that voluntarily work together to ensure growth in the Calgary region occurs in a sustainable manner.[1]

Combined, Turner Valley and Black Diamond have a 2015 population of about 5,100 people[2], which is relatively small compared to nearby Okotoks (about 28,000[3] people) and High River (about 13,000[4] people). For context, the City of Calgary has a population of about 1,231,000[5] people.

Exhibit 1: Location in Regional Context



Source: Base map from Calgary Regional Partnership, "Calgary Metropolitan Plan." June 2012, page 52. Labels added by Coriolis.

[1] The Calgary Regional Partnership includes Airdrie, Banff, Black Diamond, Calgary, Canmore, Chestermere, Cochrane, High River, Irricana, Nanton, Okotoks, Redwood Meadows, Strathmore, and Turner Valley.

[2] As described in more detail in Section 3.2 of this report.

[3] Based on the Town of Okotoks' 2015 municipal census.

[4] The Town of High River has not completed a recent municipal census and indicated that it uses the 2011 federal census figure as its current population estimate.

[5] Based on the City of Calgary's 2015 municipal census.

3.0 Remaining Capacity for Growth

Exhibit 2 summarizes the amount of land remaining to accommodate urban growth in Turner Valley and Black Diamond (holding aside land ear-marked for schools), based on information provided by the Towns about land use plans and remaining developable lands (which are illustrated in Exhibits 3 and 4 on the following page). As indicated in Exhibit 2:

- Turner Valley has a total of about 263.9 acres of land available for urban development, including about 257.5 acres of residential land and 6.4 acres of commercial land. There is no remaining land designated for industrial development. Based on information provided by the Town, we assume that residential development will achieve an average density of 5.5 units per acre from 2015 to 2035 and 6.5 units per acre from 2035 to 2045, or an overall average of 5.85 units per acre over the next 30 years. At this targeted average density[6], there is remaining capacity for about 1,506 more residential units within Turner Valley's existing boundary.
- Black Diamond has a total of about 84.5 acres of land available for urban development, including about 64.4 acres of residential land, 11.6 acres of commercial land, and 8.5 acres of industrial land. The amount of vacant residential land remaining in Black Diamond will likely be developed within the next 20 years[7], so at a targeted average residential density of 5.5 units per acre there is capacity for about 354 more residential units within Black Diamond's existing boundary.

In our land requirement forecasts, we calculate total growth potential and then deduct the remaining capacity for growth within the Towns' boundaries to provide an estimate of the amount of additional land (outside the Towns' current boundaries) required to accommodate anticipated market-driven growth.

Exhibit 2: Remaining Capacity for Growth in Turner Valley and Black Diamond

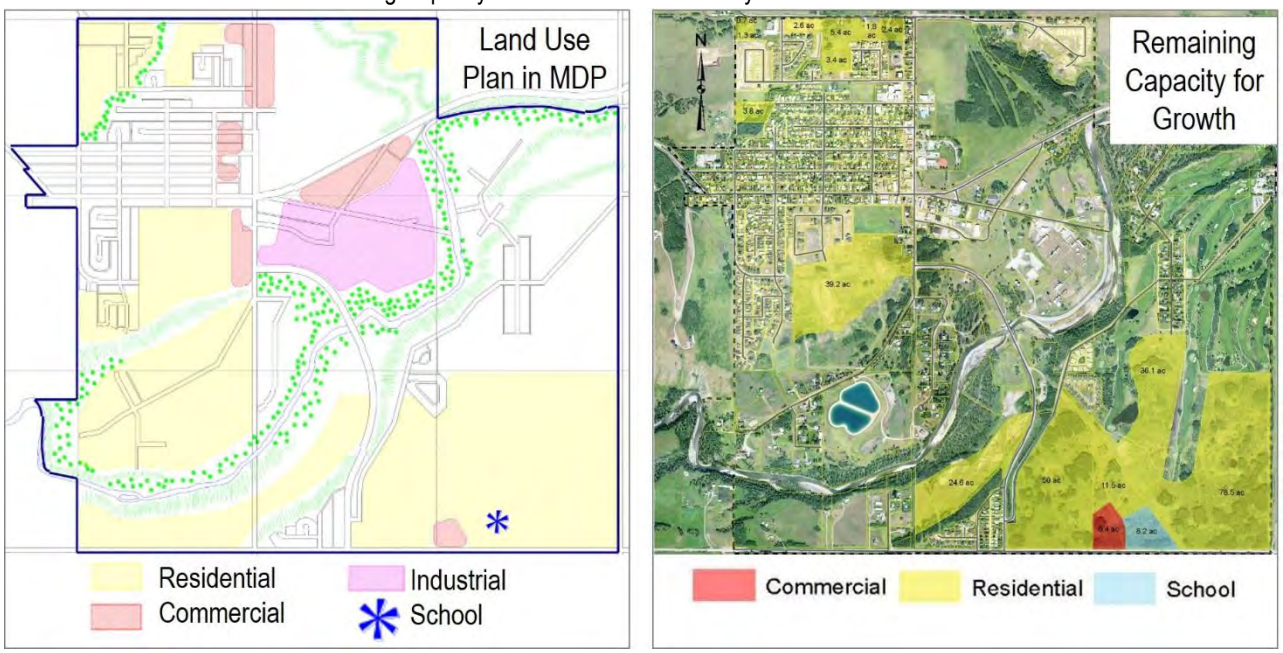
	Residential		Commercial Land (in acres)	Industrial Land (in acres)	Land Available for Urban Development (in acres)
	Land (in acres)	Estimated Number of Residential Units			
Turner Valley	257.5 acres	1,506 units[a]	6.4 acres	0.0 acres	263.9 acres
Black Diamond	64.4 acres	354 units[b]	11.6 acres	8.5 acres	84.5 acres
Total	321.9 acres	1,860 units	18.0 acres	8.5 acres	348.4 acres

Source: Coriolis, based on information provided by Turner Valley and Black Diamond.
Note a: Assumes a density of 5.85 units per gross acre based on information provided by the Town of Turner Valley.
Note b: Assumes a density of 5.5 units per gross acre based on information provided by the Town of Black Diamond.

[6] This average density assumes that the residential lands in Turner Valley build-out over the next 30 years or so, which is reasonable given our residential development forecasts (see Section 5.0).

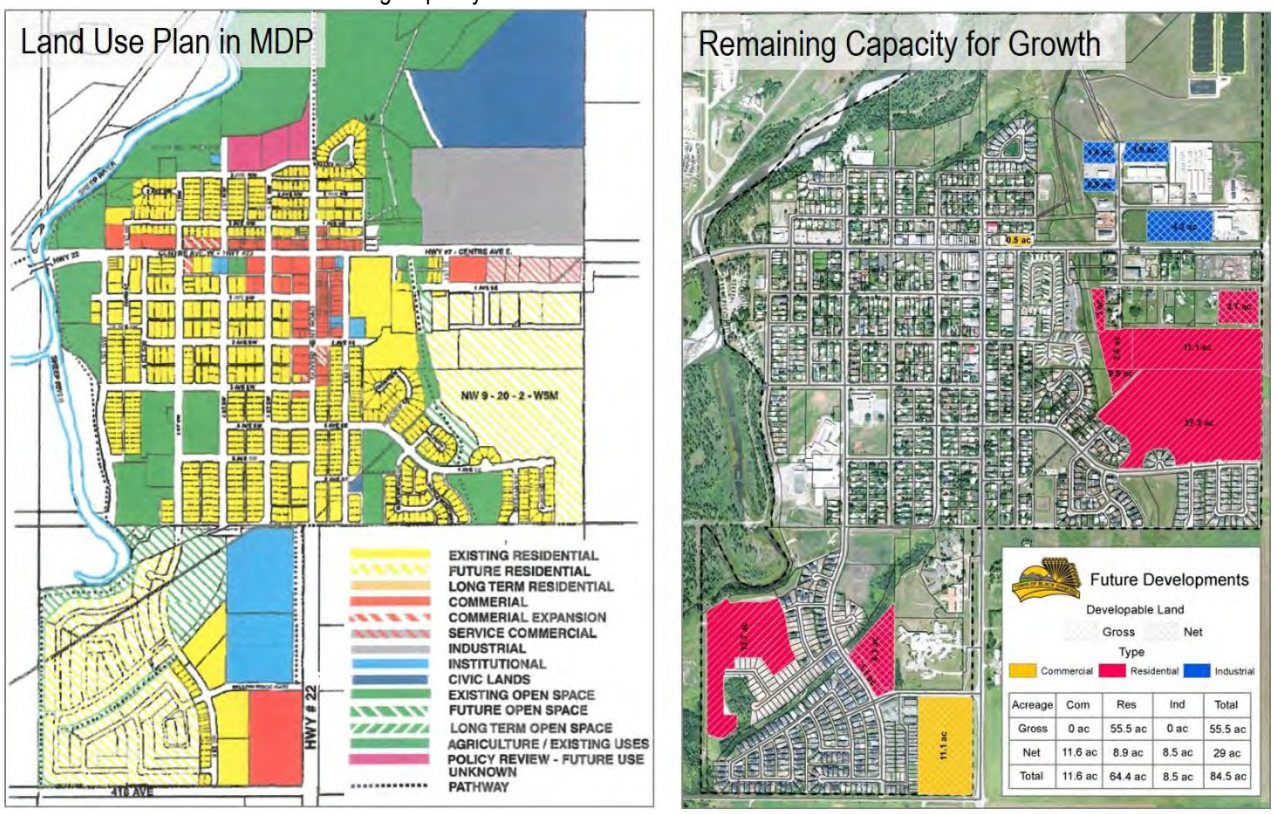
[7] The residential lands in Black Diamond will build-out within the next 20 years based on our residential development forecasts (see Section 5.0).

Exhibit 3: Land Use Plan and Remaining Capacity for Growth in Turner Valley



Source: Land Use Map is from the Town of Turner Valley, "Municipal Development Plan", Bylaw #04-891, Adopted 20 September 2004. Remaining Capacity for Growth map was provided by the Town of Turner Valley in July 2015. Note that the areas shown on the Remaining Capacity for Growth map sum to 261.3 acres but the Town indicated that the total land available is 257.5 acres.

Exhibit 4: Land Use Plan and Remaining Capacity for Growth in Black Diamond



Source: Land Use Map is from the Town of Black Diamond, "Municipal Development Plan", Bylaw #01-14, Adopted 3 October 2001. Remaining Capacity for Growth map was provided by the Town of Black Diamond in October 2015.

4.0 Population Forecast

A key input to our forecasts of future residential, commercial, and industrial growth is a forecast of future population growth. Looking at past trends and available forecasts, we produced a forecast of population growth in the two Towns as well as the surrounding trade area. Residential development in Turner Valley and Black Diamond will be driven by population growth within the Towns, but commercial and industrial development in Turner Valley and Black Diamond is tied to population growth in the Towns and in the surrounding rural area that businesses in Turner Valley and Black Diamond draw customers from.

4.1 Historic Population Growth

4.1.1 Turner Valley and Black Diamond

According to the federal census, the population of Turner Valley grew from 1,608 people in 2001 to 2,167 people in 2011, or by an average growth rate of about 3.0% over the ten-year period (see Exhibit 5). Black Diamond grew from about 1,866 people to 2,373 people over the same period, which is equivalent to an average annual growth rate of about 2.4% over the ten-year timeframe. Combined, therefore, the Towns grew from 3,474 people in 2001 to 4,540 in 2011, which is equivalent to an average growth rate of 2.7% per year and an average annual increment of 107 people per year. As shown in the exhibit, the Towns experienced faster growth from 2001 to 2011 than during the previous decade.

The average annual rate of population growth in Turner Valley and Black Diamond combined (2.7%) was slightly higher than the rate of population growth in the Calgary Regional Partnership region (2.5%) from 2001 to 2011.

Exhibit 5: Historic Population Growth in Turner Valley, Black Diamond, and Calgary Regional Partnership Region, 1991 to 2011

	Population from Statistics Canada Census					Average Annual Growth Rate			Average Annual Increment		
						10 years	10 years	20 years	10 years	10 years	20 years
	1991	1996	2001	2006	2011	1991-2001	2001-2011	1991-2011	1991-2001	2001-2011	1991-2011
Turner Valley	1,352	1,527	1,608	1,908	2,167	1.75%	3.03%	2.39%	26	56	41
Black Diamond	1,623	1,811	1,866	1,900	2,373	1.40%	2.43%	1.92%	24	51	38
Subtotal	2,975	3,338	3,474	3,808	4,540	1.56%	2.71%	2.14%	50	107	78
Calgary Regional Partnership region	765,110	836,928	970,684	1,108,021	1,252,096	2.41%	2.58%	2.49%	20,557	28,141	24,349

Source: Statistics Canada, census data.

4.1.2 Primary Commercial Trade Area

Businesses in Turner Valley and Black Diamond serve residents of the two Towns, plus residents of the surrounding rural areas. The boundaries of the primary commercial trade area for the two Towns is south of Priddis, north of Longview, west of about the mid-point between Black Diamond and Okotoks, and east of Sheep River Provincial Park in Kananaskis.

According to the federal census, the population of this defined trade area grew from a total of 7,557 people in 2006 to a total of 8,352 people in 2011 (see Exhibit 6). Deducting the populations of Turner Valley and Black Diamond indicates that the population of the surrounding rural areas was about 3,749 people in 2006 and about 3,812 people in 2011. This is equivalent to an average annual increment of 13 people per year or an average annual growth rate of about 0.33% per year over the five year period, so the population in the surrounding rural portions of the trade area was relatively stable during this timeframe.

Exhibit 6: Historic Population Growth in the Surrounding Rural Areas, 2006 to 2011

	2006	2011	Average Annual Growth Rate 2006-2011	Average Annual Increment 2006-2011
Trade Area	7,557	8,352	2.02%	159
Turner Valley/Black Diamond	3,808	4,540	3.58%	146
Surrounding rural areas	3,749	3,812	0.33%	13

Source: We estimated the total population of the trade area using PCensus, which produces population data for user-defined areas based on Statistics Canada census data.

4.2 Estimate of 2015 Population

Turner Valley completed a municipal census in 2015, which indicated that the Town has a population of 2,511 people.

Black Diamond has not completed a recent municipal census, so we estimated population growth in Black Diamond from 2011 to 2015 based on the number of residential units approved in building permits over this timeframe and the average household size in the Town. We then added this estimated population growth to the 2011 federal census population for the Town. Based on this approach, we estimate that Black Diamond has a population of 2,577 people as of 2015.

For the surrounding rural areas, we assumed that average annual population growth from 2011 to 2015 was about the same as these areas experienced from 2006 to 2011 (i.e. 0.33% per year on average). Based on this approach, we estimate that the surrounding rural portions of the trade area have a population of about 3,863 people as of 2015.

Combined, therefore, the two Towns have an estimated total population 5,088 people as of 2015 (see Exhibit 7) and the trade area as a whole has an estimated total population of 8,951 people as of 2015. This suggests that the Towns have grown at a slightly faster pace over the past four years (2.9% per year on average) than from 2001 to 2011 (when growth averaged 2.7% per year).

For context, Exhibit 7 also shows growth in the City of Calgary's population from 2011 to 2015 based on its municipal census. The data shows that the City grew by an average annual rate of about 3% per year over this period. Therefore, population growth in Turner Valley and Black Diamond combined was similar to the rate of population growth in the City of Calgary over the past four years.

Exhibit 7: 2015 Population Estimate for Turner Valley, Black Diamond, Trade Area, and City of Calgary

	2011	2015	Average Annual Growth Rate 2011-2015	Average Annual Increment 2011-2015
Turner Valley	2,167	2,511	3.75%	86
Black Diamond	2,373	2,577	2.08%	51
Subtotal for the Towns	4,540	5,088	2.89%	137
Surrounding rural areas	3,812	3,863	0.33%	13
Trade area total	8,352	8,951	1.75%	150
City of Calgary	1,090,936	1,230,915	3.06%	34,995

Source: 2011 figures for Turner Valley, Black Diamond, and the trade area are from Statistics Canada, census data, and 2011 figure for the City of Calgary is from Calgary's municipal census. The 2015 figures for Turner Valley and the City of Calgary are from their municipal censuses and the 2015 figures for Black Diamond and the surrounding rural portions of the trade area were estimated by Coriolis.

4.3 Population Forecasts

4.3.1 Forecast Period for Our Analysis

The forecast period for our work is a 60 year horizon broken into two 30 year periods:

- 2015 to 2045.
- 2045 to 2075.

4.3.2 Regional Forecasts

We reviewed previous studies that include forecasts of population growth for the Calgary region:

- Forecasts for the Calgary Metropolitan Area produced in 2014 by the Alberta Treasury Board and Finance Ministry. These forecasts are for the period from 2011 to 2041 and are for a region that is larger than the Calgary Regional Partnership.
- Forecasts for the communities in the Calgary Regional Partnership produced in 2012 as input to the Calgary Metropolitan Plan. These forecasts are for the period from 2019 to 2076 and are for the region made up of the 14 municipalities working together on regional planning.

Exhibits 8a and 8b show these available population forecasts. The exhibits suggest that the rate of population growth in the Calgary region as a whole is expected to slow over the long term.

Exhibit 8a: Available Population Forecasts for the Calgary Metropolitan Area, 2011 to 2041

	Population Estimate & Forecasts					Average Annual Growth Rate			
	2011	2014	2021	2031	2041	2011-2014	2014-2021	2021-2031	2031-2041
Calgary Metropolitan Area	1,363,607	1,518,800	1,783,610	2,110,740	2,416,865	3.7%	2.3%	1.7%	1.4%

Source: Statistics Canada, census data (2011) and Alberta Treasury Board and Finance Ministry Medium Scenario (as published in June 2014).

Exhibit 8b: Available Population Forecasts for the Communities in the Calgary Regional Partnership, 2019 to 2076

	Population Estimates & Projections					Average Annual Growth Rates		
	2006	2019	2029	2039	2076	2006-2019	2019-2039	2039-2076
Calgary Regional Partnership Area	1,109,597	1,511,844	1,770,993	1,987,386	2,640,236	2.4%	1.4%	0.8%

Source: Calgary Metropolitan Plan.

4.3.3 Key Assumptions for Turner Valley and Black Diamond Population Forecasts

We incorporate the following main assumptions into our population forecasts:

1. Available long range forecasts suggest a slowing rate of growth in the Calgary region over the long term, so we incorporate this trend into our forecasts and assume that growth rates in Black Diamond and Turner Valley slow over the 60 year forecast period.
2. As context, we assume that overall population growth in the communities that make up the Calgary Regional Partnership averaged about 3% per year from 2011 to 2015, matching average growth in the City of Calgary over this timeframe (as shown in Exhibit 7). We assume that overall population growth in

the Calgary region will average 1.4% per year from 2015 to 2045 and 0.8% per year from 2045 to 2071, based on the forecasts prepared as input to the Calgary Metropolitan Plan (as shown in Exhibit 8b).

3. We run two scenarios for population growth in Turner Valley and Black Diamond:
   a) A "lower" scenario based on the trajectory of past population growth trends in the two Towns (with a slowing growth rate over the long term).
   b) and a "higher" scenario assuming a slightly increased rate of growth in each Town compared to past trends (with a slowing growth rate over the long term). We considered this higher growth rate scenario because it is possible that Black Diamond and Turner Valley will face increasing residential growth due to a variety of factors, such as:
      - Increasing single family home prices in Calgary. This could shift purchasers who are interested in single detached homes out of Calgary into the surrounding communities (including the two Towns).
      - Improved road connections to Calgary due to the planned completion of the Southwest Ring Road. If this is completed, it will likely make commuting from Turner Valley and Black Diamond to parts of Calgary more convenient.
      - Increasing densities and congestion in Okotoks. Okotoks has experienced rapid growth and urbanization over the past decade (or more). Buyers who are looking for a new home in a smaller town to the South of Calgary may increasingly consider Turner Valley and Black Diamond rather than Okotoks.
4. We assume that population growth in the surrounding rural parts of the commercial trade area will continue to average about 0.33% per year over the long term, matching the recent pace of population growth in these areas (as shown in Exhibit 6).

4.3.4 Population Forecasts Used for Our Analysis

Exhibit 9a shows our population forecasts for Turner Valley and Black Diamond and Exhibit 9b shows our population forecast for the primary trade area as a whole. As illustrated in these exhibits:

- Our forecasts suggest that the population of Turner Valley will grow from 2,511 in 2015 to on the order of 5,140 people (lower) to 5,959 people (higher) by 2045 and on the order of 9,541 people (lower) to 12,785 people (higher) by 2075.
- Our forecasts suggest that the population of Black Diamond will grow from 2,577 in 2015 to on the order of 5,275 people (lower) to 6,105 people (higher) by 2045 and on the order of 9,792 people (low) to 13,121 people (high) by 2075.
- Combined, therefore, the Towns of Turner Valley and Black Diamond are projected to grow from about 5,088 people in 2015 to on the order of 10,415 people (low) to 12,053 people (high) by 2045 and on the order of 19,333 people (lower) to 25,906 people (higher) by 2075. This is equivalent to an overall average annual growth rate of about 2.25% per year (lower) to 2.75% per year (higher) over the entire timeframe in the two Towns combined, compared to historic population growth of about 2.7% per year from 2001 to 2011 (as was illustrated in Exhibit 5).
- The trade area as a whole is projected to grow from about 8,951 in 2015 to on the order of 14,679 people (lower) to 16,317 people (higher) as of 2045 and on the order of 24,040 people (lower) to 30,613 people (higher) as of 2075.

Exhibit 9a: Population Forecasts Used in our Analysis for Towns of Turner Valley and Black Diamond

Calgary Regional Partnership Area

	2011	2015	2045	2075
CRP Popuation	1,252,096	1,409,245	2,138,578	2,716,071
	2011-2015	2015-2045	2045-2075	
CRP Annual Growth Rate	3.0%	1.4%	0.8%	

Turner Valley and Black Diamond Population Projections - Scenario 1: Lower - "Trend"

	2015	2025	2035	2045	2055	2065	2075
Turner Valley	2,511	3,214	4,115	5,140	6,421	7,827	9,541
Black Diamond	2,577	3,299	4,223	5,275	6,590	8,033	9,792
Total	5,088	6,513	8,337	10,415	13,010	15,860	19,333

	2015-2025	2025-2035	2035-2045	2045-2055	2055-2065	2065-2075
Turner Valley	2.50%	2.50%	2.25%	2.25%	2.00%	2.00%
Black Diamond	2.50%	2.50%	2.25%	2.25%	2.00%	2.00%

	2015-2045	2045-2075	2015-2075
Turner Valley	2.42%	2.08%	2.25%
Black Diamond	2.42%	2.08%	2.25%
Total	2.42%	2.08%	2.25%

Turner Valley and Black Diamond Population Projections - Scenario 2: Higher - "Increased Growth"

	2015	2025	2035	2045	2055	2065	2075
Turner Valley	2,511	3,375	4,535	5,949	7,802	9,988	12,785
Black Diamond	2,577	3,463	4,654	6,105	8,007	10,250	13,121
Total	5,088	6,838	9,189	12,053	15,810	20,238	25,906

	2015-2025	2025-2035	2035-2045	2045-2055	2055-2065	2065-2075
Turner Valley	3.00%	3.00%	2.75%	2.75%	2.50%	2.50%
Black Diamond	3.00%	3.00%	2.75%	2.75%	2.50%	2.50%

	2015-2045	2045-2075	2015-2075
Turner Valley	2.92%	2.58%	2.75%
Black Diamond	2.92%	2.58%	2.75%
Total	2.92%	2.58%	2.75%

Source: Coriolis Consulting.

Exhibit 9b: Population Forecasts for Our Analysis, Turner Valley and Black Diamond Trade Area

	Scenario 1 - Lower ("Trend")			Scenario 2 - Higher ("Increased Growth")		
	2015	2045	2075	2015	2045	2075
Turner Valley (from above)	2,511	5,140	9,541	2,511	5,949	12,785
Black Diamond (from above)	2,577	5,275	9,792	2,577	6,105	13,121
Subtotal - Turner Valley & Black Diamond (from above)	5,088	10,415	19,333	5,088	12,053	25,906
Rural portions of the trade area - at 0.33% per year	3,863	4,264	4,707	3,863	4,264	4,707
Trade Area Total	8,951	14,679	24,040	8,951	16,317	30,613

Source: Coriolis Consulting.

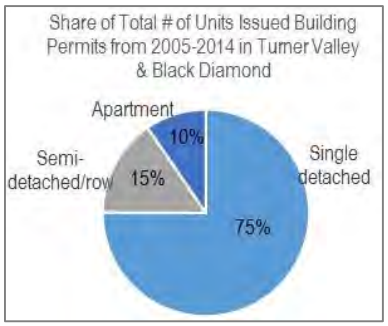
5.0 Residential Development Outlook

5.1 Past Residential Development Trends and Indicators

A total of about 700 new residential units were issued building permits from 2005 to 2014 in Turner Valley and Black Diamond combined, or an average of about 70 units per year (see Exhibit 10). Residential development was split almost evenly between Turner Valley and Black Diamond over this ten year period.

Almost all residential development in Turner Valley during this timeframe was in the form of single detached dwellings, with a small number of semi-detached units. Single family development also accounted for most of the residential development in Black Diamond, but Black Diamond also experienced some semi-detached/row housing and apartment development.

From 2005 to 2014, about 75% of the residential units issued building permits in Turner Valley and Black Diamond were single detached dwellings, 15% were semi-detached/row housing, and 10% were apartment units.



For comparison, Exhibit 11 shows the share of housing starts by unit type for the past five to seven years (depending on data availability) in Okotoks, High River, and Cochrane. As in Turner Valley and Black Diamond, single detached units accounted for the largest share of residential development in these towns (about 60% in High River and Cochrane and over 90% in Okotoks). There is very little apartment development in these communities.

Exhibit 10: Historic Residential Building Permits, 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total 2005-2014	Annual Average 2005-2014
Turner Valley - # of units:												
Single Detached	23	63	44	22	19	9	11	16	30	59	296	30
Semi Detached	6	0	0	10	0	0	0	6	0	0	22	2
Row House	0	0	0	0	0	0	0	0	0	0	0	0
Apartment Unit	0	0	0	0	0	0	0	0	0	0	0	0
Total	29	63	44	32	19	9	11	22	30	59	318	32
Black Diamond - # of units:												
Single Detached	27	47	49	15	17	16	16	12	15	17	231	23
Semi Detached	10	10	20	2	8	2	0	2	0	0	54	5
Row House	10	0	10	0	0	12	0	0	0	0	32	3
Apartment Unit	0	28	0	0	16	0	23	0	0	0	67	7
Total	47	85	79	17	41	30	39	14	15	17	384	38
Towns Combined - # of units:												
Single Detached	50	110	93	37	36	25	27	28	45	76	527	53
Semi Detached	16	10	20	12	8	2	0	8	0	0	76	8
Row House	10	0	10	0	0	12	0	0	0	0	32	3
Apartment Unit	0	28	0	0	16	0	23	0	0	0	67	7
Total	76	148	123	49	60	39	50	36	45	76	702	70
Towns Combined - share of total:												
Single Detached	66%	74%	76%	76%	60%	64%	54%	78%	100%	100%	75%	
Semi Detached	21%	7%	16%	24%	13%	5%	0%	22%	0%	0%	11%	
Row House	13%	0%	8%	0%	0%	31%	0%	0%	0%	0%	5%	
Apartment Unit	0%	19%	0%	0%	27%	0%	46%	0%	0%	0%	10%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

Source: Building permit data provided by Turner Valley and Black Diamond.

Exhibit 11: Comparison of Residential Development by Unit Type in Turner Valley & Black Diamond and Other Nearby Towns

	Turner Valley and Black Diamond 2005-2014	Okotoks 2008-2014	High River 2008-2014	Cochrane 2010-2014
Single detached	75%	92%	60%	58%
Semi-detached/row	15%	6%	40%	35%
Apartment	10%	1%	0%	7%
Total	100%	100%	100%	100%

Source: Building permit data provided by Turner Valley and Black Diamond and CMHC Housing Start data for the other towns.

According to the federal census, the average household size in Turner Valley and Black Diamond was 2.4 people per household as of 2006 and 2011 (see Exhibit 12). This is down slightly from 2001 (when the average household size was 2.5). The average household size in Turner Valley and Black Diamond is slightly lower than in the Calgary CMA, which has had an average household size of 2.6 over the past decade or so.

Exhibit 12: Average Household Size, 2001 to 2011

	2001	2006	2011
Turner Valley	2.5	2.4	2.4
Black Diamond	2.5	2.4	2.4
Calgary CMA	2.6	2.6	2.6

Source: Statistics Canada, census data.

5.2 Projected Residential Demand by Housing Type and Residential Land Requirements

We complete our forecast of residential land requirements in 4 main steps:

1. **Household Forecast**: We take our forecasts of population growth (the lower and higher scenarios) and apply an assumed average household size to generate the total estimated number of households in each Town as of 2015, 2045, and 2075. We assume an average household size of 2.4 to match the average household size in the Towns as of 2006 and 2011 (from Exhibit 12).
2. **Projected Residential Growth by Unit Type**: We calculate the total growth in the number of households in each Town and apply an assumed split by housing type to yield a forecast of residential development by unit type for 2015 to 2045 and 2045 to 2075. Turner Valley and Black Diamond will continue to be suburban satellite communities in the Calgary Region over the forecast period and, while single detached housing is likely to account for a decreasing share of total housing demand over the longer term due to a combination of demographics, increasing house prices, and lifestyle reasons, our forecasts assume that single detached homes will remain the primary housing type. From 2005 to 2014, 75% of housing starts in Turner Valley and Black Diamond were single detached units, 15% were semi-detached/row units, and 10% were apartment units (as was shown in Exhibit 11). We assume that multi-family development makes up a slightly increasing share of total housing development over the 60 year time period. For the first 30 years of the forecast period, we assume that 70% of new residential units are single detached, 15% are attached (e.g. duplex, row housing), and 15% are apartment units. We assume this shifts to 65% single detached, 15% attached, and 20% apartments for the second half of the forecast period.
3. **Comparison of Forecasted Residential Development with Existing Capacity Inside Town's Existing Boundary**: We deduct the remaining capacity for residential development (as described in Section 3.0 of this report) from our forecasts of demand to calculate the amount of unmet demand during 2015 to 2045 and 2045 to 2075 based on the Towns' existing boundaries.

4. **Additional residential land requirements**: We calculate the amount of additional land (in terms of gross acres taking into account allowances for land for items such as roads, municipal reserves for parks and schools, environmentally sensitive areas, stormwater, and community services) based on an overall assumed residential density per acre for new development. Based on input from the Towns, we assume an overall average gross residential density of:

   a) 5.5 units per acre for the first 20 years and 6.5 units per acre for the following 10 years, which results in 5.85 units per acre on average over the first 30 years of the forecast period.

   b) 8.0 units per acre for residential development over the second half of the forecast period.

   These densities are significantly higher than the existing average residential density in Turner Valley and Black Diamond, but reflect the Town's aspirations to achieve higher residential densities over time. Achieving an average density of 8 units per acre in years 31 to 60 will require a significant increase in achievable residential densities (across all types of units) in the long run.

Exhibits 13a (Turner Valley) and 13b (Black Diamond) show our housing demand and residential land requirements forecasts based on our lower population growth scenario and Exhibits 14a (Turner Valley) and 14b (Black Diamond) show our housing demand and residential land requirements forecasts based on our higher population growth scenario. The forecasts suggest that:

1. Total housing demand in Turner Valley and Black Diamond combined will average in the range of 74 to 97 units per year from 2015 to 2045 and in the range of 124 to 192 units per year from 2045 to 2075. This represents total housing demand in the range of about 5,900 to 8,700 units over the entire forecast period (2015 to 2075).
2. Single detached units will remain the primary housing type in Turner Valley and Black Diamond during the entire forecast period, but the single detached share of new residential development will decline gradually from 70% on average during 2015 to 2045 to about 65% on average during 2045 to 2075. The average annual demand for new single detached units is, therefore, projected to be in the range of 52 to 67 units per year from 2015 to 2045 and 81 to 125 units per year from 2045 to 2075. This would yield a total of about 3,900 to 5,800 single detached units during the entire forecast period.
3. Attached units will account for about 15% of total housing demand over the entire forecast period. This represents an average of about 11 to 14 units per year from 2015 to 2045 and 18 to 29 units per year from 2045 to 2075. This would yield a total of about 900 to 1,300 attached units during the entire forecast period.
4. Apartments units will account for a higher share of housing demand over time, increasing from a share of about 15% during 2015 to 2045 to a share of about 20% during 2045 to 2075. The average annual demand for new apartment units is projected to be about 11 to 14 units per year from 2015 to 2045 and 25 to 38 units per year from 2045 to 2075. This would yield a total of about 1,100 to 1,600 apartment units in the Towns during the entire forecast period.
5. Based on the assumptions about remaining residential development capacity inside the existing boundaries of the two Towns and the Towns' goals for achieving higher average densities in new residential development, our forecasts suggest that (combined), the Towns will need an additional:

   a) 132 to 191 acres (beyond the Towns' existing boundaries) to accommodate residential development between 2015 and 2045 plus

   b) 413 to 712 acres (beyond the Towns' existing boundaries) to accommodate residential development between 2045 and 2075.

   c) A total residential land requirement (outside the Towns' existing boundaries) of 545 to 903 acres over the entire forecast period.

Exhibit 13a: Residential Land Requirements Forecast – Turner Valley – Scenario 1 (Lower Growth)

Turner Valley Residential Land Requirements Forecast - Scenario 1 - Low Growth			
Section 1 - Population and Household Forecasts			
1.1 Population	2015	2045	2075
Calgary Regional Partnership	1,409,245	2,138,578	2,716,071
Turner Valley	2,511	5,140	9,541
1.2 Population Growth Rates	2011-2015	2015-2045	2045-2075
Calgary Regional Partnership Growth Rate		1.40%	0.80%
Turner Valley Growth Rate		2.42%	2.08%
1.3 Average Household Size	2015	2045	2075
Turner Valley	2.4	2.4	2.4
1.4 Households	2015	2045	2075
Turner Valley	1,046	2,142	3,975
Section 2 - Growth			
2.1 Population	Average Annual Increment		Total Increment
Population	2015-2045	2045-2075	2015-2075
Turner Valley	88	147	7,030
Population - Average Annual Growth Rate (%)	2015-2045	2045-2075	2015-2075
Turner Valley	2.42%	2.08%	2.25%
Population - Share of Regional Partnership Growth (%)	2015-2045	2045-2075	2015-2075
Turner Valley	0.4%	0.8%	0.5%
2.2 Households	Average Annual Increment		Total Increment
Households	2015-2045	2045-2075	2015-2075
Turner Valley	37	61	2,929
2.3 Units	Average Annual Increment		Total Increment
Share by type in Turner Valley (%)	2015-2045	2045-2075	2015-2075
Single-Detached	70%	65%	67%
Attached (Duplex, Townhouse, Row and Semi-Detached)	15%	15%	15%
Apartment	15%	20%	18%
Total	100%	100%	100%
Number by type in Turner Valley	2015-2045	2045-2075	2015-2075
Single-Detached	26	40	1,959
Attached (Duplex, Townhouse, Row and Semi-Detached)	5	9	439
Apartment	5	12	531
Total	37	61	2,929
2.4 Total Forecasted Units by Tme Period	Total Increment		
Turner Valley	2015-2045	2045-2075	2015-2075
Single-Detached	767	1,192	1,959
Attached (Duplex, Townhouse, Row and Semi-Detached)	164	275	439
Apartment	164	367	531
Total	1,095	1,834	2,929
Section 3 - Comparison of Forecasted Development with Existing Capacity inside Existing Town Boundaries			
Turner Valley	2015-2045	2045-2075	2015-2075
Projected Residential Opportunity (units) per time period	1,095	1,834	2,929
Estimated Existing Residential Capacity	1,095	411	1,506
Unmet Capacity (units per time period)	0	1,423	1,423
Assumed Unmet Capacity by Unit Type	2015-2045	2045-2075	2015-2075
Single-Detached	0	925	925
Attached (Duplex, Townhouse, Row and Semi-Detached)	0	213	213
Apartment	0	285	285
Total	0	1,423	1,423
Section 4 - Additional Land Requirements (Gross Acres - includes roads, MR, storm water, community services, etc)			
4.1 Density (Units per Acre)	2015-2045	2045-2075	2015-2075
Residential	5.85	8.00	8.0
4.2 Total Land Requirements (in Acres) - Full Period	2015-2045	2045-2075	2015-2075
Total	0	178	178

Exhibit 13b: Residential Land Requirements Forecast – Black Diamond – Scenario 1 (Lower Growth)

Black Diamond Residential Land Requirements Forecast - Scenario 1 - Low Growth			
Section 1 - Population and Household Forecasts			
1.1 Population	2015	2045	2075
Calgary Regional Partnership	1,409,245	2,138,578	2,716,071
Black Diamond	2,577	5,275	9,792
1.2 Population Growth Rates	2011-2015	2015-2045	2045-2075
Calgary Regional Partnership Growth Rate		1.40%	0.80%
Black Diamond Growth Rate		2.42%	2.08%
1.3 Average Household Size	2015	2045	2075
Black Diamond	2.4	2.4	2.4
1.4 Households	2015	2045	2075
Black Diamond	1,074	2,198	4,080
Section 2 - Growth			
2.1 Population	Average Annual Increment		Total Increment
Population	2015-2045	2045-2075	2015-2075
Black Diamond	90	151	7,215
Population - Average Annual Growth Rate (%)	2015-2045	2045-2075	2015-2075
Black Diamond	2.42%	2.08%	2.25%
Population - Share of Regional Partnership Growth (%)	2015-2045	2045-2075	2015-2075
Black Diamond	0.4%	0.8%	0.6%
2.2 Households	Average Annual Increment		Total Increment
Households	2015-2045	2045-2075	2015-2075
Black Diamond	37	63	3,006
2.3 Units	Average Annual Increment		Total Increment
Share by type in Black Diamond (%)	2015-2045	2045-2075	2015-2075
Single-Detached	70%	65%	67%
Attached (Duplex, Townhouse, Row and Semi-Detached)	15%	15%	15%
Apartment	15%	20%	18%
Total	100%	100%	100%
Number by type in Black Diamond	2015-2045	2045-2075	2015-2075
Single-Detached	26	41	2,010
Attached (Duplex, Townhouse, Row and Semi-Detached)	6	9	451
Apartment	6	13	545
Total	37	63	3,006
2.4 Total Forecasted Units by Tme Period	Total Increment		
Black Diamond	2015-2045	2045-2075	2015-2075
Single-Detached	787	1,223	2,010
Attached (Duplex, Townhouse, Row and Semi-Detached)	169	282	451
Apartment	169	376	545
Total	1,124	1,882	3,006
Section 3 - Comparison of Forecasted Development with Existing Capacity inside Existing Town Boundaries			
Black Diamond	2015-2045	2045-2075	2015-2075
Projected Residential Opportunity (units) per time period	1,124	1,882	3,006
Estimated Existing Residential Capacity	354	0	354
Unmet Capacity (units per time period)	770	1,882	2,652
Assumed Unmet Capacity by Unit Type	2015-2045	2045-2075	2015-2075
Single-Detached	539	1,223	1,762
Attached (Duplex, Townhouse, Row and Semi-Detached)	116	282	398
Apartment	116	376	492
Total	770	1,882	2,652
Section 4 - Additional Land Requirements (Gross Acres - includes roads, MR, storm water, community services, etc)			
4.1 Density (Units per Acre)	2015-2045	2045-2075	2015-2075
Residential	5.85	8.00	7.2
4.2 Total Land Requirements (in Acres) - Full Period	2015-2045	2045-2075	2015-2075
Total	132	235	367

Exhibit 14a: Residential Land Requirements Forecast – Turner Valley – Scenario 2 (Higher Growth)

Turner Valley Residential Land Requirements Forecast - Scenario 2 - High Growth			
Section 1 - Population and Household Forecasts			
1.1 Population	2015	2045	2075
Calgary Regional Partnership	1,409,245	2,138,578	2,716,071
Turner Valley	2,511	5,949	12,785
1.2 Population Growth Rates	2011-2015	2015-2045	2045-2075
Calgary Regional Partnership Growth Rate		1.40%	0.80%
Turner Valley Growth Rate		2.92%	2.58%
1.3 Average Household Size	2015	2045	2075
Turner Valley	2.4	2.4	2.4
1.4 Households	2015	2045	2075
Turner Valley	1,046	2,479	5,327
Section 2 - Growth			
2.1 Population	Average Annual Increment		Total Increment
Population	2015-2045	2045-2075	2015-2075
Turner Valley	115	228	10,274
Population - Average Annual Growth Rate (%)	2015-2045	2045-2075	2015-2075
Turner Valley	2.92%	2.58%	2.75%
Population - Share of Regional Partnership Growth (%)	2015-2045	2045-2075	2015-2075
Turner Valley	0.5%	1.2%	0.8%
2.2 Households	Average Annual Increment		Total Increment
Households	2015-2045	2045-2075	2015-2075
Turner Valley	48	95	4,281
2.3 Units	Average Annual Increment		Total Increment
Share by type in Turner Valley (%)	2015-2045	2045-2075	2015-2075
Single-Detached	70%	65%	67%
Attached (Duplex, Townhouse, Row and Semi-Detached)	15%	15%	15%
Apartment	15%	20%	18%
Total	100%	100%	100%
Number by type in Turner Valley	2015-2045	2045-2075	2015-2075
Single-Detached	33	62	2,854
Attached (Duplex, Townhouse, Row and Semi-Detached)	7	14	642
Apartment	7	19	785
Total	48	95	4,281
2.4 Total Forecasted Units by Tme Period	Total Increment		
Turner Valley	2015-2045	2045-2075	2015-2075
Single-Detached	1,003	1,852	2,854
Attached (Duplex, Townhouse, Row and Semi-Detached)	215	427	642
Apartment	215	570	785
Total	1,432	2,849	4,281
Section 3 - Comparison of Forecasted Development with Existing Capacity inside Existing Town Boundaries			
Turner Valley	2015-2045	2045-2075	2015-2075
Projected Residential Opportunity (units) per time period	1,432	2,849	4,281
Estimated Existing Residential Capacity	1,432	74	1,506
Unmet Capacity (units per time period)	0	2,775	2,775
Assumed Unmet Capacity by Unit Type	2015-2045	2045-2075	2015-2075
Single-Detached	0	1,804	1,804
Attached (Duplex, Townhouse, Row and Semi-Detached)	0	416	416
Apartment	0	555	555
Total	0	2,775	2,775
Section 4 - Additional Land Requirements (Gross Acres - includes roads, MR, storm water, community services, etc)			
4.1 Density (Units per Acre)	2015-2045	2045-2075	2015-2075
Residential	5.85	8.00	8.0
4.2 Total Land Requirements (in Acres) - Full Period	2015-2045	2045-2075	2015-2075
Total	0	347	347

Exhibit 14b: Residential Land Requirements Forecast – Black Diamond – Scenario 2 (Higher Growth)

Black Diamond Residential Land Requirements Forecast - Scenario 2 - High Growth			
Section 1 - Population and Household Forecasts			
1.1 Population	2015	2045	2075
Calgary Regional Partnership	1,409,245	2,138,578	2,716,071
Black Diamond	2,577	6,105	13,121
1.2 Population Growth Rates	2011-2015	2015-2045	2045-2075
Calgary Regional Partnership Growth Rate		1.40%	0.80%
Black Diamond Growth Rate		2.92%	2.58%
1.3 Average Household Size	2015	2045	2075
Black Diamond	2.4	2.4	2.4
1.4 Households	2015	2045	2075
Black Diamond	1,074	2,544	5,467
Section 2 - Growth			
2.1 Population	Average Annual Increment		Total Increment
Population	2015-2045	2045-2075	2015-2075
Black Diamond	118	234	10,544
Population - Average Annual Growth Rate (%)	2015-2045	2045-2075	2015-2075
Black Diamond	2.92%	2.58%	2.75%
Population - Share of Regional Partnership Growth (%)	2015-2045	2045-2075	2015-2075
Black Diamond	0.5%	1.2%	0.8%
2.2 Households	Average Annual Increment		Total Increment
Households	2015-2045	2045-2075	2015-2075
Black Diamond	49	97	4,393
2.3 Units	Average Annual Increment		Total Increment
Share by type in Black Diamond (%)	2015-2045	2045-2075	2015-2075
Single-Detached	70%	65%	67%
Attached (Duplex, Townhouse, Row and Semi-Detached)	15%	15%	15%
Apartment	15%	20%	18%
Total	100%	100%	100%
Number by type in Black Diamond	2015-2045	2045-2075	2015-2075
Single-Detached	34	63	2,929
Attached (Duplex, Townhouse, Row and Semi-Detached)	7	15	659
Apartment	7	19	805
Total	49	97	4,393
2.4 Total Forecasted Units by Tme Period	Total Increment		
Black Diamond	2015-2045	2045-2075	2015-2075
Single-Detached	1,029	1,900	2,929
Attached (Duplex, Townhouse, Row and Semi-Detached)	220	439	659
Apartment	220	585	805
Total	1,470	2,923	4,393
Section 3 - Comparison of Forecasted Development with Existing Capacity inside Existing Town Boundaries			
Black Diamond	2015-2045	2045-2075	2015-2075
Projected Residential Opportunity (units) per time period	1,470	2,923	4,393
Estimated Existing Residential Capacity	354	0	354
Unmet Capacity (units per time period)	1,116	2,923	4,039
Assumed Unmet Capacity by Unit Type	2015-2045	2045-2075	2015-2075
Single-Detached	781	1,900	2,681
Attached (Duplex, Townhouse, Row and Semi-Detached)	167	439	606
Apartment	167	585	752
Total	1116	2,923	4,039
Section 4 - Additional Land Requirements (Gross Acres - includes roads, MR, storm water, community services, etc)			
4.1 Density (Units per Acre)	2015-2045	2045-2075	2015-2075
Residential	5.85	8.00	7.3
4.2 Total Land Requirements (in Acres) - Full Period	2015-2045	2045-2075	2015-2075
Total	191	365	556

6.0 Commercial Development Outlook

We forecast future requirements for commercial land (retail, service and office) in Turner Valley and Black Diamond using this approach:

- We review the kinds of businesses that are located in the Towns.
- We calculate the existing commercial floorspace per capita ratio (i.e. the amount of commercial floorspace in Turner Valley and Black Diamond per trade area resident). We use a per capita ratio per trade area resident because businesses in Turner Valley and Black Diamond serve residents in the Towns plus surrounding rural areas.
- We consider whether the role of Turner Valley and Black Diamond as a commercial centre is likely to change over the forecast period.
- We forecast future commercial floorspace development in the Towns using a per capita ratio approach (i.e. we apply a commercial floorspace per capita ratio to our forecast of population growth).
- Based on an assumed average density of development, we translate our forecast of future commercial floorspace growth into an estimate of commercial land requirements. We then deduct the existing capacity for commercial growth within the Towns, resulting in an estimate of future commercial land requirements outside the Towns' existing boundaries.

6.1 Business Inventory

Appendix 1 (Turner Valley) and Appendix 2 (Black Diamond) list the commercial businesses located in each Town. Based on the business inventories and our fieldwork, all of the retail, service, and office space in Turner Valley and Black Diamond is occupied by locally-oriented retail and service businesses that meet the day-to-day needs of residents in the Towns and nearby surrounding rural areas, such as a grocery store (Country Food Mart), pharmacy, convenience stores, liquor stores, restaurants/cafes, bank, pubs, laundromat, and gas stations.

There are no regionally-oriented retail and service businesses in Turner Valley and Black Diamond, such as department stores, large format ("big box") retailers, major chain clothing stores, or specialty stores. These kinds of businesses tend to locate in major commercial centres or in locations that offer convenient vehicular access to a large regional or sub-regional trade area population (often 50,000 customers or more). Okotoks and South Calgary contain all of the major region-serving businesses that we would expect to see in a large commercial centre, such as Canadian Tire, Wal-mart Supercentre, Home Depot, Winners, Costco, Staples, and others.

6.2 Existing Commercial Floorspace Inventory and Per Capita Ratio

As of 2015, there was a total of 238,435 square feet of commercial floorspace in Turner Valley and Black Diamond.[8] This figure includes retail, service, and office space. As noted in Section 4.1.1, we defined a commercial trade area that includes Turner Valley, Black Diamond, and the surrounding rural area that is south of Priddis, north of Longview, west of about the mid-point between Black Diamond and Okotoks, and east of Sheep River Provincial Park in Kananaskis.

[8] Based on floorspace inventory data provided by the Towns.

The trade area has a total of about 8,951 people, so there is about 26.6 square feet of existing commercial space in Turner Valley and Black Diamond per trade area resident (see Exhibit 15).

Exhibit 15: Existing Commercial Floorspace Per Capita in Turner Valley and Black Diamond

	2015
Commercial floorspace inventory	238,435 sq.ft.
Trade area population:	
Turner Valley & Black Diamond	5,088 people
Remainder of Local Trade Area[a]	3,863 people
Total Trade Area Population	8,951 people
Commercial floorspace per capita ratio	26.6 sq.ft. per capita

Source: Based on information provided by the Towns of Turner Valley and Black Diamond.

Based on our work in other parts of Western Canada:

- Communities tend to support about 20 square feet per capita of local convenience-oriented retail (e.g. supermarket, pharmacy, liquor) and services (e.g. food/beverage, hair, financial institutions, cleaners).
- Communities tend to support about 25 square feet per capita of regional destination or comparison retail space (e.g. department store, furniture, home improvement, clothing, jewelry).
- Smaller communities that are not regional business centres tend to support about 6 to 10 square feet per capita of local-oriented office space (e.g. medical/dental, insurance, real estate).

Based on the existing patterns of commercial development in Turner Valley, Black Diamond, Okotoks, and Calgary:

- Turner Valley and Black Diamond are probably retaining almost all of their local convenience retail and personal services demand; the communities have a large enough array of businesses that there would be little leakage of convenience purchases.
- Turner Valley and Black Diamond trade area residents likely export almost all of their regional destination and comparison shopping demand to Calgary and Okotoks.
- Turner Valley and Black Diamond probably retain a share of their locally-oriented office business demand, but some of this demand (e.g. medical/dental, insurance, accounting and legal business) is likely exported to Calgary and Okotoks.

Based on this assessment, we would expect Turner Valley and Black Diamond to have on the order of about 20 square feet per capita of locally-serving retail and service floorspace and about 6 to 8 square feet of locally-serving office space, so the existing ratio of 26.6 square feet per capita appears to be reasonable given the size of the commercial trade area and its proximity to other regional commercial destinations.

6.3 Forecast of Commercial Floorspace Development and Land Requirements

6.3.1 Role of Turner Valley and Black Diamond Over the Forecast Period

Turner Valley and Black Diamond are not likely to attract regionally-oriented retail and service businesses over the forecast period, as Okotoks and South Calgary are already filling this role and the combined population of Turner Valley and Black Diamond is not large enough to support most (if not all) regional

oriented retail businesses. However, the two Towns will continue to attract additional retail and service businesses that serve residents of the Towns and the nearby rural areas.

As the local trade area area population grows (due to residential development), the demand for locally-oriented retail and personal service businesses will grow. We assume that the Turner Valley and Black Diamond trade area will continue to support about 27 square feet of retail, service, and office space per capita and this growth will be focused within the two Towns (not the surrounding rural areas).

6.3.2 Forecast of Commercial Floorspace Growth and Commercial Land Requirements

Our population projections suggest that the trade area will grow from about 8,951 people in 2015 to on the order of 14,679 people (low) to 16,317 people (high) as of 2045 and on the order of 24,040 people (low) to 30,613 people (high) as of 2075.

Applying a commercial floorspace per capita ratio of about 27 sq.ft. to the projected trade area population results in potential commercial floorspace growth of about:

- 158,000 to 202,000 square feet from 2015 to 2045.
- 253,000 to 386,000 square feet from 2045 to 2075.

Over the entire forecast period, therefore, total commercial floorspace growth is projected to be on the order of about 411,000 to 588,000 square feet.

We use an assumed average density for new commercial development of 0.30 Floor Area Ratio (FAR) on the net developable land area. This assumes that most of the commercial floorspace development is for retail and service space with surface parking (at about 0.25 to 0.30 FAR) with some higher density office development.

We also assume that 35% of the land is required for municipal reserves (parks and schools), environmentally sensitive areas, roads, and stormwater.

Based on these assumptions, Exhibits 16a (low scenario) and 16b (high scenario) show our forecasts of future commercial land requirements in Turner Valley and Black Diamond. The forecasts indicate that:

- The total gross commercial land requirements will be in the range of 19 to 24 acres in the short-medium term (2015-2045) and in the range of 30 to 45 acres in the long-term (2045-2075), totaling 48 to 69 acres over the entire forecast period.
- Combined, the Towns have about 18 acres of commercial land remaining for development, so an additional 30 to 51 acres are required (i.e. outside the Towns' existing boundaries) to accommodate market-driven commercial growth over the forecast period.

Exhibit 16a: Commercial Land Requirements Forecast – Turner Valley & Black Diamond – Scenario 1 (Lower Growth)

Turner Valley & Black Diamond - Commercial Land Requirements Forecast
Lower Growth Scenario

pink shaded cells are inputs

Section 1 - Projected commercial floorspace demand in Turner Valley and Black Diamond			
	2015	2045	2075
Population:			
Turner Valley & Black Diamond	5,088	10,415	19,333
Remainder of Local Trade Area - assumed to grow at an average annual rate of 0.33%	3,863	4,264	4,707
Total Local Trade Area	8,951	14,679	24,040
Supportable Commercial Floorspace Per Capita	26.6	27.0	27.0
Total Supportable Commercial Floorspace in Black Diamand and Turner Valley	238,435	396,327	649,068
Section 2 - Forecast of future commercial land requirements in Turner Valley and Black Diamond (net of roads, reserves, ESAs, etc)			
	2015 to 2045	2045 to 2075	2015 to 2075
Growth in Commercial Floorspace (sf)	157,892	252,741	410,633
Assumed FAR for New Commercial Development	0.30	0.30	0.30
Commercial Land Requirement (in net acres)	12	19	31
Section 3 - Forecast of future commercial land requirements in Turner Valley and Black Diamond (gross acres including roads, MR, storm, etc)			
	2015 to 2045	2045 to 2075	2015 to 2075
Commercial Land Requirement (in net acres)	12	19	31
Assumed gross up allowance	35%	35%	35%
Commercial Land Requirement (in gross acres)	19	30	48
Less Commercial Land Available for Development within the Towns' existing boundaries	18	0	18
Requirement for additional commercial land	1	30	30

Source: Coriolis Consulting Corp.

Exhibit 16b: Commercial Land Requirements Forecast – Turner Valley & Black Diamond – Scenario 2 (Higher Growth)

Turner Valley & Black Diamond - Commercial Land Requirements Forecast
Higher Growth Scenario

pink shaded cells are inputs

Section 1 - Projected commercial floorspace demand in Turner Valley & Black Diamond			
	2015	2045	2075
Population:			
Turner Valley & Black Diamond	5,088	12,053	25,906
Remainder of Local Trade Area 0.33%	3,863	4,264	4,707
Total Local Trade Area	8,951	16,317	30,613
Supportable Commercial Floorspace Per Capita	26.6	27.0	27.0
Total Supportable Commercial Floorspace in Black Diamand and Turner Valley	238,435	440,566	826,554
Section 2 - Forecast of future commercial land requirements in Turner Valley & Black Diamond (net of roads, reserves, ESAs, etc)			
	2015 to 2045	2045 to 2075	2015 to 2075
Growth in Commercial Floorspace (sf)	202,131	385,988	588,119
Assumed FAR for New Commercial Development	0.30	0.30	0.30
Commercial Land Requirement (in net acres)	15	30	45
Section 3 - Forecast of future commercial land requirements in Turner Valley & Black Diamond (gross acres including roads, MR, storm, etc)			
	2015 to 2045	2045 to 2075	2015 to 2075
Commercial Land Requirement (in net acres)	15	30	45
Assumed gross up allowance	35%	35%	35%
Commercial Land Requirement (in gross acres)	24	45	69
Less Commercial Land Available for Development within the Towns' existing boundaries	18	0	18
Requirement for additional commercial land	6	45	51

Source: Coriolis Consulting Corp.

7.0 Industrial Development Outlook

In this section, we describe the existing industrial situation in Turner Valley and Black Diamond, forecast future industrial floorspace growth, and translate this into future industrial land requirements for the short/medium term (2015 to 2045) and long term (2045 to 2075).

7.1 Existing Industrial Situation

As of 2015, there was a total of about 96,900 square feet of industrial space in Turner Valley and Black Diamond, of which about half is located in JKR Business Park in Black Diamond (see Exhibit 17). This industrial development has occurred over the past 30 years or so and, based on building permit data, there has been little recent industrial development in the Towns.

Turner Valley and Black Diamond have vacant, zoned, serviced industrial land available for development, so the slow pace of industrial development has likely been due to limited demand for new space, not a lack of vacant land supply. Demand for industrial development has likely been limited because the Towns are not on a major highway corridor and there are other locations (such as the Highway 2 industrial corridor in Okotoks) that have been attracting a significant amount of industrial development.

Industrial space in Turner Valley and Black Diamond is occupied by businesses that appear to be mainly serving the businesses and residents of the local trade area, such as building material suppliers, automotive sales and service, trades workshops (e.g. cabinet maker, welding shop), professional services (e.g. environmental engineering), mini-storage, and recycling and waste disposal services. There are few businesses serving the regional, provincial or broader markets.

Exhibit 17: Industrial Floorspace Inventory in Turner Valley and Black Diamond, 2015

	Industrial Floorspace as of 2015
Black Diamond:	
Business Park	*50,483 sq.ft.*
Rest of Town	*10,495 sq.ft.*
Total	60,978 sq.ft.
Turner Valley	35,930 sq.ft.
Towns Combined	96,908 sq.ft.

Source: Based on information provided by the Towns of Turner Valley and Black Diamond.

7.2 Forecast of Industrial Floorspace Development and Land Requirements

We considered the following regional context in producing our industrial floorspace growth projections:

- Turner Valley and Black Diamond will remain a suburban community in the Calgary Region and its share of regional employment will likely remain stable over time.
- The City of Calgary will continue to capture the largest share of regional employment growth.
- The City of Calgary has a large amount of vacant industrial-designated land, especially in the North/Northeast and Southeast sectors (which is the nearest area to Turner Valley and Black Diamond), and will continue to accommodate the vast majority of industrial development in the Calgary Region.

- Okotoks and the Highway 2A Industrial Corridor play a large role in the industrial market outside of Calgary and will continue to capture most of the industrial businesses that require convenient access to the regional highway system (such as distribution centres and logistics companies) and that are interested in a location to the South of the City of Calgary.

Based on this competitive context, we do not expect Turner Valley and Black Diamond to attract a significant number of industrial businesses that serve regional, provincial or broader markets. We would expect future industrial floorspace growth in Turner Valley and Black Diamond to mainly be linked to the overall pace of growth in the two Towns (as in the existing situation).

Exhibit 18 shows our forecast of industrial growth assuming the role that Tuner Valley and Black Diamond play within the regional industrial market does not change over the long term and local industrial growth is driven by business and residential growth in the nearby trade area. We assume:

- Industrial floorspace in Turner Valley and Black Diamond will grow by an average of about 2% per year.
- The average density for new industrial development will be 0.25 FAR on the net developable land area.
- An allowance of 35% for municipal reserves, environmentally sensitive areas, roads, and stormwater.

Based on these assumptions, the forecasts suggest that Turner Valley and Black Diamond will need about 11 acres of industrial land to accommodate growth in the short-medium term (2015 to 2045) plus an additional 20 acres of industrial land over the long term (2045 to 2075), or a total of about 30 acres over the entire forecast period. The Towns have 8.5 acres remaining for industrial development, so they will need an additional 23 acres (outside the Towns' existing boundaries) to accommodate industrial growth linked to business and residential growth over the next 60 years.

Exhibit 18: Industrial Land Requirements Forecast – Turner Valley & Black Diamond

Turner Valley & Black Diamond - Industrial Land Requirements Forecast
For Industrial Businesses Servicing Local Area

pink shaded cells are inputs

1. Existing Industrial floorspace in Black Diamond and Turner Valley

	2015
Total amount of Industrial floorspace in sq.ft.	96,908

2. Estimate of Future Growth in Turner Valley & Black Diamond Trade Area

	2015	2045	2075
Population (low scenario):			
Turner Valley & Black Diamond	5,088	10,415	19,333
Surrounding areas	3,863	4,264	4,707
Local trade area total (low scenario)	8,951	14,679	24,040
Population (high scenario):			
Turner Valley & Black Diamond	5,088	12,053	25,906
Surrounding areas	3,863	4,264	4,707
Local trade area total (high scenario)	8,951	16,317	30,613
Average Annual Trade Area Population Growth Rate:	2015 to 2045	2045 to 2075	2015 to 2075
Low Scenario	1.66%	1.66%	1.66%
High Scenario	2.02%	2.12%	2.07%

3. Forecast of future Industrial land requirement for businesses serving the local area (net of roads, MR, storm, etc)

	2015 to 2045	2045 to 2075	2015 to 2075
Assumed Annual Growth in Industrial Floorspace	2.0%	2.0%	2.0%

	2015	2045	2075
Projected Total Industrial Floorspace	96,908	175,535	317,958

	2015 to 2045	2045 to 2075	2015 to 2075
Industrial Floorspace at End of Period	175,535	317,958	317,958
Industrial Floorspace at Beginning of Period	96,908	175,535	96,908
Additional Industrial Floorspace	78,627	142,423	221,050
Assumed Average FAR	0.25	0.25	0.25
Estimated Industrial Additional Land Requirement (net acres)	7.2	13.1	20.3

4. Forecast of future industrial land requirements in Turner Valley & Black Diamond (gross acres including roads, MR, storm, etc)

	2015 to 2045	2045 to 2075	2015 to 2075
Industrial Land Requirement (in net acres)	7.2	13.1	20.3
Assumed gross up allowance	35%	35%	35%
Industriall Land Requirement (in gross acres)	11.1	20.1	31.2
Less Industrial Land Available for Development within the Towns' existing boundaries	8.5	0	8.5
Requirement for additional industrial land	2.6	20.1	22.7

Source: Coriolis Consulting Corp.

8.0 Potential Additional Land Requirements

The commercial and industrial land requirement forecasts in Sections 6.0 and 7.0 are based on our expectation that Turner Valley and Black Diamond's role within the overall regional commercial and industrial markets does not change significantly over time. However, it is possible that our forecasts could understate potential commercial and industrial growth over the forecast period because:

- The forecasts span 60 years. Over this length of time there could be changes in transportation networks or market conditions (that cannot be anticipated at this point in time) which will affect the commercial and industrial prospects for the two Towns.
- The two Towns have economic development objectives to significantly increase the amount of commercial and industrial development. It is possible that industrial development in Turner Valley and Black Diamond could exceed our market-based forecasts over the forecast period if the Towns are successful at growing their economic base beyond the types of commercial and industrial businesses that mainly serve local residents and businesses.

To attract a larger share of the regional commercial and industrial market, Turner Valley and Black Diamond would likely need to offer vacant land in a location that offers a convenient connection to the regional highway system (Highway 2), is flat, and is affordable to service. However, given the unpredictable nature of the demand for any industrial and commercial land beyond our forecasts, we do not suggest pre-servicing land for this kind of opportunity.

9.0 Summary of Forecasts of Land Requirements

Exhibit 19 summarizes our lower and higher forecasts of the gross amount of land required by Turner Valley and Black Diamond outside the Towns' existing boundaries to accommodate market-driven residential, commercial, and industrial growth to 2075. The forecasts indicate that:

- *Gross Residential Land Requirements*: A total of about 132 to 191 acres are needed to accommodate expected residential demand in the short-medium term (2015 to 2045) plus an additional 413 to 712 acres in the long-term, totalling on the order of 545 to 903 gross acres during the entire forecast period.
- *Gross Commercial Land Requirements*: In addition to commercial land still available for development within the Towns' boundaries (about 18 acres in total), about 1 to 6 acres are needed to accommodate projected population-driven commercial growth in the short-medium term (2015 to 2045) plus an additional 30 to 45 acres are needed in the long-term. This suggests a total requirement for additional commercial land (i.e. outside the Towns' current boundaries) on the order of 30 to 51 acres during the entire forecast period.
- *Gross Industrial Land Requirements*: In additional to industrial land still available for development within the Towns' boundaries (about 8.5 acres in total), about 3 acres are needed to accommodate projected industrial growth in the short-medium term (2015 to 2045) and an additional 20 acres are needed in the long-term (2045 to 2075), totalling on the order of 23 acres during the entire forecast period.
- *Total Gross Land Requirements*: The total land requirement (i.e., the sum of residential, commercial, and industrial land requirements) is forecasted to be about 135 to 199 acres in the short-medium term (2015 to 2045) and an additional 463 to 778 acres in the long-term (2045 to 2075) totalling on the order of 598 to 977 gross acres over the entire forecast period. These are gross land requirements outside the Towns' existing boundaries, so they already include take into account remaining capacity for development within Turner Valley and Black Diamond and include allowances for municipal reserves (parks and schools), roads, stormwater, environmentally sensitive areas, and community services (but they do not include land for other public services).

Exhibit 19: Summary of Forecasted Land Requirements for Turner Valley and Black Diamond, 2015 to 2075

	Low Scenario			High Scenario		
	2015-2045	2045-2075	Total	2015-2045	2045-2075	Total
Turner Valley Residential	*0*	*178*	178	*0*	*347*	*347*
Black Diamond Residential	*132*	*235*	367	*191*	*365*	*556*
Total Residential	132	413	545	191	712	903
Commercial (local market only)*	1	30	30	6	45	51
Industrial (local market only)*	3	20	23	3	20	23
Total (gross acres required outside the Towns' existing boundaries)	135	463	598	199	778	977

* Does not include land that may be needed to accommodate economic development opportunities.

These forecasts do not allow for additional commercial or industrial land to meet each Town's economic development objectives (beyond those needed from a market-driven perspective), so additional land could be identified to accommodate any unforeseen commercial and industrial opportunities that arise over time.

10.0 Appendices

Appendix 1: Business Inventory for Turner Valley

Town of Turner Valley Business Inventory

Address	Business
103 Edgar Avenue NW	Daisies & Dirt Greenhouse
104 Main Street NW	RBC Royal Bank
108 Main Street NW	LAB
112 Main Street NW	Home Hardware
118 Main Street NW	Children's Place, WFG Insurance, Granny's Pizza, Laundromat
140 Main Street NW	Valley Central Business, Office building
202 Main Street NW	Coyote Moon Restaurant
206 Main Street NW	Valley Cold Beer & Liquor Store Ltd.
208 Main Street SW	Subway
220 Main Street NW	Ben's Thrift Store
302 Main Street NW	Planet Auto Inc. (Automotive)
101 Sunset Boulevard SE	Esso Fuel Station/mini mart/ family restaurant
104 Sunset Boulevard SW	Bottle Depot/Liqor Store
105 Sunset Boulevard SE	Chuckwagon Café
111 Sunset Boulevard SW	Tasting Room (Brew Pub)
113 Sunset Boulevard SW	Production Room (Brew Pub)
117 Sunset Boulevard SW	Cougar's Sports Bar & Grill
117 Sunset Boulevard SE	Feed Store (rear)
202 Sunset Boulevard SE	MotorRad (Automotive)

Appendix 2: Business Inventory for Black Diamond

Town of Black Diamond Business Inventory

Company Name	Industry Group	Industry Group (Detailed Level 1)	HQ Status
Hortscape Limited	Agriculture	Agricultural Services	Single Location
Vale'S Greenhouse Ltd	Agriculture	Agricultural Production - Crops	Single Location
Eastern Slopes Veterinary Services Ltd	Agriculture	Agricultural Services	Single Location
Foothills Poultry Farm	Agriculture	Agricultural Production - Livestock And Animal Specialties	Single Location
Growco Yardcare Ltd	Agriculture	Agricultural Services	Single Location
Lilyfer Poultry Farms (Black Diamond) Ltd	Agriculture	Agricultural Production - Livestock And Animal Specialties	Single Location
T & T Disposal Services	Communications and Utilities	Electric, Gas and Sanitary Services	Single Location
Blue Torch Mechanical Inc	Construction	Special Trade Construction	Single Location
Bremen Electric Ltd	Construction	Special Trade Construction	Single Location
Image Electric	Construction	Special Trade Construction	Single Location
Ridgeline Electrical	Construction	Special Trade Construction	Single Location
Sheep Valley Heating And	Construction	Special Trade Construction	Single Location
Trinity Mechanical Inc	Construction	Special Trade Construction	Single Location
Voltel Electric Ltd	Construction	Special Trade Construction	Single Location
Blue Ridge Construction Cl Inc	Construction	Building Construction	Single Location
Canadian Timber Products	Construction	Building Construction	Single Location
Sure-Fit Mechanical Ltd	Construction	Special Trade Construction	Single Location
Silver Eagle Concrete Construction	Construction	Special Trade Construction	Single Location
1143676 Alberta Ltd	Construction	Special Trade Construction	Single Location
Scorpio Contracting	Construction	Building Construction	Single Location
Davista Homes Ltd	Construction	Building Construction	Single Location
J.K.R. Excavating Ltd	Construction	Special Trade Construction	Single Location
Alberta Treasury Branches	Finance, Insurance & Real Estate	Depository Institutions	Branch
Z69115 Alberta Ltd	Finance, Insurance & Real Estate	Real Estate	Branch
351914 Alberta Ltd	Finance, Insurance & Real Estate	Holding And Other Investment Offices	Single Location
Maxwell City Central	Finance, Insurance & Real Estate	Real Estate	Single Location
Zac'S Ventures Inc	Finance, Insurance & Real Estate	Nondepository Credit Institutions	Single Location
All About Packing Ltd	Manufacturing	Industrial and Commercial Machinery and Equipment	Single Location
First Place Feeds Ltd	Manufacturing	Food and Kindred Products	Single Location
Black Diamond- Town Of	Public Administration	Executive, Legislative & General Government, Except Finance	Branch
Black Diamond- Town Of	Public Administration	Executive, Legislative & General Government, Except Finance	Head Quarters
Alberta Health Services	Services	Health Services	Branch
Black Diamond- Town Of	Services	Amusement And Recreation Services	Branch
Foothills School Division No. 38	Services	Educational Services	Branch
Minnedosa Medical Group	Services	Social Services	Branch
Banner Enviromental Enginering Consultants Ltd	Services	Engineering Accounting Research Management & Related Svcs	Single Location
Garage Storage Solutions	Services	Automotive Repair Services And Parking	Single Location
Jmx Consulting Inc	Services	Engineering Accounting Research Management & Related Svcs	Single Location
Kid'S Stop Children Centre Ltd	Services	Social Services	Single Location
Non Typical Taxidermy	Services	Miscellaneous Repair Services	Single Location
Region 3 Family Base Care Society	Services	Social Services	Single Location
Thorhaug Consulting Service Ltd	Services	Engineering Accounting Research Management & Related Svcs	Single Location
Church Of God Mission Ltd	Services	Membership Organizations	Single Location
Chin Gordon Professional Dental Corp	Services	Health Services	Single Location
Diamond Valley Vision Care	Services	Health Services	Single Location
Mountain View Dental Hygiene	Services	Health Services	Single Location
Aritzi Beauty Lounge	Services	Personal Services	Single Location
Sweet Escape	Services	Personal Services	Single Location
Diamond Fitness And Wellness Inc	Services	Amusement And Recreation Services	Single Location
Klipperzzz	Services	Personal Services	Single Location
Pops Barbershop Ltd	Services	Personal Services	Single Location
Rav'N About Styles	Services	Personal Services	Single Location
Foot Hills Family Medical Centre	Services	Health Services	Single Location
Diamond Oasis Salon & Day Spa	Services	Personal Services	Single Location

(continued on following page)

Town of Black Diamond Business Inventory - CONTINUED

Company Name	Industry Group	Industry Group (Detailed Level 1)	HQ Status
Cowboy Trail Apartment Motel	Services	Hotels & Lodging Places	Single Location
Heirloom Oriental Rug Cleaning Ltd	Services	Personal Services	Single Location
Black Diamond Gospel Chapel	Services	Membership Organizations	Single Location
Webby Inc	Services	Business Services	Single Location
Black Diamond Eye Clinic	Services	Health Services	Single Location
Pioneer Enterprises	Services	Miscellaneous Repair Services	Single Location
800549 Alberta Ltd	Services	Legal Services	Single Location
Diamond Valley Clothing Co	Services	Business Services	Single Location
Idea Garden- The	Services	Business Services	Single Location
Equus Video Inc	Services	Motion Pictures	Single Location
Packer Inc	Services	Engineering Accounting Research Management & Related Svcs	Single Location
Boys And Girls Club Of Diamond Valley	Services	Membership Organizations	Single Location
Schwartz- Lisa Registered Massage Therapist	Services	Personal Services	Single Location
Sheep River Community Library	Services	Educational Services	Single Location
High Country Video Ltd	Services	Motion Pictures	Single Location
Oilfield Curling Club	Services	Amusement And Recreation Services	Single Location
Morgan Valve Repair (1996) Inc	Services	Miscellaneous Repair Services	Single Location
330810 Alberta Ltd	Services	Automotive Repair Services And Parking	Single Location
Carington Morris Professional Corporation	Services	Health Services	Single Location
True Grit Welding Ltd	Services	Miscellaneous Repair Services	Single Location
Journey'S Family Development Program	Services	Social Services	Single Location
Ted'S Autobody & Towing	Services	Automotive Repair Services And Parking	Single Location
Absolute Dentistry	Services	Health Services	Single Location
Diamond Valley Tune Up Ltd	Services	Automotive Repair Services And Parking	Single Location
All-Rite Towing	Services	Automotive Repair Services And Parking	Single Location
Anchor D Guiding & Outfitting Ltd	Services	Hotels & Lodging Places	Single Location
298007 Alberta Ltd	Services	Hotels & Lodging Places	Single Location
High Country Lodge	Services	Engineering Accounting Research Management & Related Svcs	Single Location
Oilfields General Hospital	Services	Health Services	Single Location
Sunrise Transport Ltd	Transportation	Motor Freight Transportation	Branch
693394 Alberta Ltd	Transportation	Local & Suburban Transit & Interurban Highway Transportation	Single Location
Roadstar Express Inc	Transportation	Motor Freight Transportation	Single Location
Corporation La Senza	Wholesale & Retail Trade	Apparel and Accessory Stores	Branch
Rona Inc	Wholesale & Retail Trade	Building Materials, Hardware, Garden Supplies & Mobile Homes	Branch
Subway Developments 2000 Inc	Wholesale & Retail Trade	Eating and Drinking Places	Branch
Chinook Windz Healthy Pet Supplies	Wholesale & Retail Trade	Food Stores	Single Location
Navntoft Motorsport	Wholesale & Retail Trade	Automotive Dealers and Gasoline Service Stations	Single Location
Pharmasave	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
Saigon Moon Restaurant	Wholesale & Retail Trade	Eating and Drinking Places	Single Location
Grillos Pizzeria Ltd	Wholesale & Retail Trade	Eating and Drinking Places	Single Location
Fifth Avenue Collection	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
Tumbleweed Mercantile	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
Foothills Pizza & Pasta	Wholesale & Retail Trade	Eating and Drinking Places	Single Location
Marv'S Classic Soda Shop	Wholesale & Retail Trade	Eating and Drinking Places	Single Location
Maryanne'S Eden	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
Canadian Bdx Inc	Wholesale & Retail Trade	Wholesale Trade - Durable Goods	Single Location
Terra Cotta Gallery	Wholesale & Retail Trade	Home Furniture, Furnishings and Equipment Stores	Single Location
Black Diamond Bakery (1985) Ltd	Wholesale & Retail Trade	Food Stores	Single Location
Gateway Gazette	Wholesale & Retail Trade	Wholesale Trade - Nondurable Goods	Single Location
370733 Alberta Inc	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
10810 Alberta Ltd	Wholesale & Retail Trade	Automotive Dealers and Gasoline Service Stations	Single Location
Lee Park Investments Enterprises	Wholesale & Retail Trade	Automotive Dealers and Gasoline Service Stations	Single Location
Country Food Mart	Wholesale & Retail Trade	Food Stores	Single Location
Sandul'S Pharmacy Ltd	Wholesale & Retail Trade	Miscellaneous Retail	Single Location
Sure Fit Mechanical	Wholesale & Retail Trade	Wholesale Trade - Durable Goods	Single Location
Three Point Holdings Inc	Wholesale & Retail Trade	Food Stores	Single Location

Source: Town of Black Diamond.

Appendix B

Joint Growth Strategy Transportation Analysis

Joint Growth Strategy Transportation Analysis - Scenario 3



MEMORANDUM

Date:	December 10, 2015
To:	Andrew Palmiere, O2 Planning and Design Inc.
cc:	Meghan Aebig, P.Eng
From:	Chun Man, P.Eng
File:	4033.0001.01
Subject:	Joint Growth Strategy Transportation Analysis

1.0 BACKGROUND

Urban Systems was retained by O2 Planning and Design Inc. (O2) to complete the conceptual transportation analysis related to the Town of Black Diamond and the Town of Turner Valley's Joint Growth Strategy (the Study).

The purpose of the technical memo is to provide a summary of the assumptions and findings for the transportation planning component of the Study. The document will identify the potential deficiencies in the existing network and the improvements required to support the future 2075 growth scenarios.

1.1 Baseline - Network

The traffic volumes on the baseline network were compiled from data made available from Alberta Transportation and the Town of Black Diamond. It was noted during the transportation evaluation for the Study that the Town of Turner Valley did not have recent data on its major roads and will require additional evaluation as proposed improvements are taken into consideration.

The existing network in the study area is comprised of two-lane roadways. For the purposes of the study, our focus will be on highway class corridors.

Two highways exist within the study area:

- Highway 22
- Highway 7

Highway 22 provides a significant north-south link in the Town of Black Diamond and is also known as Government Road. The Highway 22 north-south link terminates at Highway 7 and heads west across Sheep River into the Town of Turner Valley terminating at Highway 546 (Sunset Boulevard NW) before heading north to form Main Street and Cowboy Trail. Highway 22 is a two lane corridor with residential, agricultural and commercial land uses fronting onto the roadway.

Highway 7 provides an east-west connection east of Government Road ultimately connecting to Highway 2. The majority of development along Highway 7 is limited to acreage developments and businesses.

2.0 Growth Scenarios

Four scenarios were provided by O2 Planning for analysis. The scenarios contain a mix of employment, residential and industrial land uses. In addition to the forecasted requirements the scenarios also provided a contingency supply to support growth beyond current estimates.

For the purposes of the transportation analysis, the total supply (demand and contingency) will be evaluated to understand the pressures from the future land uses. The growth scenarios are as follows:

Table 2-1: Proposed Supply for Growth Scenarios

OPTION 1A			
	Units	**Strategic Contingency Supply**	**Demand Support Supply**
Employment	sqf	834,285	221,050
Gateway Employment	sqf	185,397	-
Residential (Unconstrained)	acres	287	545
River Valley	acres	197	-
Commercial	sqf	-	410,633
OPTION 1B			
	Units	**Strategic Contingency Supply**	**Demand Support Supply**
Employment	sqf	891,330	221,050
Residential (Unconstrained)	acres	157	545
River Valley	acres	197	-
Commercial	sqf	-	410,633
OPTION 2A			
	Units	**Strategic Contingency Supply**	**Demand Support Supply**
Employment	sqf	221,050	221,050
Residential (Unconstrained)	acres	94	545
River Valley	acres	197	-
Commercial	sqf	-	410,632
Gateway Commercial	sqf	222,425	
OPTION 2B			
	Units	**Strategic Contingency Supply**	**Demand Support Supply**
Employment	sqf	1,140,904	221,050
Residential (Unconstrained)	acres	47	545
River Valley	acres	-	385
Commercial	sqf	-	410,632
Gateway Commercial	sqf	119,768	-

3.0 Model and Assumptions

3.1 Forecast

The current development density in the Town of Turner Valley is 4.5 units per acre (upa) and the Town of Black Diamond estimates a development density of 5.5 units per acre (upa). The Joint Growth Strategy is using an average 7.4 upa to support the forecasted growth demand.

For this analysis, we evaluated the approximate number of single family units based on the density requirements in the proposed residential growth areas to determine the future traffic volume on the existing network. It should be noted that to be conservative, we assumed 100% of the trips generated will be personal vehicle trips. Future studies should evaluate the travel mode share within the study areas to determine an accurate representation on how people move in the community.

3.2 Carrying Capacities

Based on the scenarios for the Joint Growth Study, upgrades to the road network were developed based on the following criteria:

- Functional carrying capacity
- V/C Ratio greater than 0.90

Volume to Capacity ratio (v/c ratio) compares roadway demand (vehicle volumes) with roadway supply (carrying capacity). This measure indicates the amount of congestion for each lane group. V/C ratios greater than or equal to 1 indicate that the approach is operating at or above capacity. Alberta Transportations generally finds v/c ratios of 0.90 or less acceptable.

The carrying capacity is a function of accessibility and provides an estimate on the number of vehicles a roadway can accommodate.

The variables dependent on determining the level of service will influence the functional capacity for a corridor and is summarized in Table 3-1.

Table 3-1: Functional Carrying Capacity

FACILITY	CAPACITY (Vehicles per hour per lane)
Collector	800
Arterial	800
Freeway	1,800

Widening of the Highway within Black Diamond's downtown core will be a significant challenge as the existing mature area currently includes on-street parking and businesses fronting onto the

Highway. The challenges associated with upgrades to Highway 7 are reduced outside the current municipal boundaries where there has been less development along the highway.

Highway 22 (Government Street) provides a local and regional north-south connection. As users enter Black Diamond's Town boundaries, the rural highway transitions into a residential corridor with homes fronting onto Government Street. Widening along Highway 22 would also be challenging as it would impact established businesses and residents.

As users enter the Town of Turner Valley on Highway 22 (Main Street), development is primarily located on the west side of the Highway. Although the concentration of development is much lower on the east side of the Highway, widening of the Highway would potentially impact several important institutions such as the library, RCMP office and fire hall.

3.3 Transportation Improvement Cost

Potential improvements to the network include intersection upgrades and options to either widen the existing road network to support the additional growth volumes or build new links.

After discussions with O2, the Town of Black Diamond and the Town of Turner Valley, it was determined that widening the highways to increase the capacity would be a last resort due to the challenges associated with widening, including the impact on existing residents, businesses and institutions and the removal of on-street parking. The estimated improvement costs provided in this study only account for new road alignment and locations where traffic signals maybe required; property and other impacts have not been accounted into the costing exercise.

A functional evaluation must be completed to understand the extent of the community impacts to support the proposed growth scenario. The functional evaluation will also detail the environmental and geotechnical requirements for the study area. The public will also be engaged as part of the functional study to understand the community concerns

In addition to the upgrades to intersections at Highway 7 and 22 required to support the potential growth in 2075, existing arterial class road alignment can also be used which includes:

- Township Road 201
- Township Road 200 (16 Avenue)
- Imperial Drive
- Decalta Road

A study will be required to determine the cost required to improve the existing network to support the additional volume and frequency of vehicles operating on the corridors. It will be important to understand the existing road structure and its current life cycle prior to ensure the corridor can support the additional volume.

Intersections in the study area identified for new construction or upgrades will need to consider the appropriate roundabout or traffic signal treatment. Additional traffic impact assessment will be

required to select the appropriate treatment to ensure operational, safety and property requirements are met.

It should be noted that the cost provided in this study should only be used for comparisons purposes only. Using the planning level cost estimate for budgetary or cost to construct is not appropriate. Should cost to construct or detailed cost estimates be required, a functional study or detailed design exercise should be completed as the next stage in the process.

3.4 Transportation Accessibility

In order to allow for maximum connectivity and access it is recommended for any proposed major roads required supporting the growth area should be modeled after the grid network to allow maximum connectivity and access. It should be understood that areas identified as environmentally sensitive will require additional measures to mitigate the potential impacts. The costs and measures associated with these environmentally sensitive areas were not included in this study.

4.0 General Network Performance

4.1 Baseline Horizon

The study area contains two locations where the Provincial Highways meet:

- Highway 22/Highway 7 (Town of Black Diamond)
- Highway 546/Highway 22 (Town of Turner Valley)

The traffic analysis illustrate additional capacity was available during the peak period while the study location in Turner Valley revealed the intersection exceeds capacity during the afternoon peak period. The remaining intersection analyses during the afternoon period are summarized in Table 4-1. It should be noted that not all intersections are accounted for due to data deficiencies.

Table 4-1: Afternoon Intersection Level of Service

INTERSECTION	CONTROL TYPE	INTERSECTION LOS	V/C
Highway 22 & Highway 546	Unsignalized	E	1.02
Highway 22 & 3 St SW/NW	Unsignalized	A	0.14
Highway 22 & Highway 7	Unsignalized	B	0.48
Highway 7 & 3 St SE/NE	Unsignalized	A	0.14
Highway 7 & 1 Ave SE	Unsignalized	A	0.30
Highway 7 & Range Road 23	Unsignalized	A	0.11

4.2 2075 Growth Horizon

At the 60 year horizon, the model assembled included the following parameters:

- Baseline Traffic Conditions
- Forecasted population Growth within Turner Valley

- Forecasted population Growth within Black Diamond
- Demand Support Supply
- Strategic Contingency Supply

To be conservative, the projected population within the municipal boundaries was converted to single family homes using an estimated 2.4 occupants per home. The analysis evaluated the overall magnitude of growth along the existing highway corridors and compared the results against the functional carrying capacity for the specific road classification.

Table 4-2 summaries the magnitude of additional growth for each scenario.

Table 4-2: Estimated Magnitude of Growth per Scenario

	Option 1A	Option 1B	Option 2A	Option 2B
Highway 7 *(East of Government Road)*	9	8	7	8
Highway 22 *(Government Road)*	18	18	12	11
Highway 22 *(West of Government Road)*	4	4	5	6
Highway 22 *(North of Highway 546)*	6	5	5	8

Intersections improvements are typically required before corridor upgrades. The additional interactions and coordination at an intersection typically exceeds that of a corridor.

Understanding those requirements, existing intersections should be planned for upgrades as the growth within the study area is achieved. Based on the planning level daily traffic volumes Table 4-3 summarizes the corridors that may need to be widen to support the future growth scenarios if no additional roads were constructed.

Table 4-3: Potential Corridor Upgrades

LOCATION	OPTION 1A	OPTION 1B	OPTION 2A	OPTION 2B
Highway 7 *(East of Government Road)*	Widen	Widen	Widen	Widen
Highway 22 *(Government Road)*	Widen	Widen	Widen	Widen
Highway 22 *(West of Government Road)*	Widen	Widen	Widen	Widen
Highway 22 *(North of Highway 546)*	-	-	-	Widen

As discussed in the previous section, widening may be a potential challenging understanding the community impacts. We therefore assumed that a secondary option would be required to provide alternative routes to service the growth area.

5.0 Option Evaluation

The following option evaluates the four growth scenarios with an expanded road network and intersection improvements. As note previously, the solutions provide to support the growth scenarios assumed 100% of the future trips to be vehicle based. It should also be noted that the planning level cost shown for each option is only used to illustrate "order of magnitude". The true cost required to provide the proposed infrastructure may be vastly different between planning and detail design. The planning level cost estimate should not be used for budgetary purposes or cost to construct.

5.1 Option 1A

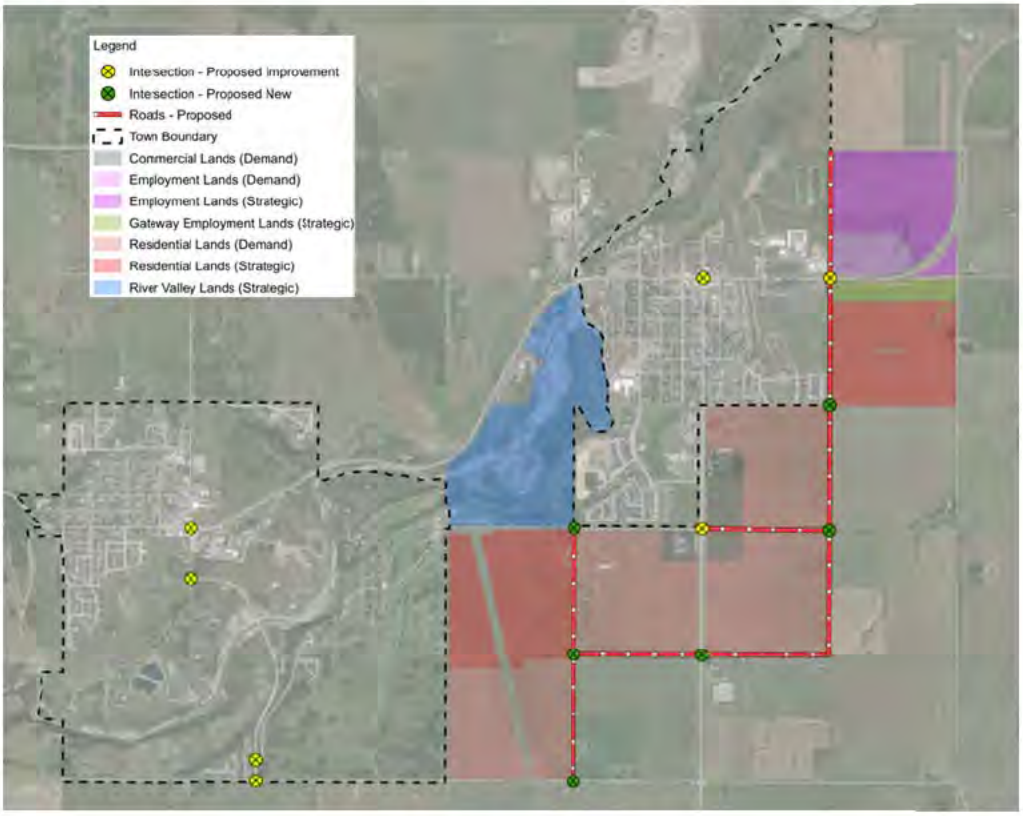


Figure 5-1: Option 1A

The following elements will need to be considered to support Option 1A:

- 13 (seven existing, six new) intersection improvements along the proposed and existing network
- 7.4 km of additional road required to support the growth scenario
- Potential terrain challenges may increase project cost
- Magnitude of traffic growth on existing highway network between 4 and 18
- Planning level estimate for proposed improvements *$30.7M*

5.2 Option 1B

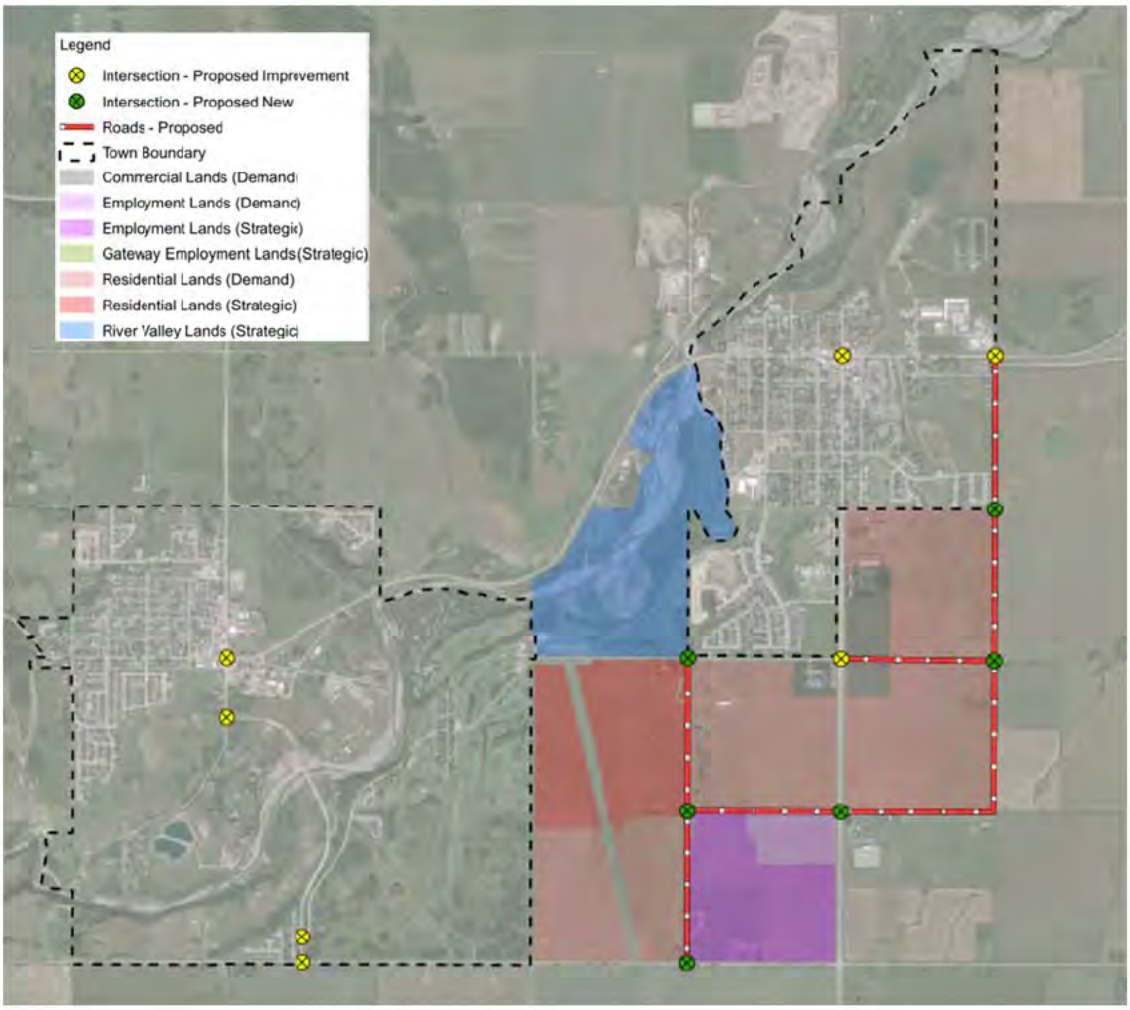


Figure 5-2: Option 1B

The following ele nents will need to be considered to support Option 1B:

- 13 (seven existing, six new) intersection improvements al ong the proposed and existing network
- 6.6 k ı of additional road required to support the growth s cenario
- Magnitude of traffic growth on existing highw ay network b etween 4 and 18
- Planning level estimate for proposed for improvements *$27.9M*

5.3 Option 2A

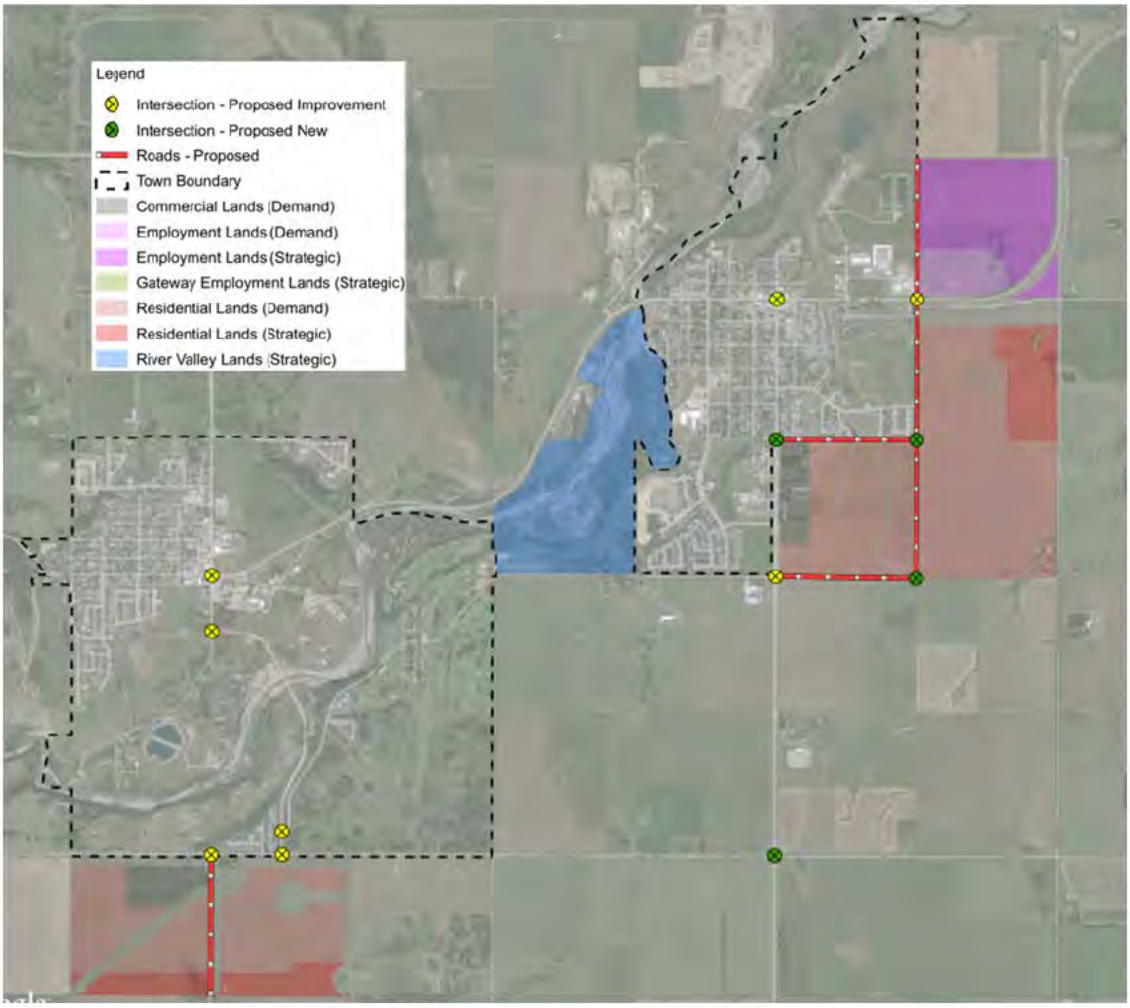


Figure 5-3: Option 2A

The following ele nents will need to be considered to support Option 2A:

- 12 (ei ght existing, four new) intersection improvements al ng the proposed and existing network
- 6.6 k ı of additional road required to support the growth s cenario
- Poten tial terrain challenges may increase project cost
- Magnitude of traffic growth on existing highw ay network b etween 5 and 12
- Planning level estimate for proposed for improvements *$27.6M*

5.4 Option 2B

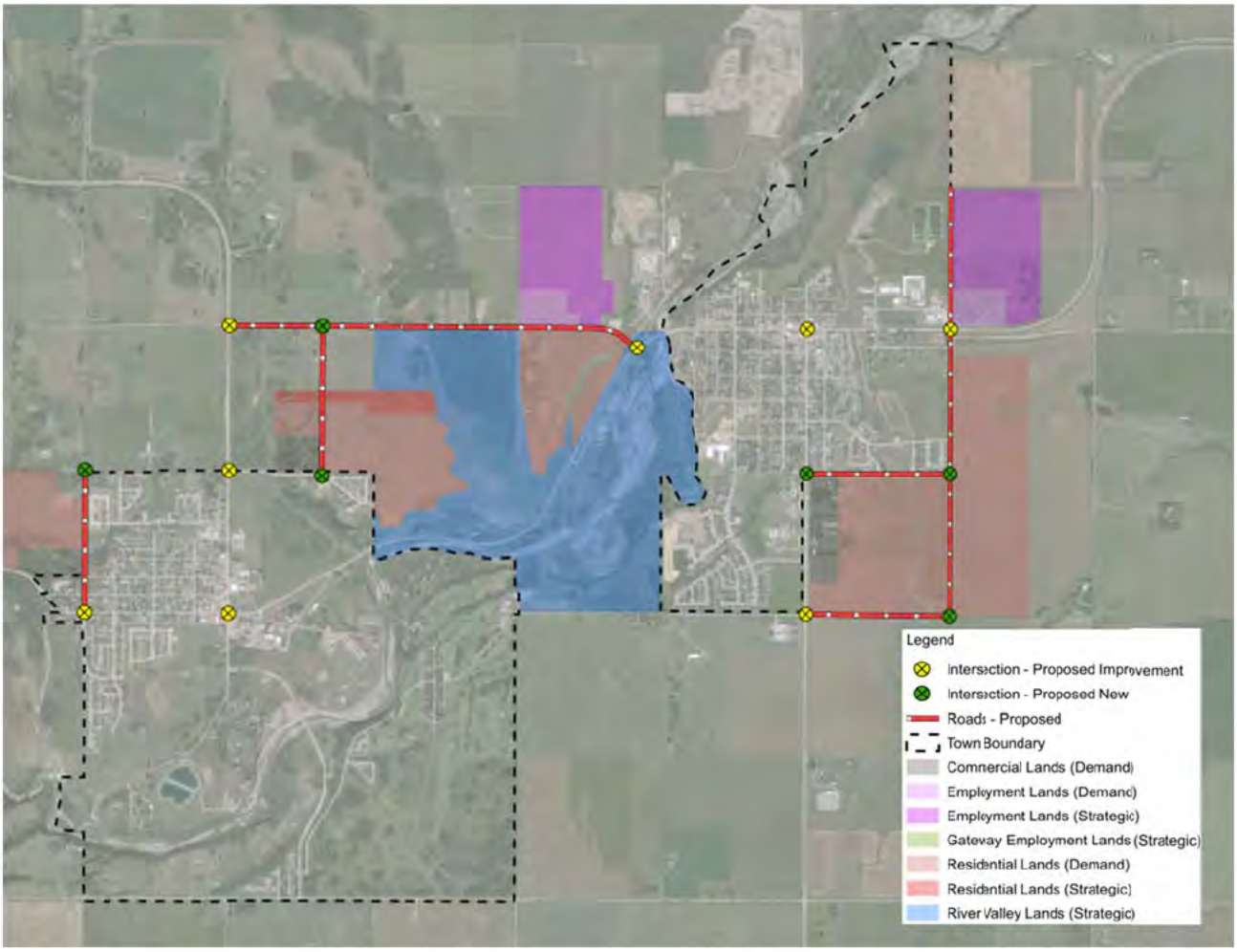


Figure 5-4: Option 2B

The following ele nents will need to be considered to support Option 2B:

- 14 (ei ght existing, six new) intersection impr vements alo ng the proposed and existing network
- 8.1 k n of additional road required to support the growth s cenario
- Poten tial terrain challenges may increase project cost
- Magnitude of traffic growth on existing highw ay network b etween 6 and 11
- Planning level estimate for proposed for improvements *$33.3M*

6.0 Summary and Future Requirements

Table 6-1 summarizes the evaluation for each growth scenario. The planning level cost estimate should not be used for budgetary purposes or cost to construct.

Table 6-1: Transportation Summary

	OPTION 1A	OPTION 1B	OPTION 2A	OPTION 2B
Magnitude of Growth (On existing network)	4 to 18	4 to 18	5 to 12	6 to 11
Intersection Improvements (Only signals – no property or other impacts included in cost)	13	13	12	14
Grade Challenges (Not included in cost)	Yes	No	Yes	Yes
New Roads (m)	7,400	6,600	6,600	8,100
Total Area (Hectares)	*430*	*380*	*350*	*410*
Cost per Hectare	*$71,000*	*$73,000*	*$79,000*	*$81,000*
Cost (Planning level)	***$30.7M***	***$27.9M***	***$27.6M***	***$33.3M***

In additional to the planning level cost estimate provided in Appendix B, additional studies will need to be completed to understand the scope of the future improvements on the following roadways:

- Township Road 201
- Township Road 200 (16 Avenue)
- Imperial Drive
- Decalta Road

Additional evaluations will be required to understand the detailed requirements and capital investments to support the Joint Growth Strategy for Town of Turner Valley and Black Diamond. These studies include:

Transportation Master Plan – is prepared as a long term plan to guide the development of transportation infrastructure to support goal and objectives of the Community. The TMP evaluates current travel conditions, forecasts future travel conditions and develops appropriate long-term transportation strategies for the community to consider.

Functional Road Study – this document is prepared to understand the "ground-level" conditions by provide detailed technical analysis and design to support future road alignments ensuring environmental, geotechnical, community and property considerations are evaluated.

Data Collection – the Communities in the study area should allocate resources for traffic data collection on priority corridor to identify changing travel patterns and demand period. The data provides can useful insights to make traffic management decisions such as when to implement traffic calming measures, road improvements and traffic and parking regulations.

Sincerely,

URBAN SYSTEMS LTD.

Chun Man, P.Eng
Transportation Engineer

/cm

\\usl.urban-systems.com\projects\Projects_CAL\4033\0001\01\R-Reports-Studies-Documents\R1-Reports\2015-12-10-FINAL Tech Memo 1.docx

MEMORANDUM

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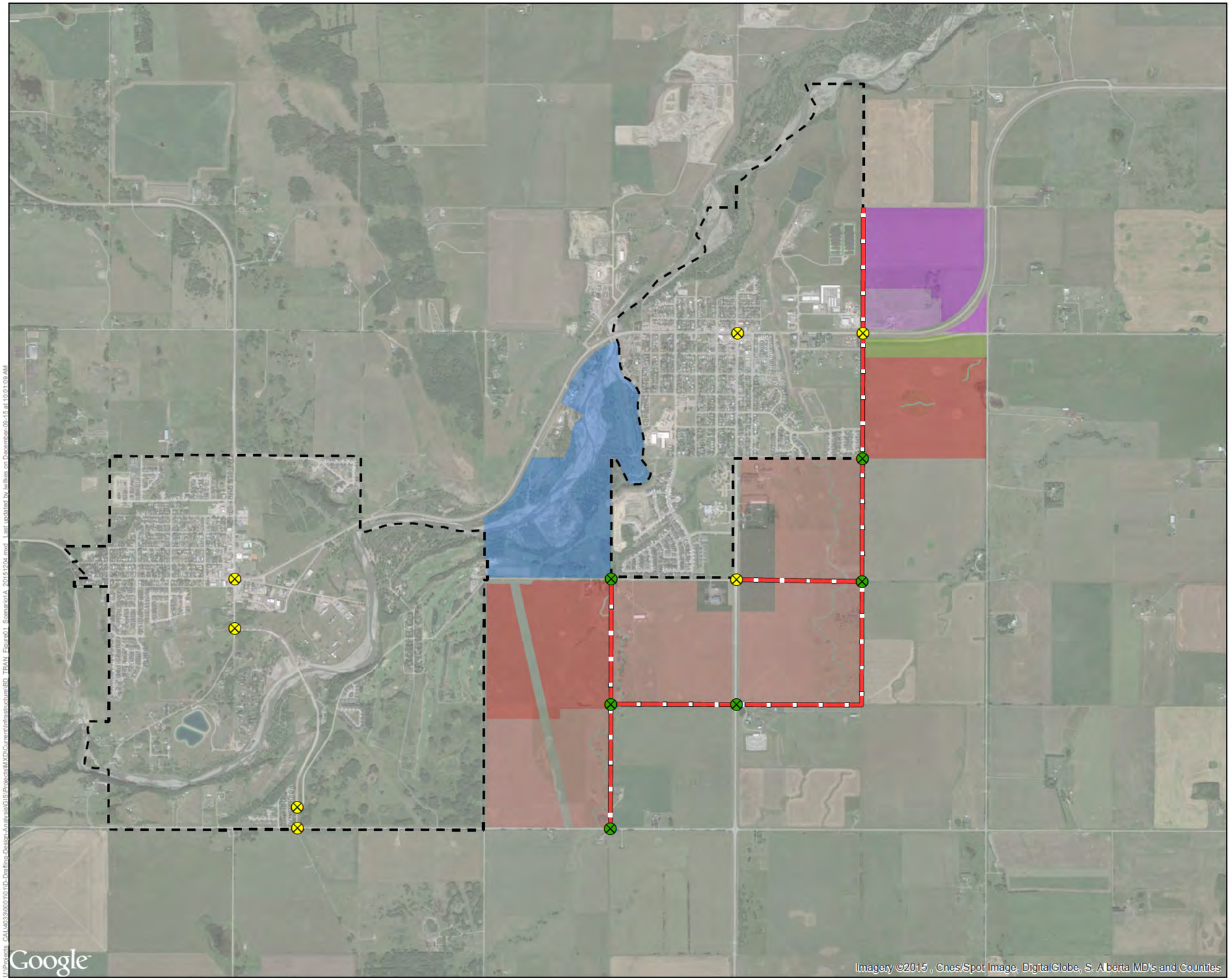
Appendix A - Figures

Figure 5-1 : Option 1A

Figure 5-2: Option 1B

Figure 5-3: Option 2A

Figure 5-4: Option 2B



Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Transportation Scenario 1A

Legend

- Intersection - Proposed Improvement
- Intersection - Proposed New
- Roads - Proposed
- Town Boundary
- Commercial Lands (Demand)
- Employment Lands (Demand)
- Employment Lands (Strategic)
- Gateway Employment Lands (Strategic)
- Residential Lands (Demand)
- Residential Lands (Strategic)
- River Valley Lands (Strategic)

The accuracy & completeness of information shown on this drawing is not guaranteed. t will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

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Metres

Coordinate System
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Scale
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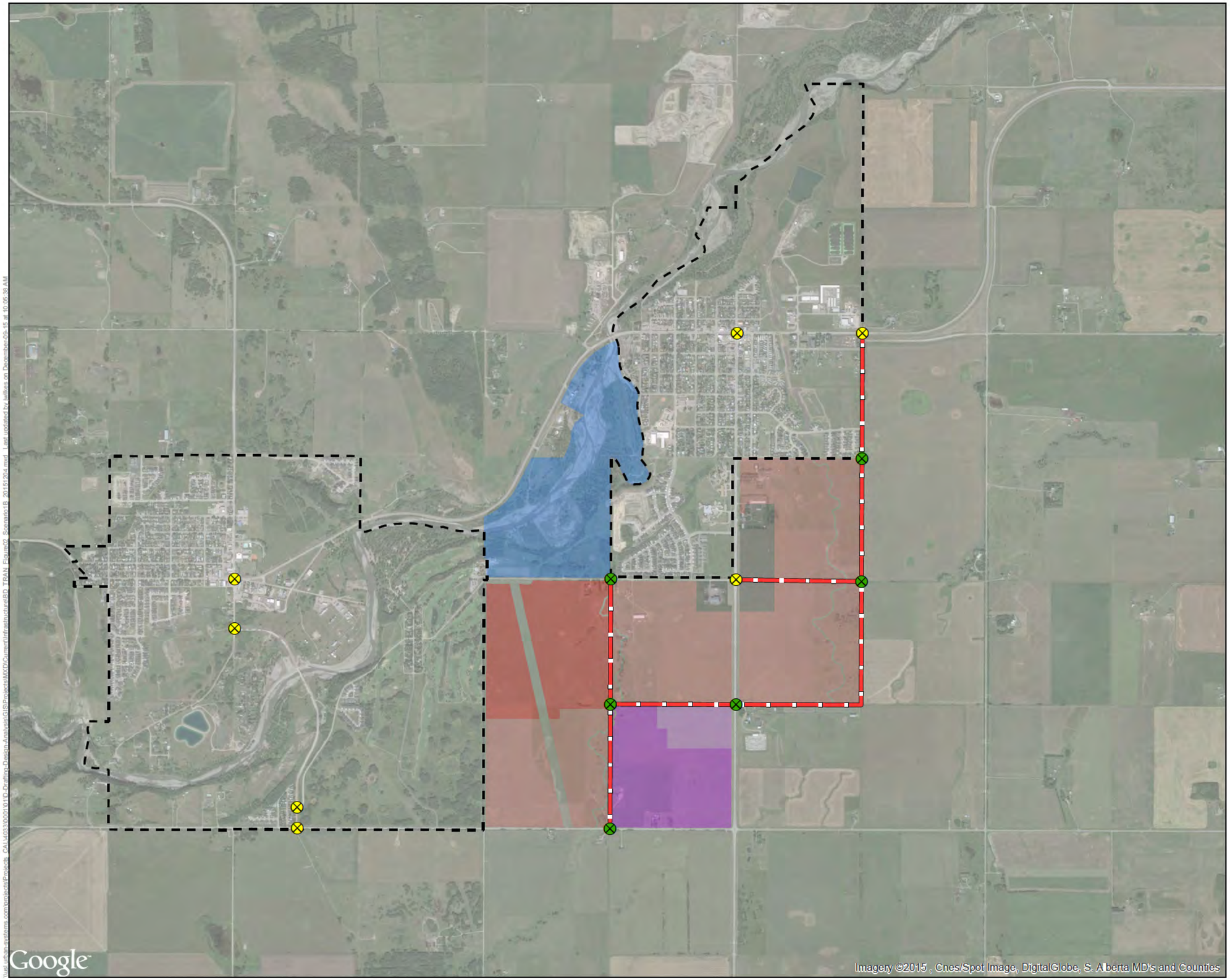
Data Sources
- Data provided by the Town of Black Diamond

Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2015 / 12 / 9

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FIG. 1 BD-TRAN

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Transportation Scenario 1B

Legend

- Intersection - Proposed Improvement
- Intersection - Proposed New
- Roads - Proposed
- Town Boundary
- Commercial Lands (Demand)
- Employment Lands (Demand)
- Employment Lands (Strategic)
- Gateway Employment Lands (Strategic)
- Residential Lands (Demand)
- Residential Lands (Strategic)
- River Valley Lands (Strategic)

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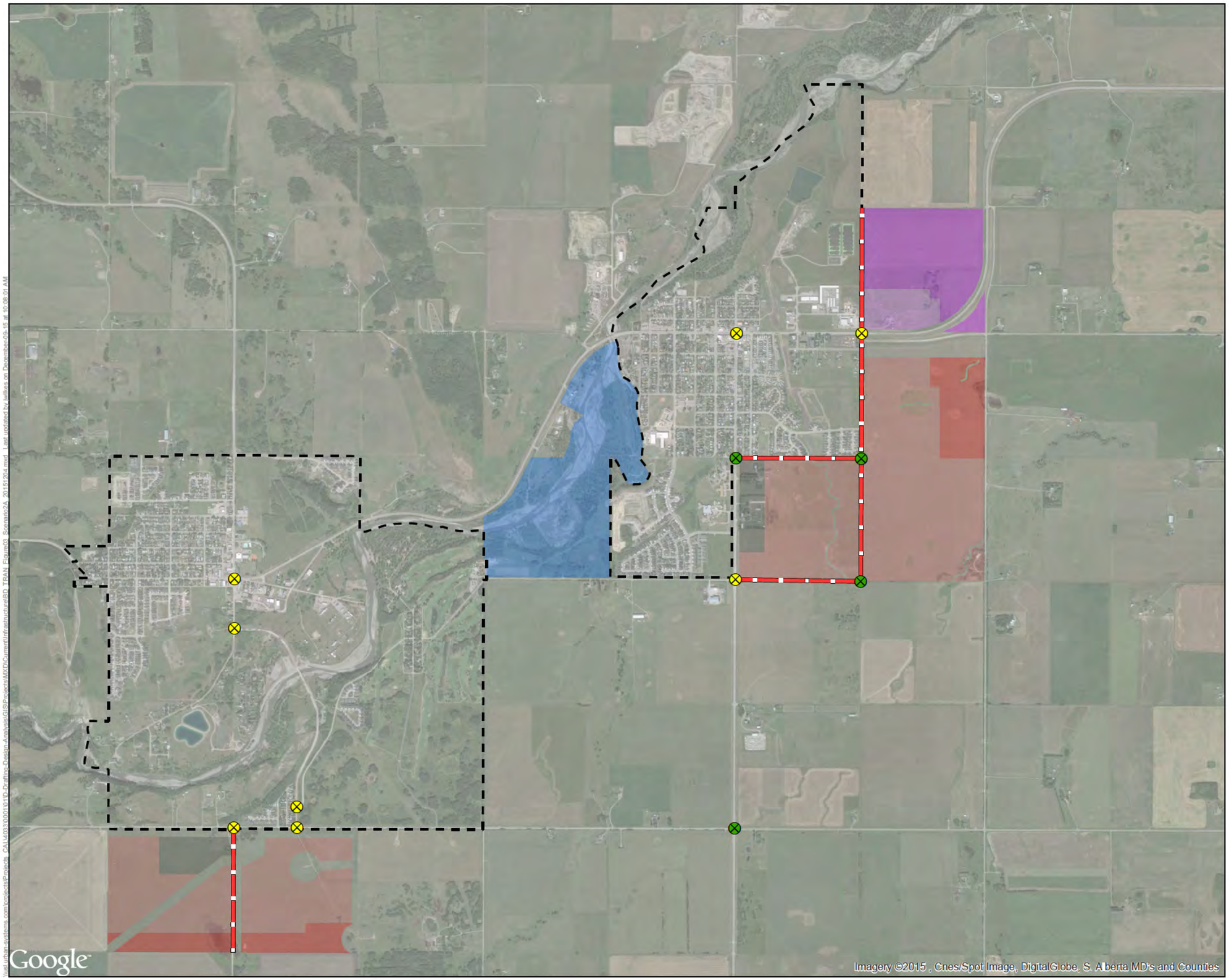
Data Sources
- Data provided by the Town of Black Diamond

Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2015 / 12 / 9

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FIG. 2 BD-TRAN

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Transportation Scenario 2A

Legend

- Intersection - Proposed Improvement
- Intersection - Proposed New
- Roads - Proposed
- Town Boundary
- Commercial Lands (Demand)
- Employment Lands (Demand)
- Employment Lands (Strategic)
- Gateway Employment Lands (Strategic)
- Residential Lands (Demand)
- Residential Lands (Strategic)
- River Valley Lands (Strategic)

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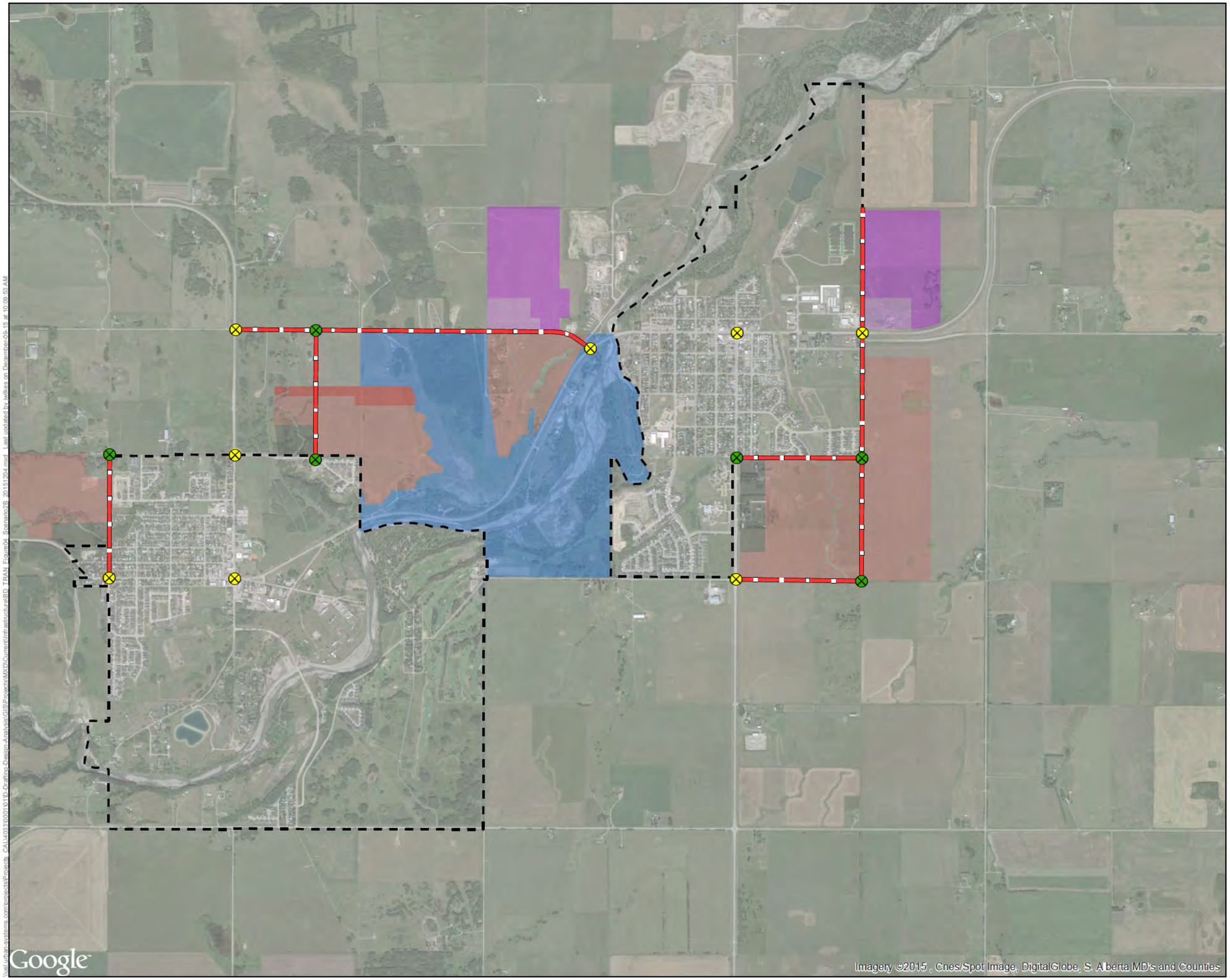
Data Sources
- Data provided by the Town of Black Diamond

Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2015 / 12 / 9

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FIG. 3 BD-TRAN

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Transportation
Scenario 2B

Legend

- Intersection - Proposed Improvement
- Intersection - Proposed New
- Roads - Proposed
- Town Boundary
- Commercial Lands (Demand)
- Employment Lands (Demand)
- Employment Lands (Strategic)
- Gateway Employment Lands (Strategic)
- Residential Lands (Demand)
- Residential Lands (Strategic)
- River Valley Lands (Strategic)

The accuracy & completeness of information shown on this drawing is not guaranteed. t will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

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Metres

Coordinate System
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Scale
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Data Sources
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Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2015 / 12 / 9

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FIG. 4 BD-TRAN

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MEMORANDUM

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Appendix B – Planning Level Cost Estimate

Suite 101 - 2716 Sunridge Way NE, Calgary, AB T1Y 0A5 | T: 403.291.1193

urbansystems.ca

PLANNING LEVEL COST ESTIMATE

Cost provided in this study should only be used for comparisons purposes only. Using the planning level cost estimate for budgetary or cost to construct is not appropriate. Should cost to construct or detailed cost estimates be required, a functional study or detailed design exercise should be completed as the next stage in the process.

Table A summarizes the cost of new road alignments and traffic signals only. Property, utility impacts, environmental, geotechnical, etc have not been accounted for in the cost estimate.

Contingency and engineering have been applied to the planning level costs. As the functional and detail design is completed, the assumed rate will be decreased to correspond with the increase level of accuracy.

Table A – Planning Level Cost Estimate

	Option 1A	Option 1B	Option 2A	Option 2B
New Road Alignments	$17,260,000	$15,430,000	$15,420,000	$18,790,000
Traffic Signals	$3,250,000	$3,250,000	$3,000,000	$3,250,000
Contingency *(30%)*	$6,160,000	$5,610,000	$5,530,000	$6,620,000
Engineering *(15%)*	$4,010,000	$3,650,000	$3,600,000	$4,300,000
Cost*	***$30,680,000***	***$27,940,000***	***$27,550,000***	***$32,960,000***

MEMORANDUM

URBAN systems

Date:	January 12, 2016
To:	Andrew Palmiere, O2 Planning and Design Inc.
cc:	Meghan Aebig, P.Eng
From:	Chun Man, P.Eng
File:	4033.0001.01
Subject:	Joint Growth Strategy Transportation Analysis – Scenario 3

1.0 BACKGROUND

Urban Systems was retained by O2 Planning and Design Inc. (O2) to complete the conceptual transportation analysis related to the Town of Black Diamond and the Town of Turner Valley's Joint Growth Strategy (the Study).

The purpose of the technical memo is to provide a transportation evaluation on Growth Scenario 3 developed as part of Joint Advisory Committee meetings. Scenario 3 was developed after reviewing the initial four scenarios (1A, 1B, 2A, 2B). The document will identify the potential deficiencies in the existing network and the improvements required to support the future 2075 growth scenarios.

2.0 Growth Scenarios

For the purposes of the transportation analysis, the total supply (demand and contingency) will be evaluated to understand the pressures from the future land uses. The growth scenarios are as follows:

Table 2-1: Proposed Supply for Growth Scenarios

Scenario 3			
	Units	**Strategic Contingency Supply**	**Demand Support Supply**
Employment	sqf	834,285	221,050
Gateway Employment	sqf	185,397	-
Residential (Unconstrained)	acres	373	545
River Valley	acres	197	-
Commercial	sqf	-	410,633

For Scenario 3, the proposed land use includes Strategic Gateway Lands which was excluded for Table 2-1 understanding no population or employment have been assigned to the specific area.

Additional evaluation will be required once the specific uses are determined for the Strategic Gateway Lands.

3.0 Model and Assumptions

3.1 2075 Growth Horizon

At the 60-year horizon, the model assembled included the following parameters:

- Baseline Traffic Conditions
- Forecasted population Growth within Turner Valley
- Forecasted population Growth within Black Diamond
- Demand Support Supply
- Strategic Contingency Supply

To be conservative, the projected population within the municipal boundaries was converted to single family homes using an estimated 2.4 occupants per home. The analysis evaluated the overall magnitude of growth along the existing highway corridors and compared the results against the functional carrying capacity for the specific road classification. Table 3-1 summaries the magnitude of additional growth for each scenario.

Table 3-1: Estimated Magnitude of Growth

	Scenario 3
Highway 7 *(East of Government Road)*	9
Highway 22 *(Government Road)*	18
Highway 22 *(West of Government Road)*	5
Highway 22 *(North of Highway 546)*	8

Intersections improvements are typically required before corridor upgrades(widening). The additional interactions and coordination at an intersection typically exceeds that of a corridor.

Understanding those requirements, existing intersections should be planned for upgrades as the growth within the study area is achieved. Based on the planning level daily traffic volumes Table 3-2 summarizes the corridors that may need to be widen to support the future growth scenarios if no additional roads were constructed.

Table 3-2: Potential Corridor Upgrades

Location	Scenario 3
Highway 7 *(East of Government Road)*	Widen
Highway 22 *(Government Road)*	Widen
Highway 22 *(West of Government Road)*	Widen
Highway 22 *(North of Highway 546)*	Widen

4.0 Option Evaluation

The following evaluates Scenario 3 with an expanded road network and intersection improvements. As note previously, the solutions provided to support the growth scenarios assumed 100% of the future trips to be vehicle based. It should also be noted that the planning level cost shown for each option is only used to illustrate "order of magnitude". The true cost required to provide the proposed infrastructure may be vastly different between planning and detail design. The planning level cost estimate should not be used for budgetary purposes or cost to construct.

4.1 Scenario 3

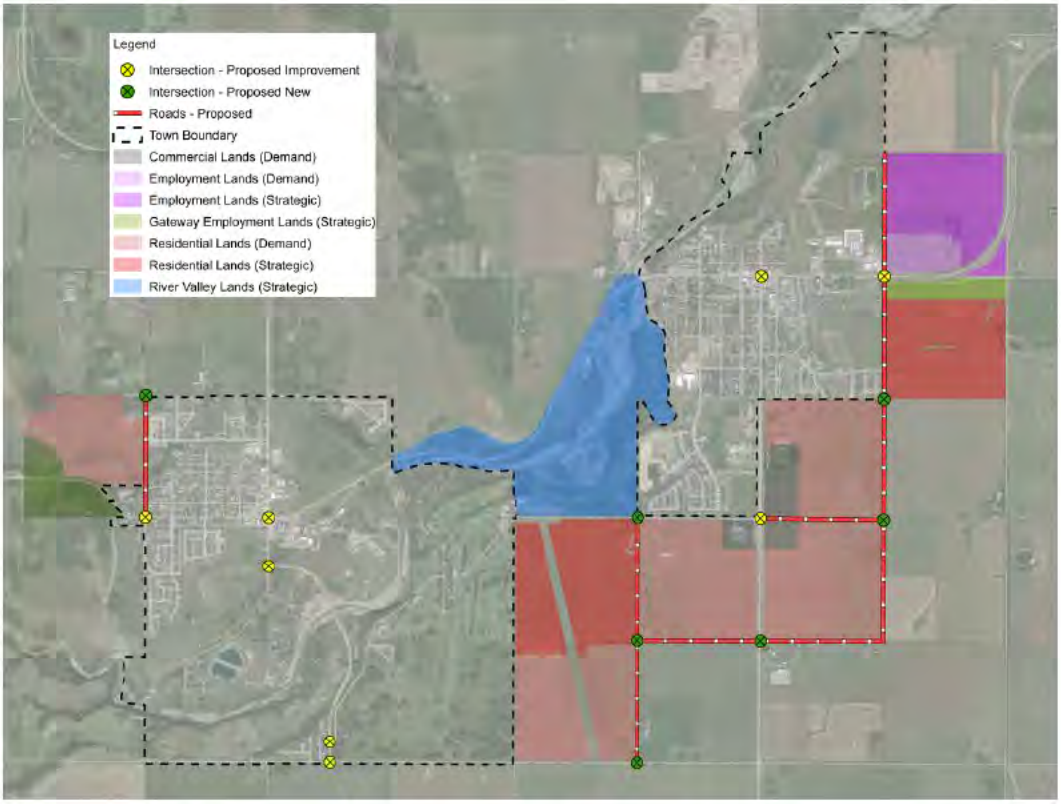


Figure 4-1: Scenario 3

The following elements will need to be considered to support Scenario 3:

- 15 (eight existing, seven new) intersection improvements along the proposed and existing network
- 8.2 km of additional road required to support the growth scenario
- Potential terrain challenges may increase project cost
- Magnitude of traffic growth on existing highway network between 5 and 18
- Planning level estimate for proposed improvements *$34.1M*

5.0 Summary and Future Requirements

Table 5-1 summarizes the evaluation for each growth scenario. The planning level cost estimate should not be used for budgetary purposes or cost to construct.

Table 5-1: Scenario 3 - Transportation Summary

	Scenario 3
Magnitude of Growth (On existing network)	5 to 18
Intersection Improvements (Only signals – no property or other impacts included in cost)	15
Grade Challenges (Not included in cost)	Yes
New Roads (m)	8,200
Total Area (Hectares)	*465*
Cost per Hectare	*$73,000*
Cost (Planning level)	***$34.1M***

Sincerely,

URBAN SYSTEMS LTD.

Chun Man, P.Eng
Transportation Engineer

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Appendix C

Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis

Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis - Scenario 3



MEMORANDUM

URBAN systems

Date:	December 10, 2015
To:	Andrew Palmiere, O2 Planning and Design Inc.
cc:	Meghan Aebig, P.Eng.
From:	Leigh Chmilar, P.Eng., Ariane Sauter, M.Sc., PL (Eng)
File:	4033.0001.01
Subject:	DRAFT – Black Diamond and Turner Valley Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis

1.0 Black Diamond Water and Wastewater Conceptual Servicing Background

USL was retained to complete a conceptual servicing analysis for Water and Wastewater for the Town of Black Diamond, using the growth scenarios provided by O2. MPE was retained to conduct the same analysis for Turner Valley. USL coordinated with MPE Engineering (MPE) to ensure the demand and flow assumptions were aligned, since Turner Valley supplies potable water to Black Diamond, and Black Diamond provides wastewater treatment to Turner Valley. USL coordinated with MPE to divide the supply areas between the towns based on proximity and serviceability.

For each growth scenario provided by O2, only residential growth was considered to occur within the Town boundary. The projected future flows and demands were based on total future population (as provided), so the flows include existing demands within the Town boundary. Only growth that was specified to be within the boundary was used for infrastructure that is existing. Any growth beyond the capacity of the existing systems were assumed to require new infrastructure outside the Town boundary.

2.0 Potable Water Servicing

USL calculated the potable water demands for each growth scenario provided by O2 using the criteria in Table 2.1. As previously mentioned, the scenarios provide contingency supply lands to support growth beyond current projections. To remain conservative in our conceptual servicing analysis, USL included the total supply (demand and contingency) in the analysis to ensure that servicing would be available for future land use. It can be seen in Table 2.1 that the average water consumption per person has been applied to both residential and commercial/employment lands at the same rate. There is wide variability in commercial/employment demands however the rates used reflect relatively conservative values for the expected land uses. The MDD and PHD ratios were based on typical factors in other communities nearby.

Table 2.1. - Potable Demand Criteria

CRITERIA	VALUE	UNITS
Average Water Consumption[1]	315	l/c/day
Commercial/Employment Ratio	315	l/c/day
MDD:ADD Ratio	2.2	-
PHD:ADD Ratio	**4.0**	-

[1] Total community demand projected for 2076. CRP Regional Water and Wastewater Servicing Masterplan, May 2014.

The total potable demand for each scenario are shown in Table 2.2.

Table 2.2. – Potable Water Demand Summary

GROWTH SCENARIO	RESIDENTIAL POPULATION	EMPLOYMENT	MDD (MLD)	PHD (L/s)	MIN. FIRE FLOW REQUIREMENTS (L/s)	MIN. STORAGE REQUIRED (m^3)
Scenario 1A	13,451	2,807	11.3	237	197 L/s	5,716
Scenario 1B	11,119	1,156	8.5	179	197 L/s	4,750
Scenario 2A	10,607	1,787	8.6	181	197 L/s	4,779
Scenario 2B	9,792	1,633	8.7	183	197 L/s	4,883

Each of the scenarios below were analysed using the criteria in Table 2.1 to determine the peak flows per catchment. The Fire Underwriters Survey for Black Diamond (2013) was used to estimate the minimum required fire flows for the town and each scenario. The required reservoir storage was calculated following the Alberta Environment and Parks (AEP) Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems. Please note that the proposed infrastructure is not exhaustive of what may be required to service the growth scenarios in the future. They are intended to show conceptually the infrastructure that may be required to allow the existing system to provide flow and adequate pressure to the associated catchments, while maintaining service within the Town boundary. USL recommends that a detailed analysis be conducted once a scenario is selected for further study.

USL analysed each demand scenario using a WaterCAD model of the Town's water distribution system. The Town receives its potable water from the water treatment plant in Turner Valley via the Sheep River Utilities Regional transmission main, which was installed in 2013 after the flood. The sections below describe the recommendations to service each scenario.

Please note the following:

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.
- Note that the existing water license has not been reviewed in detail, and will likely not support the full build-out of the growth scenarios. Further study and review will be required to ensure adequate water is available for future growth.

- All of the scenarios assume that treated water will be supplied by the Town of Turner Valley, and adequate supply will be provided. MPE is providing costs for a WTP upgrade required to supply the demands of both towns in each scenario. The alignment of the Twin line is currently assumed to follow close to the current alignment however this will require review to confirm that adequate right of way exists.

2.1 Scenario 1A

Refer to Figure BD-PW-01 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Secure sufficient water license capacity and twin the distribution transmission main from Turner Valley to Black Diamond.
- Upgrade source capacity, treatment plant and pumps in TV WTP to increase flow from Turner Valley to the potable water reservoir in Black Diamond (MPE to provide costs)
- Reservoir upgrade to accommodate an additional 1,200 m3 of storage
- Replace reservoir pump station
- Upsize the distribution pipe from the reservoir to the distribution system
- A PRV station to manage the system pressures
- Add a booster station to increase flow to Catchment B
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy

2.2 Scenario 1B

Refer to BD-PW-02 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Secure sufficient water license capacity and twin the distribution transmission main from Turner Valley to Black Diamond
- Upgrade source capacity, treatment plant and pumps in TV WTP to increase flow from Turner Valley to the potable water reservoir in Black Diamond (MPE to provide costs)
- Reservoir upgrade to accommodate an additional 200 m3 of storage
- Replace reservoir pump station
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy

2.3 Scenario 2A

Refer to BD-PW-03 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Secure sufficient water license capacity, and twin the distribution transmission main from Turner Valley to Black Diamond
- Upgrade source capacity, treatment plant and pumps in TV WTP to increase flow from Turner Valley to the potable water reservoir in Black Diamond (MPE to provide costs)
- Reservoir upgrade to accommodate an additional 250 m3 of storage
- Replace reservoir pump station
- A new pump station required to boost flow to Catchment B.
- Two PRV stations to manage the system pressures in Catchments B and C
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy

2.4 Scenario 2B

Refer to BD-PW-04 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Secure sufficient water license capacity, twin of the distribution transmission main from Turner Valley to Black Diamond
- Upgrade source capacity, treatment plant and pumps in TV WTP to increase flow from Turner Valley to the potable water reservoir in Black Diamond (MPE to provide costs)
- Reservoir upgrade to accommodate an additional 350 m3 of storage
- Replace reservoir pump station
- Upsize the distribution pipe from the reservoir to the distribution system
- Dedicated transmission watermain to carry flow from reservoir across the river to Catchment D
- New booster station to boost flow to Catchment D
- One pipeline river crossing to convey from Black Diamond to Catchment D
- Two PRV stations to manage the system pressures in Catchment D
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy
- Two PRV stations to manage the system pressures in Catchments B and C

3.0 Wastewater Servicing

USL calculated the sanitary flows for each growth scenario provided by O2 using the criteria in Table 3.1. As previously mentioned, the scenarios provide contingency supply lands to support growth beyond current projections. To remain conservative in our conceptual servicing analysis, USL included the total supply (demand and contingency) in the analysis to ensure that servicing would be available for future land use. It can be seen in Table 3.1 that the wastewater flow is an average for the community, meaning it

encompasses estimated flows from all land uses (residential, commercial, institutional), and includes inflow and infiltration. For that reason it was applied to all land uses. The numbers in the table below were taken from the Foothills Regional Wasterwater Collaborative (FRWWC) Regional Servicing Study currently being completedby USL and MPE (to be completed early 2016).

Table 3.1 – Wastewater Flow Equivalents

POPULATION FLOW EQUIVALENTS	VALUE	UNITS
Total Community Wastewater Flow	264	L/c/d
MDF:ADF Ratio	2.2	--
PHF:ADF Ratio	5.0	--
Westend Forcemain Capacity	134	L/s

Wastewater from the Town of Turner Valley is treated at the Westend wastewater treatment plant in Black Diamond, and sent via the Westend Sanitary Forcemain. The total calculated sanitary flows for each scenario therefore included the sanitary flows from TV, which were provided by MPE. Flows generated in TV will fill the Westend Forcemain to capacity (134 L/s), and excess flows will be sent to Black Diamond, as can be seen in BD-WW-01 to BD-WW-04. The wastewater treatment costs assume that the Westend Regional Wastewater Commission lagoon system will be upgraded to a mechanical tertiary treatment plant in order to meet high quality effluent standards currently being reviewed as part of the Foothills Regional Wastewater Collaborative study (to be completed in early 2016). This option will require a receiving environment study to confirm that the Sheep River has adequate capacity to receive these flows. We have not reviewed the option of piping the wastewater to Okotoks or other regional plant which is currently under review in the FRWWC study.

The total sanitary demands for each growth scenario, including Turner Valley are shown in Table 3.2.

Table 3.2. – Wastewater Flow Summary

GROWTH SCENARIO	ADF (m^3/d)	MDF (m^3/d)	PHF (L/s)
Scenario 1A	7,400	16,300	1,550
Scenario 1B	6,800	14,900	1,410
Scenario 2A	6,200	13,600	1,290
Scenario 2B	6,100	13,400	1,270

USL analysed each demand scenario against Town's existing collection system. The Town receives wastewater from Turner Valley via the Westend Regional forcemain, which was re-aligned in 2013 after the flood, and transitions into a gravity main that runs North through the Town to the lagoons. The gravity main had been sized for future growth (total capacity 280 L/s), and was used to convey additional flows when possible. The sections below describe the recommendations to service each scenario.

Please note the following:

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.

3.1 Scenario 1A

Refer to BD-WW-01 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Flow from TV will connect into the BD system at the West side of Catchment B.
- A new WWTP with a MDF of 13,400 m^3/d will be required to treat the flow to HQ criteria
- A 375 mm gravity line will carry the flow from the TV/BD boundary on Catchment B, North through Catchments C and D, and connect into the new WWTP
- A new effluent outfall

3.2 Scenario 1B

Refer to BD-WW-02 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Flow from TV will connect into the BD system at the West side of Catchment B.
- A new WWTP with a MDF of 14,900 m3/d will be required to treat the flow to HQ criteria
- 375 mm gravity line will carry the flow from the TV/BD boundary on Catchment B, North along the Town boundary, and connect into the new WWTP
- A new effluent outfall

3.3 Scenario 2A

Refer to BD-WW-03 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Flow from TV will connect into the BD system at the Southwest side of Catchment B.
- A new WWTP with a MDF of 13,600 m3/d will be required to treat the flow to HQ criteria
- 375 mm gravity line will carry the flow from the TV/BD boundary on Catchment B, North along the Town boundary through Catchment C, and connect into the new WWTP
- A new effluent outfall

3.4 Scenario 2B

Refer to BD-WW-04 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Flow from TV will connect into the BD system at the Southwest side of Catchment B.
- A new WWTP with a MDF of 13,400 m3/d will be required to treat the flow to HQ criteria
- 300 mm gravity line will carry the flow from the TV/BD boundary on Catchment B, North through Catchment C, and connect into the new WWTP

- 250 mm gravity line will carry flow from Catchment D North and East under the river to the new WWTP
- A new effluent outfall

4.0 Stormwater Servicing

It is anticipated that stormwater will be attenuated at strategic locations by the means of stormwater detention facilities (ponds). For each scenario, potential locations of stormwater facilities were identified based on the existing ground contours. These facilities can be wet or dry depending on the requirements and the ground condition. These facilities will attenuate post-development stormwater flow and release into their respective outlets at the pre-development rate.

The locations of the outlets were identified using existing drainage contours. Where possible, the ponds and outlets are adjacent to receiving drainage courses to mimic the predevelopment drainage patterns. It is anticipated that at some location ditches will have to be created to discharge stormwater into a watercourse. The ultimate main receiving body is the Sheep River. Below is a summary of stormwater facilities required for the proposed scenarios.

Please note the following

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.
- The proposed layout of the catchment and ponds can vary significantly based on factors such as planning design, desired site grading, environmental impact, and geotechnical conditions. Catchment and pond layouts will need to be verified through a Master Drainage Plan (MDP) and a Regional Plan or Section Plan, including hydrogeological reports, geotechnical reports, and biophysical inventory & environmental assessment reports.
- Anticipated stormwater facility excavation costs are based upon experience with a typical greenfield development with a wet pond. This assumes that excavated volume can be balanced across each site, there is no bedrock encountered, and the ponds are lined. Excavation costs can vary significantly depending on soil type, bedrock depth, groundwater table, and other factors.
- Inlet and outlet costs are dependent on minor system design and tie-in conditions, as well as potential water quality treatments.
- Landscaping costs were assumed to include some wetland plantings around the perimeter of the pond, but no park features or pathways.
- The stormwater costs as presented here additionally do not include the costs of the drainage system within each catchment, which would be specified during the detailed design stage.
- Considering these factors, the final cost will need to be determined in conjunction with detailed site design and investigation. The cost as presented is merely to indicate an order of magnitude to assist in comparing the scenarios within this report.

4.1 Scenario 1A

Refer to Figure BD-SWM-01 for the proposed catchments, ponds and drainage patterns based on existing contours.

- Based on existing contours, eight catchments, each with a stormwater detention facility, are proposed to attenuate storm flow.
- Stormwater detention facilities will generally discharge into the existing creeks nearby.
- A drainage ditch and an outfall from the north pond to the Sheep River and a ditch from the east pond to the nearby creek will be required. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The southwest pond will require a drainage connection to the south pond, or the creek.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

4.2 Scenario 1B

Refer to Figure BD-SWM-02 for the proposed catchments, ponds and drainage patterns based on existing contours.

- Five catchments, each with a stormwater detention facility, are proposed to attenuate storm flow.
- Stormwater detention facilities will generally discharge into the existing creeks nearby.
- The southwest pond will require a drainage connection to the adjacent south pond, or the creek.

4.3 Scenario 2A

Refer to Figure BD-SWM-03 for the proposed catchments, ponds and drainage patterns based on existing contours.

- Seven catchments, each with a stormwater detention facility, are proposed to attenuate storm flow.
- Stormwater detention facilities will generally discharge into the existing creeks nearby.
- The north pond will require a drainage ditch and outfall to the Sheep River. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The east pond will require a drainage ditch to the adjacent southeast pond, or the creek.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

4.4 Scenario 2B

Refer to Figure BD-SWM-04 for the proposed catchments, ponds and drainage patterns based on existing contours.

- Nine catchments, each with a stormwater detention facility, are proposed to attenuate storm flow.
- The south ponds will discharge into the existing creek nearby.
- Three ponds to the north will require drainage ditches and outfalls to the sheep river. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The two ponds to the east will require drainage ditches to the nearby creek. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

5.0 Scenario Cost Comparison

The planning level estimate proposed for water, wastewater and stormwater infrastructure that may be required to service each scenario are presented in Table 5.1.

It should be noted that the infrastructure and servicing costs for each scenario will be shared between future private developers, and between the Towns of Black Diamond and Turner Valley. Future agreements will be required to determine which portions of the costs below will be assumed by each party depending on the detailed design of the communities.

The estimates assume the following:

- The costs are order of magnitude, to be used for comparison purposes between scenarios
- The receiving environment should be assessed and confirmed prior to design of the WWTP
- Land acquisition costs are not included
- The cost to acquire additional water license is not included
- Detailed costs are subject to actual site conditions and community layout (detailed design) – the proposed infrastructure layouts are subject to change
- The costs do not include underground network piping outside of the main transmission and trunk mains
- WTP expansion costs are carried in Turner Valley costs

Table 5.1. – Cost Comparison Summary*

INFRASTRUCTURE	SCENARIO 1A	SCENARIO 1B	SCENARIO 2A	SCENARIO 2B
Twin Potable Transmission Main from TV	$ 6,100,000	$ 6,100,000	$ 6,100,000	$ 6,100,000
Potable Water Reservoir and Pump Stations	$ 4,000,000	$ 1,500,000	$ 2,000,000	$ 3,800,000
Potable Distribution Mains and tie-ins	$ 2,800,000	$ 1,600,000	$ 4,200,000	$ 6,700,000
Water Subtotal	$ 12,900,000	$ 9,200,000	$ 12,300,000	$ 16,600,000
WWTP and Outfall Upgrade	$ 31,900,000	$ 30,200,000	$ 28,600,000	$ 28,300,000
Sanitary Trunk Mains and Tie-ins	$ 3,100,000	$ 2,900,000	$ 2,400,000	$ 5,600,000
Wastewater Subtotal	$ 35,000,000	$ 33,100,000	$ 31,000,000	$ 33,900,000
Earthworks and Landscaping	$ 13,600,000	$ 7,300,000	$ 10,700,000	$ 14,600,000
Inlet	$ 1,900,000	$ 1,200,000	$ 1,700,000	$ 2,100,000
Outlet	$ 1,400,000	$ 900,000	$ 1,300,000	$ 1,600,000
Drainage Ditches	$ 100,000	$ 40,000	$ 100,000	$ 180,000
Stormwater Subtotal	$ 17,600,000	$ 9,440,000	$ 13,800,000	$ 18,480,000
SUBTOTAL	$ 66,000,000	$ 52,000,000	$ 57,000,000	$ 69,000,000
Construction Contingency (30%)	$ 19,800,000	$ 15,600,000	$ 17,100,000	$ 20,700,000
Engineering (15%)	$ 12,900,000	$ 10,100,000	$ 11,100,000	$ 13,500,000
TOTAL	**$ 98,700,000**	**$ 77,700,000**	**$ 85,200,000**	**$ 103,200,000**

*The opinion of cost above is based on major infrastructure, and is a high level estimate designed for planning only. In order to provide a detailed itemized breakdown of the costs and infrastructure required (including site servicing and network piping), a detailed design of the community would be required.

Table 5.2 indicates the total water, wastewater and stormwater costs above per hectare of growth area for Black Diamond as per the catchment boundaries shown in Figures BD-PW-01 to BD-PW-04.

Table 5.2. – Cost per Area Summary for Comparison

SCENARIO	TOTAL DEVELOPABLE AREA (HA)	UNIT COST ($/HA)	TOTAL COST
Scenario 1A	316	$310,000	$98,700,000
Scenario 1B	193	$400,000	$77,700,000
Scenario 2A	248	$340,000	$85,200,000
Scenario 2B	242	$430,000	$103,200,000

Sincerely,

URBAN SYSTEMS LTD.

Leigh Chmilar, P.Eng.
Water and Wastewater Engineer

Ariane Sauter, M.Sc., P.L.(Eng)
Senior Water Resources Specialist

/lc/as/ts
Enclosure

cc: Meghan Aebig, USL, Steve Brubacher, USL

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MEMORANDUM

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Appendix A - Figures

BD-PW-01 – Water Servicing - Scenario 1A

BD-PW-02 – Water Servicing - Scenario 1B

BD-PW-03 – Water Servicing - Scenario 2A

BD-PW-04 – Water Servicing - Scenario 2B

BD-WW-01 – Sanitary Servicing - Scenario 1A

BD-WW-02 – Sanitary Servicing - Scenario 1B

BD-WW-03 – Sanitary Servicing - Scenario 2A

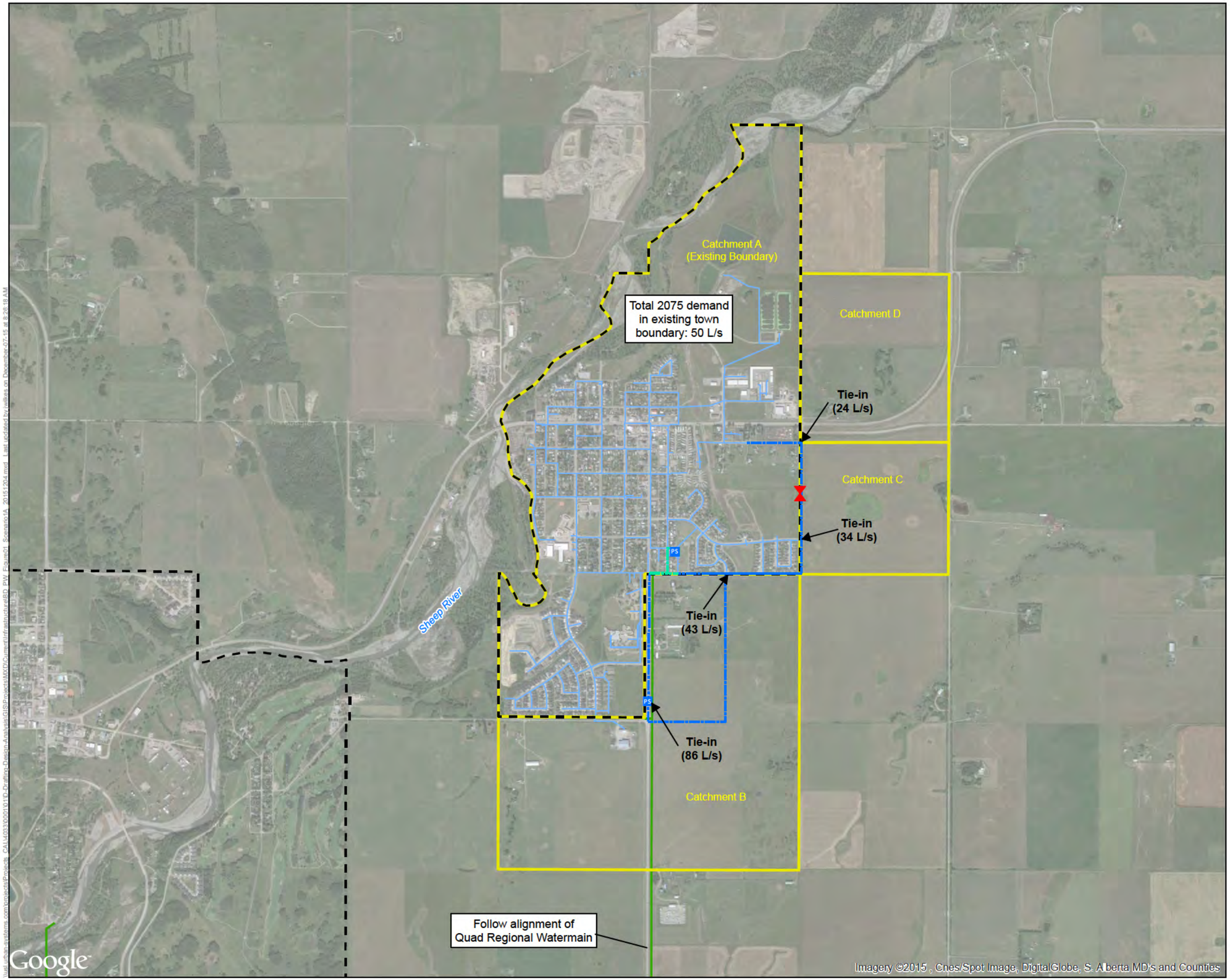
BD-WW-04 – Sanitary Servicing - Scenario 2B

BD-SWM-01 – Catchments – Scenario 1A

BD-SWM-02 – Catchments – Scenario 1B

BD-SWM-03 – Catchments – Scenario 2A

BD-SWM-04 – Catchments – Scenario 2B



Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Water Servicing
Scenario 1A

Legend

- Pump Station - Proposed
- PRV - Proposed
- Watermain - Proposed
- Watermain - Existing (Upsize)
- Watermain - Existing
- Twin Quad Regional Main
- Catchments
- Town Boundary

The accuracy & completeness of information shown on this drawing is not guaranteed. t will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

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Metres

Coordinate System
NAD 1983 3TM 114

Scale
1:20,000

Data Sources
- Data provided by the Town of Black Diamond

Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2015 / 12 / 7

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FIG. 1 BD-PW

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Catchment A
(Existing Boundary)

Total 2075 demand in existing town boundary: 50 L/s

Tie-in
(43 L/s)

Catchment B

Tie-in
(43 L/s)

Tie-in
(43 L/s)

Follow alignment of
Quad Regional Watermain

Sheep River

PS

Google

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Water Servicing Scenario 1B

Legend

- Pump Station - Proposed
- PRV - Proposed
- Watermain - Proposed
- Watermain - Existing (Upsize)
- Watermain - Existing
- Twin Quad Regional Main
- Catchments
- Town Boundary

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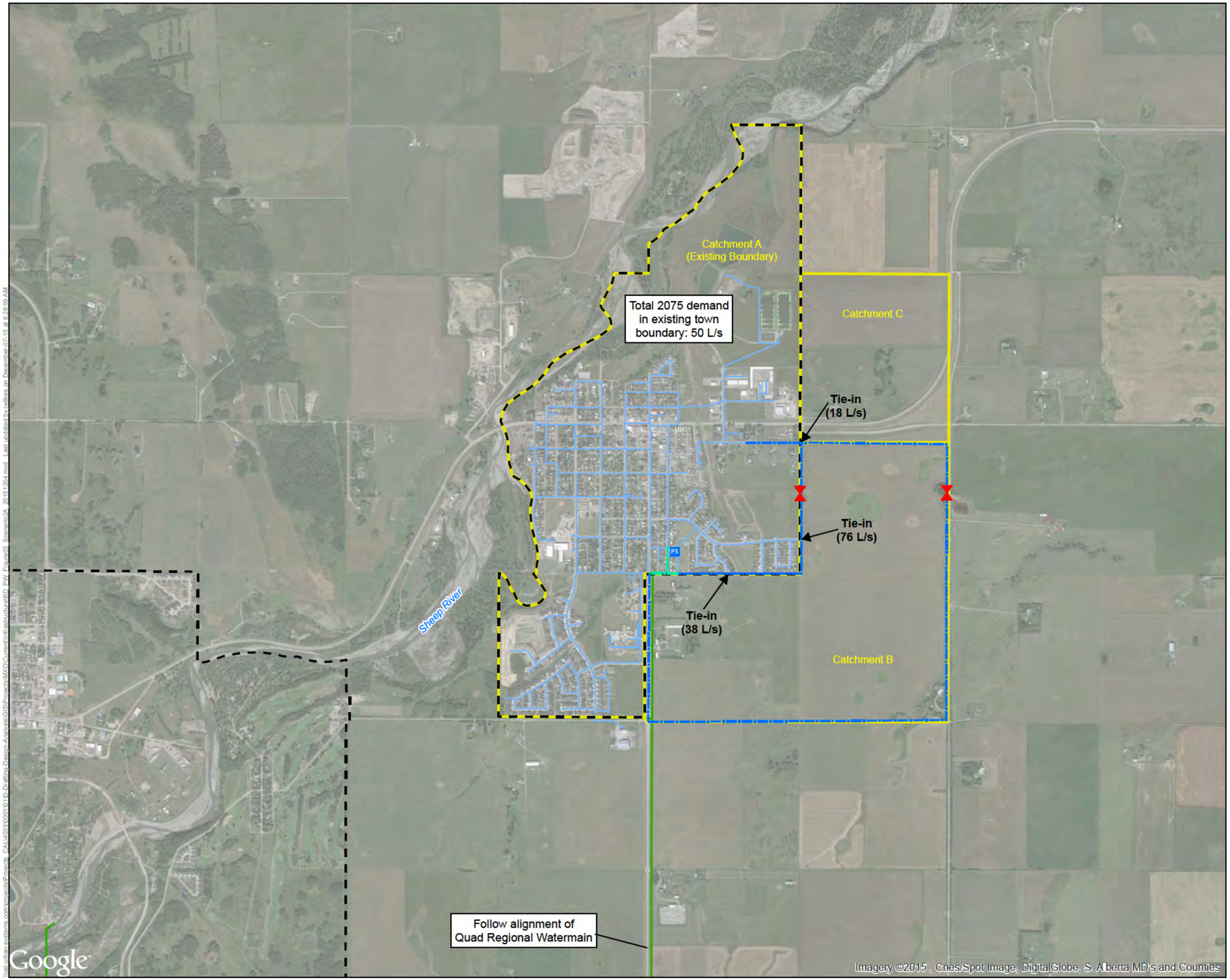
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FIG. 2 BD-PW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Water Servicing
Scenario 2A

Legend

- Pump Station - Proposed
- PRV - Proposed
- Watermain - Proposed
- Watermain - Existing (Upsize)
- Watermain - Existing
- Twin Quad Regional Main
- Catchments
- Town Boundary

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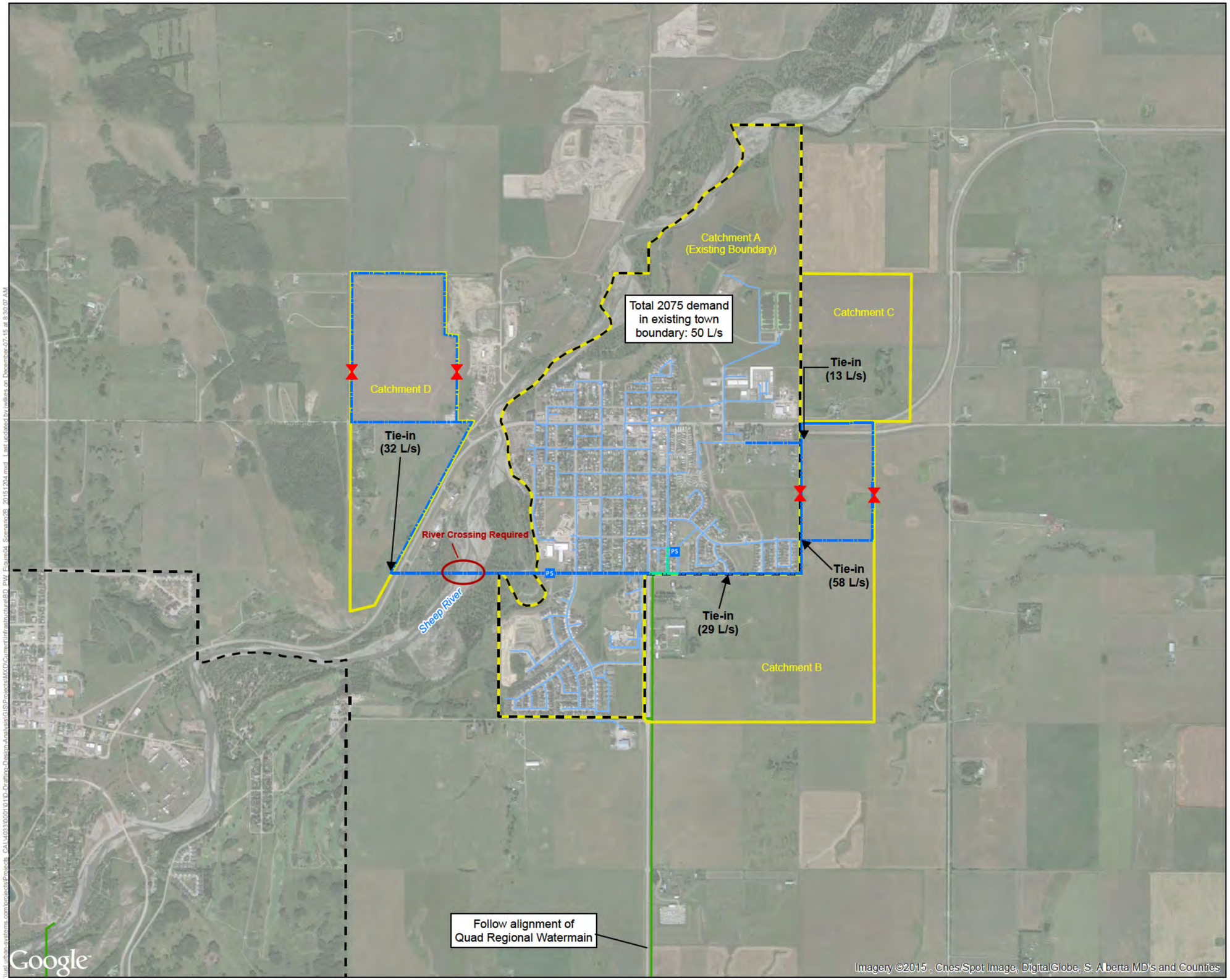
Data Sources
- Data provided by the Town of Black Diamond

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FIG. 3 BD-PW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Water Servicing
Scenario 2B

Legend

- Pump Station - Proposed
- PRV - Proposed
- Watermain - Proposed
- Watermain - Existing (Upsize)
- Watermain - Existing
- Twin Quad Regional Main
- Catchments
- Town Boundary

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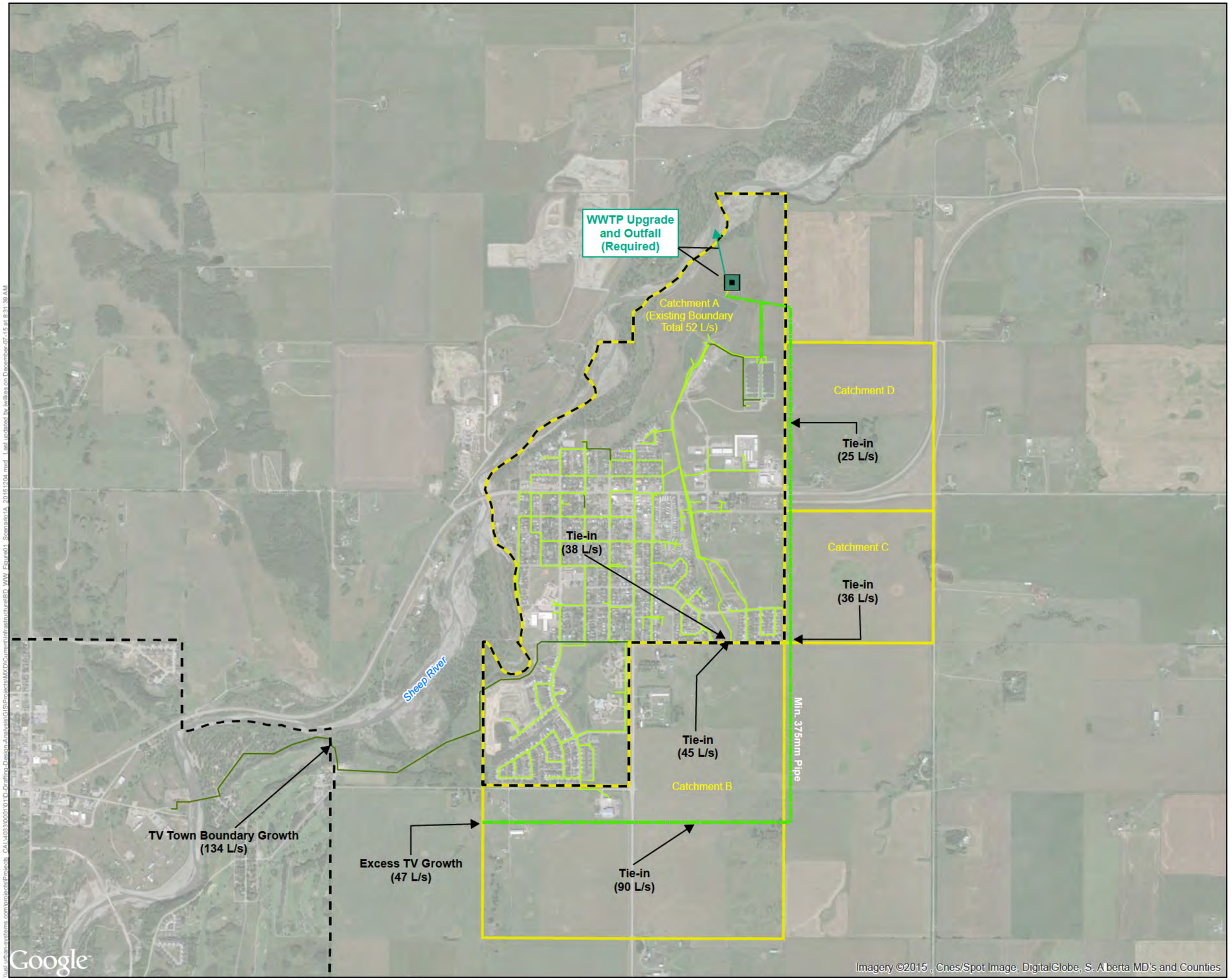
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FIG. 4 BD-PW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Sanitary Servicing Scenario 1A

Legend

- Forcemain - Existing
- Gravity Main - Existing
- Sanitary - Proposed
- Catchments
- Town Boundary

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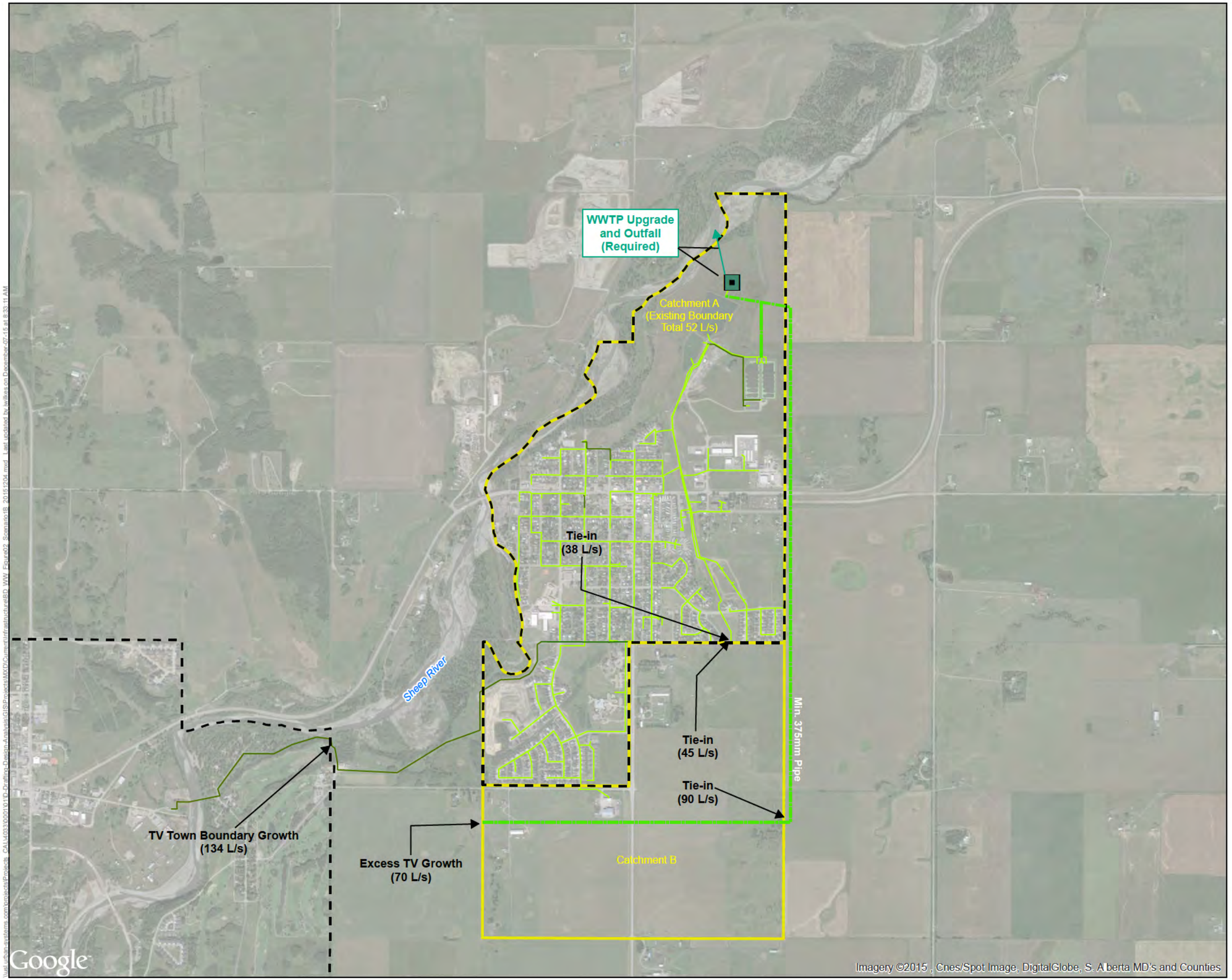
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FIG. 1 BD-WW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Sanitary Servicing Scenario 1B

Legend

- Forcemain - Existing
- Gravity Main - Existing
- Sanitary - Proposed
- Catchments
- Town Boundary

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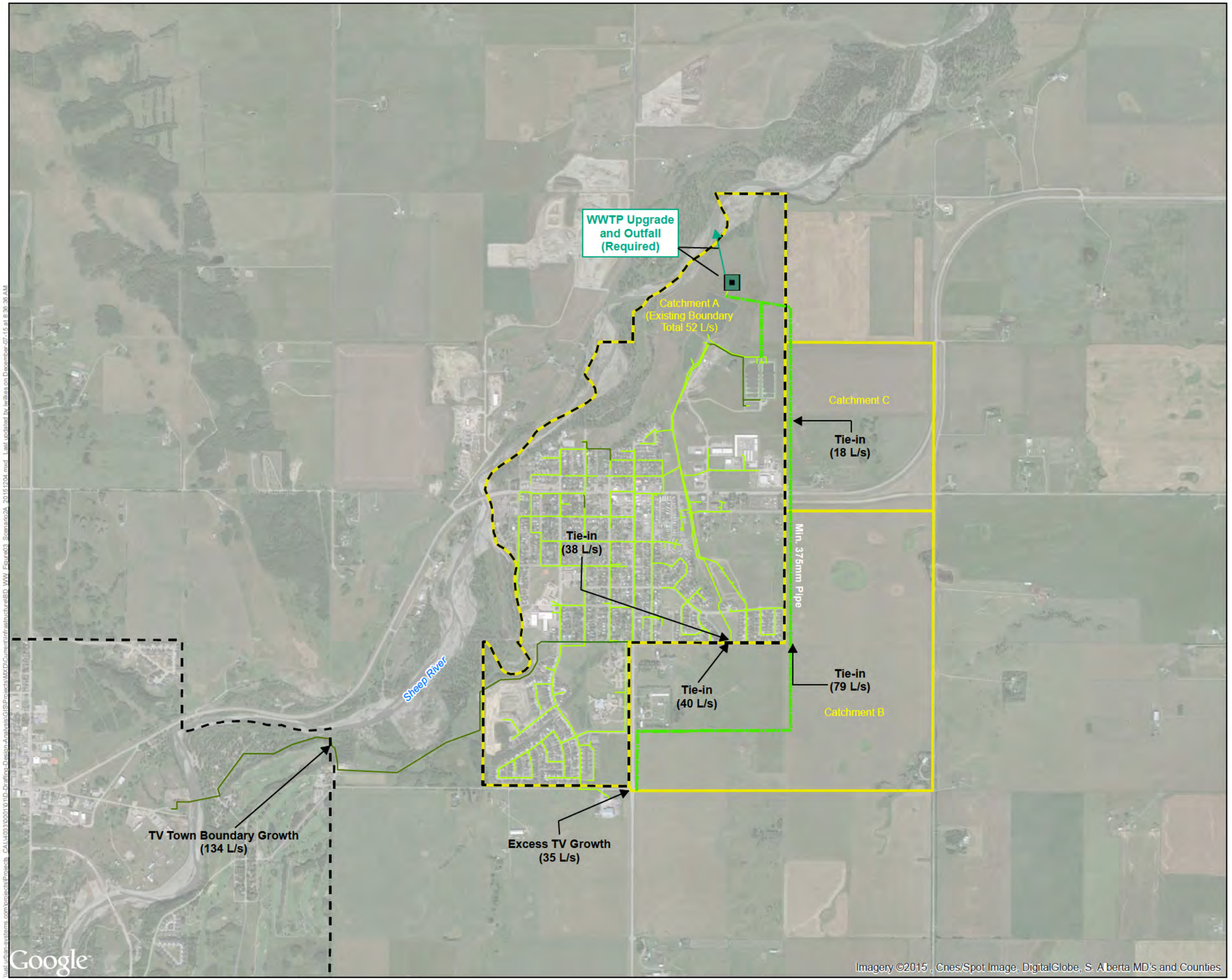
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FIG. 2 BD-WW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Sanitary Servicing Scenario 2A

Legend

- Forcemain - Existing
- Gravity Main - Existing
- Sanitary - Proposed
- Catchments
- Town Boundary

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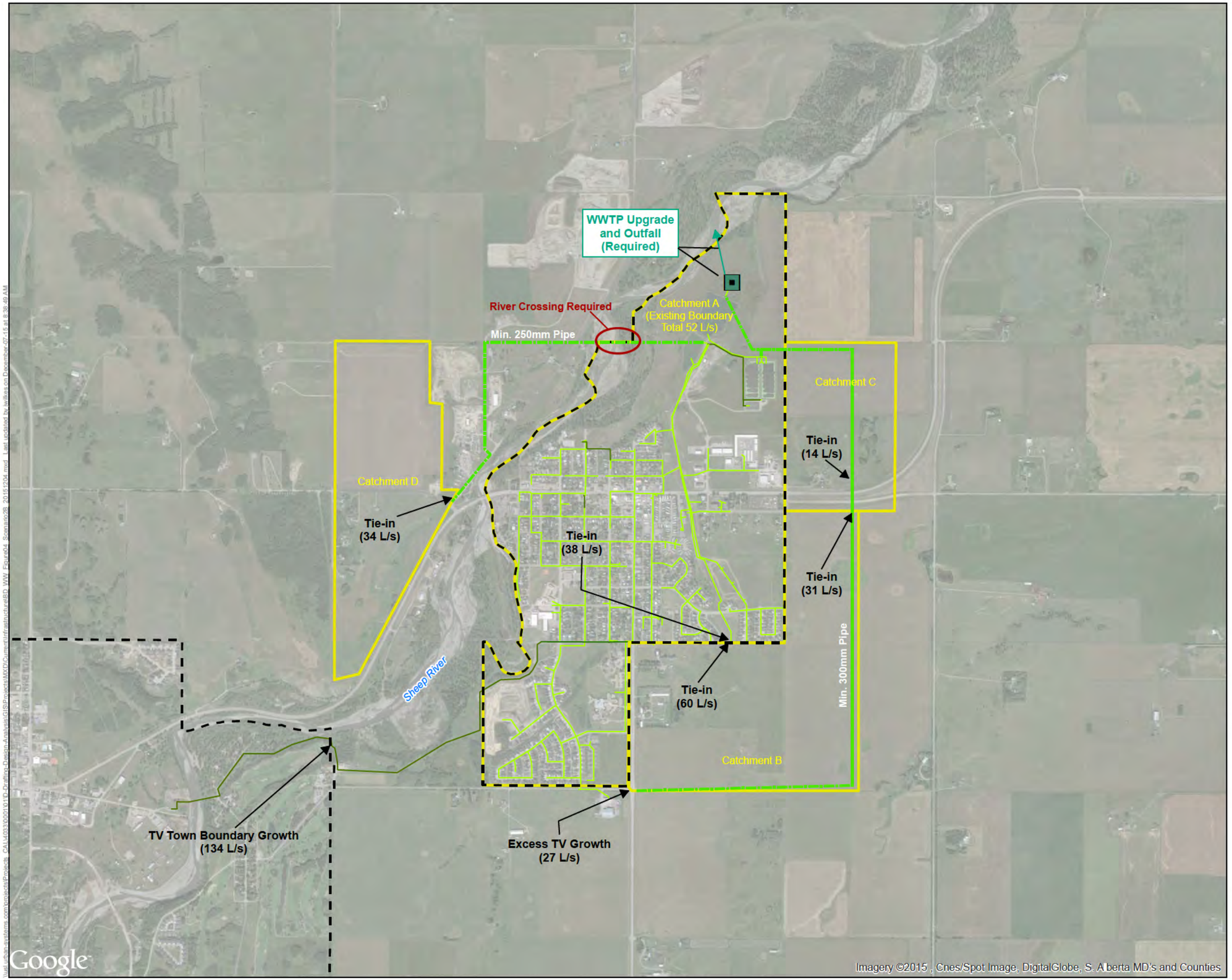
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FIG. 3 BD-WW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Sanitary Servicing Scenario 2B

Legend

- Forcemain - Existing
- Gravity Main - Existing
- Sanitary - Proposed
- Catchments
- Town Boundary

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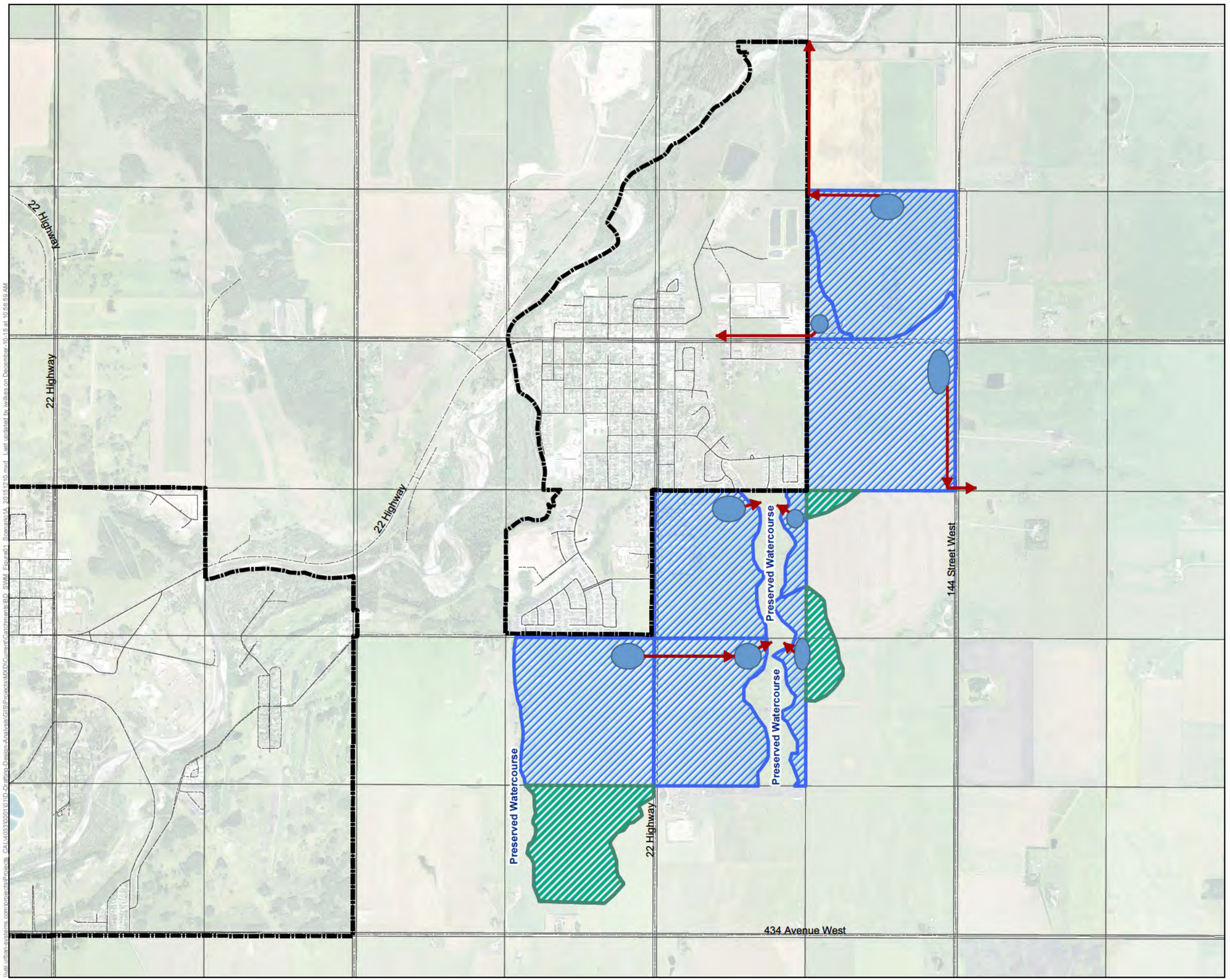
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FIG. 4 BD-WW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Strategy

Catchments - Scenario 1A

Legend

- Drainage Ditches - Proposed
- Ponds - Proposed
- Catchments - Proposed
- Upstream Catchments Naturally Draining to Development Area
- Town Boundary
- Quarter Sections

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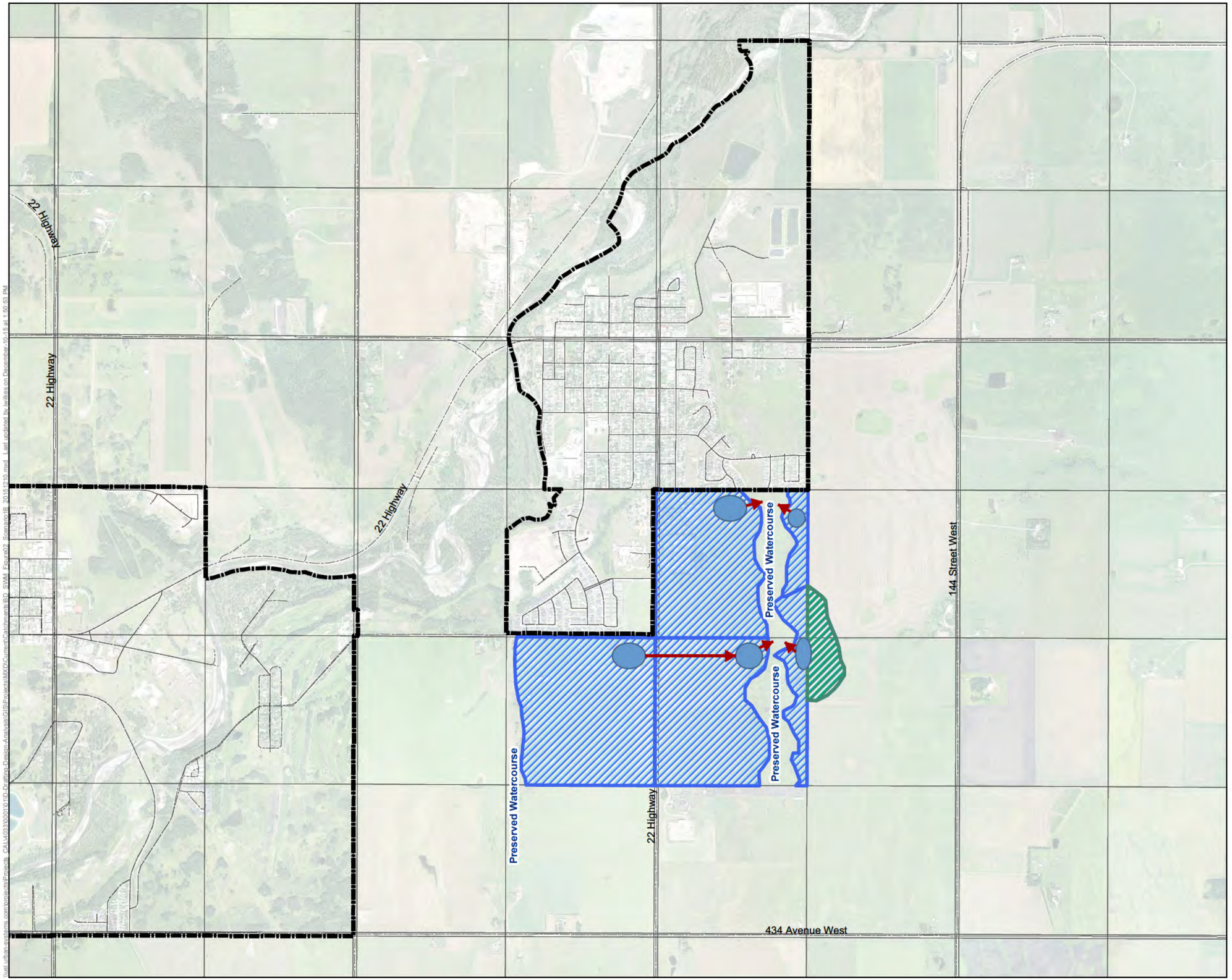
Data Sources
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FIG. 1 BD-SWM

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Strategy

Catchments - Scenario 1B

Legend

- Drainage Ditches - Proposed
- Ponds - Proposed
- Catchments - Proposed
- Upstream Catchments Naturally Draining to Development Area
- Town Boundary
- Quarter Sections

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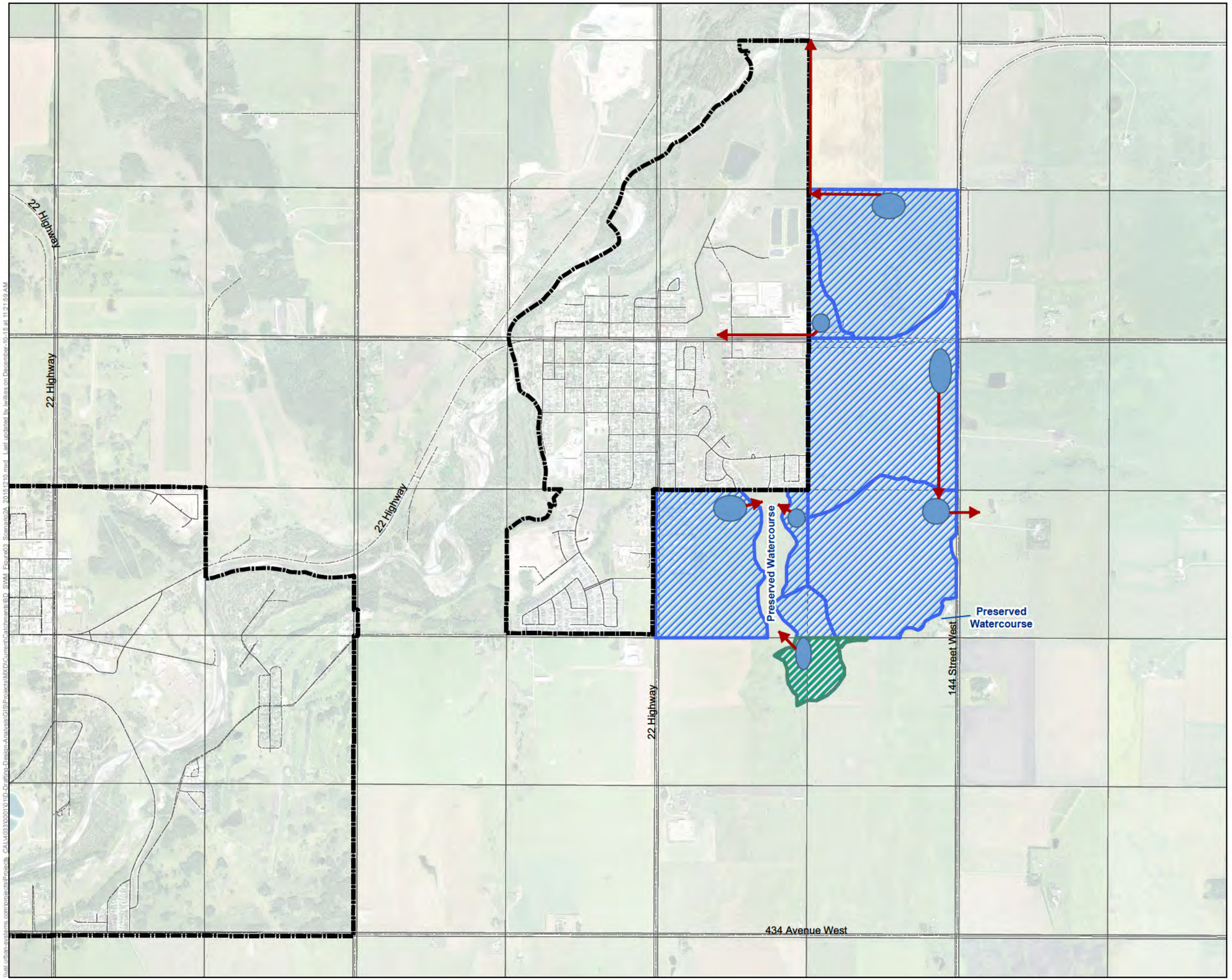
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FIG. 2 BD-SWM

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Strategy

Catchments - Scenario 2A

Legend

- Drainage Ditches - Proposed
- Ponds - Proposed
- Catchments - Proposed
- Upstream Catchments Naturally Draining to Development Area
- Town Boundary
- Quarter Sections

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FIG. 3 BD-SWM

Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Strategy

Catchments - Scenario 2B

Legend

- Drainage Ditches - Proposed
- Ponds - Proposed
- Catchments - Proposed
- Upstream Catchments Naturally Draining to Development Area
- Town Boundary
- Quarter Sections

22 Highway
22 Highway
22 Highway
Preserved Watercourse
144 Street West
Preserved Watercourse
434 Avenue West

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Data Sources
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FIG. 4 BD-SWM

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MEMORANDUM

URBAN systems

Date:	January 12, 2016
To:	Andrew Palmiere, O2 Planning and Design Inc.
cc:	Meghan Aebig, P.Eng.
From:	Leigh Chmilar, P.Eng., Ariane Sauter, M.Sc., PL (Eng)
File:	4033.0001.01
Subject:	Black Diamond and Turner Valley Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis – Scenario 3 - DRAFT

1.0 Black Diamond Water and Wastewater Conceptual Servicing Background

USL was retained to complete a conceptual servicing analysis for Water and Wastewater for the Town of Black Diamond (BD), using the growth scenarios provided by O2. MPE was retained to conduct the same analysis for Turner Valley (TV). USL coordinated with MPE Engineering (MPE) to ensure the demand and flow assumptions were aligned, since Turner Valley supplies potable water to Black Diamond, and Black Diamond provides wastewater treatment to Turner Valley. USL coordinated with MPE to divide the supply areas between the towns based on proximity and serviceability. Analysis of four growth scenarios (Scenario 1A, 2A, 1B and 2B) was provided in the Black Diamond and Turner Valley Joint Growth Strategy Water, Wastewater and Stormwater Conceptual Analysis Technical Memorandum – DRAFT (USL 2015).

For each growth scenario provided by O2, only residential growth was considered to occur within the Town boundary. The projected future flows and demands were based on total future population (as provided), so the flows include existing demands within the Town boundary. Only growth that was specified to be within the boundary was used for infrastructure that is existing. Any growth beyond the capacity of the existing systems were assumed to require new infrastructure outside the Town boundary.

O2 presented Scenario's 1A, 2A, 1B and 2B, to both Turner Valley and Black Diamond's councils and the group's preference was a combination of Scenario 1A and 2B (Scenario 3) (Appendix B). This option adds growth to the west side of Turner Valley, which would not affect the potable water servicing of Black Diamond. Growth to Turner Valley adds additional wastewater servicing requirements to the Westend System, operated by the Town of Black Diamond, as explained in Section 3.0. The following provides a summary of the water, wastewater and stormwater servicing requirements for Scenario 3.

2.0 Potable Water Servicing

USL calculated the potable water demands for Scenario 3 provided by O2 using the criteria in Table 2.1. As previously mentioned, the scenarios provide contingency supply lands to support growth beyond current projections. To remain conservative in our conceptual servicing analysis, USL included the total supply (demand and contingency) in the analysis to ensure that servicing would be available for future land use. It can be seen in Table 2.1 that the average water consumption per person has been applied to both residential and commercial/employment lands at the same rate. There is wide variability in commercial/employment demands however the rates used reflect relatively conservative values for the expected land uses. The MDD and PHD ratios were based on typical factors in other communities nearby.

Table 2.1. - Potable Demand Criteria

CRITERIA	VALUE	UNITS
Average Water Consumption[1]	315	l/c/day
Commercial/Employment Ratio	315	l/c/day
MDD:ADD Ratio	2.2	-
PHD:ADD Ratio	**4.0**	-

[1] Total community demand projected for 2076. CRP Regional Water and Wastewater Servicing Masterplan, May 2014.

The total potable demand for Scenario 3 is shown in Table 2.2. There was no difference in the potable water demands for the Town Black Diamond between Scenario 1A and Scenario 3, as the additional growth for Scenario 3 is in Turner Valley (not analyzed here).

Table 2.2. – Scenario 3 Potable Water Demand Summary

GROWTH SCENARIO	RESIDENTIAL POPULATION	EMPLOYMENT	MDD (MLD)	PHD (L/s)	MIN. FIRE FLOW REQUIREMENTS (L/s)	MIN. STORAGE REQUIRED (m^3)
Scenario 3	13,451	2,807	11.3	237	197 L/s	5,716

Scenario 3 was analysed using the criteria in Table 2.1 to determine the peak flows per catchment. The Fire Underwriters Survey for Black Diamond (2013) was used to estimate the minimum required fire flows for the town and each scenario. The required reservoir storage was calculated following the Alberta Environment and Parks (AEP) Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems. Please note that the proposed infrastructure is not exhaustive of what may be required to service the growth scenarios in the future. They are intended to show conceptually the infrastructure that may be required to allow the existing system to provide flow and adequate pressure to the associated catchments, while maintaining service within the Town boundary. USL recommends that a detailed analysis be conducted once a scenario is selected for further study.

USL analysed each demand scenario using a WaterCAD model of the Town's water distribution system. The Town receives its potable water from the water treatment plant in Turner Valley via the Sheep River Utilities Regional transmission main, which was installed in 2013 after the flood. The section below describes the recommendations to service Scenario 3.

Please note the following:

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.

- Note that the existing water license has not been reviewed in detail, and will likely not support the full build-out of the growth scenarios. Further study and review will be required to ensure adequate water is available for future growth.
- It is assumed that treated water will be supplied by the Town of Turner Valley, and adequate supply will be provided. MPE is providing costs for a WTP upgrade required to supply the demands of both towns in each scenario. The alignment of the Twin line is currently assumed to follow close to the current alignment however this will require review to confirm that adequate right of way exists.

2.1 Scenario 3

Refer to Figure BD-PW-05 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Secure sufficient water license capacity and twin the distribution transmission main from Turner Valley to Black Diamond.
- Upgrade source capacity, treatment plant and pumps in TV WTP to increase flow from Turner Valley to the potable water reservoir in Black Diamond (MPE to provide costs).
- Reservoir upgrade to accommodate an additional 1,200 m3 of storage.
- Replace reservoir pump station.
- Upsize the distribution pipe from the reservoir to the distribution system.
- A PRV station to manage the system pressures.
- Add a booster station to increase flow to Catchment B.
- Various distribution mains to loop the system to provide adequate pressure, flow and redundancy.

3.0 Wastewater Servicing

USL calculated the sanitary flows for Scenario 3 using the criteria in Table 3.1. As previously mentioned, the scenarios provide contingency supply lands to support growth beyond current projections. To remain conservative in our conceptual servicing analysis, USL included the total supply (demand and contingency) in the analysis to ensure that servicing would be available for future land use. It can be seen in Table 3.1 that the wastewater flow is an average for the community, meaning it encompasses estimated flows from all land uses (residential, commercial, institutional), and includes inflow and infiltration. For that reason it was applied to all land uses. The numbers in the table below were taken from the Foothills Regional Wastewater Collaborative (FRWWC) Regional Servicing Study currently being completed by USL and MPE (to be completed early 2016).

Table 3.1 – Wastewater Flow Equivalents

POPULATION FLOW EQUIVALENTS	VALUE	UNITS
Total Community Wastewater Flow	264	L/c/d
MDF:ADF Ratio	2.2	--

POPULATION FLOW EQUIVALENTS	VALUE	UNITS
PHF:ADF Ratio	5.0	--
Westend Forcemain Capacity	134	L/s

Wastewater from the Town of Turner Valley is treated at the Westend wastewater treatment plant in Black Diamond, and sent via the Westend Sanitary Forcemain. The total calculated sanitary flows therefore include the sanitary flows from TV, which were provided by MPE. Flows generated in TV will fill the Westend Forcemain to capacity (134 L/s), and excess flows will be sent to Black Diamond, as can be seen in BD-WW-05. The wastewater treatment costs assume that the Westend Regional Wastewater Commission lagoon system will be upgraded to a mechanical tertiary treatment plant in order to meet high quality effluent standards currently being reviewed as part of the Foothills Regional Wastewater Collaborative study (to be completed in early 2016). This option will require a receiving environment study to confirm that the Sheep River has adequate capacity to receive these flows. The option of piping the wastewater to Okotoks or other regional plant is currently under review in the FRWWC study.

The total sanitary demands for Scenario 3, including Turner Valley are shown in Table 3.2.

Table 3.2. – Scenario 3 Wastewater Flow Summary

GROWTH SCENARIO	ADF (m^3/d)	MDF (m^3/d)	PHF (L/s)
Scenario 3	7,800	17,200	454

USL analysed each demand scenario against Town's existing collection system. The Town receives wastewater from Turner Valley via the Westend Regional forcemain, which was re-aligned in 2013 after the flood, and transitions into a gravity main that runs North through the Town to the lagoons. The gravity main had been sized for future growth (total capacity 280 L/s), and was used to convey additional flows when possible. The sections below describe the recommendations to service each scenario.

Please note the following:

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.

3.1 Scenario 3

Refer to BD-WW-05 for the peak flow demands in each catchment and the locations of proposed infrastructure:

- Flow from TV will connect into the BD system at the West side of Catchment B.
- A new WWTP with a MDF of 17,200 m^3/d will be required to treat the flow to HQ criteria.
- A 400 mm gravity line will carry the flow from the TV/BD boundary on Catchment B, North through Catchments C and D, and connect into the new WWTP.
- A new effluent outfall.

4.0 Stormwater Servicing

It is anticipated that stormwater will be attenuated at strategic locations by the means of stormwater detention facilities (ponds). For Scenario 3, potential locations of stormwater facilities were identified based on the existing ground contours. These facilities can be wet or dry depending on the requirements and the ground condition. These facilities will attenuate post-development stormwater flow and release into their respective outlets at the pre-development rate.

The locations of the outlets were identified using existing drainage contours. Where possible, the ponds and outlets are adjacent to receiving drainage courses to mimic the predevelopment drainage patterns. It is anticipated that at some location ditches will have to be created to discharge stormwater into a watercourse. The ultimate main receiving body is the Sheep River. Below is a summary of stormwater facilities required for the proposed scenarios.

Please note the following

- The recommendations are not exhaustive, and further detailed review of existing site conditions and a detailed development plan would be required to provide a conceptual design.
- The proposed layout of the catchment and ponds can vary significantly based on factors such as planning design, desired site grading, environmental impact, and geotechnical conditions. Catchment and pond layouts will need to be verified through a Master Drainage Plan (MDP) and a Regional Plan or Section Plan, including hydrogeological reports, geotechnical reports, and biophysical inventory & environmental assessment reports.
- Anticipated stormwater facility excavation costs are based upon experience with a typical greenfield development with a wet pond. This assumes that excavated volume can be balanced across each site, there is no bedrock encountered, and the ponds are lined. Excavation costs can vary significantly depending on soil type, bedrock depth, groundwater table, and other factors.
- Inlet and outlet costs are dependent on minor system design and tie-in conditions, as well as potential water quality treatments.
- Landscaping costs were assumed to include some wetland plantings around the perimeter of the pond, but no park features or pathways.
- The stormwater costs as presented here additionally do not include the costs of the drainage system within each catchment, which would be specified during the detailed design stage.
- Considering these factors, the final cost will need to be determined in conjunction with detailed site design and investigation. The cost as presented is merely to indicate an order of magnitude to assist with comparison of growth options.

4.1 Scenario 3

Refer to Figure BD-SWM-05 for the proposed catchments, ponds and drainage patterns based on existing contours.

- Based on existing contours, eight catchments, each with a stormwater detention facility, are proposed to attenuate storm flow.
- Stormwater detention facilities will generally discharge into the existing creeks nearby.
- A drainage ditch and an outfall from the north pond to the Sheep River and a ditch from the east pond to the nearby creek will be required. These ditches will require drainage easements along adjacent property lines or roads, and may require culverts under secondary highways.
- The southwest pond will require a drainage connection to the south pond, or the creek.
- The northwest pond will drain west along the existing highway ditch. This may require expanding the ditch.

5.0 Scenario 3 Planning Level Estimate

The planning level estimate proposed for water, wastewater and stormwater infrastructure that may be required to service Scenario 3 is presented in Table 5.1. A planning level estimate is a preliminary estimate which, due to little or no site information indicates the approximate order of magnitude cost of the proposed project, based on broad requirements. This overall estimate is derived from lump sum or unit costs associated with other recent similar projects, and may be used to obtain approval in principle and for discussion purposes. A contingency allowance of 30% plus 15% allowance for engineering and design is appropriate for this level of estimate.

It should be noted that the infrastructure and servicing costs for each scenario will be shared between future private developers, and between the Towns of Black Diamond and Turner Valley. Future agreements will be required to determine which portions of the costs below will be assumed by each party depending on the detailed design of the communities.

The estimates assume the following:

- The costs are order of magnitude, to be used for comparison purposes between scenarios.
- The receiving environment should be assessed and confirmed prior to design of the WWTP.
- Land acquisition costs are not included.
- The cost to acquire additional water license is not included.
- Detailed costs are subject to actual site conditions and community layout (detailed design) – the proposed infrastructure layouts are subject to change.
- The costs do not include underground network piping outside of the main transmission and trunk mains.
- WTP expansion costs are carried in Turner Valley costs.

Table 5.1. – Cost Comparison Summary*

INFRASTRUCTURE	SCENARIO 3
Twin Potable Transmission Main from TV	$ 6,100,000
Potable Water Reservoir and Pump Stations	$ 4,000,000
Potable Distribution Mains and tie-ins	$ 2,800,000
Water Subtotal	$ 12,900,000
WWTP and Outfall Upgrade	$ 33,100,000
Sanitary Trunk Mains and Tie-ins	$ 3,100,000[1]
Wastewater Subtotal	$ 36,200,000
Earthworks and Landscaping	$ 14,200,000
Inlet	$ 1,900,000
Outlet	$ 1,400,000
Drainage Ditches	$ 100,000
Stormwater Subtotal	$ 17,600,000
SUBTOTAL	$ 67,000,000
Construction Contingency (30%)	$ 20,100,000
Engineering (15%)	$ 13,1,000
TOTAL	**$ 100,200,000**

[1]The difference in costs between scenario 1A and and 3 are negligible with a slight increase in pipe size.

*The opinion of cost above is based on major infrastructure, and is a high level estimate designed for planning only. In order to provide a detailed itemized breakdown of the costs and infrastructure required (including site servicing and network piping), a detailed design of the community would be required.

Sincerely,

URBAN SYSTEMS LTD.

Leigh Chmilar, P.Eng.
Water and Wastewater Engineer

Ariane Sauter, M.Sc., P.L.(Eng)
Senior Water Resources Specialist

/lc/as/ts
Enclosure

cc: Meghan Aebig, USL, Steve Brubacher, USL

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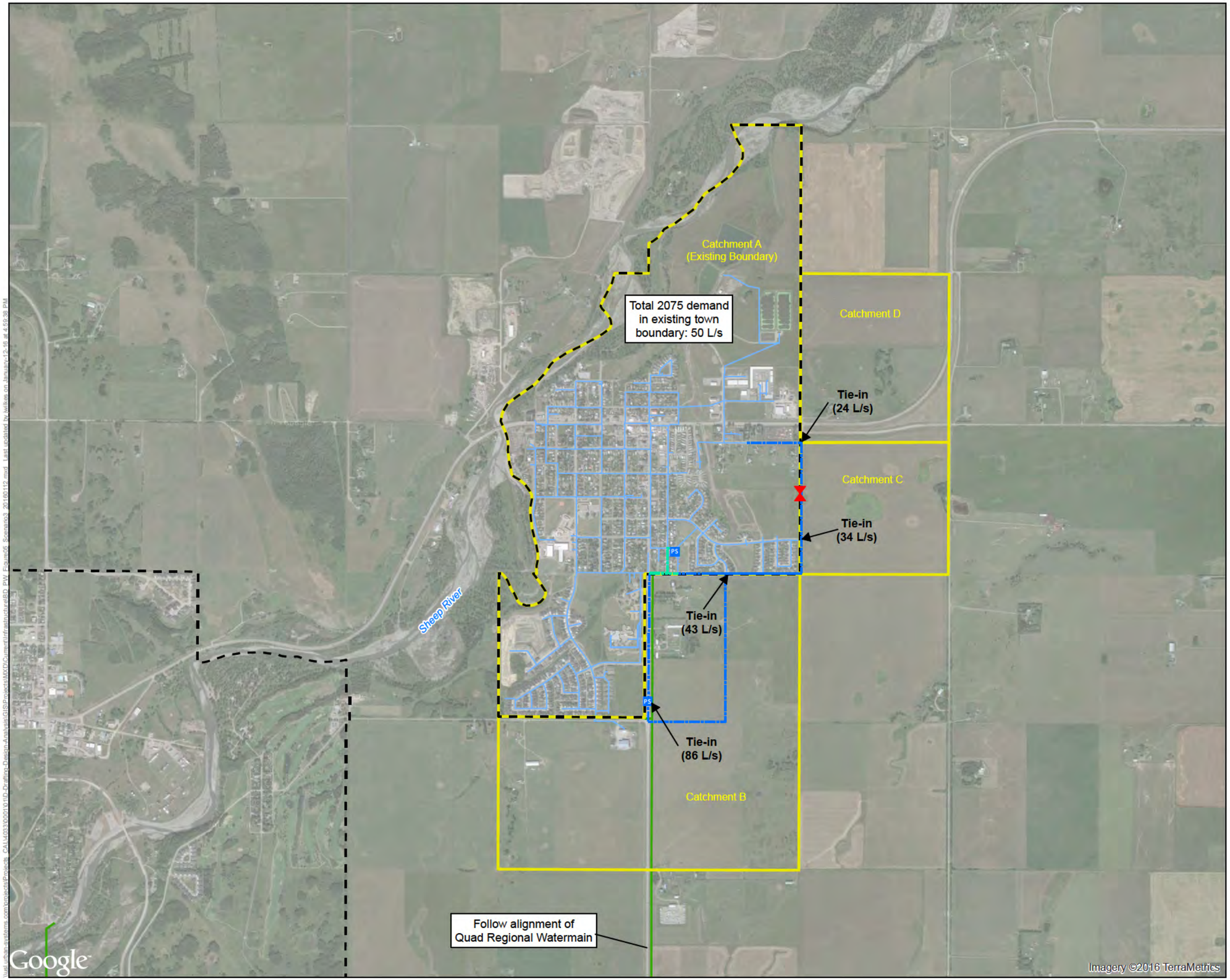
MEMORANDUM

Appendix A - Figures

BD-PW-05 – Water Servicing - Scenario 3

BD-WW-05 – Sanitary Servicing - Scenario 3

BD-SWM-05 – Catchments – Scenario 3



Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Water Servicing
Scenario 3

Legend

- Pump Station - Proposed
- PRV - Proposed
- Watermain - Proposed
- Watermain - Existing (Upsize)
- Watermain - Existing
- Twin Quad Regional Main
- Catchments
- Town Boundary

The accuracy & completeness of information shown on this drawing is not guaranteed. t will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

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Metres

Coordinate System
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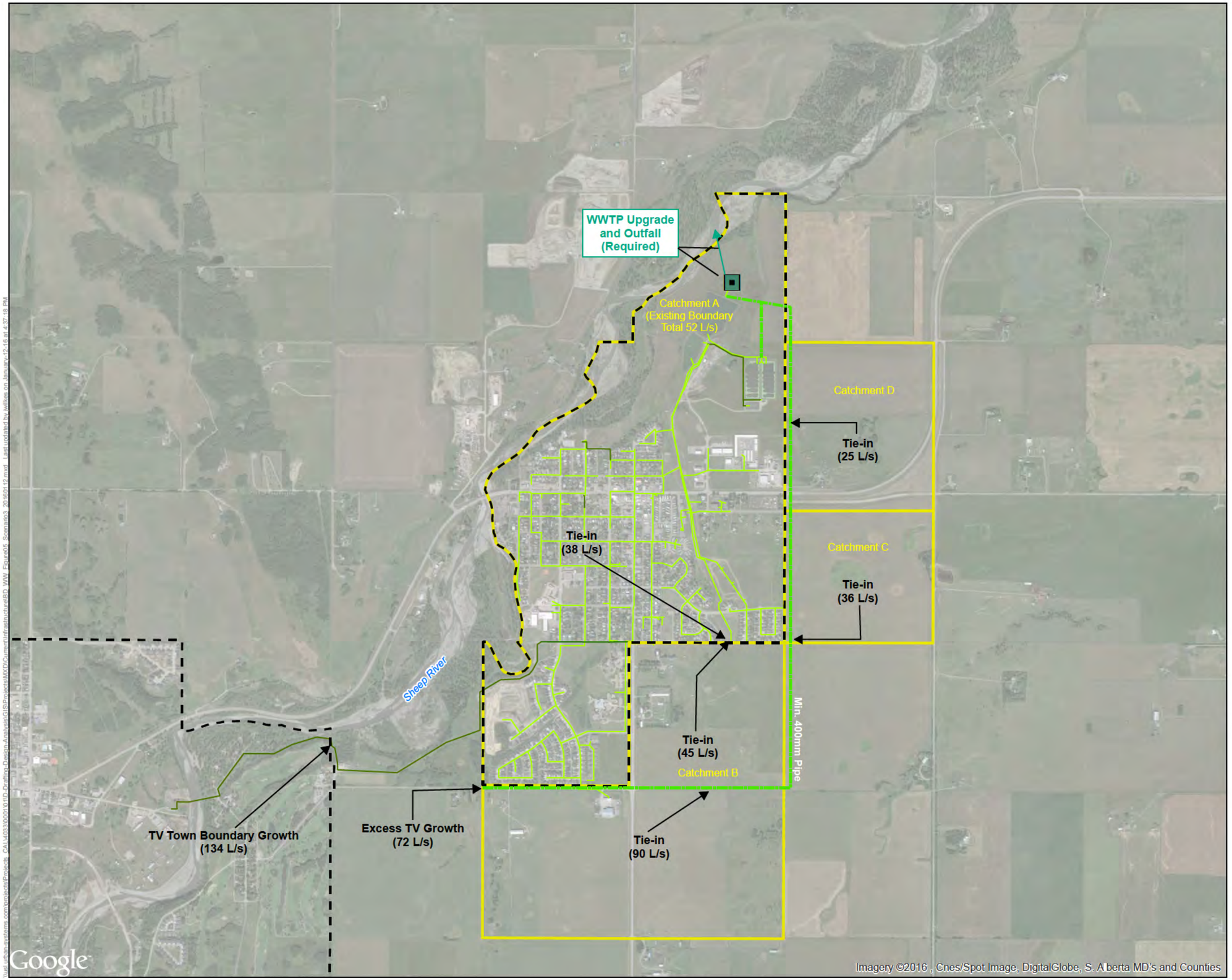
Data Sources
- Data provided by the Town of Black Diamond

Project #:	4033.0001.01
Author:	JW
Checked:	LC
Status:	~ DRAFT ~
Revision:	A
Date:	2016 / 1 / 12

URBAN systems

FIG. 5 BD-PW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Scenarios

Sanitary Servicing Scenario 3

Legend

- Forcemain - Existing
- Gravity Main - Existing
- Sanitary - Proposed
- Catchments
- Town Boundary

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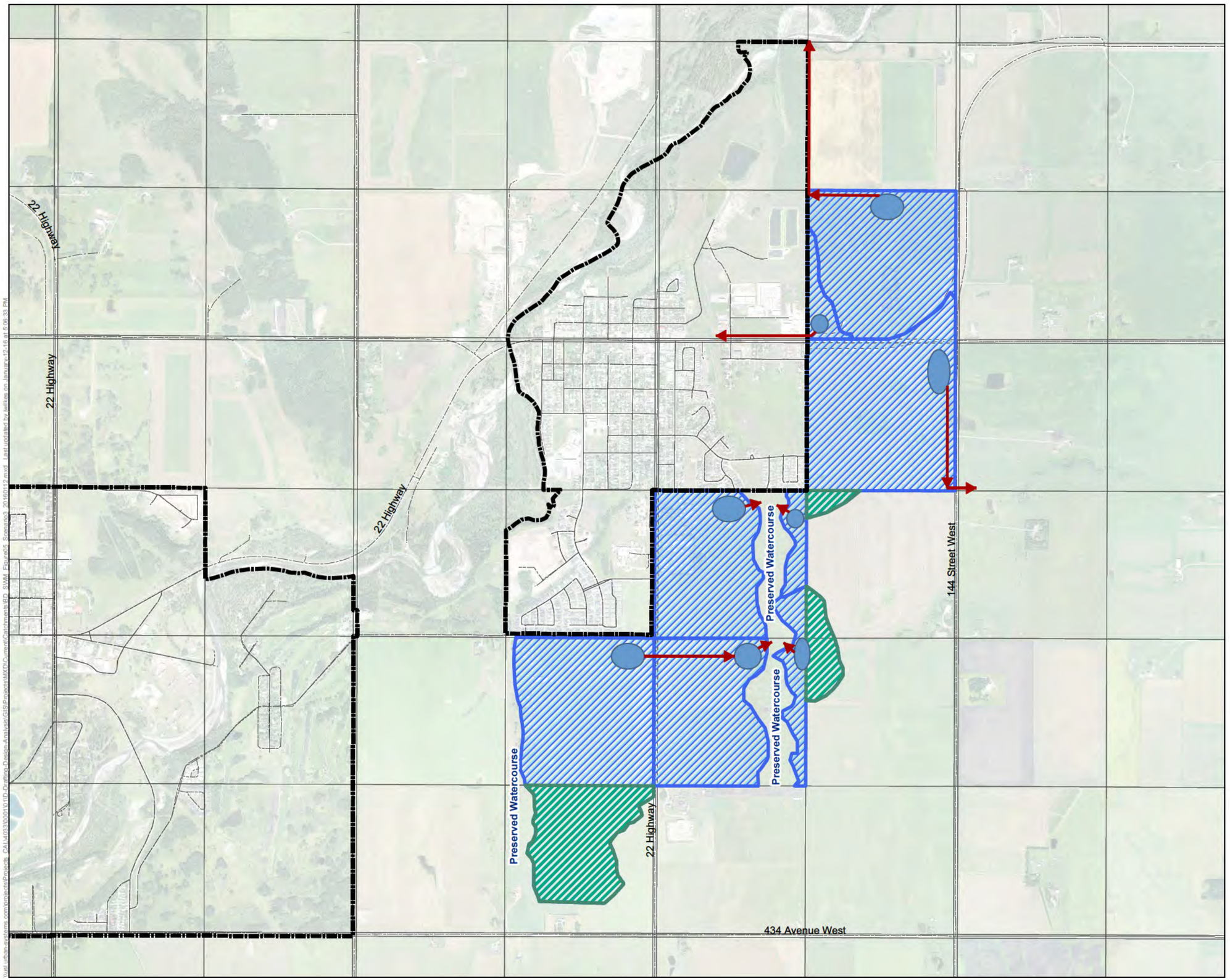
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URBAN systems

FIG. 5 BD-WW

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Town of Turner Valley
Back to Nature

TOWN OF BLACK DIAMOND

Town of Turner Valley
Town of Black Diamond

Growth Strategy

Catchments - Scenario 3

Legend

- Drainage Ditches - Proposed
- Ponds - Proposed
- Catchments - Proposed
- Upstream Catchments Naturally Draining to Development Area
- Town Boundary
- Quarter Sections

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Data Sources
- Town of Black Diamond

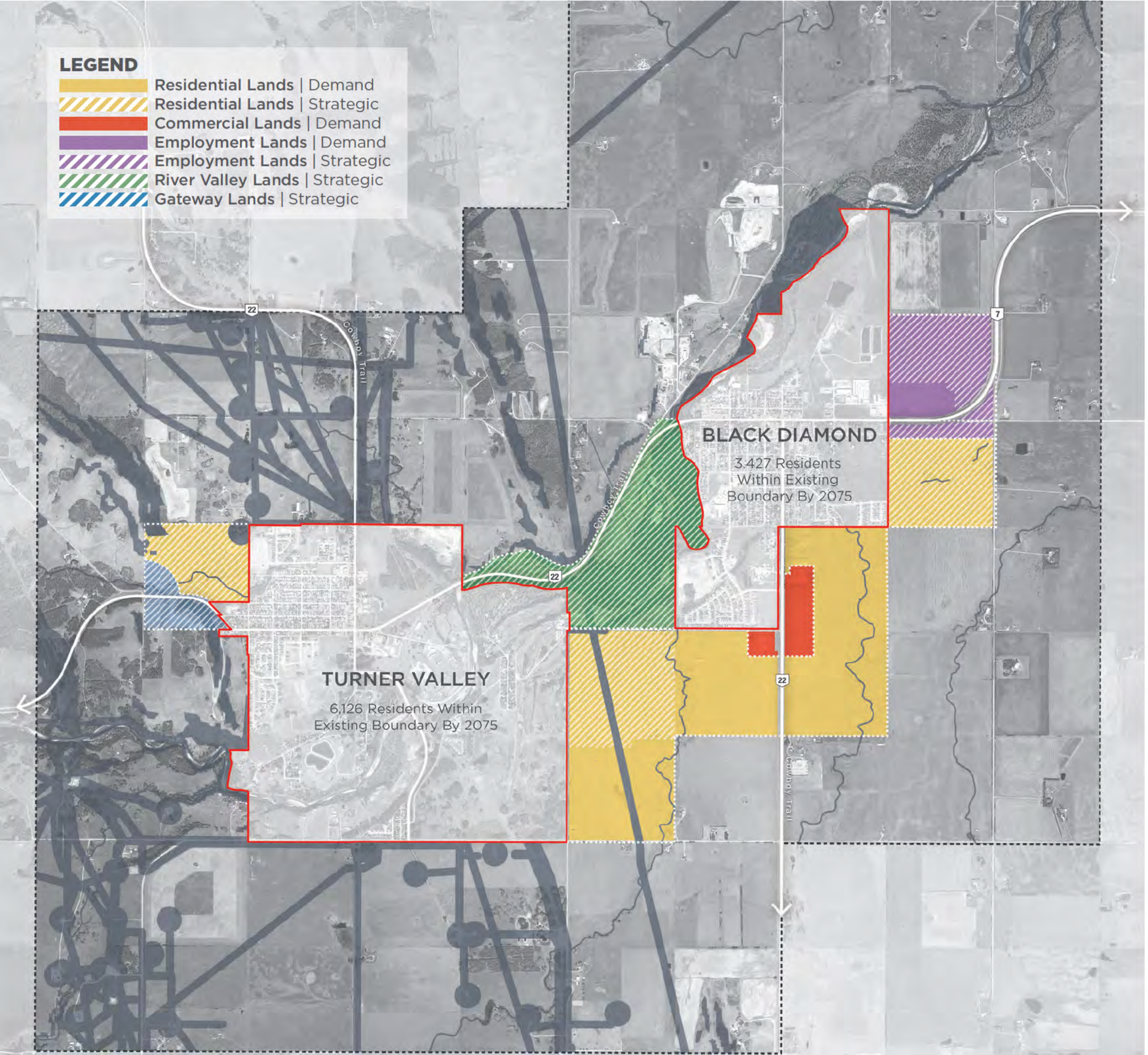
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URBAN systems

FIG. 5 BD-SWM

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Appendix B – Scenario 3

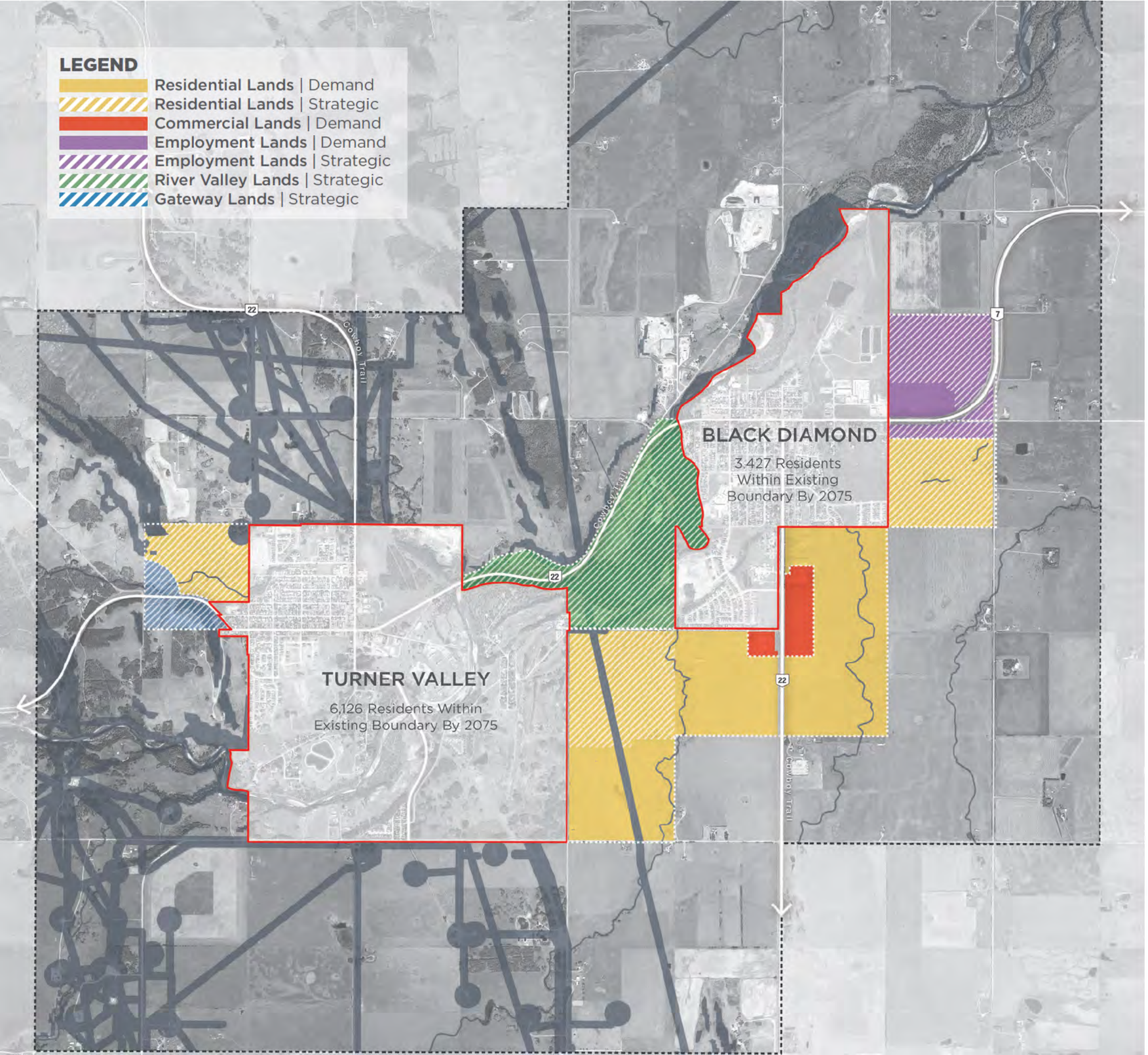


SCENARIO **3**

JOINT ADVISORY COMMITTEE DIRECTION

Concept Summary

- Indistinguishable borders
- Future growth concentrated in the least constrained lands
- Expanded River Valley Lands create an important environmental and open space connection between the Towns while maintaining highway control
- Creation of a new commercial node along Highway 22
- Concentration of Employment Lands along Highway 7
- Substantial contingency land supply



SCENARIO 3

JOINT ADVISORY COMMITTEE DIRECTION

Concept Statistics

GROWTH AREA TYPE	ACRES	PEOPLE / JOBS
Residential Lands | Demand	545	9,780
Residential Lands | Strategic	386	6,927
Commercial Lands | Demand	48	1,156
Employment Lands | Demand	31	294
Employment Lands | Strategic	143	1,357
River Valley Lands | Strategic	292	-
Gateway Lands | Strategic	50	-
Subtotal | Developable Lands	1,153	19,514
TOTAL | All Growth Area Lands	1,561	19,514

Appendix D

Joint Growth Strategy - Scenario 3 Phasing



MEMORANDUM

URBAN systems

Date:	February 17, 2016
To:	Andrew Palmiere, O2 Planning and Design Inc.
From:	Meghan Aebig, P.Eng.
File:	4033.0001.01
Subject:	Joint Growth Strategy – Scenario 3 Phasing

Urban Systems was retained by O2 Planning and Design Inc. (O2) to complete the conceptual analysis related to the Town of Black Diamond and the Town of Turner Valley's Joint Growth Strategy (the Study).

The purpose of the technical memo is to provide a very high level summary of the preferred phasing for Scenario 3 from just a servicing perspective for the areas surrounding Black Diamond. It is understood that MPE addressed the phasing for the areas around Turner Valley and therefore those areas are not included in this summary.

Attached is a sketch of Scenario 3. It is preferable to develop Area A first, followed by Area B and then Area C for the following reasons:

Area A

The Town plans to install a watermain this year that will connect the watermain on 1st Avenue NE to the watermain on 4 Avenue SE. For Development of Area A, the developer would be able to easily tie into this watermain.

Area A is also the closest to the Town of Black Diamond's wastewater lagoon and therefore only a small section of sanitary sewer will need to be constructed to service this area.

In terms of transportation, the proposed north-south road on the west side of Area A (shown on the conceptual drawing that was provided in the transportation memo for Scenario 3) is all that is required for access to this area.

Area B

For construction of Area B, watermain looping and the construction of a pump station will be required.

The proposed sanitary sewer would need to be extended from Area B to the lagoon. If Area A were to be developed first, a portion of the sanitary sewer will have already been constructed.

For access to the site, the proposed north-south road, will need to be extended further south (assuming a portion of this road was constructed when Area A was developed) and east-west roads will be required to ensure connectivity.

Area C

For construction of Area C, most of the larger watermains will have been constructed as part of the phasing for development of Area's A and B.

The sanitary sewer would be extended from Area's A and B.

The roads would be extended from Area B to the west.

If Areas B or C were constructed prior to Area A, the watermains required to service these areas could be easily constructed. However, based on the conceptual alignment of the sanitary sewer and the roads, in order to service Areas B and C, the sanitary sewer for the area would need to connect to the wastewater lagoon, north of the Highway. The roads to connect to the highways would also be required.

Sincerely,

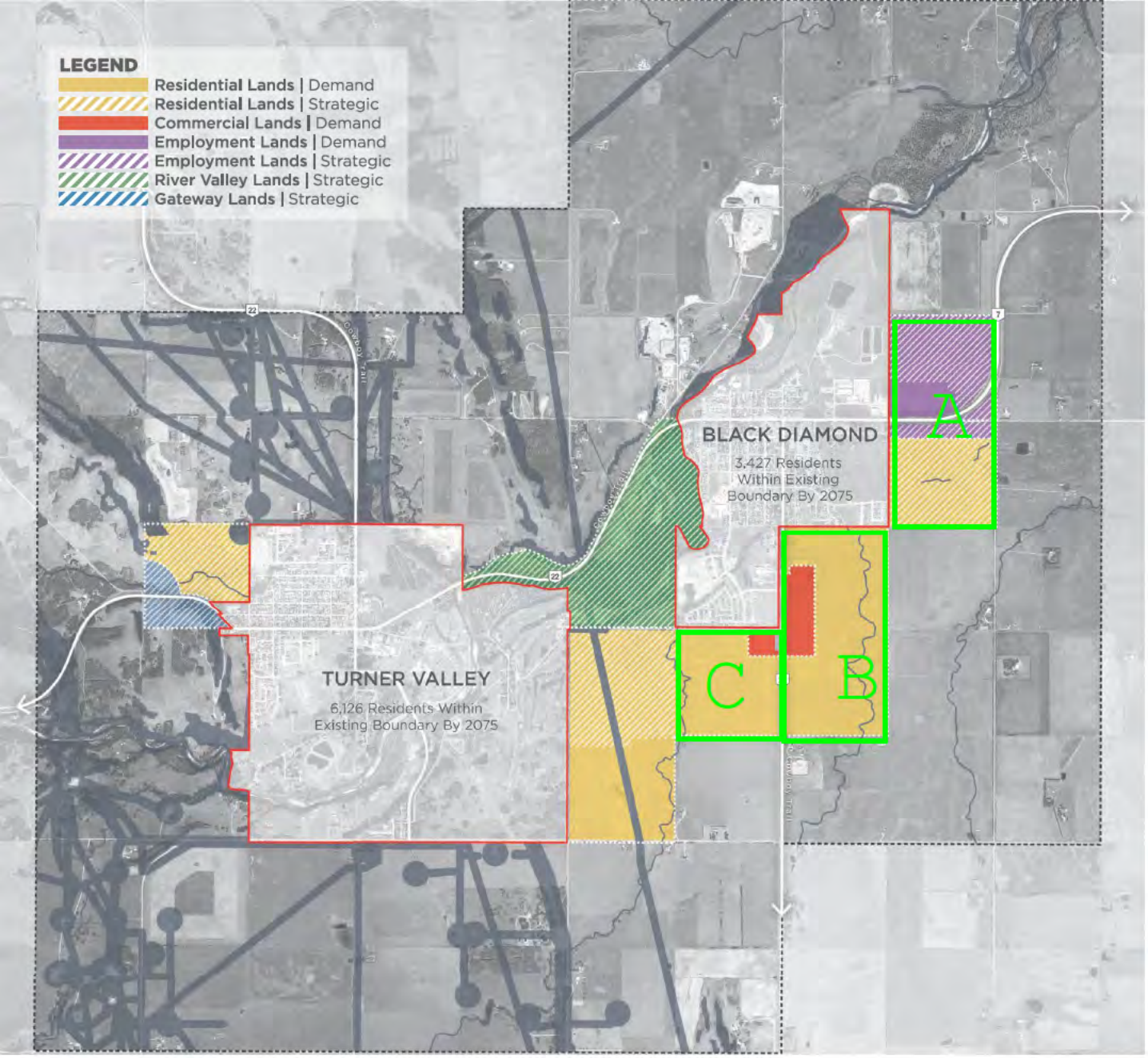
URBAN SYSTEMS LTD.



Meghan Aebig, P.Eng
Project Engineer

/ma

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SCENARIO 3

JOINT ADVISORY COMMITTEE DIRECTION

Concept Summary

- Indistinguishable borders
- Future growth concentrated in the least constrained lands
- Expanded River Valley Lands create an important environmental and open space connection between the Towns while maintaining highway control
- Creation of a new commercial node along Highway 22
- Concentration of Employment Lands along Highway 7
- Substantial contingency land supply

Appendix J
Black Diamond Economic Development Plan



TOWN OF BLACK DIAMOND

COMMUNITY ECONOMIC DEVELOPMENT PLAN

IMAGINATION AT WORK

2017

Disclaimer for Errors and Omissions:

Rynic Communications makes every reasonable effort to ensure the accuracy and validity of the information provided on this Report. However, as information and data is continually changing and this Report is to be used as a general framework for consideration of targeted economic development, Rynic Communications makes no warranties nor accepts liability or responsibility for any errors or omissions in the content or for damages as a result of relying on information contained within this Report.

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I. SETTING THE STAGE

Close your eyes. Now think about communities that you really love, communities that really stick in your mind or imagination. Have a picture? You likely didn't think of dozens of communities. You thought of two or three. They are more than just a dot on a map to you. They are colorful rainbow dots. There's something different in a world of homogeneous. The grass grows greener for you there. They put an instant smile on your face.

Is this place your community? Perhaps or perhaps not. What is reality is that memorable, exceptional communities are rare.

"Home" is such an emotionally laden term we answer with when asked to describe our community. We raise our kids there, nurture connections to people and place there, and hopefully find greater meaning in our lives there. The pursuit and achievement of happiness revolves around our home.

We all quietly want our communities to inspire us, and be inspired in its action. We all want to be proud of the community we live in.

All the plans in the world are just paper. Expressions of hope and optimism. Community and economic development is purely a product of people: as a matter of positive attitude, visionary and proactive community leadership, focused direction, and concrete actions. Great communities push out the voices of doubt…and yes…often anger in a community who all too often dominate the agenda.

To move into the future ambitiously, we need to start thinking differently about our role in enabling a more invigorated future, with the communities we live in at the core. We need to re-frame governance among government itself, and re-socialize governance within a society using a new set of keywords: Transformative; Purpose; Things That Matter; Soul; Emotional Attachment; Meaning; Engagement; Connection; Conviction; Heroes; The Incredible; Belief in Better.

Let's start with the simplest of starts: a light switch. Flick it on. With a single action, you now believe that acting in the service of others isn't a matter of generosity, it's a matter of obligation to future generations. "Legacy" is an immensely powerful word if each of us assumes we have an obligation to actively contribute – whatever our talents may be – to our community as community-builders.

Ultimately community success boils down to…US.

II. OVERVIEW

1.1 LOCATION

The Town of Black Diamond is located in the Municipal District of Foothills, at the foot of the Rocky Mountains and abutting Kananaskis Country, approximately 50 km southwest of Calgary on Highway 22. Driving times: Turner Valley - 5 minutes, Okotoks (10 minutes - Highway 7), south Calgary - 25 minutes, High River - 25 minutes. Black Diamond's location places it on the outside margin of the Calgary Region commutershed. The Calgary CMA is the fastest growing CMA in Canada for each of the two last census periods (2006 through 2016). This presents Black Diamond with an economic development agenda that can focus on directed growth management. Two inter-related questions become important: 1) What opportunities should Black Diamond capitalize on, and what strategies and actions can best maintain desired uniqueness within the region – which is a driver of investment attractiveness.

1.2 DEMOGRAPHY

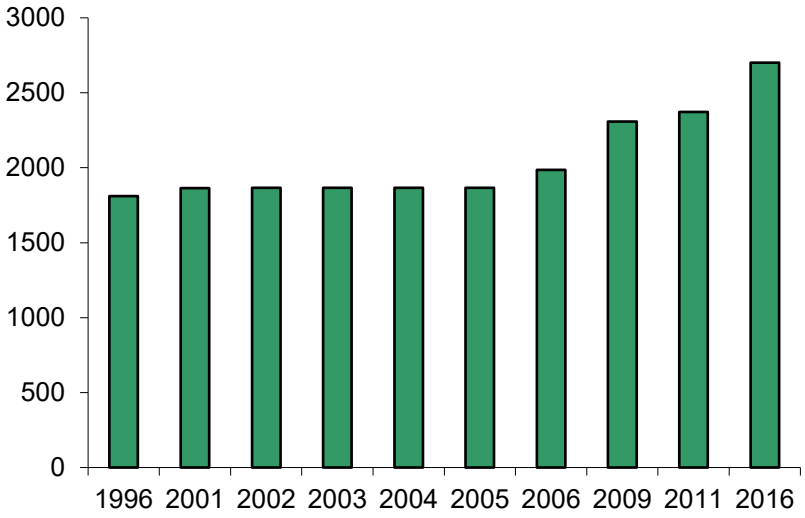
Population growth rate has exceeded the provincial and Calgary Census Metropolitan Area (CMA) average spanning two federal census periods since 2006, but population growth at 40.5% lags Turner Valley at 50.4%:

- Population – 2016: 2700
- Growth rate - 2001 to 2006: 1.8% (18.7% - Turner Valley, 46.7% - Okotoks, 10.6% - Alberta, 12.4% - Calgary CMA).
- Growth rate - 2006 to 2011: 24.9% (13.6% - Turner Valley, 42.9% Okotoks, 10.8% - Alberta, 12.6% - Calgary CMA, 5.9% - Canada).
- Growth rate – 2011-2016: 13.8% (18.1% - Turner Valley, 17.8% Okotoks, 11.6% - Alberta, 14.6% - Calgary CMA, 5%-Canada)

Total Black Diamond and Turner Valley population grew from 3470 in 2001 to 5259 in 2016.

Okotoks was one of the 10 fastest growing communities in Canada for the 10-year period from 2001 to 2011. Population grew from 11689 in 2001 to 28881 in 2016.

Figure 1 – Town of Black Diamond Population, 2016 Census of Canada



Black Diamond's proportion of population under age 45 is lower than Alberta, while the proportion of population over age 45 is greater than Alberta. Black Diamond's population (2016) is aging 5 times faster than Alberta's trendline since 2006. This is made more glaring by Turner Valley, where median age declined by 0.2 years between 2006 and 2016. Okotoks' median age has risen 4.1 years between 2006 and 2016 to 36.3, but Okotoks has a young population in Canadian context. Black Diamond's older median age is a pocket within a more youthful southern Alberta (e.g.

http://www.macleans.ca/society/mapped-the-oldest-and-youngest-places-in-canada/) – making it an economic development issue.

Figure 2 – Town of Black Diamond Age Structure, 2016 Census of Canada

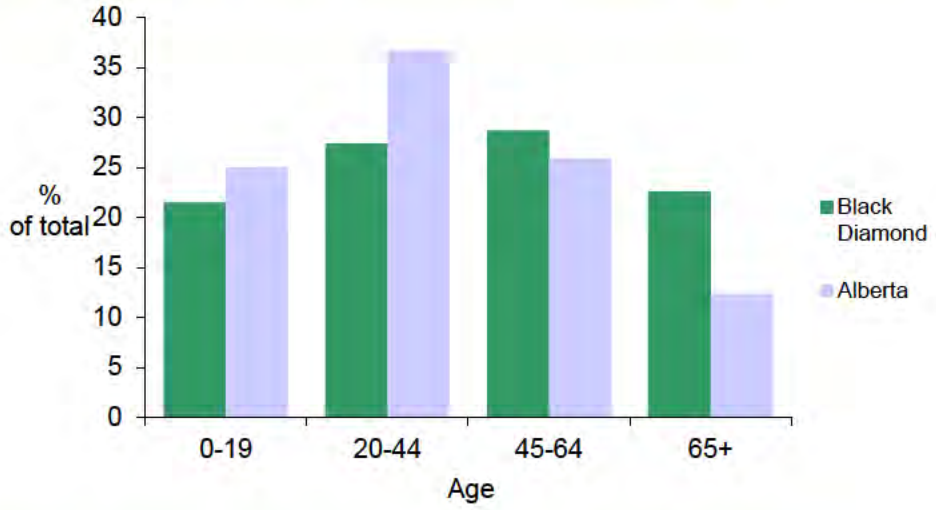


Table 1 – Town of Black Diamond Median Age, 2011 and 2016 Census of Canada

	Median Age			
	2016	2011	2006	% Change 2006-2016
Black Diamond	46	43	42.6	3.4
Turner Valley	41.5	42	41.7	-0.2
Okotoks	36.3	34.1	32.4	3.9
Calgary CMA	36.6	36.4	35.7	0.9
Alberta	36.7	36.5	36	0.7

III. WORKFORCE ANALYSIS

1.0 WORKFORCE BY OCCUPATION

1.1 Occupational Strengths (2016)

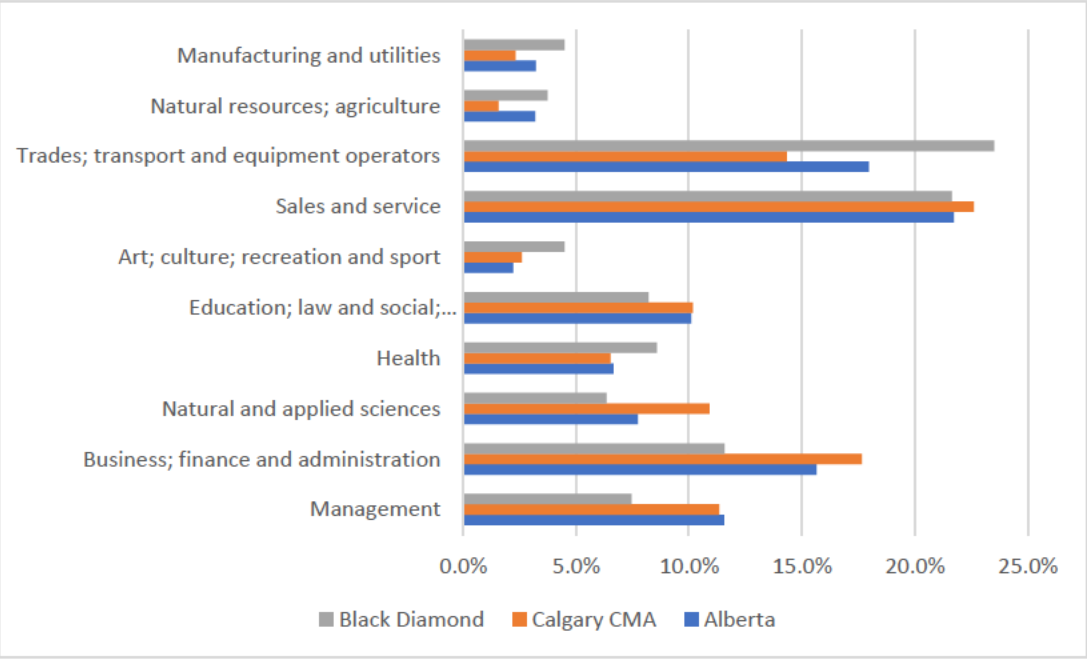
- Trades, Transport, Equipment Operators
- Sales and Service
- Business, Finance and Administration

Compared to the Calgary Economic Region, Black Diamond has more people proportionately working in Agriculture/Natural Resources, Art/Culture/Recreation/Sport, Manufacturing and Utilities, and Trades/Transport/Equipment Operators. Black Diamond has fewer people proportionately working in Natural and Applied Sciences, Management, and Business Finance and Administration. The remaining occupational groupings are close to average.

Compared to Alberta, Black Diamond has proportionately more people working in Art/Culture /Recreation/Sport, Manufacturing and Utilities, Trades/Transport/Equipment Operators, and Health. Black Diamond has fewer people proportionately working in Management, Business Finance and Administration, and Education/Law and Social/Community and Government Services. The remaining occupational groupings are close to average.

Consistent relative strengths are: Art/Culture/Recreation/Sport, Manufacturing and Utilities, and Trades/Transport/Equipment Operators.

Figure 3: Workforce Composition by Occupation, 2016 Compared To Calgary Economic Region and Alberta



Src: Census Canada, 2016

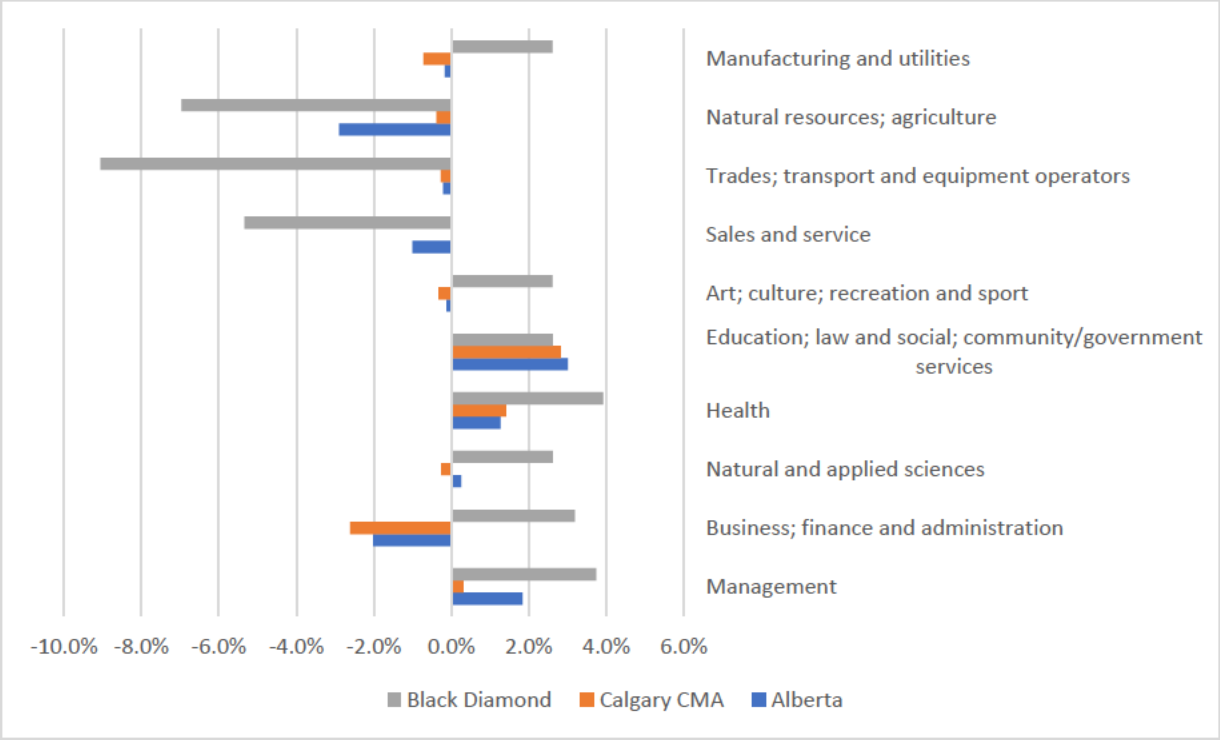
1.2 Occupation Strength Shifts (2006-2016)

As a proportion of the total labour force and compared to the Calgary Economic Region and Alberta, Black Diamond's Top 3 strengthening occupations as a proportion of the total workforce are Health, Management, and

Business/Finance/Administration. Stand-out weakening occupations as a proportion of the total workforce are Trades/Transport/Equipment Operators, Natural Resources/Agriculture, and Sales and Service.

While Trades/Transport/Equipment Operators (23.5%) and Sales and Service (21.6%) remain the largest occupational employers, these two occupations are two of the Top 3 proportionate declining Black Diamond workforce occupations.

Figure 4: Workforce by Occupation (Proportionate Change 2006-2016) Black Diamond Compared to Calgary Economic Region and Alberta



Src: Derived from Census Canada 2006, 2011, and 2016

Table 2: Top 3 Occupations 2006 vs 2016 Black Diamond Compared to Alberta

2016 Black Diamond	Alberta	2006 Black Diamond	Alberta
Trades, Transport, Equipment Operators	Sales and Service	Trades, Transport, Equipment Operators	Sales and Service
Sales and Service	Business, Finance and Administration	Sales and Service	Trades, Transport, Equipment Operators
Business, Finance and Administration	Management	Natural Resources; Agriculture	Business, Finance and Administration

Src: Derived from Census Canada 2006 and 2016

2.0 WORKFORCE BY INDUSTRY

2.1 Black Diamond Workforce Sector Strengths

Compared to the Calgary Economic Region, Black Diamond has more people proportionately working in Company Management, Construction, Retail Trade, Health Care/Social Assistance, and Public Administration. Black Diamond has fewer people proportionately working in Wholesale Trade, Finance/Insurance, Real Estate, Utilities, Professional, Scientific and Technical Services, and Accommodation and Food Services.

Compared to Alberta, Black Diamond has proportionately more people working in Company Management, Arts/Entertainment/Recreation, Public Administration Health Care/Social Assistance, and Construction. Black Diamond has fewer people proportionately working in Agriculture, Forestry, Fishing/Hunting, Utilities, Wholesale Trade, Finance/Insurance, Real Estate, and Accommodation and Food Services. The remaining occupational groupings are close to average (within 1%).

Table 3: Summary Top Town of Black Diamond Workforce Industry Sectors by Employment, 2016

Sector	% of Workforce	Employment Growth 2006-2016	Proportionate Shift in Labour Force 2006-2016
1. Retail Trade	13.4%	85	9.4%
2. Construction	13.1%	-35	1%
3. Healthcare, Social Assistance	13.1%	65	5.8%
4. Professional, Scientific and Technical Services	7.8%	75	0.6%
5. Public Administration	7.1%	60	-0.6%

Src: Census Canada 2016

2.2 Black Diamond Workforce Fastest Growing Industry Sectors by Employment (2006-2016)

Fourteen of 20 economic sectors recorded employment growth between 2006 and 2016. Six sectors recorded declines (Agriculture/Forestry/Fishing/Hunting, Mining/Oil and Gas, Construction, Wholesale Trade, Transportation/Warehousing, Administrative/Waste Management).

Eight of Black Diamond's 20 economic sectors had growth rates exceeding 75% between 2006 and 2016 (Utilities, Retail Trade, Finance/Insurance, Professional/Scientific/Technical Services, Company Management, Educational Services, Arts/Entertainment/Recreation, Public Administration).

"The Heavyweights"

Table 4: Fastest Growing Industry Sectors by Number Additionally Employed in Sector, 2006-2016

	Change in Raw Number Employed by Sector (2006-2016)
Retail Trade	**85**
Professional, Scientific and Technical Services	**75**
Healthcare, Social Assistance	**65**
Public Administration	**60**
Educational Services	**40**

Src: Derived from Census Canada 2006 and 2016

"The Movers and Shakers"

Table 5: Fastest Growing Industry Sectors by Proportionate Shift in Workforce, 2006-2016

	Proportionate Shift of Workforce (2001-2011)
Retail Trade	**9.4%**
Healthcare, Social Assistance	**5.8%**
Transportation/Warehousing	**2.1%**
Mining/Oil and Gas	**1.2%**
Construction	**1%**

Src: Derived from Census Canada 2006 and 2016

"The Upstarts"

Table 6: Fastest Growing Industry Sectors by Rate of Sector Workforce Growth, 2006-2016

	% Growth of Sector (2001-2011)	# Added to Workforce (2001-2011)
Utilities	**1000%**	**10**
Company Management	**1000%**	**10**
Arts/Entertainment/Recreation	**350%**	**35**
Professional/Scientific/Technical Services	**250%**	**75**
Public Administration	**171%**	**60**

Src: Derived from Census Canada 2001 and 2016

"The Decliners"

Table 7: Fastest Declining Industries as a Proportionate Shift of Total Workforce, 2006-2016

	Proportionate Shift of Workforce (2001-2011)	# Added to Workforce (2001-2011)
Wholesale Trade	-6.9%	-5
Administrative/Waste Management	-5.6%	-10
Accommodation/Food Services	-3.6%	5
Manufacturing	-2.4%	5
Information/Cultural Industries	-1.8%	0

Src: Derived from Census Canada 2001 and 2016

Table 8: Fastest Declining Industries with Fewest Additional Workforce, 2006-2016

	# Subtracted Workforce (2001-2011)
Construction	-35
Agriculture/Forestry/Fishing/Hunting	-30
Transportation/Warehousing	-20
Mining/Oil and Gas	-15
Administrative/Waste Management	-10

Src: Derived from Census Canada 2001 and 2016

Table 9: Workforce by Industry (Top 5 Industries 2016 vs 2006)

2016				*2006*			
Black Diamond		*Alberta*		*Black Diamond*		*Alberta*	
	% Workforce		% Workforce		% Workforce		% Workforce
Retail	13.4%	Retail	11%	Construction	12.1%	Retail	10.7%
Construction	13.1%	Health Care, Social Assistance	10.9%	Administrative/ Waste Management	10.1%	Health Care, Social Assistance	9.1%
Healthcare, Social Assistance	13.1%	Construction	10.4%	Wholesale Trade	8.1%	Construction	8.8%
Professional, Scientific and Technical Services	7.8%	Professional, Scientific and Technical Services	7.4%	Accommodation and Food Services	8.1%	Professional, Scientific and Technical Services	7.5%
Public Administration	7.1%	Accommodation and Food Services	6.8%	Public Administration	7.7%	Manufacturing	7.2%

Src: Derived from Census Canada 2006 and 2016

2.3 Black Diamond Workforce Relative Sector Strengths (2016)

Based on industry sector (classified according to the North American Industrial Classification (NAIC)) share of total employment, Figures 5 and 6 indicate leading sectors relative to the Calgary Economic Region and Alberta while Figure 7 indicates Location Quotient (LQ) sectors with values greater than 1 (suggesting economic base/export activity):

Table 10: Summary of Black Diamond's Relative Industry Sector Strengths

Black Diamond's Relative Sector Strengths as Proportion of Black Diamond Labour Force (2016)	Black Diamond's Economic Sectors With LQ > 1 Compared to Calgary CMA (2016)	Black Diamond's Economic Sectors With LQ > 1 Compared to Alberta (2016)
Retail Trade	Agriculture, Forestry, Fishing and Hunting (2.62)	Company Management (3.0)
Construction	Public Administration (1.86)	Arts, Entertainment, Recreation (1.69)
Health Care/Social Assistance	Company Management (1.58)	Public Administration (1.3)
Professional, Scientific and Technical Services	Arts, Entertainment, Recreation (1.47)	Information/Cultural Industries (1.28)
Public Administration	Construction (1.39)	Retail (1.22)
	Retail Trade (1.22)	Healthcare/Social Assistance (1.2)
	Healthcare/Social Assistance (1.22)	

Src: Derived from Census Canada 2016, LQ quotients independently calculated.

Figure 5: Black Diamond Employment Distribution Compared to Calgary Metropolitan Area and Alberta, 2016

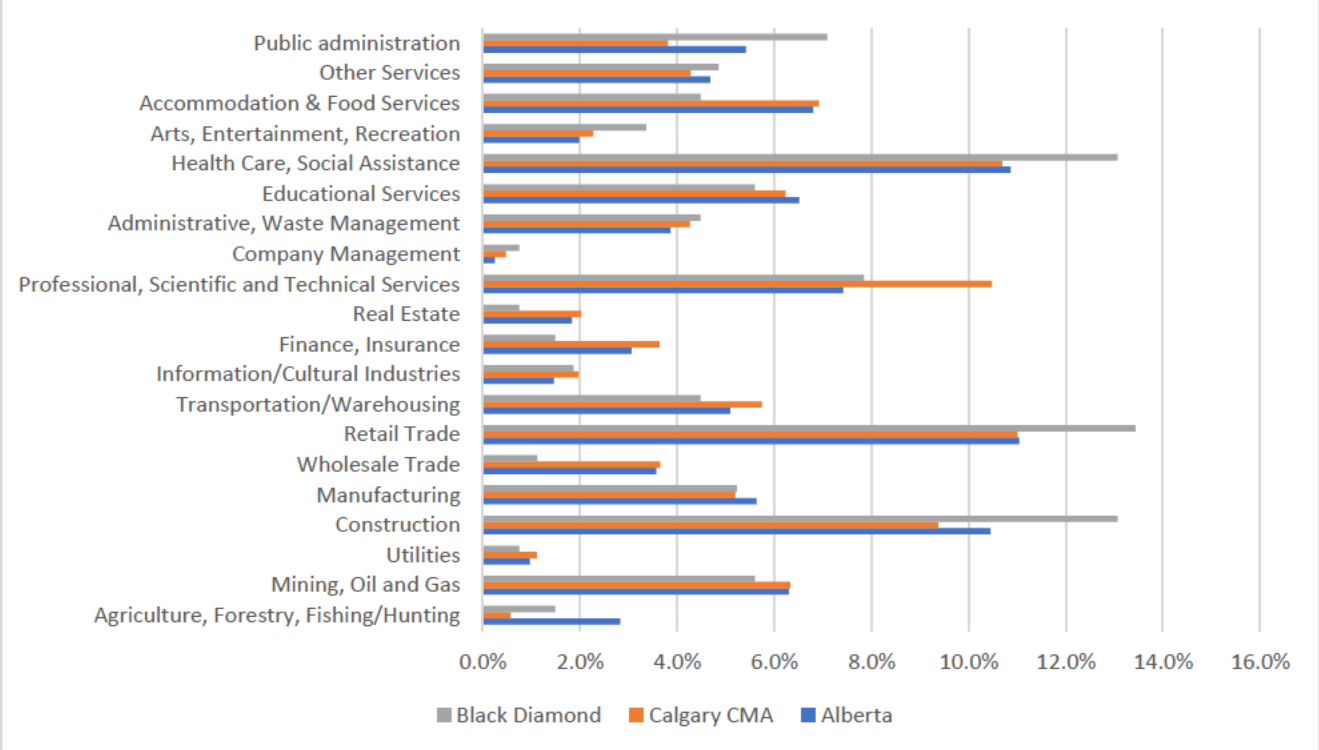
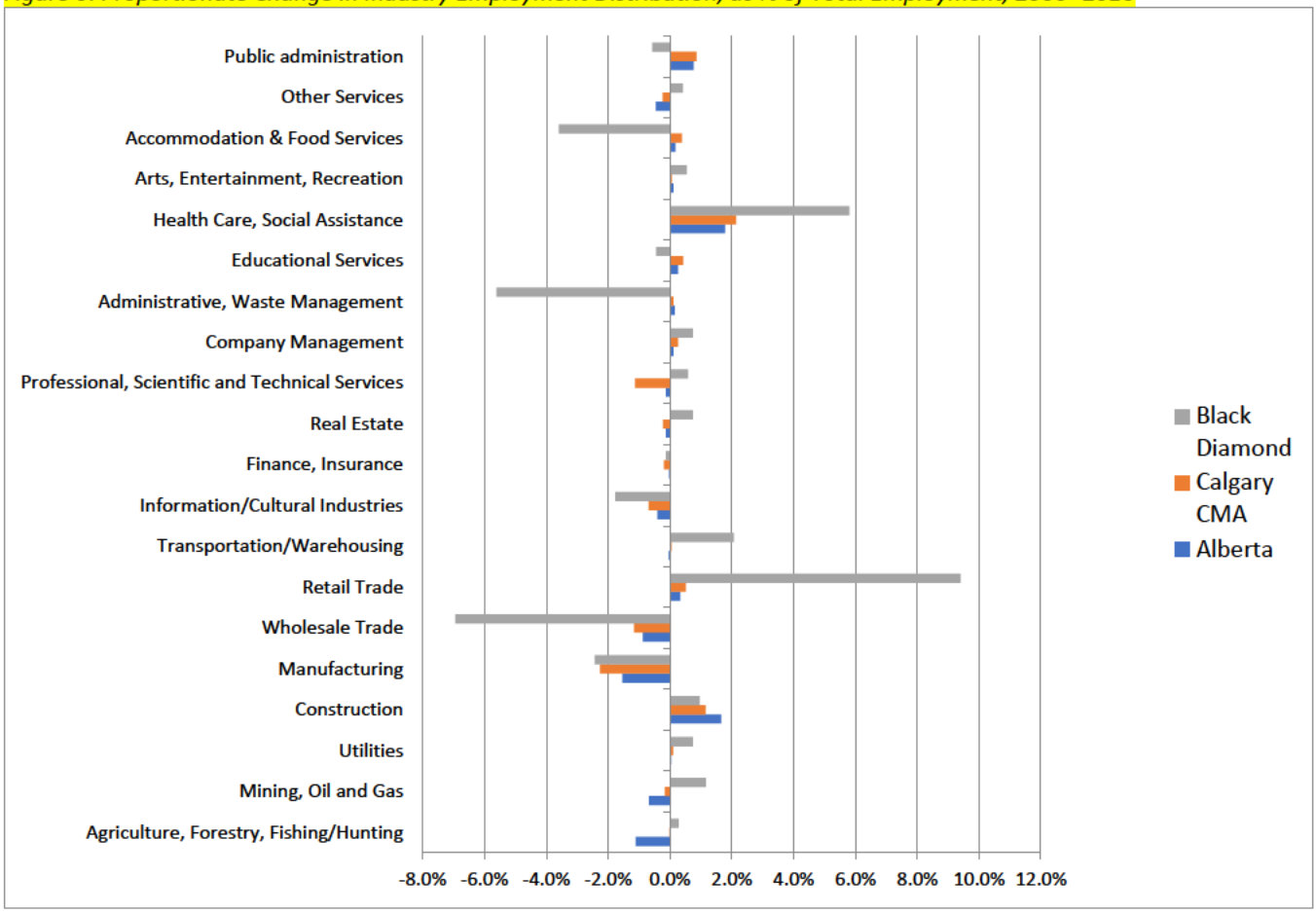


Figure 5 – Labour Force by Industry, 2016 Census Canada

Figure 6: Proportionate Change in Industry Employment Distribution, as % of Total Employment, 2006 -2016



Src: Census Canada 2006 and 2016

2.3.1 Location Quotients By Workforce Sector Employment, 2016

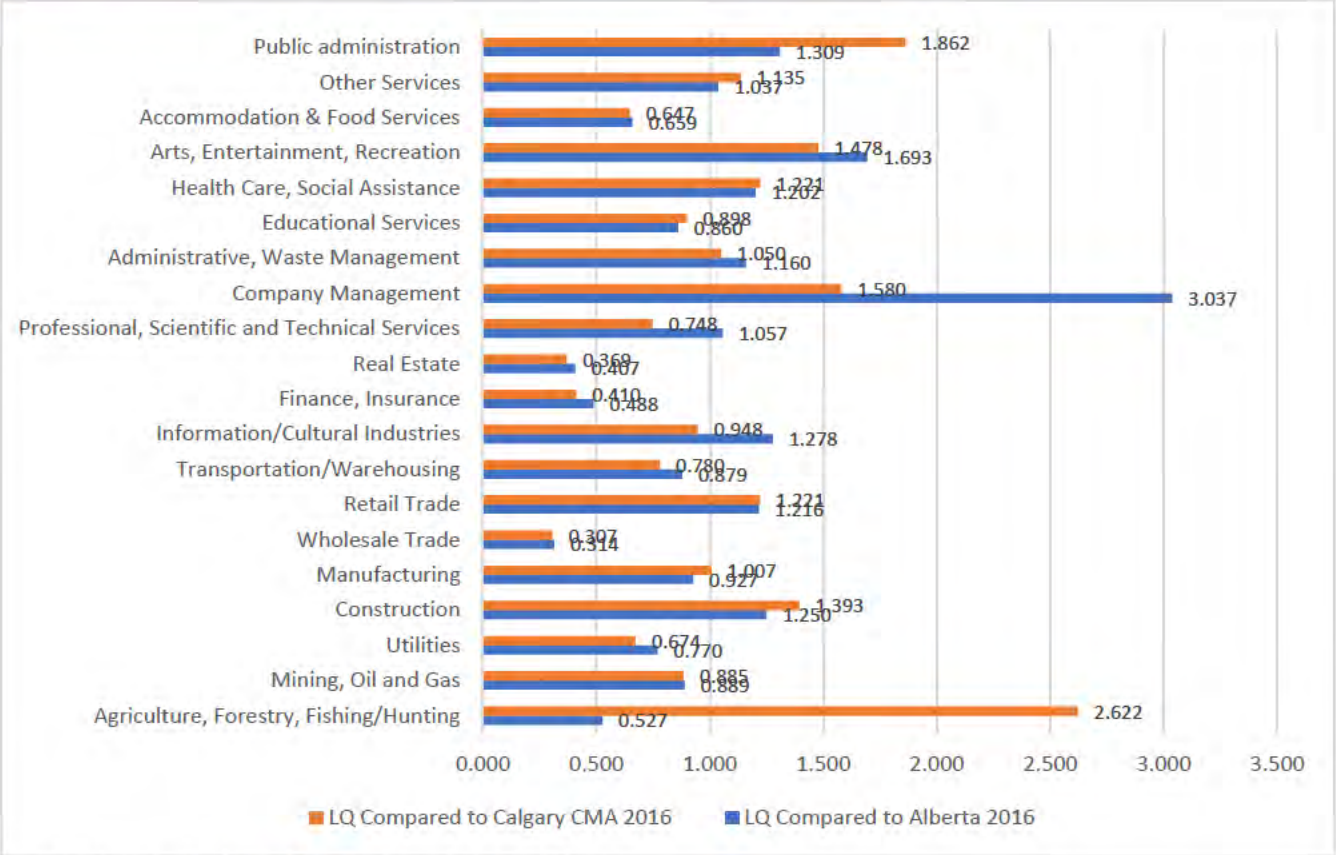
Location quotients (LQ) measure the relative degree of concentration of an industry sector in a municipality. LQ calculation measures relative industry sector employment in a municipality divided by the relative industry sector employment in a broader, benchmark area. Black Diamond is compared with Alberta and the Calgary CMA.

- A LQ of 1.0 results if local sector employment is the same as provincial sector employment.
- A LQ less than 1.0 indicates a concentration of economic activity that is less than Alberta and/or the Calgary CMA.
- A LQ over 1.0 indicates a concentration of economic activity that is greater than Alberta and/or the Calgary CMA.

As a general guide, basic industries (LQ greater than 1) are those exporting from the community and bring wealth from outside a community, while non-basic (or service) industries support basic industries.

Figure 7 indicates industry sectors that differentiate Black Diamond from the Calgary CMA and/or Alberta.

Figure 7: Black Diamond Location Quotients (LQ) Compared to Calgary CMA and Alberta, 2016



Src: LQs independently calculated based on Census Canada 2016 figures.

Two industry sectors have considerably above average representation in Black Diamond compared to Alberta:

- Company Management 3.04
- Arts, Entertainment, Recreation 1.69

Five industry sectors have modestly above average representation in Black Diamond compared to Alberta:

- Public Administration 1.31
- Information/Cultural Industries 1.28
- Construction 1.25
- Retail 1.22
- Healthcare/Social Assistance 1.2

Three industry sectors have considerably above average representation in Black Diamond compared to the Calgary CMA:

- Agriculture, Forestry, Fishing/Hunting 2.62
- Public Administration 1.86
- Company Management 1.58

Four industry sectors have modestly above average representation in Black Diamond compared to the Calgary CMA are:

- Arts, Entertainment, Recreation 1.48
- Construction 1.39
- Retail 1.22
- Healthcare/Social Assistance 1.22

2.3.2 Location Quotients By Workforce Employment, 2006 to 2016

Sector strength shifts in Black Diamond can be compared over time.

Compared to Alberta (2006 to 2016), Black Diamond's economy has shifted relative to Alberta with fewer sectors showing above average concentration. Data indicates an emergent sector strength in Company Management, Arts/Entertainment/Recreation, and Retail. There has been relative decline in strength of Construction, Transportation/Warehousing, and Administrative/Waste Management.

Table 11: Black Diamond LQ Compared to Alberta, 2016 vs 2006

2016	**2006**
Company Management 3.04	Construction 2.28
Arts, Entertainment, Recreation 1.69	Administrative/Waste Management 1.8
Public Administration 1.31	Transportation/Warehousing 1.49
Information/Cultural Industries 1.28	Information/Cultural Industries 1.28
Construction 1.25	Mining/Oil and Gas 1.23
Retail 1.22	Agriculture, Forestry, Fishing/Hunting 1.21
Healthcare/Social Assistance 1.20	Healthcare/Social Assistance 1.15
Administrative/Waste Management 1.16	Other Services 1.11

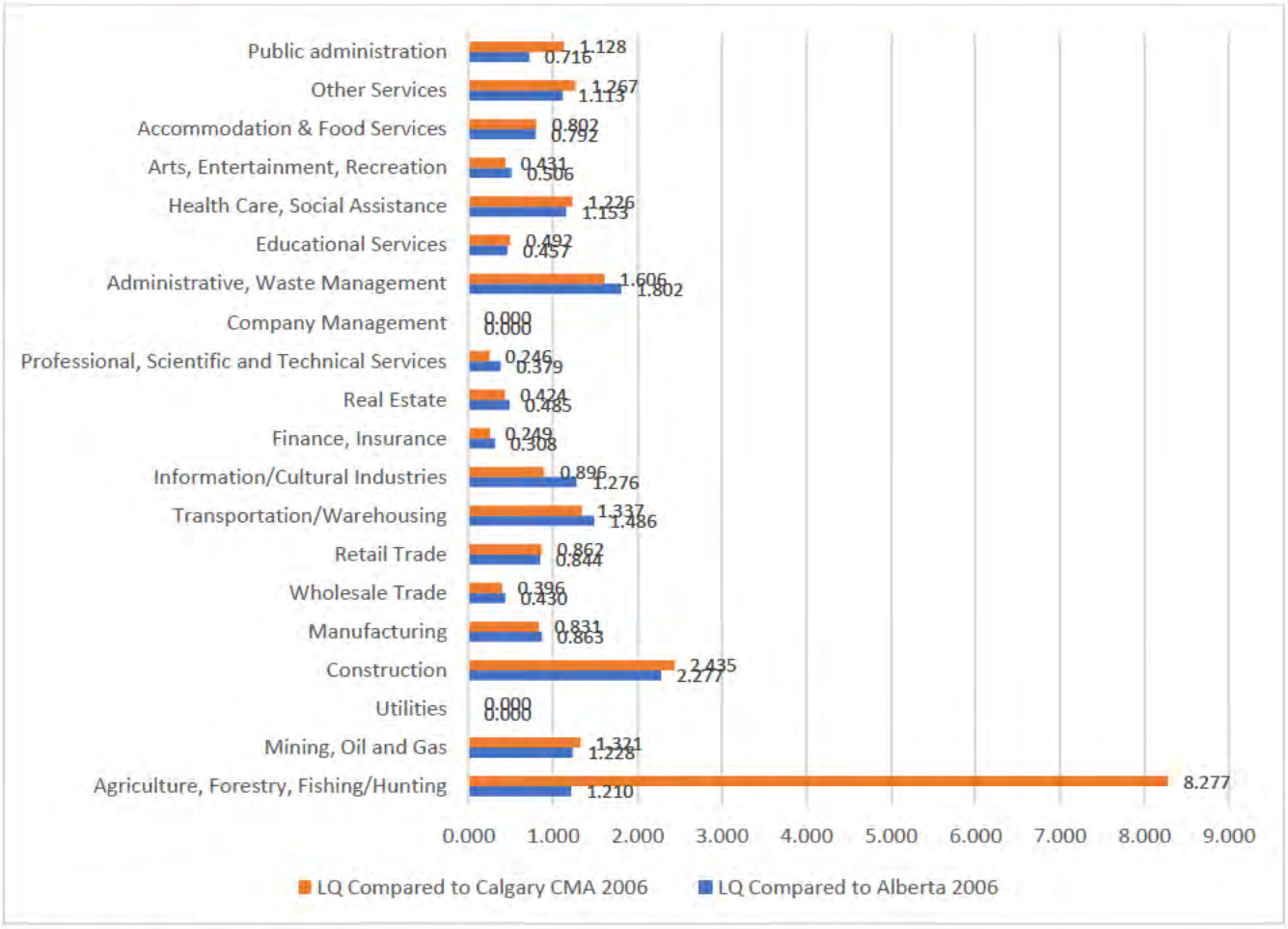
Src: Derived from Census Canada 2006 and 2016, LQs independently calculated.

Table 12: Black Diamond LQ Compared to Calgary CMA, 2016 vs 2006

2016	**2006**
Agriculture, Forestry, Fishing and Hunting 2.62	Agriculture, Forestry, Fishing/Hunting 8.28
Public Administration 1.86	Construction 2.43
Company Management 1.58	Administrative/Waste Management 1.61
Arts, Entertainment, Recreation 1.48	Transportation/Warehousing 1.34
Construction 1.39	Mining/Oil and Gas 1.32
Healthcare/Social Assistance 1.22	Other Services 1.27
Retail Trade 1.22	Healthcare/Social Assistance 1.23
Other Services 1.13	Public Administration 1.13

Src: Derived from Census Canada 2016 and 2006, LQs independently calculated.

Figure 8: Black Diamond Location Quotients Compared to Calgary CMA and Alberta, 2006



Src: Derived from Census Canada 2006, LQs independently calculated.

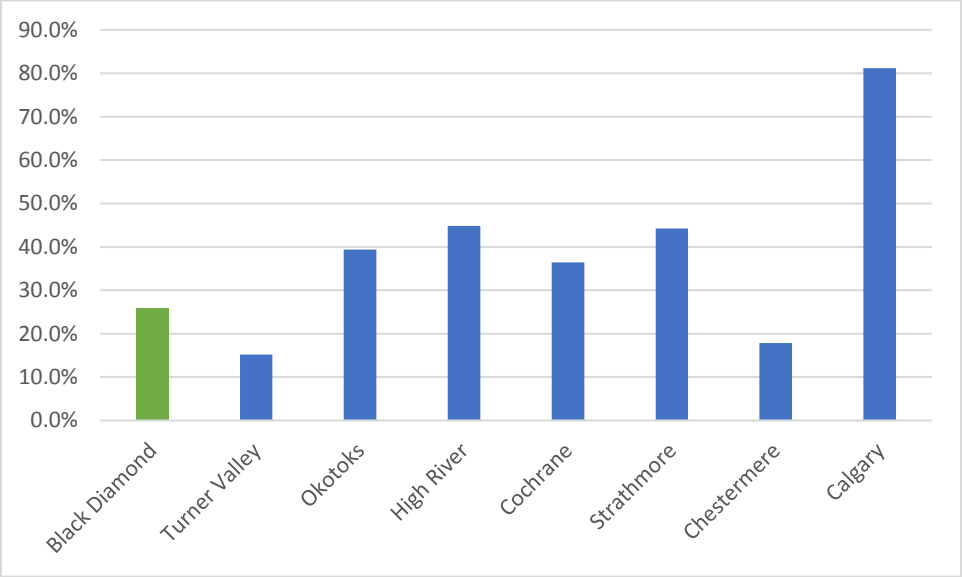
2.4 Workforce Movement

Economic boundaries are not fixed and the Black Diamond economy both imports and exports its workforce. An understanding of workforce movement allows for consideration of strategic pathways that work to reduce outflow on a broad and/or sectoral basis, and/or work to "repatriate" jobs in Black Diamond tapping skillsets the Black Diamond workforce has that are currently being exported.

2.4.1 Commuter Ratio

With 26% of the labour force working in Black Diamond in 2016 (8.9% from home, 16.9% from commercial premises) the Town lags other communities in the Calgary Region for proportion of the Black Diamond workforce that remains in the community to work – representing a significant labour force leakage issue and suggesting a classic definition of "bedroom community" to the City of Calgary. This said, only 15% of Turner Valley's workforce works in Turner Valley (39% Okotoks). This is a limiting factor for expansion of commercial services, and is generally a ratio that economic development should seek to improve over time.

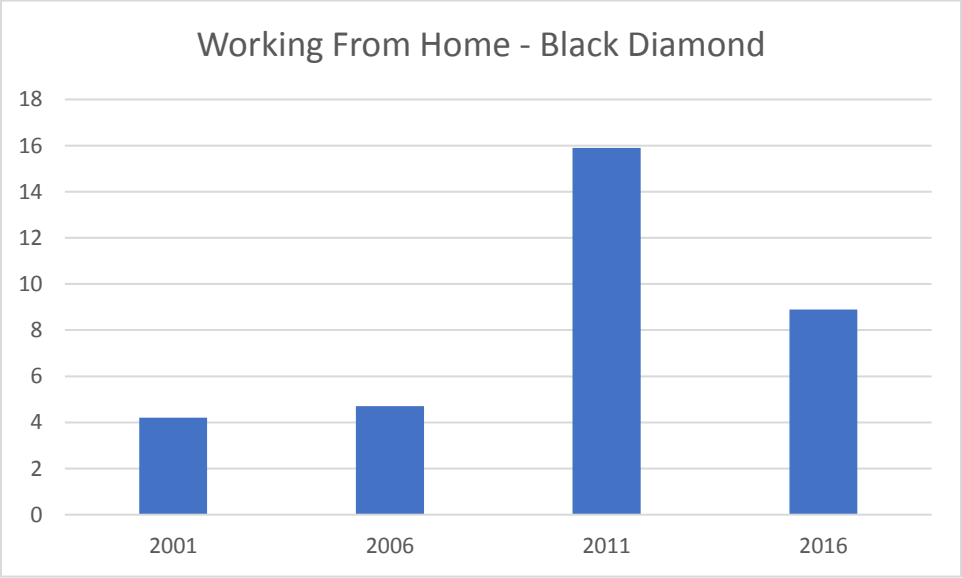
Figure 9: Proportion of Labour Force Working in Community (Commercial Establishments or Home-Based), 2016



Src: Census Canada, 2016

Nine percent of the labour force works from home (2016) (*Figure 9*), above a 7.7% Alberta average and a 7.1% Calgary CMA average.

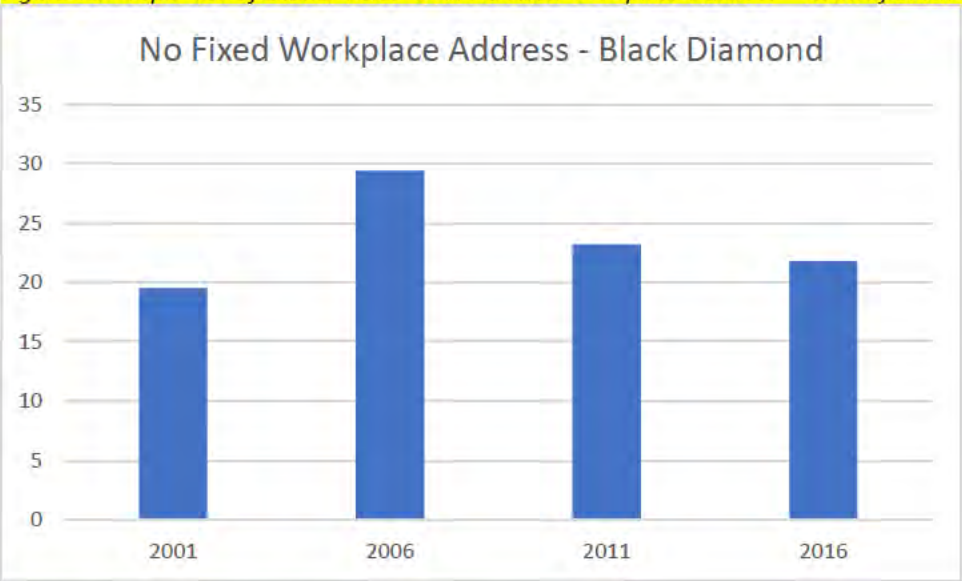
Figure 10: Labour Force Working From Home – Town of Black Diamond



Src: Census Canada 2001, 2006, 2011, 2016

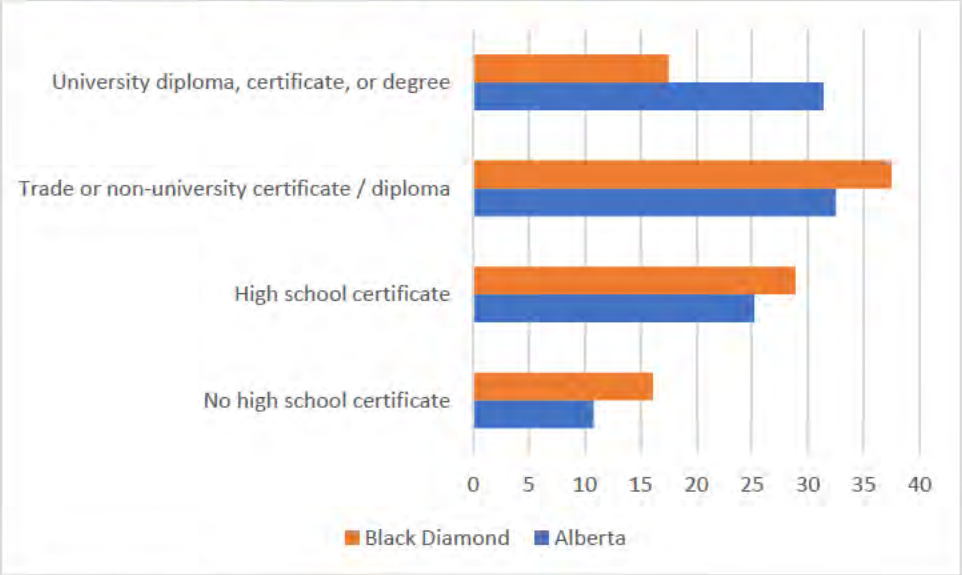
Twenty-two percent of the Black Diamond labour force has no fixed work place (Figure 11) (Turner Valley 24%, Alberta – 14.6%, Calgary CMA 13.8%), which is generally a characteristic of the construction, transportation and warehousing sectors. Together with Turner Valley, this represents the highest ratio of sampled communities in the Calgary Region. Not surprisingly, Black Diamond's labour force reflects a more trades-oriented profile, as seen in education levels that are above provincial average in trade certificates/diplomas, and under provincial average in university degrees.

Figure 11: Proportion of Labour Force With No Fixed Workplace Address – Town of Black Diamond



Src: Census Canada 2011, 2006, 2011, 2016

Figure 12: Level of Education – Town of Black Diamond



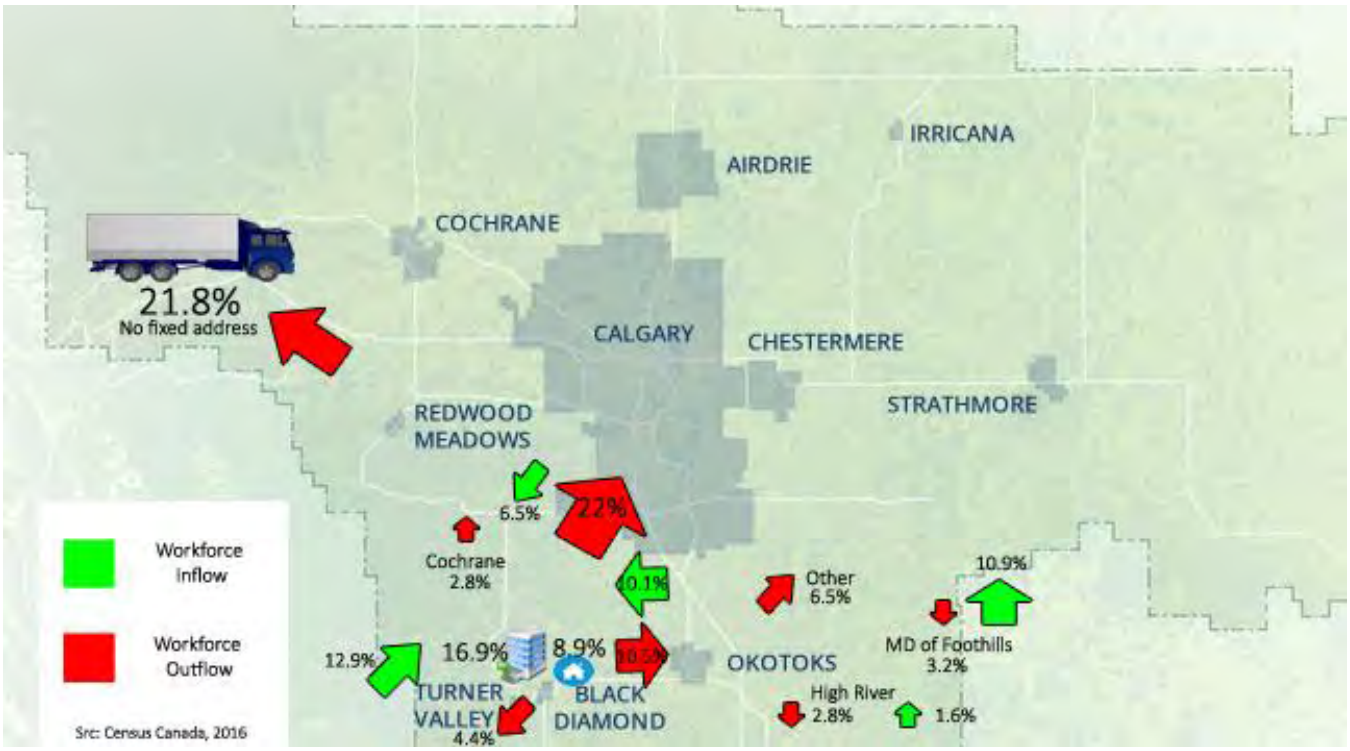
Black Diamond's level of education is a mixed picture. From 2011 to 2016 there has been a 2.7% rise in the proportion of the population age 25-64 with no high school certificate. A proportionate decline in trade or non-university certificate/diploma of 17.8% has been partially offset by a proportionate rise in those with a university diploma, certificate or degree of 8%.

Src: Census Canada, 2016

2.4.2 Workforce Inflow/Outflow

While Black Diamond residents leave the community to work (650), there is an inflow of Region residents (520) into the community to work (Figure 13) – generating a net workforce export of only 130 people or 10.5% of the workforce (Src: 2016 Census Canada, Commuting Flow – Census Subdivisions).

Figure 13: Workforce Inflow/Outflow, 2016



Commuting flow data source: http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/dt-td/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GK=0&GRP=1&PID=111332&PRID=10&PTYPE=109445&S=0&SHOWALL=0&SUB=0&Temporal=2017&THEME=125&VID=0&VNAMEE=&VNAMEF=

2.5 Other Town of Black Diamond Workforce/Community Characteristics

- Median household income at $76,288 is 18% below provincial average of $93,835 (2015). This is a limiting factor for consideration of expansion of commercial services.
- Median dwelling value of dwelling (2016), at $320,417, is 20% below the Alberta median of $400,104 and 29% below the Calgary CMA median of $450,406. Median monthly shelter costs for owned dwellings at $1112 is 25% below the Alberta median of $1481 and 31% below the Calgary CMA median. This is a significant cost of living competitive advantage.
- Black Diamond has an immigrant/visible minority population that is very small (and relatively static when statistically combined) compared to Calgary CMA and Alberta (Table 13). With Canadian policy indicating a welcoming of 1 million new immigrants to Canada over the next three years, this segment of population is an untapped potential in Black Diamond.

Table 13: Immigrant and Visible Minority Population

	Immigrant	%		%	Visible Minority	%		%	Total	
	2016		*2011*		*2016*		*2011*		*2016*	*2011*
Black Diamond	150	5.8%	195	8.8%	135	5.3%	20	0.9%	2570	2225
Calgary CMA	404700	29.4%	313880	26.2%	463450	33.7%	337425	28.1%	1374650	1199125
Alberta	845215	21.2%	644115	18.1%	933165	23.5%	656325	18.4%	3978145	3567975

Src: Census Canada, 2011 and 2016

- Black Diamond's self-employed labour force has fallen considerably between 2011 and 2016 while self-employment in each of the Calgary CMA and Alberta has risen modestly over the same time period.

Table 14: Self Employment

			Self Employed			
		%		%	Total	
	2016		*2011*		*2016*	*2011*
Black Diamond	117	6.8%	215	17.3%	1730	1245
Calgary CMA	92350	11.3%	79375	10.9%	816550	725915
Alberta	278710	13.7%	246785	11.7%	2032940	2115640

Src: Census Canada, 2011 and 2016

3.0 BLACK DIAMOND BUSINESS BASE

While employment by occupation and employment by industry sector provide a snapshot of Black Diamond's workforce and indicates workforce strengths that can be leveraged by local enterprise, 74% of Black Diamond's workforce has no fixed workplace address (270 people) or leaves Black Diamond to work elsewhere (920 people). In addition, there is a daily inflow of 520 people into Black Diamond to work that offsets outflow (Src: 2016 Census Canada, Commuting Flow – Census Subdivisions).

An analysis of business licensing provides a profile of industry sector strength that exists within Black Diamond's boundary. Strengths represent competitive advantages, which are typically attractive to similar businesses (as per the principle of economic clustering), and can be capitalized on for corporate or self-employment investment attraction.

Structure of Current Economy

Agriculture, oil and gas, tourism, commercial services.

Black Diamond is a regional service centre, drawing residents from the larger agricultural community to its bank, hospital, senior's lodge and curling rink/arena. Oilfields Junior/ Senior High School, C. Ian McLaren Elementary School and Education Plus educate youth to adults from Black Diamond and the surrounding areas. The library and post office provide public amenities to all residents.

The town's economic history was founded on the oil and mining industries. Today, although Black Diamond still benefits from the oil industry and the Town continues to have a strong agricultural base – providing a close economic and cultural tie to the agricultural community. A growing artistic community, location on Highway 22 ("Cowboy Trail"), and location that is desirable as a weekend circle tour for visitor segments like motorcycles, is feeding modest growth of the tourism industry.

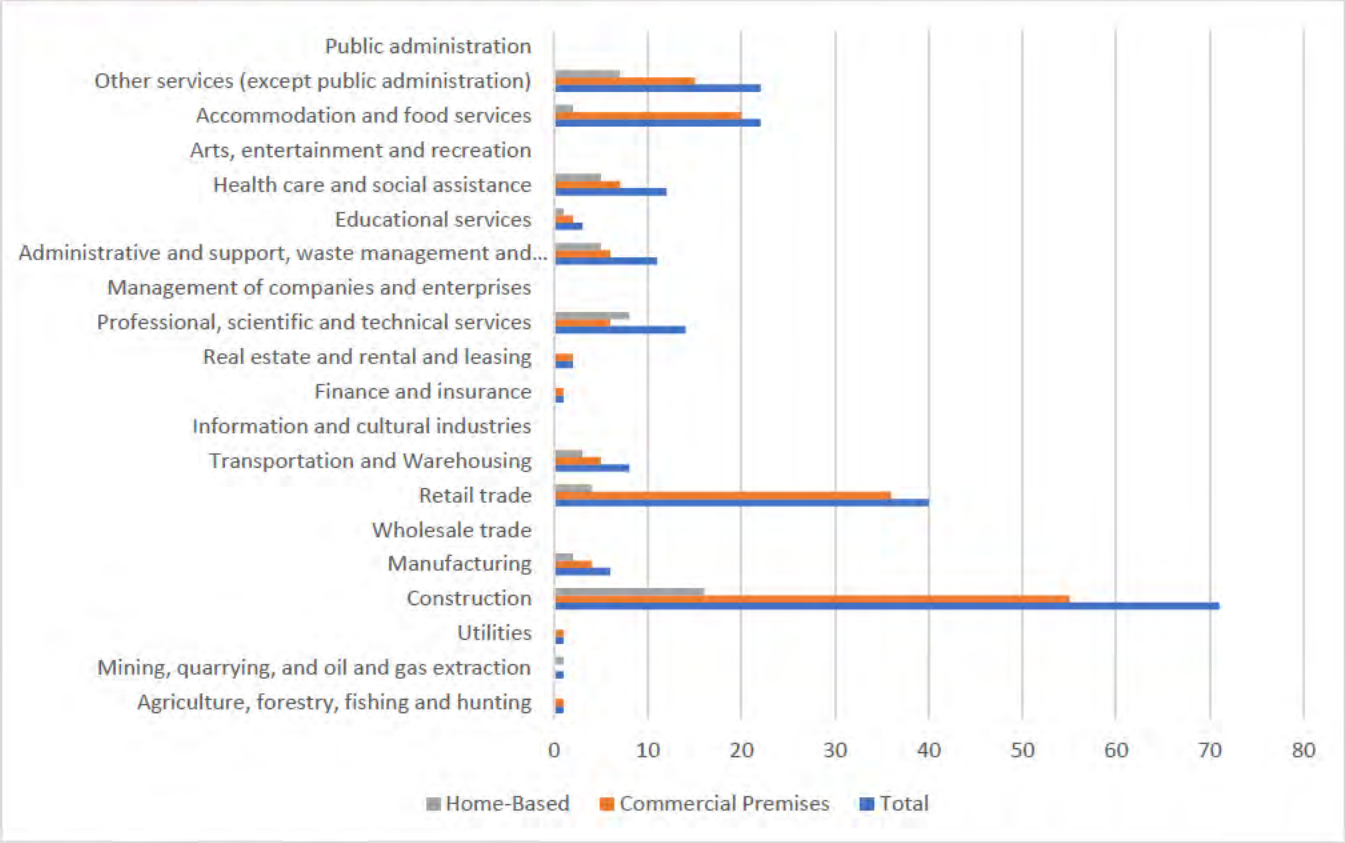
3.1 Local Economy Strengths (Business Licenses)

Licensed businesses in Black Diamond have been assigned NAICS industry codes. Industry groups that exhibit a large local presence are best positioned to attract other businesses of similar type given sector aggregation acknowledges degree of competitive advantage.

There are 215 licensed businesses in Black Diamond as at June, 2017, with 157 of those businesses located in Black Diamond. The industry groups that exhibit a large local presence are best positioned to attract other businesses of similar type. Businesses registered in Black Diamond (2017) have strong concentration in Construction and Retail, with secondary concentration in Accommodation and Food Services, and Other Services. Together, Construction and Retail represent 52% of business licensing. A grouping of Services (accommodation, food and other services) together are the size of the retail business community. The Professional, Scientific and Technical Services presence should be of particular strategic interest to Black Diamond, given they represent the heart of a knowledge workforce, have more independent locational choice. This type of business tends to choose their resident community based on quality of place factors.

Fifty-eight non-resident licensed businesses have a very strong concentration in the Construction sector (45 businesses or 77% of non-resident businesses), representing an economic opportunity for local enterprise to fill with benefit to the community in the form of local spending multiplier effect.

Figure 14: Black Diamond Business Base By Sector, 2017



Src: Town of Black Diamond Business Licenses as at June, 2017

4.0 BLACK DIAMOND WORKFORCE PROFILE: CONCLUSIONS

Analysis of Black Diamond's workforce and business licensing yields a number of conclusions about the changing nature of Black Diamond's sectoral workforce:

- **Emergence of a White Collar Economy** - the trend of occupational shift in Black Diamond's workforce suggests ongoing transition from a "blue collar" to a "white collar" labour force profile. While the blue collar connotation has larger presence (e.g. construction, trades/transport/equipment operators, those with no fixed workplace address) it is proportionally declining. This trend is supported by workforce declines in agriculture and oil and gas primary industries, and a rise in health, company management, public administration and business/finance/administration segments of the workforce.
- **Strengthening Sub-Regional Service Centre Role** – the workforce is shifting from a goods to a services economy. Primary industry is in decline while retail, education services, professional services, other services, and accommodation/food services have both workforce and business license strength. Black Diamond remains a service centre for the agricultural community, but also serves commuters/acreages, and its own population that has surpassed 5000 (Black Diamond and Turner Valley).
- **Solid Healthcare Foundation** – the presence of the hospital provides economic stability. An economic development question is whether it can be leveraged in other forms of economic activity like medical professional services given an older than Alberta median age.
- **Creativity on the Rise** – though a small portion of the workforce, the art/entertainment/recreation workforce is expanding and has proportionate strength relative to the Calgary Region and Alberta. Turner Valley has equivalent workforce strength, suggesting an economic development point of emphasis given this sector's benefit on quality of life and quality of place.
- **The Entrepreneur** – Black Diamond's above Calgary CMA and Alberta home-based portion of the workforce is a key economic development opportunity to exploit given Black Diamond's value proposition in the Calgary Region (affordability, market access, enhanced Internet (TELUS)). While self-employment has declined in the last five years, and can be cyclical based on economic conditions (i.e. rises in a downturn), this entrepreneurial segment of the labour force is a key economic development opportunity given potential for job and company generation, and in-community workforce with all of its benefits – from community safety to economic spending multipliers.
- **Manufacturing Revival?** – the numbers do not suggest a revival without effort. Manufacturing is in proportionate decline in the Calgary region and Alberta. While Black Diamond has a small nucleus of manufacturing activity, the convergence of agricultural community connection and creative "makers" present in the community suggests potential for craft manufacturing expansion.

IV. SETTING A KEY PERFORMANCE TARGET

A core economic development objective is to expand the non-residential assessment base. A higher non-residential assessment ratio is generally desired by communities for three reasons: 1) increased ability to pay for services/amenities that in turn create a self-sustaining cycle of community investment; 2) wise municipal fiscal management; and 3) local employment has a number of positive ramifications, including but not limited to community self-sufficiency, reduced commuter ratio, increased community safety, and increased corporate support for community initiatives/events. Of note, Black Diamond's non-residential assessment ratio declined by 1.4% between 2011 and 2017, lagging town-status community average growth of 1.07% in this period.

The Turner Valley/Black Diamond Joint Growth Strategy makes a 27 sq. ft/capita projection recommendation based on communities in western Canada with a similar economic role. A modestly different way to view non-residential land need is to identify an average town-status community assessment ratio, and work from a current assessment value per developed acre to project to calculate projected need.

Table 15: Assessment Ratio

	2017		2011	
	Non-Residential	Residential	Non-Residential	Residential
Black Diamond	**10.3**	**89.7**	**11.4**	**88.6**
Turner Valley	8.1	91.9	8.4	91.6
Town-Status Community Average	*20.74*	*79.26*	*19.67*	*80.33*

Src: Alberta Municipal Affairs

A target for Black Diamond is established as follows:

- **85% residential / 15% non-residential.**

A lower than provincial average target ratio acknowledges constraints related to presence of Okotoks as an established commercial service centre, acknowledges assessment ratio of mid-size communities in the Calgary region (e.g. Okotoks 13.4% non-residential, 2017), and yet remains ambitious.

To reach this target, and using a small number of assumptions, a calculation of land commercial/industrial land required to achieve a target assessment ratio at build out to current boundary was calculated (*See Appendix 1*):

To reach an 85/15 ratio:

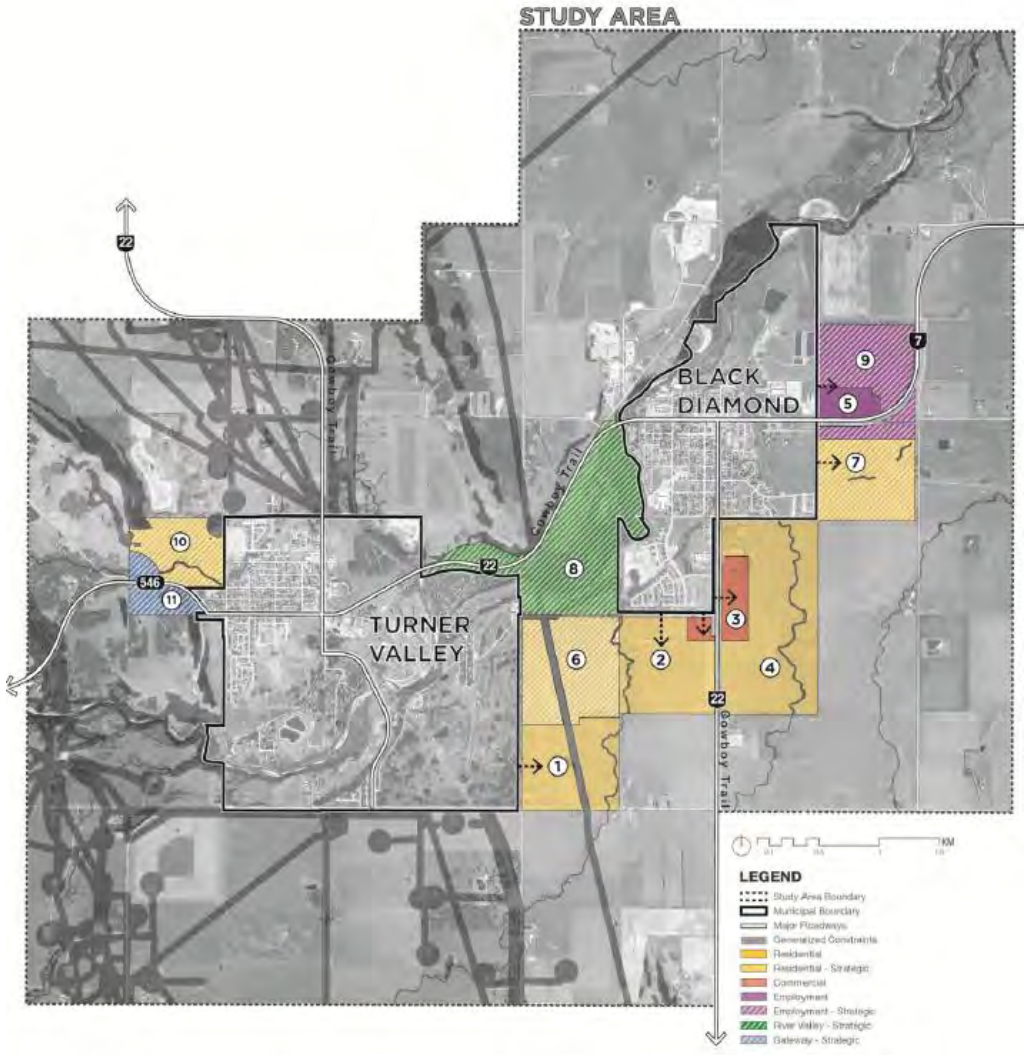
- **There is a 105 acre commercial/industrial land deficiency within the current boundary, which would have to be compensated for in proportionately more non-residential development in new lands subject to the Growth Study (2017).**

To reach an average Alberta Town target (79/21):

- **There is a 147 acre commercial/industrial land deficiency (all remaining lands within the current town boundary), which would have to be compensated for in proportionately more non-residential development in new lands subject to the Growth Study (2017).**

This conclusion, and pursuit of both a target assessment ratio and closing of the deficiency via identification of suitable (based on market forces and minimization of land restrictions) land to achieve the target, shapes fundamental consideration of vision, land development, and sub-regional community collaboration.

Figure 15: New Development Lands, Scenario 3 (Preferred), Turner Valley/Black Diamond Growth Study, 2017



V. STRATEGIC POSITIONING

The Municipal Development Plan talks about achieving health economic growth. The Strategy Plan speaks to achieving a sustainable, strong, and diverse economy. This Plan is about defining the "how" with clarity.

Strategy isn't about pursuing everything. It's about focus, choice, and ultimately differentiation that lies at the heart of a sustainable and thriving community.

Strategy does not mean you stop doing other things and offering general services to a full range of need, it means that you place points of emphasis on your path forward….to draw distinction and achieve excellence in specific areas that set the community apart – contributing to a broader positive economic and community development environment – and a vibrancy – that creates a self-perpetuating cycle of dynamism.

1.1 DOCUMENTATION

The following documents were reviewed to help "interpret" community economic development plan direction:

- Black Diamond Municipal Development Plan, 2001
- Black Diamond Land Use Bylaw
- Strategic Plan (2015-2018)
- Black Diamond Brand Study – 2016
- Turner Valley Economic Development Plan – 2012
- Turner Valley-Black Diamond Joint Growth Strategy – Draft – 2017
- Black Diamond-Turner Valley Amalgamation Study – 2017

1.2 BLACK DIAMOND ECONOMIC DEVELOPMENT WORKSHOP, JUNE 2017

Challenge Themes: Diversification, entrepreneurship, differentiation, leadership, vision-based growth management, collaboration with Turner Valley.

Best Bet Economic Opportunities (Top 3): Hotel, River access via a beach, Creative hub/artist centre for art, music and culture.

Community Development Opportunities (Top 3): Destination development (attraction draws), Park with river access, Amalgamation

Community Drivers (Top 3): Creative/knowledge-based workforce attraction, Innovative housing, downtown expansion/quality of place tied with recreation amenity.

Community Distinction in Future (Top 3): Gateway to recreation/recreation hub, creative community, green innovator tied with family-friendly and more socially connected than average.

1.3 BRAND SURVEY, 2016

"Arts, culture and unique stopping points are primary draws Black Diamond should take more advantage of."
Words most used to describe Black Diamond: artistic, artsy, artisanal, art (and culture) has the most consistent strength as the most unique differentiators.

There is a gap between brand vision and brand reality that will require focused effort to bridge:

- What residents feel Black Diamond is most known for now: access to Chain Lakes, Black Diamond Hotel, Marv's, Artisans, Cowboy country.
- What visitors feel Black Diamond is best known for now: Black Diamond Hotel, relation to Turner Valley, Black Diamond Bakery, Cafes and eateries.

1.4 OTHER KEY ENVIRONMENTAL FACTORS

Turner Valley – investment and tourism think far less about municipal boundaries than municipalities and their residents do. Investment and tourism thinks about value proposition and distinctive product, respectively. Given geographic proximity of Black Diamond and Turner Valley and the degree of shared services, value proposition between the two communities is little differentiated. Tourism product development and promotion would benefit from deeper collaboration

by creating a sum greater than the parts. In addition, together the two communities have a population that has surpassed 5000 people. For investment purposes, this "talks louder" than two smaller communities.

Aging – Black Diamond's older population aging faster than provincial average.

Okotoks and Aldersyde – regional service centre and regional industrial hub limit Black Diamond's economic picture to niche opportunity

Vision – A defining vision for community is not well articulated/understood. Investment is attracted to dynamic communities that have sense of direction and associated accomplishment.

1.5 STRATEGY CONVERGENCE

Good strategy overcomes a key challenge(s), differentiates, and is ambitious:

1) Consider amalgamation an eventuality and plan accordingly. A key next step is joint economic development and marketing.

2) Attract families to add dynamism and nurture workforce development.

3) Pursue a Creative Black Diamond vision with both economic and community development components to reflect community instinct for capitalizing on local assets in a way that elevates the community and sets it apart.

4) Generate housing innovation to attract families and a creative workforce.

Black Diamond Strategy: To be a leader in the expression of creative spirit in the arts, the built and natural environment, housing innovation, and economic activity that celebrates "the makers" of food and hand-craft.

Four things will make Black Diamond different:

- Black Diamond has created an ag-residential new neighbourhood as a signature form of innovative housing.
- Black Diamond loudly celebrates its creators and makers.
- Black Diamond has created a rural creative community centre.
- Black Diamond has worked with Turner Valley to create the largest new river park to be created in the Calgary Region in the next 50 years.

1.6 THE VISION

Existing vision is established in the Black Diamond Municipal Development Plan:

"Rooted in a strong heritage of community pride and Western Culture, Black Diamond offers a blend of positive small town atmosphere and values with the challenge of establishing a thriving sustainable community. Black Diamond supports a balance of opportunities for commerce and economic development with a commitment to protect and enhance its natural setting in the Sheep River watershed. Black Diamond strives to create a safe and healthy community by encouraging its residents to participate in achieving the benefits of health, education, recreation, and culture for all community members and visitors."

The vision statement is supported by a set of directional values:

Positive Small Town Atmosphere
The Town of Black Diamond takes pride in its artistic culture, friendliness and small town charm. Black Diamond's small town atmosphere will be preserved and enhanced.

Respect for the Environment
The Town of Black Diamond's clean air, natural setting and environment is the foundation for Black Diamond's quality of life. The Town of Black Diamond will protect these natural assets through preservation and environmentally sound development.

Heritage Appreciation
The Town of Black Diamond is tied to its history and heritage. This history and heritage will be preserved and enhanced through planning processes.

Healthy Economic Growth

Diversification and healthy economic growth are encouraged within the context of a vision for economic development. The Town of Black Diamond will promote appropriate commercial and low impact industrial development. The success of present business operators and entrepreneurs will be advocated while working towards a diversified economic base.

While this vision statement and values effectively guide an administration in its integration of required actions, it isn't memorable as an elevator pitch for "who Black Diamond is" and "why Black Diamond matters" – which lies at the heart of differentiation and value proposition that drive investment and tourism decision making.

Elements of an effective vision statement are: Audacious, Capitalize on core competencies, Future facing, Inspiring and Motivating, and Purpose-driven.

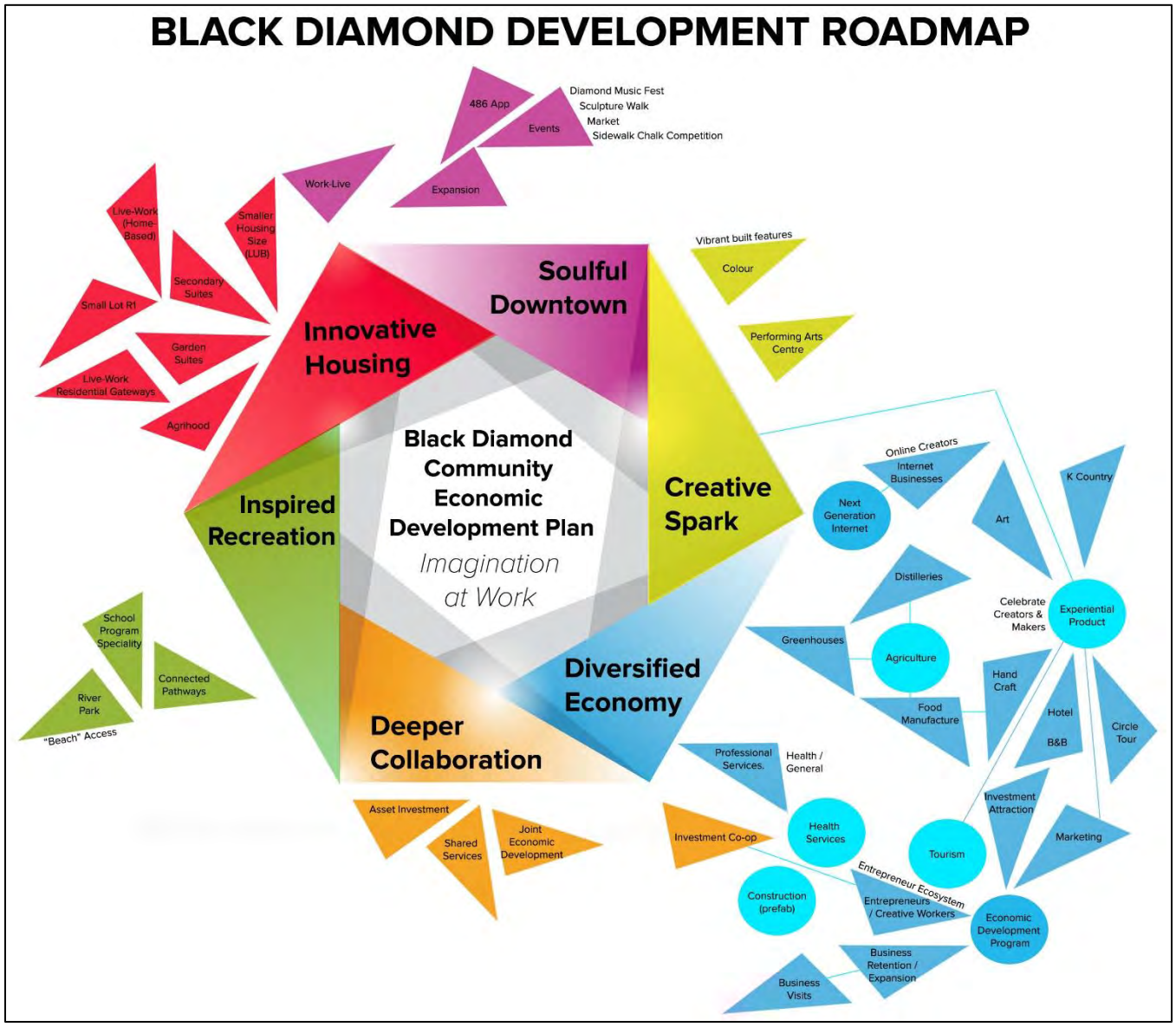
A complementary community economic development vision statement is proposed:

Black Diamond: Imagination At Work

We are Creative Black Diamond. We will lead as a place that nurtures the expression of creative spirit in the arts, the built and natural environment, housing innovation, and economic activity that celebrates "the makers" of food and hand-craft.

V. COMMUNITY DEVELOPMENT ROADMAP

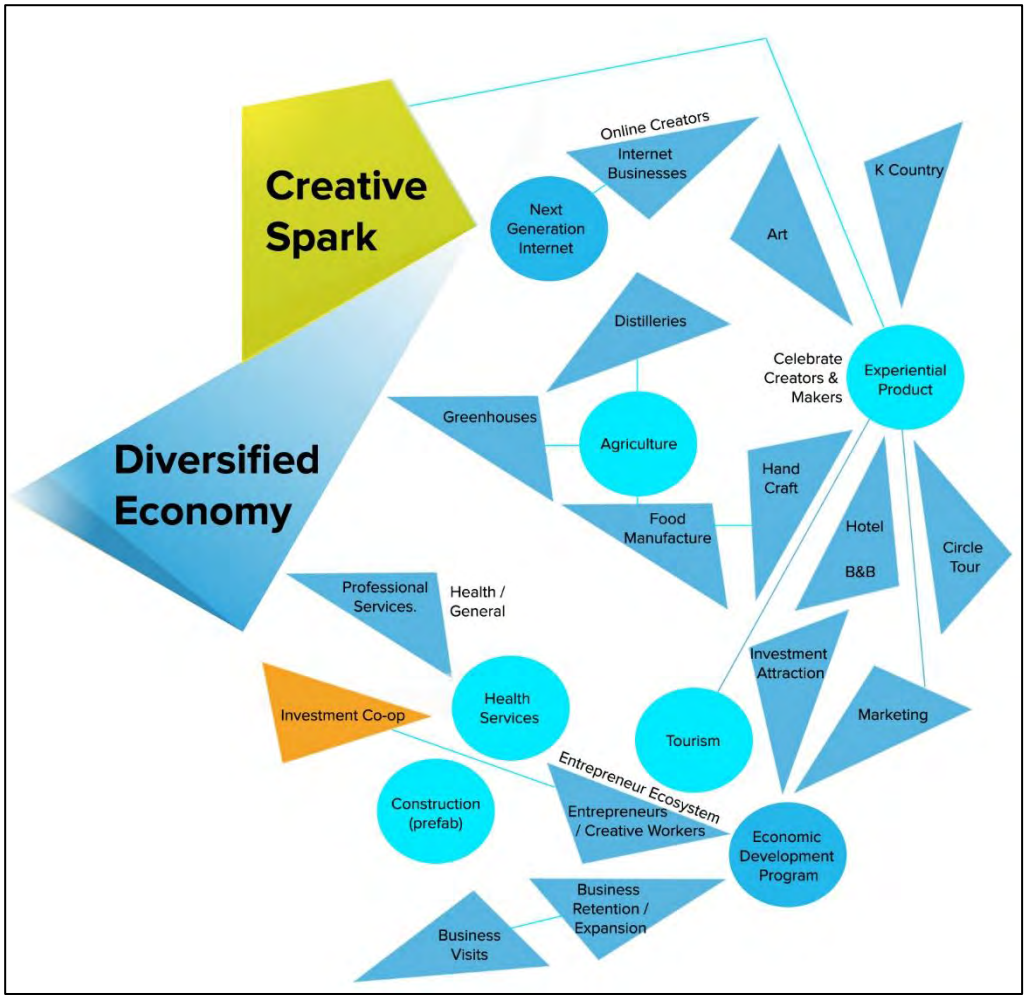
A Community Development Roadmap establishes an aspirational horizon line, and shows both action areas, and the linking of actions, to form the vision. Strategic Issues represent key considerations in pursuit of action. Enablers influence ability to generate success in all initiatives.



GOAL 1 - DIVERSIFY THE ECONOMY

Black Diamond will pursue five pathways to diversify its economy:

1) **Pursue sector strengths in Construction and Health Services**
2) **Attract and Retain Independent Entrepreneurs and Creators**
3) **Leverage historical connection to Agriculture in the form of a craft processing industry.**
4) **Focus on development and promotion of Experiential Product**
5) **Nurture and promote the Arts**



OBJECTIVE 1 – PURSUE SECTOR STRENGTHS IN CONSTRUCTION AND HEALTH

Strength lies in presence of the hospital in Black Diamond, and occupational and sector workforce strength in Construction and Health. Opportunity lies in being able to leverage entrepreneurial activity from this skillset:

- Health-Related Professional Services
  - Private business opportunities: spa, chiropractic, massage therapy, wellness products, etc.
  - Appeals to older Black Diamond demographic while health services access and depth of types of services (with core value proposition being presence of the hospital itself) is desirable to family-age target newcomers.
- Construction Manufacturing (prefab and other construction products/advanced manufacturing)

Types of Economic Development Initiatives:

- Physician attraction, in part via the Alberta Rural Physician Action Plan
- Expanded hospital functionality (specialized services like cancer care, plastic surgery, MRI)
- Medical professional services attraction
- Marketing of health services availability
- Local post-secondary education specific to health programs (e.g. LPNs, medical technologists)

- "Wellness" (mind, body, spirit) focused community development initiatives: wellness retail (e.g. medical aids retail, technology-based health aids) and services (e.g. spa, chiropractic, massage therapy, physiotherapy, psychiatric therapy, optometrists, dentists, veterinarians; fitness centre); medical professional services building; wellness-focused resort accommodation/service destination.

Recommended Actions:

- Conduct Business Retention and Expansion focused conversation with health and construction workforce and enterprise to identify opportunities.
- Marketing – communicate targets via Town website.
- Explore general Professional Services Building opportunity.

OBJECTIVE 2 – ATTRACT AND RETAIN INDEPENDENT ENTREPRENEURS AND CREATORS

Developed "western" economies are transitioning to a knowledge-based workforce. Innovation will become our primary source of competitive advantage – generating a global fight to attract and retain talent as a heartbeat of economic development. And talent looks at communities differently than the industrial age ever did – not as places they have to live in, but as places they want to live in – with quality of life and amenity in the driver's seat. Key implications include the need for next generation Internet speeds, and collaboration between communities in the region to provide desired services and amenities that many rural communities do not necessarily currently offer. On the other hand, there is a market that has been created by those disenfranchised with urban life, the "minimalists," and other motivations that have a segment of the population seeking reconnection in more authentic and grounded communities. Black Diamond's innate characteristics offer potential to step into this opportunity, particularly given proximity to both an international airport (a top-ranked locational factor for creative industries) and the Calgary economic region.

INITIATIVE 1 – GROW THE NUMBER OF HOME-BASED BUSINESSES

Opportunity: Black Diamond can make home-based visible via regulatory relaxation, and celebration of successes in communications activity.

A reported national average of one in six households operates a home-based business. Translated to Black Diamond's 1100 households (2016) suggests there are 180 home-based businesses present in the Town. As at June, 2016, there were 54 home-based businesses registered in the Town of Black Diamond (25% of total business licenses). HBBs are proven incubators (e.g. HP, Google, Microsoft, Apple, Estee Lauder, Spanx) for new business growth and development, yet it is a largely invisible sector in most communities because most communities don't promote its existence or growth or over-worry about business existence in residential neighbourhoods. With an objective of raising visibility and nurturing home-based business growth, Town actions should focus on regulation, housing innovation, and marketing. Black Diamond has very reasonable business license fees, graduated fees for new business, and a Major and Minor classification system that eases regulation for all but the most intensive forms of home-based business. Black Diamond should promote this business friendliness and encourage business registration for purposes of promotion, and Town business retention and expansion programming.

Targets:

- Telecommuters – people who work in the Calgary metro region but do so remotely from their home.
- Entrepreneurs (solo) – self-employed professionals with home office.
- Entrepreneurs (start-up) – business start-up with plan to expand when more space is needed.
- Services – service-based enterprise (e.g. seamstress, hairdresser, masseuse, etc.).

Recommended Actions:

- Promote home-based business registration (regular communications), explaining the business networking, promotion, and business retention/expansion support benefits of registration.
- Based on review of home-based business regulation in Black Diamond (Land Use Bylaw), consider adding allowance for small signage for Minor home occupations. Consider parking leniency (allowance for employee on-street parking for Major home occupations), Consider whether Minor home occupations should require any

permitting, promoting registration for promotion and business retention/expansion purposes. Consider permission for Minor home occupations to use accessory building as long as any existence of the business is hidden from view.

- Regularly write home-based business success stories and present via Town website, newsletter, Facebook page, or other third-party publications.
- Work individually with home-based businesses to identify and resolve growth-related needs and issues.
- Connect home-based business (and all business) to external business networks and resources.
- Educate all Black Diamond stakeholders as to why HBB is important to the vitality of Black Diamond's economy.
    - Home-based business has economic value in Black Diamond (number of businesses, income generation, proportion of total business licenses) that will surprise most. The key is to arm people with facts and benefits of home-based business.
    - Working at home, a broader term than home-based business that includes employee work at home arrangements and self-employment, engages 20% of the Canadian workforce.
- Promote a B&B opportunity.

Resources:

- Statistics Canada – Working At Home - http://bit.ly/1nAbAgR.
- Globe and Mail - http://bit.ly/1qEs2gx.
- Percent working from home by characteristics - http://bit.ly/1pqM4xI.
- Small business facts - http://bit.ly/1nAbFkv.
- Telework Stats and Value Proposition (US) - http://bit.ly/1nAbJ3M.
- Debunking the myths of remote working - http://bit.ly/1hPgeb7.

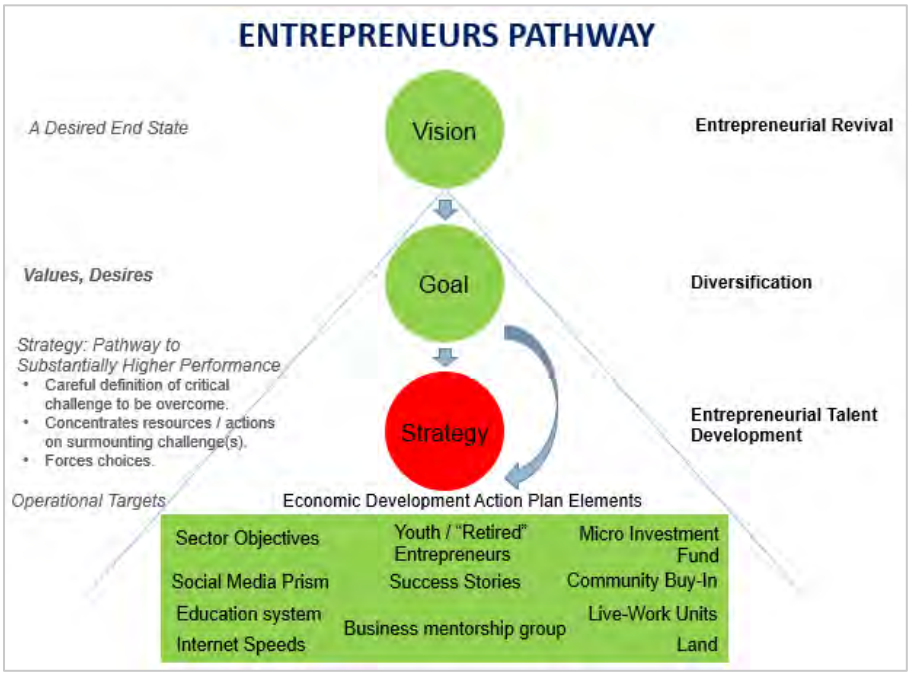
<u>Self-Employment</u>

- Self-Employment, the cash-starved Canadian dream - http://bit.ly/SStcJT.
- Industry Canada: Key Small Business Statistics - http://bit.ly/1oW3ctd.
- 15% of labour force self-employed - http://bit.ly/1pQXCI7.
    - Factors include: an aging population – the over 50 crowd represents 30 per cent of all the new start-ups; technology like the Internet that makes the process easier; outsourcing by corporations to small firms; and the continued influx of immigrants, who represent a sizable number of self-starters.
- CIBC Study (PDF) - http://bit.ly/1qEsGe5.
- Millennials - http://bit.ly/1okngrB.
- Self-employment/age of entrepreneurship - http://bit.ly/1ueldT7.
- Self-employment trends - http://bit.ly/1kSyu3c.

INITIATIVE 2 - COMPREHENSIVELY SUPPORT ENTREPRENEURIAL TALENT DEVELOPMENT

Opportunity:

A strong focus on entrepreneurial development and innovation will foster business expansion and retention and promote and encourage the injection of local investment into the Town of Black Diamond.



Next steps:

- Conduct a business survey to identify priority business retention issues and opportunities.
- Explore potential to establish a local micro investment fund.
    - Context: Traditional financing has its merits, but is not a good fit with smaller scale, high risk, and/or more atypical initiatives. With 80% of investment being local, local investment environment mechanisms should be nurtured. Municipal government, local business, and leverage of outside crowd-funding platforms all offer prospect to enhance the local investment environment and complete visible and impacting community development projects, nurture new business start-ups, and support local business growth.
    - Actions:
        1) Communicate to business community, financing options available through Community Futures - https://goo.gl/osNkS8.
        2) Establish a Black Diamond fund within a community foundation and "legacy giving" framework to support philanthropy with undertaking of community development initiatives (e.g. Vancouver Foundation - https://goo.gl/gUGwDC).
        3) Create a modest municipal Community Investment Fund to fund 2-3 community development projects annually. Based on proposal submission, this initiative offers prospect to fund creative ideas, create community dialogue about community development, and create a more permeable relationship between municipal government and the community (e.g. Prince Rupert Port Authority - https://goo.gl/khHuVz).
        4) Investigate potential to create a Black Diamond chapter of Awesome Calgary (Awesome Black Diamond) to support 'micro-financing for micro-brilliance'. Note' this very modest funding mechanism should be driven by invaluable local business mentorship - www.awesomecalgary.org.
        5) Promote crowdfunding as a source of project/company fundraising, including awareness and information (Canada Business - https://goo.gl/HfMtKY).
        6) Look at NGO micro-finance programs - e.g. Rotary Action Group for Microfinance & Community Development - https://goo.gl/MDkrZC.
- Create business mentorship group (could include micro-investment fund) to mentor/generate new business ideas. Use mentor group as a form of business accelerator (vs incubator) - e.g. CBC article - https://goo.gl/00k2GO.
- Consult with City of Airdrie and explore potential to establish a Smart Start Program (https://goo.gl/3FLzDw), an eight-month entrepreneur training program to help enhance small business skills through a proven training

program and mentorship.

- Create an eNewsletter to communicate timely information related to business issues, opportunities, and celebrations. eNewsletter programs can be purchased to make managing process easier. Recommended twice annually to manage resources.
- Collaborate with Flagstaff County to adopt their Junior Achievement Program as a best practice means to nurture youth entrepreneurship within the greater Region to nurture youth entrepreneurship. This program supplements the curriculum that students are already learning within the school.
- Implement marketing activities: create an enhanced Business tab on the Town website.

OBJECTIVE 3 – FURTHER DEVELOP A CRAFT PROCESSING AGRICULTURE INDUSTRY

Opportunity: The future of farming may well divide into mega-farms on one side, and boutique operations that fill niches in the food industry (higher margins per unit which the market will pay for as a matter of experience, health consciousness, etc.) on the other. While agriculture is associated with tradition in Black Diamond, it is a proportionately declining portion of the Black Diamond workforce as the community grows. Canada is one of the few net food exporters in the world, and Alberta's policy framework has placed renewed emphasis on agricultural diversification – due in part to the last downtown in the oil and gas sector. Limited water supply limits larger scale processing opportunity in Black Diamond. There is modest measure of craft-scale agricultural processing in Black Diamond (e.g. brewery), and some restaurant specialized use/marketing of local-grown ingredients.

This smaller scale niche production caters to the grow-local/organic market trend (e.g. 100 km diet, organic, hand-crafted, slow food, rising societal interest in reconnection to land and what it grows locally), and offers more direct connection to the Town's entrepreneurial enablement direction. The role of technology as an enabler – from GPS-based automation to vertical greenhouses, to eco-village housing forms that integrate land-based production and renewable energy integration – tightens the narrative of a Black Diamond that is meaningfully connected to the convergence of more people desiring health-conscious (and local) products, land, and wellness.

Types of Economic Development Initiatives:

Enabling mechanisms, direct contact with the producer/investor community, and marketing need to come together to more fundamentally leverage business opportunity from land-based production.

- Emerging forms of more intensive production (e.g. vertical farming)
- Investigation/adoption of techniques that can extend the growing season and the variety of products grown (e.g. High Tunnels in Alaska - http://bit.ly/1xSc5s2)
- Food incubator (commercial kitchen)
- Business retention and expansion specific to working with local/immediate area food producers
- Investment co-op
- Crafters marketing co-op
- General marketing of agriculture as part of broader craft/creators vision to locals and external audiences
- Local food within grocery stores
- Farmer's market
- More restaurant/chef sourcing of local products (product awareness, supplier linkages)
- Culinary tourism promotion
- Food box programs (door to door delivery)
- Participation in regional agricultural initiative(s) – regional value chain formation and expansion
- Nurture emergence of the urban farm at a yard scale: http://bit.ly/1xSCar1 *Note: The City of Vancouver, a municipality leading in this space in Canada, has a new urban farm policy that is in the midst of continued tweaking. A supporting, enabling land use amendment is to list Urban Farm as a discretionary use in all residential districts.*

Challenge: Water supply. Agricultural processing/food and beverage production is typically water intensive. Enterprise must be water conscious, or incorporate technology and methods that conserve water. For example, emergent vertical farming methods involve as little as 5% water loss annually to evaporation in a largely close loop system. Craft-scale processing

(with higher margins/unit for the manufacturer in production of specialty products) is intentionally targeted given the community does not have water supply to support large scale processing.

INITIATIVE 1 – EXPLORE POTENTIAL FOR NICHE CROP/LOCAL CRAFT PRODUCTION

Opportunities to explore include nutraceuticals, food ingredients/foods/food for health products (meat, grains and oilseeds, bakery product, beverage, or food ingredient-based), bio-energy (bio-diesel, ethanol, biogas), ag tourism (e.g. experiential recreational products and farm stays), and greenhouse/horticulture activity driven by fibre-in-diet/ethnic/fresh food trends, and plant material to serve Alberta's rapidly growing housing market.

This represents a diverse grouping of opportunities. "Brand" and competitive differentiation stems from a focus on one or two inputs/outputs that can leverage a key competitive advantage, while generating brand awareness for Black Diamond. The philosophy is that collaboration and partnership of a few suppliers in the same space can generate a "crafters" sum greater than the parts.

Recommended Actions:

- Review Government of Alberta agriculture resource material.
- Facilitate local agriculture producers workshop to identify niche product opportunities based on local production/land capability plus market trends.

INITIATIVE 2 – EXPLORE POTENTIAL FOR A FOOD MANUFACTURING INCUBATOR

Opportunity: transition a community hall, church or Legion kitchen into a commercially-licensed food production facility. Note: provincial licensing permits sale within the province of origin. A federal license permits product export.

A commercially-licensed kitchen can nurture growth of micro-business/start-up food manufacturing enterprises that face a significant initial – even "non-starter" barrier with respect to regulatory requirement to produce in a commercially-licensed kitchen facility. Manitoba has established solid precedent in this space, with 14 food manufacturing facilities (Src: Manitoba Agriculture, Food and Rural Development - https://goo.gl/hieGYr).

It's conceivable to view a secondary economic development impact in the form of travel to the Town to use a facility of this nature.

Recommended Actions:

- Identify product opportunities/enterprises/people from agriculture producers workshop.
- Investigate funding sources.
- Construct kitchen.

Other press:

- Swan River - https://goo.gl/frkyvx
- Government of Manitoba - https://goo.gl/MWtLUk
- Manitoba Cooperator - https://goo.gl/by3mRb

INITIATIVE 3 – ATTRACT PROCESSING INVESTMENT

-E.G. NICHE CROPS, GREENHOUSES, FABRICS, AQUACULTURE, DISTILLERY, PULSE FOODS, MEAT SNACKS, READY MEALS, HORTICULTURE-

Opportunity

- Farm to table processing (jams, cheeses, berry syrup, meats, fruits, vegetables, etc.)/retail linked to tourism/local supply to restaurants. Organic (higher margin) packaged product potential.
    - Supported by co-op approach, regional "brand" for products, and farm-stay tourism (food/education) that offers potential to create a sum greater than the parts.
- Hydroponic/vertical greenhouse (https://goo.gl/6LkFOc). Vertical farming - https://goo.gl/clctjv.
    - Note: Sprung (Aldersyde) has a greenhouse option with a vertical farming element.

- Fibre Manufacturing (e.g. clothing – alpaca, hemp) - https://goo.gl/G5BJgo.
- Brewery – e.g. (Rossland) - https://goo.gl/asUDLd.
- Distillery/Cidery – e.g. Pemberton Distillery - https://goo.gl/F7xY6z, Turner Valley Eau Claire Distillery - https://goo.gl/7B7kHA.

Craft brewing has taken off since 2013 with Alberta Gaming and Liquor Commission removal of minimum production requirements. This dynamic has been supported by more recent government announcement of a $1.25 markup for beer sold in Alberta regardless of producer size or location, offset by a $20 million grant program that returns a significant portion of that money back to small Albertan operators. Hard Knox Distillery n Black Diamond is a second local sign of opportunity to come (first – Eau Claire Distillery, Turner Valley).

Vertical farming offers a signature opportunity in context of growing consumer interest in organic and/or fresh produce. This interest translates to restaurants, farmer's markets, and grocery stores that are adding locally grown produce to the supply chain. Intensification of production combined with fewer inputs to production (water, chemicals) offers a new form of agricultural economic opportunity. Vertical farming aligns well with Black Diamond's location given the business model requires proximity to a large local restaurant, consumer (and potential secondary processing) market (Calgary metro).

Investor/entrepreneur opportunity is highlighted by emergent vertical farming systems:

"AeroFarms' high-yielding, economically efficient technology has made it the commercial leader in indoor farming, a market that is expected to quadruple over the next five years to nearly $4 billion. In about 16 days our output per square foot is approximately 80 times per square foot over a field farmer while using 95% less water, and we also grow using about 50 percent less fertilizers and zero pesticides, herbicides, fungicides." Src: https://goo.gl/acvjnl.

Photo Src: https://goo.gl/oHOxi6



Bevo Agro Inc. (Vancouver, http://www.bevofarms.com) has a patent pending Cubic Farming technology which has been several years in development and production. Licensed to CubicFarms Systems (www.cubicfarms.com), the system is dedicated to managing the opportunity for businesses and entrepreneurs to own and operate a cubic farm by providing world-class systems, processes and support to the cubic farmer.

Recommended Actions:

- Review regulations that may apply to food/beverage processing to enable the activity.
- Consider incentives (e.g. municipal utility rates)
- Participate in the annual Alberta Farm Days to develop and promote niche products - https://goo.gl/hsnxUx.
- Identify potential local investment interest in a vertical farming enterprise.
- Make contact with Sprung to discuss potential local vertical farming opportunities.
- Review corporate agriculture investment site selection criteria and develop sector profile/marketing package to advertise Town competitive advantage in this space.
- Identify water limitations/capacity/developer requirements.

Resources:

- Alberta Food Processors Association – www.afpa.com.
- Farm to table - https://goo.gl/A791IW, https://goo.gl/ZDvaGV.

- Government of Alberta
  - Horticulture - https://goo.gl/rxangX.
  - Processing - http://www.agric.gov.ab.ca/app21/infopage?cat1=Food %26 Ag Processing&cat2=Processing
  - Greenhouses and Specialty Farms - https://goo.gl/0ywrK4.
  - Alberta Agriculture Programs and Services - https://goo.gl/v9hyKe.
  - Ag and Environmental Sustainability - https://goo.gl/i9YVOr.
  -

Press:

- Edmonton Journal - https://goo.gl/D6IRLp.
- CNN - World's largest Indoor vertical farm to produce greens without sun, soil or water - https://goo.gl/oHA4qb.
- VOA News - Profits From Eco-friendly Vertical Farming Stack Up - https://goo.gl/udzcr1.

CHART: Agricultural Processing Site Selection Criteria. Src: MDB Insight

FIGURE 10: SITE LOCATION MATRIX SUMMARY FOR VALUE ADD AGRICULTURAL PROCESSING

Labour Force Characteristics	▪ Income ▪ Ethnicity profile ▪ Size of the total labour force/ participation rate ▪ Unemployment rate/ employment rate ▪ Availability of unskilled workers ▪ Cost of unskilled workers ▪ Presence of union (labour management relations)
Transportation / Distribution	▪ Proximity to current and future customer markets ▪ Proximity to highways ▪ Third party trucking availability
Utilities	▪ Electricity (capacity, availability, rate, reliability) ▪ Water (capacity, availability, rate, reliability) ▪ Sewer (capacity, availability, rate, reliability)
Property Availability and Cost	▪ Serviced industrial land availability (shovel ready sites) ▪ Cost of Land / Lease Rates

OBJECTIVE 4 – DEVELOP AND PROMOTE EXPERIENTIAL PRODUCT

It's easy to be average. The drumbeat of standards and norms will generate new forms of activity in Black Diamond. But as a matter of economic development strategy, municipal efforts should focus on attracting, and retaining/expanding products and services that create experiences worth talking about.

It is those things that step out from the norm….that elevate our mood and make us feel good….that people remember. It is the different, not the same, that people talk about. Collectively, a sum can be greater than the parts when individual differentiated experiences are aggregated. Building a beautiful community, wearing artistic expression on a sleeve, good food, locally-made products: these elements of community life can converge into a powerful sales pitch for tourism, investment, and resident satisfaction and pride. Working together among the business community, and between public and private sectors to pursue initiatives, products, and services that elevate experience collectively benefits from the economic law of inelastic demand – where people will pay proportionately more for products/services that are in demand. This dynamic accelerates the local spending multiplier effect, and economic prosperity.

INITIATIVE 1: PURSUE HOTEL INVESTMENT ATTRACTION

A number of dynamics align to suggest potential for a new hotel in Black Diamond: existing product has a small number of rooms (total under 25 rooms) and is older/not aligned with current hotel form/function (amenity, meeting space, 40-80 rooms, etc.), Highway 22 traffic is up 50% in the last decade, Highway 22 (particularly Black Diamond to Crowsnest Pass) is an under-appreciated amenity drive, Black Diamond is a popular weekend circle tour stop for the Calgary Region (e.g. Cool Little Towns marketing initiative), a combined Black Diamond/Turner Valley population of 5000+ suggests support for enhanced accommodation as a matter of service to the business community and visiting friends and relatives, and there is enough recreation facility presence and enhancement (e.g. Turner Valley – anticipated ball field construction) and number of community events to add demand for hotel rooms.

A Hotel Study completed in 2014 for the Town of Black Diamond concludes there is support for a moderately-priced 40 room hotel. This model is seen in Okotoks (e.g. Best Western, Okotoks Country Inn, Lakeview).

Alternative experiential models, with their own economic dynamics to consider, are a destination hotel (e.g. Azuridge in Priddis – www.azuridgehotelcom), or B&B(s).

Recommended Actions:

- Market the Hotel Study (2014) to target hotel chains and local entrepreneurs.
- Market an experiential destination hotel and B&B(s) as an investment opportunity.

INITIATIVE 2 – ENHANCE MARKETING

Recommended Initial Actions:

- Promote what Black Diamond has already has that enables the Creative Black Diamond vision: work-live enabling policy downtown, amenable home-based business guidelines, etc.
- Create Investment Guide (note: RISE is no longer as a regional initiative and Black Diamond's investment guide currently points to the RISE guide).
- Consider initiation of promotion of "Diamond Valley" in selected ways such as an investment guide.
- Enhance Business section of Town of Black Diamond website.
    - Creative Black Diamond vision
    - Target sector sub-tabs
    - Create two target sector success stories per year/post to website and social media channels
- Use "creativity" as a filter for posting of third party social media content that helps Black Diamond sell its vision and value proposition.
- Create business eNewsletter (distribution 2-3 times annually in context of limited resources)
- Establish entrepreneur email database to target specific communications (eNewsletter)
- Categorize business by NAICS codes in business license form (aligns better with other data sources)

- Website – focus on makers and creators in marketing activity – e.g. Wainwright "The Makers" - https://www.youtube.com/watch?v=_KsgFgoWgb0
- "Own the diamond" by using a recurring geometric pattern in economic development marketing.
- Consider a brand title for the Black Diamond Music Fest – "Live Out Here" – with a double meaning phrase for live music and consideration of living in Black Diamond.
- Implement a recommended "Imagination Space" marketing campaign targeted at key audiences: independent entrepreneurs, creative workforce, home-buyers (families). Include use of a hashtag #imaginationspace to help organize Town and consumer content online/organize a call to action.



OBJECTIVE 5 – PROMOTE NEXT GENERATION BROADBAND

Broadband access, speed, and reliability are the great enablers for not just consumer experience, but for a rapidly growing digital enterprise economy. Most companies require adequate speed/reliability in day to day business. Internet-based businesses (e.g. online car parts sales) require a more robust solution. Innovation springs from advanced service where doors open to new enterprise models and solutions (e.g. virtual reality, eLearning, eHealth). Access is now ubiquitous, but speed combined with reliability have variability in Alberta.

TELUS' October, 2017 announcement (https://www.telus.com/en/about/news-and-events/media-releases/telus-investing-60-million-to-connect-okotoks-black-diamond-turner-valley-homes-businesses-advanced-fibre-optic-network) of a $60 million investment in a TELUS PureFibre offering that will offer 150 Mbps upload and download offers a substantive connectivity step forward for Black Diamond and Turner Valley. Network build is anticipated to be complete by the end of

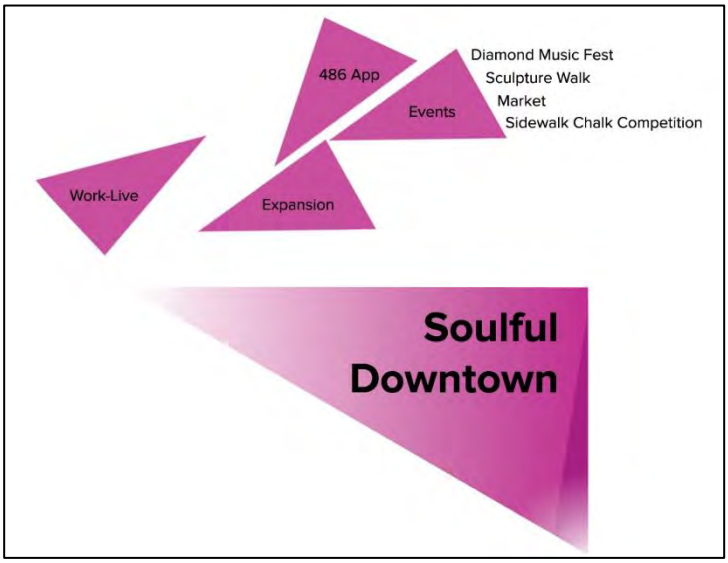
2019. Local healthcare providers, educators and technology companies will be able to draw upon the technology to reimagine how they deliver existing services and develop entirely new solutions.

Recommended Action:

- Black Diamond should actively promote next generation connectivity (including service levels provided by other Internet service providers) as a key means to attract and retain Internet businesses.

GOAL 2: SOLIDIFY A SOULFUL DOWNTOWN

Black Diamond's boomtown-architecture downtown (nurtured by the Downtown Design Standards Bylaw) has quality of place that is important for a number of reasons: differentiation, civic pride, attractive to tourists, attractive to newcomers and investors (particularly creative/knowledge workers).



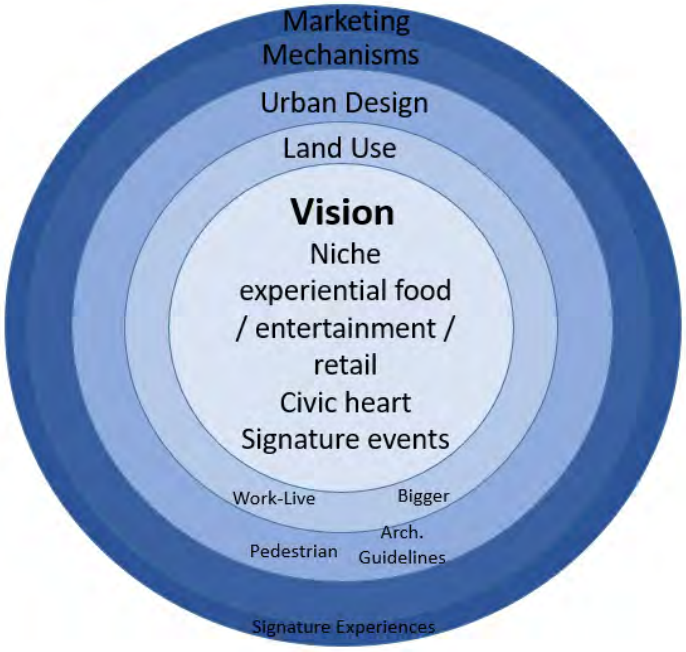
The continued importance of the downtown as an economic, social and cultural heartbeat of the town is a matter of function, quality of place, and animation.

INITIATIVE 1: EXPANSION

In context, Black Diamond's downtown functions as a downtown for an immediat e population of 5000 including Turner Valley in addition to a service area population of roughly 8900 (Src: Turner Valley-Black Diamond Growth Strategy, 2017). In addition, there is an identified land area deficiency to reach a target non-residential assessment ratio. There is a natural desire to cement the centrality of the downtown as an economic hub for "Diamond Valley" vs distribute any additional commercial activity to community edges.

In general, a vibrant downtown of the future should be:

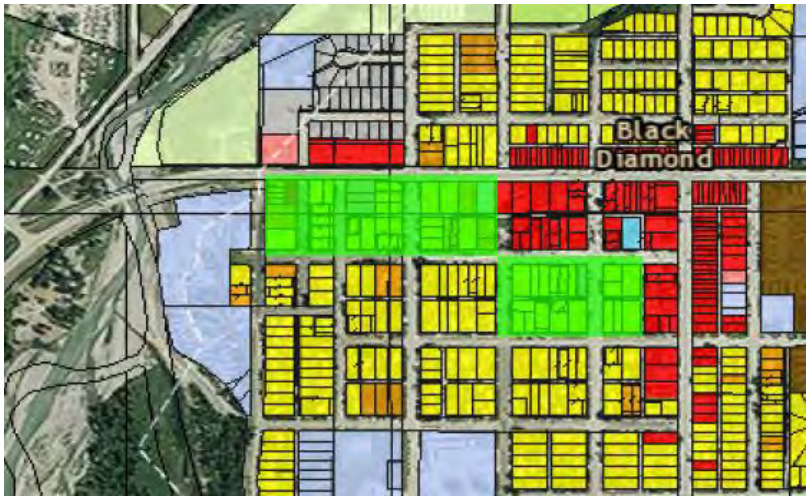
- Mixed use (e.g. work-live)
- Beautified – down to the small details
- Animated – with a series of interesting signature events
- Be a focal point for civic facilities (e.g. municipal office, performing arts, library)
- Be a focal point for quality, experiential commercial experiences (e.g. entertainment, specialty retail, restaurants)
- Have easy off-street connectivity (sidewalks/pathways) to other key municipal anchors (schools, recreation facilities, neighbourhood, etc.)



Together, these elements should elevate atmosphere and quality of human experience, offering a range of activities that are unique and serve as destination. Together, these activities create a sum greater than the parts.

Recommended Actions:

- Generate MDP and LUB amendments that expand the historical downtown boundary (suggested expansion noted in green):



- Establish and use policy that moves professional services onto second floor and above on multi-storey buildings not otherwise serving as a dedicated Professional Services Building. This adjustment leaves the main floor of buildings to more dynamic activity.
- Add more range of Services to permitted uses in commercial land use districts to account for a changing marketplace increasingly determined by Millennials (e.g. hot yoga, dance instruction, tutors/test prep, massage, spin classes, karate, nail salons, massage, Src: https://www-bloomberg-com.cdn.ampproject.org/c/s/www.bloomberg.com/amp/view/articles/2017-12-13/retailers-still-haven-t-caught-up-to-millennials
- Ensure inclusion of dynamic downtown elements indicated above in policy documentation (MDP, LUB, decisions about location of civic facilities, etc.)

INITIATIVE 2: ENCOURAGE WORK-LIVE CONSTRUCTION/RENOVATION

Black Diamond regulation currently allows for commercial/residential mixed use in the downtown. This feature can be more aggressively stepped into as a fundamental opportunity to enhance animation and quality of place in the downtown core.

Work-live units (where the commercial function takes precedence over the residential function) offer an opportunity for downtown redevelopment/infill that supports: 1) more affordable housing; 2) a more animated downtown with permanent residents; 3) an alternative, combined housing/enterprise form that is lighter on the pocketbook for entrepreneurs. While there are examples of mixed use that offer commercial premises on the main floor and residential above (e.g. east downtown Okotoks), work-live units are specifically designed with land title to both the work and live unit as a combined entity.

Recommended Actions:

- Revise Land Use Bylaw to permit the residential portion of the work-live unit to also include the main floor (with fire separation). The Bylaw does not currently allow this, while mixed use now generally occurs both horizontally and vertically.
- Review policy in general to encourage work-live renovation/construction, referencing live-work and work-live case studies in other communities active in this area (e.g. Okotoks, Vancouver, Canmore, Jackson Hole).
- Ensure flexible development approval mindset given mixed use developments benefit from design freedom that comes from lack of rigid regulation of the details like setbacks, lot coverage, etc.
- Market Black Diamond's work-live aspiration (website, etc.) as a development opportunity.

Examples:



Metro Plateau Live/Work Development – Jackson Hole, Wyoming
Src: https://goo.gl/1Gu9nd.



Spring Creek Development, Moraine Ridge, Canmore
Src: https://goo.gl/nJrd6U.



RYAN DORGAN / NEWS&GUIDE
A new 20,450-square-foot development will bring 15 live/work units to Jackson on a parcel near Flat Creek along South Highway 89

Flat Creek Live/Work Development – Jackson Hole, Wyoming
Src: https://goo.gl/BY9n1C.



East Vancouver
Src: https://weloveeastvan.com/hub-205-e-10th-ave/

Context:

Live/Work – Def'n - on balance, the "quiet enjoyment" expectations of neighbours in the building or adjacent buildings take precedence over work needs of the unit in question. This means processes with no noise, odour or other impacts; no employees; and no sales.

Work/Live – Def'n - where the needs of the work component take precedence, in that there may be noise, odours, or other impacts; employees; or sales.

Src: http://live-work.com/live-work/live-work-project-types/

The City of Calgary *Municipal Development Plan* defines mixed-use development as: "The development of land, a building or a structure with two or more different uses, such as residential, office and retail. Mixed-use can occur vertically within a building, or horizontally on a site."

Types of Contemporary, Mixed Use Zoning (Src: https://en.wikipedia.org/wiki/Mixed-use_development)

- Neighborhood commercial zoning – convenience goods and services, such as convenience stores, permitted in otherwise strictly residential areas
- Main Street residential/commercial – two to three-story buildings with residential units above and commercial units on the ground floor facing the street
- Urban residential/commercial – multi-story residential buildings with commercial and civic uses on ground floor
- Office convenience – office buildings with small retail and service uses oriented to the office workers
- Office/residential – multi-family residential units within office building(s)
- Shopping mall conversion – residential and/or office units added (adjacent) to an existing standalone shopping mall
- Retail district retrofit – retrofitting of a suburban retail area to a more village-like appearance and mix of uses
- Live/work – residents can operate small businesses on the ground floor of the building where they live
- Studio/light industrial – residents may operate studios or small workshops in the building where they live
- Hotel/residence – mix hotel space and high-end multi-family residential
- Parking structure with ground-floor retail
- Single-family detached home district with standalone shopping centre

The following is sourced from http://live-work.com/live-work/the-ten-truths-of-live-work-planning-policy/:

"Live-work is not a monolithic phenomenon. Some of what bears the name is predominantly residential in character. The rise of the internet, telecommuting, and teleconferencing have created unprecedented opportunities for home office and small, at-home business, which we (and many jurisdictions) call home occupation. On the other hand, there is a demand for a more work-driven type of space in which employees and walk-in trade are permitted and more intense and/or more hazardous kinds of work are performed. This we are calling work/live. There is a demonstrated tendency for live-work space to revert to purely residential use, regardless of how it was permitted or represented. This tendency is most pronounced in new construction condominiums or "lifestyle lofts." In some locations this is tolerable, in others it can cause harm. Because it is intended to be a flexible type, it is fair to say that work will occur in a live-work unit at some time, but that work activity may not always be present.

Residential reversion should be discouraged strenuously in those areas where pure residential use is undesirable due to incompatibilities with other pre-existing uses, lack of residential amenities, etc. Residential reversion can be slowed down, if not entirely stopped, through the use of a combination of regulations, sanctions, financial incentives, tax policy incentives and, perhaps most importantly, the design of units for the appropriate level of proximity between living and working spaces. Residential reversion as a central issue of concern was an important part of a study conducted in 1997 by TDA and others, entitled *Work/Live in Vancouver*.

Live-work plays an important part in The Incubator Cycle. Ideas for small businesses often progress through different work spaces, from a spare room at home, to the garage (of Apple Computer and Hewlett Packard fable and fame), and often next to a live-work space. In fact, for some, the progression from home occupation to live/work to work/live space is part of the cycle. Government and corporate-sponsored incubators are a valuable newcomer on the scene: many have been very successful. A project idea that should be considered is a "Live-work Incubator," in which business assistance and facilities would be provided in a residential — i.e. live-work — setting. Such an incubator could combine well with a co-working space. Many New Urbanist projects include live-work spaces; as mentioned above, the fit is a natural. The apartment above the mom-and-pop store, or the country lawyer whose cottage is behind his office are time-honored built forms in the traditional town. They are both forms of live-work.

Live-work is arguably the most viable form of market rate development in many inner cities. It is the only building type that provides both employment and housing. A common term on the lips of planners today is "live-work-play environment." Inherently mixed use, infill live-work projects or renovations of existing buildings often go a long way toward meeting many of the goals of The New Urbanism, and therefore could be seen as one of its best entrees into an inner-city context."

Resources:

- Vancouver live-work and work-live - http://guidelines.vancouver.ca/L002.pdf

- Live-work buildings – East Vancouver - http://www.weloveeastvan.com/blog/everything-you-need-to-know-about-live-work-buildings/
- For visual image reference Google Image search "live-work buildings" and "work-live buildings."

INITIATIVE 3: IMPLEMENT 468 APP

To position for the future as a community that embraces creativity, the use of technology should be embraced. An emergent app – 468 Insider – is a good example of the marriage of technology with consumer motivation to visit bricks and mortar establishments.

468 Insider (www.468insider.com) is a customizable mobile app that drives visitor engagement and commerce for communities by rewarding users for visiting places. The more places visited, the more points earned. Points can be redeemed for discounts on good and services within the community. By deploying the app, organizations can go beyond basic maps and directory listings – making their communities more fun, memorable and rewarding for visitors.

The app's EXPLORE button takes visitors to your community's map, which has pins indicating places of interest. Clicking on each pin on the map gives users more information about that location. Locations can be assigned POINTS to be collected when users are within GPS range of a location. Physically visiting a location adds points to a user's Achievement page. Points can be redeemed for goods or services at REWARDS locations. Place owners enter a code to deduct points in exchange for a reward of their choosing. The app can be customized (brand) for location. An online control panel provides valuable data about visitor activity, volume, and origin.

There are 13 implementations of the app to date – mostly in Washington State with the company owner originates. The app will shortly be extended into BC via a relationship with the BC Economic Development Association.

The Think Local First version of the app for Greater Victoria is the first adaptation of the app for a shop local business community context (http://thinklocalvictoria.com/think-local-first-app/) – where places of interest can be objects in a store, or a business location, for e.g.

To provide cost context, a 40 location arrangement is $3K/year with zero setup cost for 3+ year contract terms. Pricing is tiered based on the number of locations.

INITIATIVE 4: ENHANCE SIGNATURE EVENTS

Signature events – with enough investment of time and energy to be of scale and quality to attract both locals and visitors – have clear direct economic benefit to the local business community, and animate a downtown. Without precluding other options, the following four recommended signature events align with a "creators and makers" development vision:

Diamond Music Fest

Sculpture Walk – the City of Castlegar adapted a similar event in the US. In its 7th year, this all-summer event now attracts many tourists, attracts international artists submitting works, and is generating two art installation purchases per year via community voting for annual favourites. This form of event has not yet been adapted to Alberta context. Black Diamond could step into this opportunity working alone, or in collaboration with Okotoks.

http://www.sculpturewalkcastlegar.com/

Market – a handcraft and farmer's market located in the downtown. Time events for days that do not cross-over with Millarville or Okotoks (http://www.okotoksfarmersmarket.com/) and work with these organizations to create a sum greater than the parts. Consider a Black Diamond co-marketing presence at large markets like Black Diamond to aggregate local craft/food and economize on marketing effort.

Sidewalk Chalk Competition – this form of event is not currently present in the Foothills. It is easily held on downtown sidewalks. This form of event has advantages in the form of visible creativity and being open to all ages (competition categories), while being "washable". Examples: http://shippensburg.org/bloom-festival/Sidewalk%20Chalk%20info%20&%20rules%202017.pdf, https://www.facebook.com/events/974189429301962/, https://www.buzzfeed.com/davidmack/sidewalk-art?utm_term=.xnOqkRV4QL#.yiweQmwNlG

Recommended Actions:

- Initiate 1-2 new signature events that match with a Creative Black Diamond vision.
- Add Turner Valley events to the Town of Black Diamond website event calendar.



Photo Src: https://www.buzzfeed.com/davidmack/sidewalk-art?utm_term=.xnOqkRV4QL#.yiweQmwNlG

GOAL 3 – NURTURE CREATIVITY WITH HOUSING INNOVATION

INITIATIVE 1 - BE A CATALYST FOR HOUSING INNOVATION

Housing innovation has a number strategic benefits:

- Housing innovation offers the greatest potential to make inroads on achieving key objectives: 1) Attract families; 2) Attract youthful demographic; 3) Attract creators and entrepreneurs with imaginative housing forms in imaginative development areas. Affordable pricing for a diversity of population and a range of lifestyles is key to nurturing a creative economy in Black Diamond.
- Both the housing form and housing development can be treated as a form of creative expression in and of themselves if the community/developers/and builders are willing to step beyond "resale beige" and cookie cutter.
- Holistically planned housing development is able to integrate economic, social, environmental, and fiscal components of sustainability.
- Housing options generates labour supply for local enterprise (e.g. value-added agriculture processing).
- Housing innovation can re-integrate land productivity with housing form.
- Housing innovation can differentiate Black Diamond in a competitive marketplace.

Black Diamond currently has a competitive advantage related to housing cost in the region. Median dwelling value of dwelling (2016), at $320,417, is 20% below the Alberta median of $400,104 and 29% below the Calgary CMA median of $450,406. Median monthly shelter costs for owned dwellings at $1112 is 25% below the Alberta median of $1481 and 31% below the Calgary CMA median. This is a significant cost of living competitive advantage.

This said, median value still $320,000. Whether it's millennials, seniors, or entrepreneurs, there is a market desire to explore housing options beyond the traditional modestly-priced bungalow or two-story on a homogenous street in a bland neighbourhood. Greater affordability is typically a product of housing size, and/or mixed use form (e.g. live-work, work-live).

A quick poll of consumers would also indicate consumer distaste for "cookie cutter" – which is an outcome of strict adherence to universal infrastructure design standards, typology of housing form and location, and even colour palette. Municipalities are ultimately in control of consideration of variation of these standards.

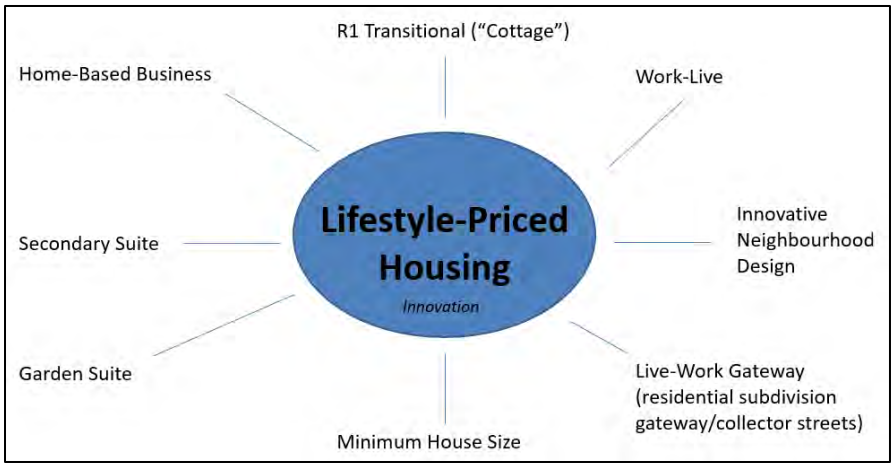
Economic Development Workshop results (June, 2017) indicate support for diversity of housing options in Black Diamond most of which do not presently exist. Generation of housing innovation will require community engagement and support/buy-in. The development community will have to be engaged. The Town will have to actively sell its openness to housing innovation, and consider use of policy sticks and carrots (e.g. density bonuses in return for initiatives the Town wants) to achieve its vision.

Support from residents and the development community will be highest for housing forms that are most commonly seen in today's housing market, while housing innovation is a key means to achieve strategic objectives. To bridge the gap, the Town should consider completing a visualization project (design charrettes, work with an academic institution or consultant) to help frame opportunities, and generate required land use and other policy adjustments. Key plan-making elements include master planning (vs consideration of one-off development applications), enabling policy that creates knowns, and generation of aesthetic development and design standards that maintain and enhance quality of place.

Target demographic: young frist-home buyers, young families, aging in place (independent or assisted living), entrepreneurs (work-live, live-work).	**Potential for competitive differentiation:** affordability, ecologically advanced, novel integration of agricultural functionality.	**Key brand attributes:** reconnection (people, values, land), family living Key brand phrases: • Retire 10 Years Earlier • Buy a Home at 25 Instead of 35 • Enable your entrepreneurial vision • Leave $ in Your Pocketbook to Do What You Love

Design ethic: green housing (LEED), urban agriculture, urban farming, renewable energy sources, conservation measures, colourful, variety of housing architecture.		

There are a number of ways to consider housing innovation in Black Diamond:



Home-Based Business – addressed in Goal 1

Live-Work Gateway – a more formalized home-based business streetscape along a collector road/higher traffic gateway into and out of the community where homes have been specifically design to better enable a home-based business option. The home can be designed to be more business friendly to the street. Signage regulation is relaxed to permit, for example, hanging business signs in a front yard.

The best example of this form is Elma Street in Okotoks, a heritage-commercial street.

Work-Live (Downtown) – addressed in Goal 3

Minimum House Size – minimum detached dwelling lot size in Black Diamond is 5500 sq. ft. with a minimum ground floor area of 960 sq. ft. for a bungalow and 1400 sq. ft. for a two-storey. A cottage or pocket home can be as small as 200 sq. ft. but often have a configuration of 500-600 sq. ft.

R1 Transitional – a small lot (smaller than current minimum lot size allowed in Black Diamond Land Use Bylaw) configuration, or a larger lot strata (condo) configuration that enables community within community cottage or pocket home developments with reduced square footage. A revitalization process design approach would be to consider re-subdivision of 5500 sq. ft. residential lots in half in specific areas identified as being amenable, creating both street-front and laneway housing.



Pocket homes offer very small residential home footprints that drastically reduce housing prices, which is attractive to key targets such as millennials. A key consideration for a municipality is to move the "tiny home" concept onto a permanent foundation.

- e.g. Dawson City - https://goo.gl/yfJHN6.
- Saskatoon - https://goo.gl/OOvhqQ.
- Tiny House Villages May Be the Next Big Housing Trend, According to Researchers - https://goo.gl/NLWzZh.



Src: www.pockethouse.ca

Secondary Suite (in a principal dwelling) – while "Accessory Suites" are permitted in Black Diamond as an accessory use in residential districts and sizing is reasonably generous (40% of principal dwelling), permission is limited to use by family members only.

Garden Suite (in a yard) – there is currently no allowance for garden suites in Black Diamond. Both Okotoks (https://www.okotoks.ca/sites/default/files/pdfs/publications/Studio%20Suite%20Brochure.pdf) and High River (https://okotoksonline.com/local/jessica-hallam-1) permit garden suites.

- A means to avoid conflict that can arise from one-off development applications is to zone new areas in town to specifically accommodate garden suites (e.g. R1St zone in Crystal Shores, Okotoks where 42 homes were required to accommodate a secondary suite in their design plans. Zoning in this fashion speeds up the process as suites are considered a permitted use, allowing them to bypass the land use application process.
- Off-street parking requirements are typically a bone of content for secondary and garden suites. Black Diamond ca consider relaxing standards to encourage this type of development.

Innovative New Neighbourhood Design - an "agri-hood" is an example of a new neighbourhood design fit with Black Diamond's creative community vision. In an agri-hood, a working farm is the central feature of a residential neighbourhood, in the same way other communities cluster around a golf course, pool or fitness center. Homes are typically built to high environmental standard to align with a more "earthy" development concept.

Agri-hoods are designed to appeal to young, active families (millennials) who love to eat healthy and spend time outdoors.

Example: Agritopia in Gilbert, Arizona – "16 of Agritopia's 160 acres are certified organic farmland, with row crops (artichokes to zucchini), fruit trees (citrus, nectarine, peach, apple, olive and date) and livestock (chickens and sheep). Fences gripped by grapevines and blackberry bushes separate the farm from the community's 452 single-family homes, each with a wide front porch and sidewalks close enough to encourage conversation. The hub of neighbourhood life is a small square overlooking the farm, with a coffeehouse, farm-to-table restaurant and honour-system farm stand. The square is also where residents line up on Wednesday evenings to claim their bulging boxes of just-harvested produce, eggs and honey, which come with a $100-a-month membership in the community-supported agriculture, or C.S.A., program." (Source: "Farm-to-Table Living Takes Root," New York Times http://nyti.ms/1pqFDKT - the article lists numerous other examples from across the USA). Other development features that promote connectivity include: shared public spaces, community garden, farmstand (honour system), housing diversity, farmer's market, u-pick, and annual farm to table dinner.

There are roughly 150 agri-hoods in the U.S. - http://www.businessinsider.com/agrihoods-golf-communities-millennial-homebuyers-2017-10

e.g. Agritopia – Gilbert, Arizona



Canadian example - Creekside Mills – Chilliwack Vancouver Sun - https://goo.gl/upQ8yq

Eco-Village involves an aim to be regenerative in terms of resource use given they desire use of resources in a closed loop.

e.g. Wind Walk, Okotoks - a "dark green" vision that promises to demonstrate a significant shift in the paradigm of sustainability, conservation, efficiency, and future-proofing – including use of smart grid principles as a central system to conserve and manage community energy needs, and a net zero energy consumption goal - https://goo.gl/vkXY54.

e.g. ReGen Villages - a start-up real estate development company aiming to build small, self-sustaining residential communities around the world. The first one is expected to be completed in Almere, Netherlands in 2018.



Src: Business Insider - https://goo.gl/6nfdN5.

Hybrid Farm/Eco Neighbourhood - an excellent hybrid farm/eco master planned innovative neighbourhood example is Serenbe in Georgia - http://serenbe.com/

Other Innovative Housing Forms

Co-housing communities are small-scale neighborhoods that provide a balance between personal privacy and living amidst people who know and care about each other. People live in private homes yet enjoy convenient access to shared space including a common house with facilities such as a gourmet kitchen, dining room, laundry facilities, guest rooms, library and sitting areas, and workshops.

e.g. The Green House Project

- A freestanding building-where 10 people live and receive nursing level care (www.thegreenhouseproject.org) has demonstrated that not only is it possible to live in a home and receive skilled nursing services, the model can be financially viable. The model is spreading and several other organizations are now supporting the small house movement, including the National Alliance of Small Houses (www.smallhousealliance.org) and the Association of Households International (www.ahhi.org).

e.g. Wolf Creek Lodge, https://goo.gl/xe4Hst, (California)



Innovative Independent or Assisted Seniors Living - more innovative independent or assisted seniors living would be attractive to residents who wish to remain in the community as they age, and potentially attract newcomers.

e.g. Ohio. The centres are designed to look like a community of 1930s and '40s homes, complete with porches, rocking chairs, grass-like carpet, and a fiber optic ceiling that transitions from a day to night sky. Src - https://goo.gl/SFipDs.



Multi-generational Homes – e.g. http://zeninbalance.com/multi-generational-homes/, http://nationalpost.com/news/canada/why-more-of-us-are-living-in-multigenerational-households

Lifecycle Homes - includes fixed accessible features (wider doors and halls, open floor spaces, clear traffic patterns, etc.), and adaptable features, such as wall reinforcement for grab bars and removable base cabinets for future knee space to enable aging in place.

Housing Energy Efficiency - the housing sector in Canada provides significant potential for the reduction of energy footprint. e.g. Natural Resources Canada Energy Efficient Housing - https://goo.gl/JH2kvc, Natural Resources Canada Housing - https://goo.gl/TUdSy5, Passive House – Fort St. John, BC - https://goo.gl/jt0kLV.

Recommended Actions:

- Complete visualization project (academic institution or consultant) for innovative housing form, including required policy adjustments, including engagement process with residents and development community.
- Sell the vision with marketing, including the Black Diamond website.
- Create developers/builders list and direct target market with the Black Diamond's vision.
- Amend Land Use Bylaw to permit secondary suite use by non-family members.
- Consider enabling innovative housing forms in specific districts (or as part of master planning for new developments) vs a blanket approach to all areas of the community.
- Amend Land Use Bylaw to permit garden suites as a discretionary use in identified districts, and create Garden Suite land use as a permitted use in specific areas as part of master planning for new developments).
- Work with a developer to consider design-build of an innovative neighbourhood design.

INITIATIVE 2: ENCOURAGE USE OF TECHNOLOGY AS A NEIGHBOURHOOD AND COMMUNITY CONNECTOR

It's easy to desire a small town atmosphere where everyone knows your name and social connectivity is personable. Reality is that technology is pervasive in our lives. A hybrid is to consider whether technology can help nurture desired social connectivity.

Nextdoor (https://nextdoor.com/) is a US example. Nextdoor's mission is to provide a trusted platform where neighbors work together to build stronger, safer, happier communities, all over the world.

People are using Nextdoor to:

- Quickly get the word out about a break-in
- Organize a Neighborhood Watch Group
- Track down a trustworthy babysitter
- Find out who does the best paint job in town
- Ask for help keeping an eye out for a lost dog
- Find a new home for an outgrown bike
- Finally call that nice man down the street by his first name

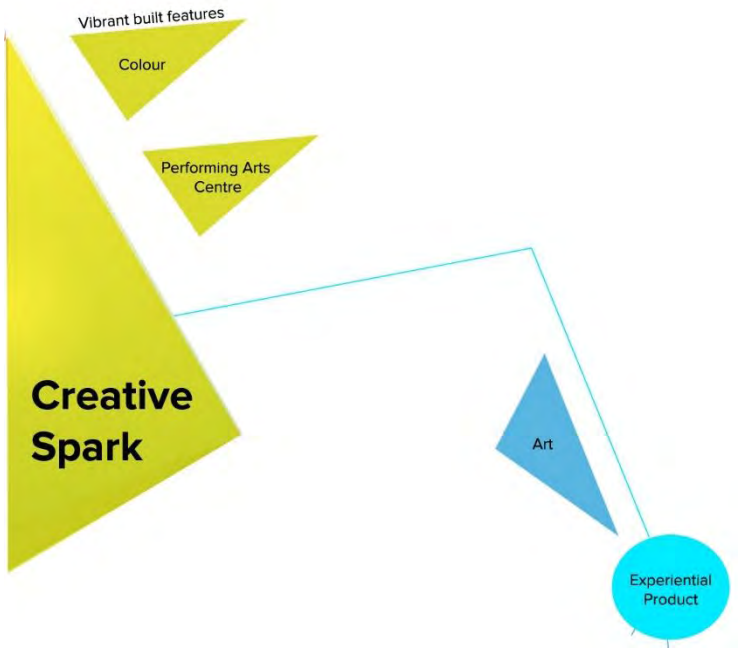
While this solution is not available in Canada yet, a comparable Canadian solution is goneighbour.org (https://goneighbour.org/). The site is being used to:

- Discuss nearby news, crime, planning proposals and public services
- Find locals with common interests, organize and attend social groups and events
- Share belongings and skills with neighbours, from hedge-trimmers to computing tips
- Recommend and discover local businesses and trades persons
- Promote, campaign and volunteer for community projects and local causes

Recommended Action:

- Investigate apps that offer potential to connect neighbor to neighbor technologically. Communicate opportunity to the community.

GOAL 4: GENERATE CREATIVE SPARK



OBJECTIVE 1 – NURTURE AND PROMOTE THE ARTS

-music and performing arts, craft food, visual arts, writing, digital creativity, hand-craft product in any medium-

"Culture is who we are. Art is expression of who we could be. It's fundamental to concentrate on the question of art: how do we nurture creativity at the heart of, and ultimately expressed as, our community culture?"

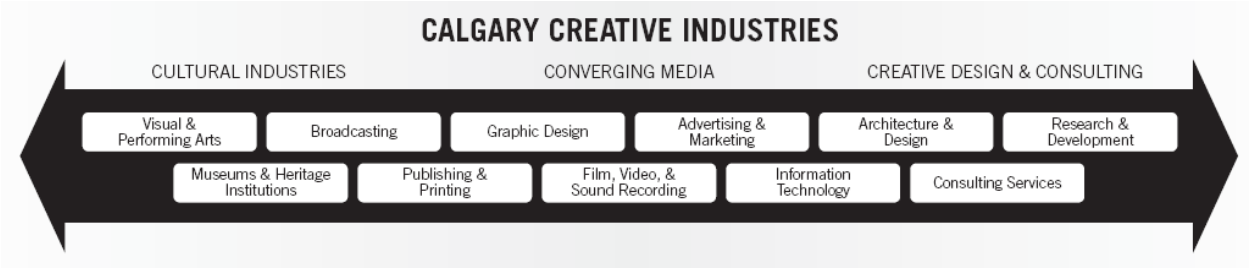
INITIATIVE 1 – CREATE A ONE PAGE, 1-2 YEAR ACTION PLAN THAT WILL IMPLEMENT 2-3 CREATIVE COMMUNITY INITIATIVES

The City of Calgary (https://www.calgaryeconomicdevelopment.com/industries/focus-areas/creative-services/, https://www.calgaryeconomicdevelopment.com/assets/Sector-Profiles/2015-136-CED-Creative-Industries-Sector-Profile-FINAL.pdf) provides context for the Creative Economy to provide guidance on where Black Diamond may be able to focus its emphasis. The Creative Industries are divided into two categories of economic activity.

1. **The Traditional Arts and Culture Sector** - Participants in this sector include: visual artists, writers, musicians, dancers and actors. This is the group traditionally associated with creativity as it relates to arts and culture. In relation to an economic development initiative, High River should carefully distinguish between professional artists who make a living in the arts predominantly, and hobbyists who enjoy creative expression as a sideline. These two market segments have distinct needs. For example, a professional artist would find joint venture gallery marketing appealing, while a hobbyist appreciates a Farmer's Market display opportunity.
2. **The Applied Arts Sector** - These are the professionals who market their creative resources as a product or service, tapping artistic and creative talent as an economic commodity. This category includes media and advertising professionals, web and game designers, software developers, publishers, architects, design specialists, and those involved in research and development furthering innovation.

Creative industries are divided into three main occupational sub-sectors.

1. **Cultural Industries** - This sub-sector includes visual artists, writers, musicians, dancers and actors. This group is traditionally associated with the application of creativity as it directly relates to arts and culture.
2. **Convergent Media** - This sub-sector is comprised of professionals that participate in a creative process of communication and creation of new media products and services. It includes digital media and advertising professionals, web and game designers, interactive software developers, publishers, graphic design specialists, social media developers, and other contributors to the convergent media sector.
3. **Creative Design and Consulting** - This sub-sector includes the professionals who leverage their creative resources in the creation and delivery of a product or service, tapping artistic and creative talent in an applied domain. This includes consulting firms, architecture and design firms and those involved in research and development furthering innovation.



Source: Calgary Economic Development Creative Industries Profile

In terms of an economic framework for a Creative Black Diamond vision, it's important to note how a traditional, narrower definition of arts and culture represents a tiny fraction (3%) of the creative industry. Almost half the industry operates in the online space. Almost half the industry operates in a design, consulting and technical services capacity.

Thinking more broadly about a definition of creative industries shapes thinking about how to nurture it in the community, and how to attract it. For those in the online space, quality of urban environment, presence of similar types of enterprise, and support infrastructure for a more youthful demographic is important. For those in the design, consulting, and technical services capacity, this activity already has modest presence in the community (as it does for almost all satellite communities around Calgary) and a good start would be to make the creative side of Business Services more visible in the community through various tactics.

Types of Economic Development Initiatives:

- Focus investment attraction and business retention and expansion on food/craft/artistic enterprise and creative workforce development.
- Construct Creative Economy Business Incubator – e.g. The Hive, Medicine Hat - http://hivehub.ca/, Victoria Makerspace (www.makerspace.ca)
- Install Public Art Installations – including consideration of funding as a portion of capital infrastructure projects (e.g. City of Calgary) – focus on beauty, originality, whimsy and surprise "worth talking about"
- Performing and Creative Arts Centre
- Building murals – focus on beauty, originality, whimsy and surprise "worth talking about"
- Artist in Residence program – municipal and/or industry level
- Online Artist's Directory and/or Creative Services Directory
- Signature Event(s)
- Generate Creative Industries Sector Profile and use as an investment attraction promotional tool (website, etc.)
- Create a Creativity Master Plan. Examples: Calgary Arts Development Plan 'Living a Creative Life' http://livingcreative.ca, Comox Cultural Development Plan (PDF) http://bit.ly/1lfSgAU, Okotoks Culture and Heritage Master Plan - https://www.okotoks.ca/municipal-government/community-consultation/cultural-master-plan
- Focus business and tourism sections of Town of Black Diamond website on creative economy investment attraction vision, value proposition/sales pitch, attraction and retention initiatives, and success stories.

- Involve schools in creation and display of creativity.
- Hold creatively thematic social media contests (photos, videos) or post creatively thematic third party content to social media channels.
- Have discussions with Sheep River Arts Council to explore their role in implementation of the Creative Black Diamond vision, including identification of 1-2 collaborative initiatives
- Develop and use a "Crafted In Black Diamond" logo on locally handcrafted products and services
- Nurture the downtown area as an art, music, creativity and entertainment centre in land use, investment attraction, and marketing activities. An atmospheric downtown supports niche retail activity. Professional services activity downtown (placed on the second floor to encourage street level activity) could be supported by the growth of a health and wellness cluster
- Promote a 100 km diet - markets, restaurants, events, bakery
- Innovative housing and new neighbourhoods (form and function)
- Create an adaptable downtown plaza to serve as a gathering/performance/visual art/market space. Pay attention to design detail to create an elevated experience. E.g. Fort Frances, Ontario Market Square (Src: https://www.northernontariobusiness.com/regional-news/northwestern-ontario/multi-use-market-mirrors-best-features-of-fort-frances-445954):



INITIATIVE 2 – BUILD A NEXT GENERATION PERFORMING AND CREATIVE ARTS CENTRE

-gallery, stage, art studio space, meeting/event rental space-

A typology of community gathering/creative space can be described as follows:

1) Community Centre

The Flare and Derrick in Turner Valley currently serves as the primary community centre in the two communities. Most community halls largely sit empty most of the time (and are therefore difficult to present as a viable business model) because they don't have daytime functionality. They are used for modest community gatherings/meetings and focus on a large room. Most work to incorporate a stage – though most are not acoustically or otherwise designed to host performing arts with a high quality experience. They can be attractive for extended forms of events like weddings (including external bookings/tourism) if they have good amenity or a great geographic location.

Examples of community centres under construction include Invermere – which has integrated a library to provide daytime functionality - https://www.columbiavalleycentre.ca/, and Radium Hot Springs - http://www.radiumhotsprings.ca/content/community-hall-information

2) Performing Arts Centre

A performing arts centre is specifically design to host performance art. There is typically stage production. Seating is typically presented in a theatre format, and the building is acoustically designed to heighten quality of experience.

E.g. Rotary Performing Arts Centre, Okotoks

3) Integrated Creative Centre

cSPACE King Edward in Calgary (http://cspacekingedward.com/) represents a best practice in this space – serving as playground for creativity, community and collaboration. An old school has been re-imagined as an integrated creative hub. There is a large gathering space, which double as performance space with wall recessed seating. There are working art studios. There is an art gallery (items for sales). There is temporary business cubicle rental space.

Vision can drive clarity on pursuit of a new and expanded direction for a community cultural gathering space. By most accounts, the Flare and Derrick has reached the end of its lifecycle – certainly in context of a growing community with an ambitious vision. A Creative Black Diamond vision suggests pursuit of an Integrated Creative Centre model for a next generation community gathering and creative space.

Recommended Action:

- Socialize Integrated Creative Centre vision with community. Adopt vision as direction to be pursued. Insert into long term capital budget. Forge connection with creative community and philanthropists to explore a creative/joint venture funding model.

INITIATIVE 3 – INCORPORATE COLOUR IN BUILT ENVIRONMENT

There is no real reason to avoid colour in our built environmental other than our fear-based tethering to "resale beige" because colour won't "sell." And yet we take pictures of the colour around us when we travel. Other northern cultures like Scandinavia embrace colour as a means to elevate the human spirit even in the darkest days of winter. In the Calgary Region, colour is spare. Perhaps only the Children's Hospital steps out of uninspired colour palettes:



Src: Trotter & Morton, http://eww.trotterandmorton.com/service-type/electrical?page=1

Colour can directly impact economic development and tourism, as illustrated by Stavanger, Norway - https://www.lifeinnorway.net/ovre-holmegate/



Recommended Action:

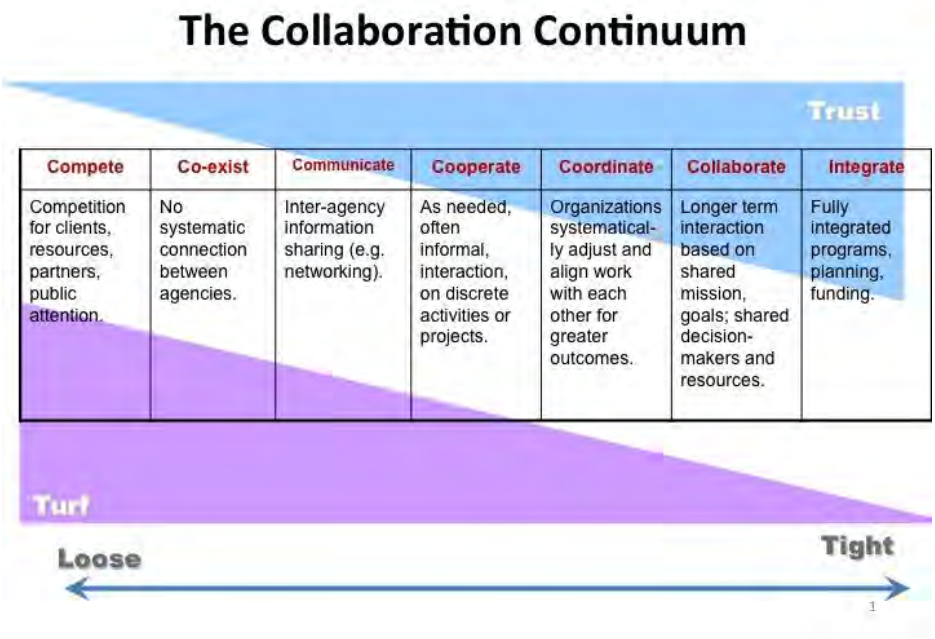
- Advocate for inclusion of a more vibrant/primary colour palette in new neighbourhood design and commercial areas.
    - recognizing that Mainstreet architectural guidelines include a heritage palette

GOAL 5: PURSUE DEEPER COLLABORATION WITH TURNER VALLEY

There have been two amalgamation studies, most recently in 2017. A Friendship Agreement (and a trail between the two communities of the same name) dates from 2012. A joint growth strategy has been drafted in 2017. Following the 2013 flood, Black Diamond and Turner Valley opted to participate in formation of the Sheep River Regional Utilities Corporation (est. 2016).



The actions noted in the preceding suggest that Black Diamond and Turner Valley in many ways already exist in the realm of Collaborate and Integrate in the Collaboration Continuum:



Src: http://www.collaborationforimpact.com/collaborative-approaches/ca-subpage-2/

Black Diamond economic development workshop results (2017) suggest an inevitability of amalgamation, which is a logical conclusion of two communities that exist on the right side of the Collaboration Model, and given limited geographic separation which results in shared culture and many shared services. What is in dispute is timing, and a natural inclination for communities to protect their history and identity – extending the timeline toward a catalyst of some kind (economic necessity, asset management challenges/opportunities, community leadership impetus, etc.) down the road. "Trust" is typically a mindset catalyst.

There is almost universality of agreement that collaborative services should be pursued, with cost efficiency as a primary factor in determining where to collaborate. A service inventory, current service collaboration, and each of Black Diamond and Turner Valley resident (survey) prioritization of collaborative services is indicated as follows:

Table 1: Municipal Service Inventory

INVENTORY OF INTERNAL SERVICES	INVENTORY OF EXTERNAL SERVICES
1. **Administrative Services** a. Community and Stakeholder Communications b. Information Management Systems c. Mapping Services d. Civic Addressing e. Reception	1. **Protective Services** a. Fire Protection b. Emergency Medical Services c. Police Protection d. Community Bylaw Enforcement e. Emergency Response
2. **Financial Services** a. Accounting b. Taxation System c. Budget Process d. Financial Reports/Controls/Audit e. Property Assessment	2. **Community Services** a. Arts, Culture, and Recreation Programs b. Library c. Museum d. Economic Development/Tourism e. Family and Community Support Services
3. **Organizational Services** a. Human Resources b. Employee Benefits/Payroll c. Strategic Planning d. Orientation and Training e. Performance Monitoring	3. **Municipal Services** a. Planning and Development b. Inspections and Licensing c. Public Transportation d. Weed and Pest Control e. Parks and Open Space Maintenance
4. **Legislative Services** a. Policy Development b. Legal Advice c. Council Meeting Support d. Committee Support e. Records Management	4. **Operational Services** a. Water Treatment and Distribution b. Wastewater Collection and Treatment c. Storm Water Collection and Treatment d. Road and Sidewalk Maintenance e. Public Facility Maintenance f. Garbage and Recycling

NOTE: This lists the main groupings of services typically provided by municipalities.

Table 3: Existing Collaborative Efforts

Protective Services	Community Services
• Memorandum of Understanding for protective services to assist each other as needed • Shared Dog Pound	• Recreation – Friendship Trail • Recreation – Black Diamond Arena • Recreation – Turner Valley Pool • Economic Development – Diamond Valley Days and Parade • Shared Library
Municipal Services	**Operational Services**
• Planning and Development – Inter-Municipal Development Plan • Administration – Aligned Accounting Software • Administration – Shared GIS Staff	• Water – Sheep River Regional Utilities Corporation • Wastewater – Westend Regional Sewage Services Commission • Solid Waste – Garbage Collection • Solid Waste – Foothills Regional Service Commission • Solid Waste – Recycling Depot Agreement • Transportation – Joint Planning and Transit Pilot Program

NOTE: This represents an overview of the various services being shared by the towns.

Turner Valley:

Table 16: Overall Level of Importance for Collaborative Services

Collaborate	Level of Importance
Water/Sewer	99.1%
Garbage/Recycling	96.3%
Protective services	95.4%
Parks/Paths/Open Space	91.7%
Snow removal	89.0%
Library	87.3%
Recreation Facilities	86.4%
Planning	86.1%
Street/Sidewalk maintenance	84.5%
Bylaw Enforcement	82.4%
FCSS	73.4%
Arts/Culture	72.5%
Public Transportation	66.1%

Black Diamond:

Table 6: Overall Level of Importance for Collaborative Services

Services	Level of Importance
Water/Sewer	89.0%
Garbage/Recycling	87.7%
Protective Services	85.3%
Recreation Facilities	80.6%
Bylaw Enforcement	78.2%
Planning	76.3%
Parks/Paths/Open Space	75.6%
Library	75.3%
Street/Sidewalk maintenance	73.2%
Snow removal	72.4%
FCSS	66.9%
Arts/Culture	64.7%
Public Transportation	56.1%

Whether it wasn't present as an option in survey work, or it wasn't highly ranked, Economic Development is typically low hanging fruit with respect to shared service. Regional economic development models are extensively used in Alberta. Municipalities cooperate on economic development in many ways – typically around marketing. The reason for this is that investment and tourism think far less about municipal boundaries than municipalities and their residents do. Investment and tourism thinks about value proposition and distinctive product, respectively. Given geographic proximity of Black Diamond and Turner Valley and the degree of shared services, value proposition between the two communities is little differentiated. Tourism product development and promotion would benefit from deeper collaboration by creating a sum greater than the parts. In addition, together the two communities have a population that has surpassed 5000 people. For investment purposes, this "talks louder" than two smaller communities.

In addition to municipal collaboration, Black Diamond should work on deeper collaboration with the business community. A natural bridge between community and business interests is investment. There is no better form of local business retention and expansion than an investment co-op where the community itself has a vested interest in the success of enterprises.

INITIATIVE 1 – UNDERTAKE A JOINT ECONOMIC DEVELOPMENT PROGRAM WITH TURNER VALLEY

Black Diamond currently has a municipal economic development program. Turner Valley does not. A combined office, co-invested by each of the communities, creates a more stable investment in a more municipal service, and offers a population critical mass for an Economic Development Officer to nurture and promote.

Recommended Actions:

- That Black Diamond and Turner Valley create a joint Diamond Valley Economic Development Office.
- That the joint Economic Development Office starts to use the name "Diamond Valley" in selected marketing activity to start to socialize a leading (community discussion) new community name.



INITIATIVE 2 – DEVELOP JOINT BLACK DIAMOND-TURNER VALLEY ASSET INVESTMENT/SHARED SERVICES PLAN

The quality of infrastructure is an unheralded but important component of economic development. It increasingly impacts investment given quality of life recreation and cultural assets influence investment decision making, particularly for creative/independent workforce elements. Communities essentially compete with other communities with their range and quality of services and amenities. Investment has choice and will concentrate in communities and regions with a strong services value proposition.

Re-investment in the state of repair of all infrastructure also ultimately influences the business cost environment. Many small communities have not adequately re-invested in infrastructure repair. In May, 2017 the Government of Alberta issued a letter to all Alberta municipalities indicating that more comprehensive asset management practices will be required (beyond current limitations of recording infrastructure investment as tangible capital assets – which identifies value based on the original construction price not current cost of replacement). This provincial policy push is complemented by Municipal Government Act amendments that will require deeper collaboration between regional communities. In many cases, the uncovering of infrastructure capitalization deficiency will force the hand of deeper collaboration and expanded shares services as a means to better/more efficiently manage and invest in capital assets.

Black Diamond and Turner Valley can take advantage of Amalgamation Study work to establish long range recreation and culture amenity, core infrastructure re-investment, and multi-year capital/operating plans related to shared infrastructure and services. This plan can include a roadmap for expanded and/or enhanced joint services.

The Amalgamation Study identified resident desire for priority shared services. This Plan assumes the Amalgamation Study included infrastructure assessment and re-capitalization requirements (annual lifecycle re-investment identified) and therefore this work is not required. The Amalgamation Study did not identify desired priority new amenity/services.

Recommended Actions:

- Develop/maintain multi-year capital and operating budgets for shared services.
- Conduct region services survey to better understand desired new services and amenities (i.e. identify gaps) to complement existing knowledge of desired shared services. This survey can also help determine tax strategies to support services provision (e.g. user fees vs tax supported). Use survey to update any master planning.

INITIATIVE 3 - ESTABLISH INVESTMENT CO-OP(S) TO SUPPORT ECONOMIC DEVELOPMENT

Opportunity - co-ops related to agricultural processing, new commercial building construction, downtown building revitalization, tourism infrastructure.

Co-ops enable people to pool resources, share-risk, and to own and make decisions around important resources in their community. Co-ops are typically created to meet a common need, and to benefit members who share that need. Co-ops also provide a decision making structure that make it easy to organize groups, to share resources, and to promote equality and equity. Src: http://acca.coop/. One of the key reasons that groups might choose to organize as a Co-op is that it may be easier to gain the confidence of local community investors. Co-op legislation, by reputation and by design, restricts the degree of control held by any one individual or group of individuals. The co-op principle of democratic control by the membership may be attractive where a venture depends upon raising funds from the community.

Recommended Action:

- Economic Development Committee to explore potential for co-op structure(s) around opportunity identification.

Resources:

- Alberta Community and Co-operative Association - co-op development resources, youth and adult education, rural development, administrative services, conference coordination and financial management - http://acca.coop/.
- Next generation cooperatives – Alberta Agriculture and Forestry - https://goo.gl/dXeHGQ. Start Up Guide - https://goo.gl/y4GC7S.
- Service Alberta – Co-operatives - https://goo.gl/ZWjlT9
- Top 300 global co-operatives - https://goo.gl/jRb8Hb.
- Nebraska (examples of cheese business, retail store, and online farmer's market - https://goo.gl/JQWGZa.

GOAL 6: ENABLE INSPIRED RECREATION

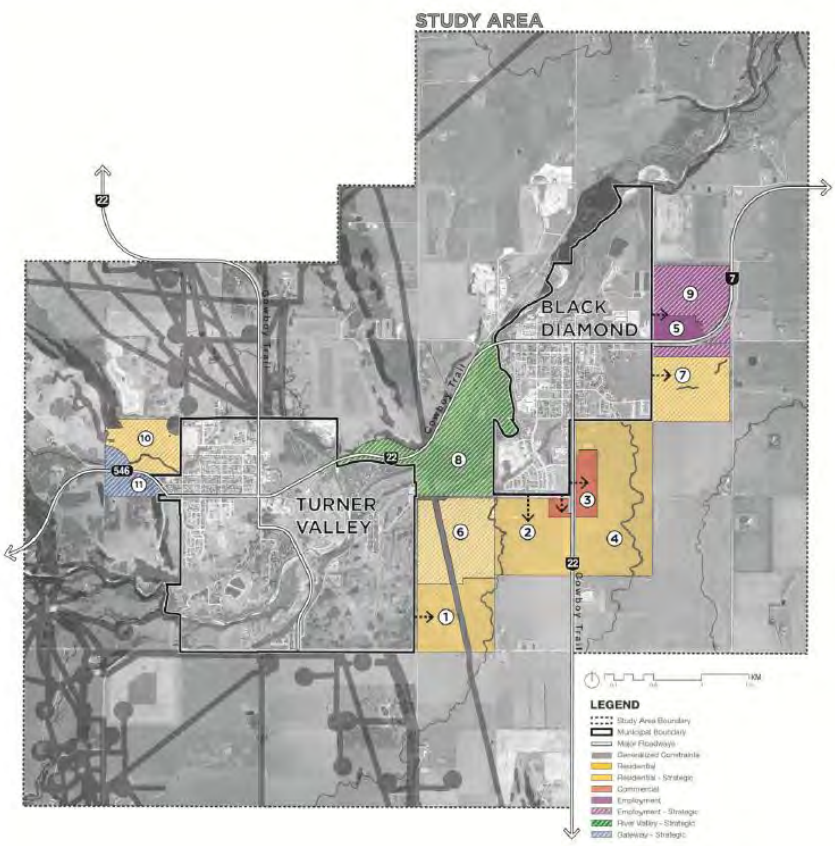
Three community development initiative areas have been selected given they were either identified in the Black Diamond Economic Development Workshop (June, 2017, River Park), is typically ranked high in all communities as a recreational amenity (Connected Pathways), and supports the Creative Black Diamond Vision (School Program Specialty).

INITIATIVE 1 – ESTABLISH A RIVER PARK WITH "BEACH" ACCESS

The preferred growth scenario (Scenario 3, see graphic below) in the Turner Valley Black Diamond Joint Growth Strategy (2017) identifies a river area between Black Diamond and Turner Valley as "River Valley – Strategic." This location is highly amenable to a spectacular and large river environment natural park, especially given most of it lies in a floodplain and is otherwise undevelopable. This park would be one of the largest in the Calgary region and is a great way to bridge two communities together. This park could be connected (under road passageway) to the Friendship Trail that connects the two communities. This area could serve as one potential location for a Performing Arts Centre.

A best practice in this area is Okotoks, which established policy in 1998 to purchase riparian floodplain lands. Almost all land of this nature in Okotoks has been purchased. Another option is to align with a trust or conservancy and negotiate with any current landowners to make dedication to.

Figure 44. Scenario 3 Concept



INITIATIVE 2 – FURTHER DEVELOP SPECIALTY SCHOOL PROGRAM(S)

"Specialty schools are schools with a specific focus, which can run the gamut from arts to athletics to science to the environment. The way the specialty can be incorporated into programming really ranges. For instance, at a school where there is a focus on, say, winter sports, the school day will be arranged to allow students optimal time for practices and to travel for competitions. The school might also be located near prime ski and snowboard areas. Whereas with an arts school, a student with a specialty in visual art might take courses in drawing, painting and print making." Src: http://www.ourkids.net/school/specialty-schools.php

Over the past decade high school education systems in many provinces have evolved to allow for a wider variety of educational options, including sport specific academies. Three significant streams are: Arts, Sport, International Students.

All of these could have significant benefit for Black Diamond. Arts specialty most aligns with a Creative Black Diamond vision while Sport aligns well with lifestyle choices families make in moving to commutershed metropolitan region communities like Black Diamond. For example, there are 64 sport specialty schools in Alberta; Oilfields High School is listed as a hockey program school. The Alberta School of Fine Arts in Okotoks offers potential to add and align further related programming in Black Diamond.

Further – the type of students attracted to, and placed in, these programs are aligned with life success down the road, which can pay long term dividend for Black Diamond as a matter of workforce development and entrepreneurial enablement.

Recommended Action:

- Have an ongoing dialogue with the Foothills and Christ The Redeemer School Divisions re Black Diamond's interest in adding specialty programming in Black Diamond schools.

Resources:

- Sport Schools in Canada: The Future Is Here - http://www.vancouversun.com/pdf/NationalPaper2.pdf
- International Student Program (Strathmore) - http://ghsd-international.com/
- List of Sport Specialty Schools in Alberta (pages 46-48) http://www.vancouversun.com/pdf/NationalPaper2.pdf

INITIATIVE 3 – FURTHER DEVELOP INTERCONNECTED OFFSTREET PATHWAY AND TRAIL SYSTEM

Surveys in most communities in Alberta would reveal pathways as a Top 3 desired recreational amenity. Black Diamond should continue to pursue off-street pathway development, and insist on it as part of new development agreements for new neighbourhoods. A joint Turner Valley-Black Diamond priority on integrated off-street pathway development would create a significant community amenity and differentiator over the long-term, particularly when tied to two potential, broader development concepts: 1) River Park between Black Diamond and Turner Valley linked by Friendship Trail (Turner Valley-Black Diamond Joint Growth Strategy, River Valley – Strategic, Scenario 3); and 2) Sheep River pathway to Okotoks.

Recommended Actions:

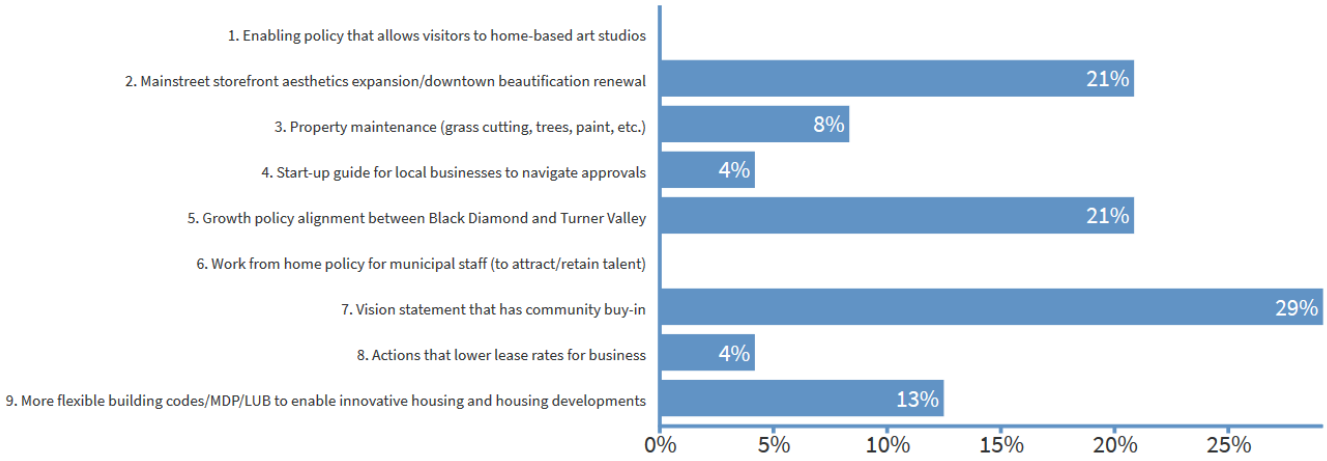
Enhance pathway master plan to include consideration of off-street connectivity to all major community infrastructure amenities (including the downtown), and tie-in to Turner Valley trail master planning.

VI. ONE YEAR ACTION PLAN

In general, this Plan serves as a playbook for an Economic Development Officer, who develops an annual work plan from larger context. Simpler and shorter is better.

To support Economic Development Officer activity, Black Diamond Economic Development Workshop participants were asked to prioritize Year 1 initiatives in three key areas: Policy, a Small, Visible Initiative, and One Stretch Initiative:

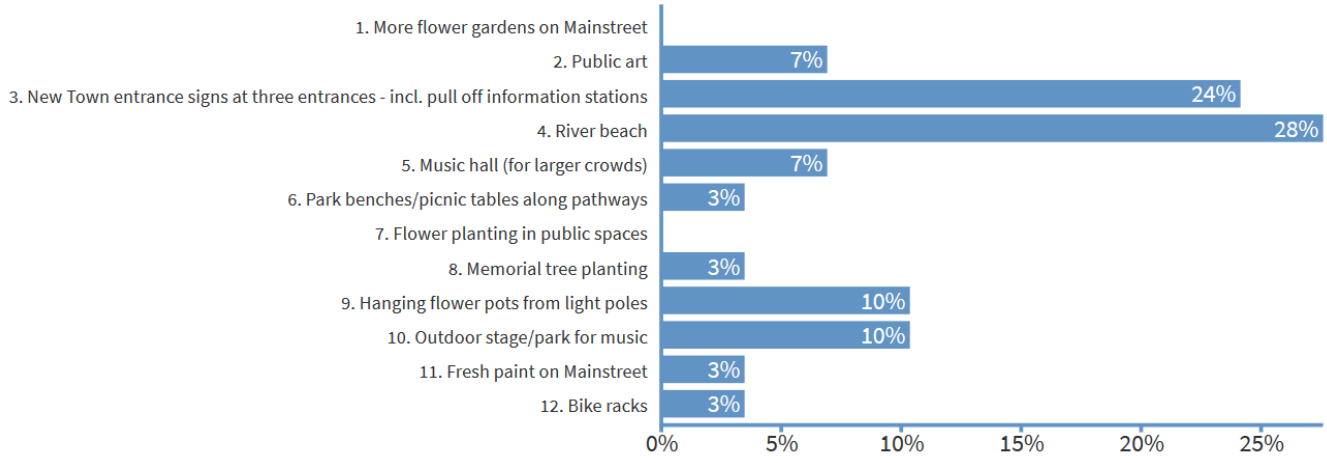
Policy:



Year One Actions

- Communicate a community economic development vision statement and core strategic elements and achieve enough buy-in to confidently move forward.
- Adopt a final version of the Turner Valley-Black Diamond Joint Growth Strategy.
- Identify and implement one downtown beautification initiative.

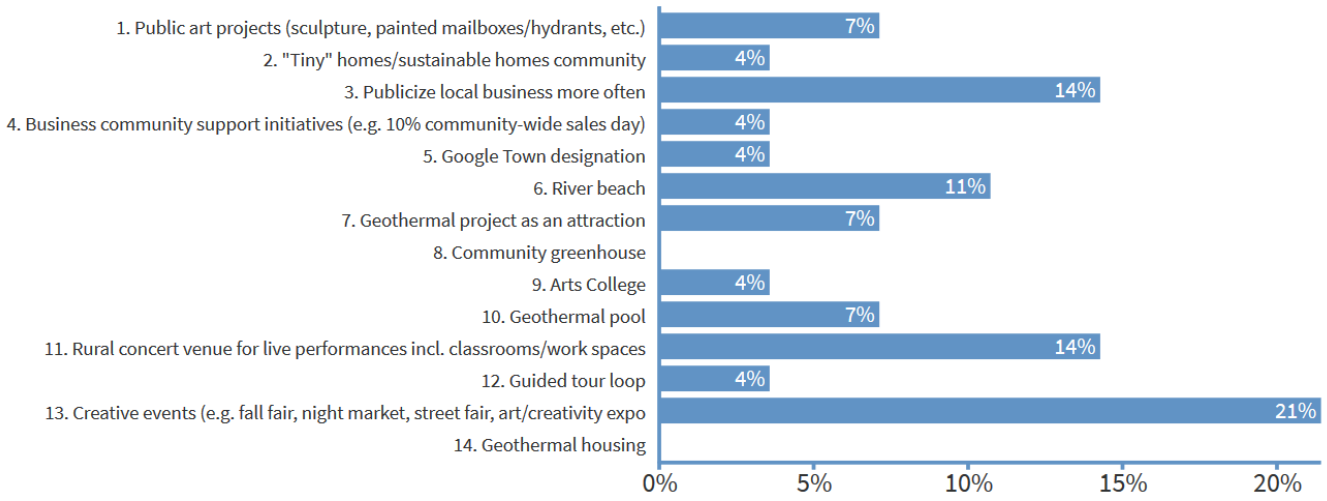
One small, visible initiative that improves physical appearance of the community:



Year One Actions

- Commit to a river beach location.
- Complete a Wayfinding Signage Program (consultant) that includes directional, amenity and community entrance signage, with a key implementation priority on entrance signage.

One stretch initiative:



<u>Year One Actions</u>

- Identify and hold one new creativity-based community event.
- Create 2-3 business success stories.
- Hold discussions with Turner Valley and commit to a new path forward for a Performing Arts/Creative Centre.

VII. PERFORMANCE METRICS

Economic development metrics should focus on outcomes that can be directly related to economic development-related activity. More generally, metrics should be 'SMART': specific, measurable, achievable, relevant, and time-based. A smaller number of relevant metrics is more important than a large number of metrics. These metrics have been aligns with metrics in the Turner Valley Economic Development Plan in anticipation of further alignment of economic development activity and a need to include residents in the "story" of the two communities as a matter of consistent measurement and messaging.

1. Key Metric

85/15 Assessment Ratio

- By build out to current municipal boundary
- Estimated 26 year build-out at current development rate

2. Metrics Related to Target Markets

The following metrics are suggested for the evaluation of marketing efforts to attract and engage Professional Services and Creative Industries target markets. A baseline will need to be established to provide a frame of reference for the performance of the plan.

- 10% increase in number of home based businesses over last 5 year average - 2021
- 1% increase in percentage of the whole related to labour force for creative industries and professional services segments (over each 5 year rolling average – Census Canada) - 2021
- Number of leads generated and referred (need to have a way of tracking these in the first place) - annual
- Number of converted leads related to target markets – annual.

3. Generic Metrics

The following metrics are considered generic because they apply to the overall performance of Turner Valley to attract investment and grow.

- Reduction of commuter ratio from 74% to 64% by 2021 (federal census).
- 10% increase in new business license applications / total # of business licenses over last 5 year average - 2021
- Local job growth (evaluate performance going forward as an increase over established 10 year growth pattern).
- 10% increase in commercial/industrial building permit value (conditional on new land supply being established) - 2021.

The following apply to the overall performance of various marketing tactics:

- Increase in website hits/quality of traffic/origin of traffic (Google Analytics required, or similar analytics package).
- Increase in popularity/likes of online assets (videos, downloads, etc.).
- Increase in level of engagement on social channels.

4. Background

Typical metrics used by economic developers in Canada are referenced as background as follows:

Top Ten Measures used in Canadian Economic Development

Answer Options	Response Percent	Response Count
New Businesses opened	73.4%	69
Population	67.0%	63
Jobs created full time	60.6%	57
Workforce	60.6%	57
Inquiries received	59.6%	56
New Business investment attracted	58.5%	55
Building permits - Commercial	53.2%	50
Building permits - Institutional	51.1%	48
Business closures	48.9%	46
Unemployment rate	47.9%	45

Figure 14 – Economic Development Measures - Canada

What measures do you routinely keep track of (pick all that apply)?

Answer Options	Response Percent	Response Count
New Businesses opened	73.4%	69
Population	67.0%	63
Jobs created full time	60.6%	57
Workforce	60.6%	57
Inquiries received	59.6%	56
New Business investment attracted	58.5%	55
Building permits - Commercial	53.2%	50
Building permits - Institutional	51.1%	48
Business closures	48.9%	46
Unemployment rate	47.9%	45
Funding granted	45.7%	43
Building permits - residential	44.7%	42
Municipal tax	43.6%	41
Jobs created part time	42.6%	40
Average family income	42.6%	40
Jobs maintained	39.4%	37
Commercial vacancy rates	36.2%	34
Number of project files open	33.0%	31
Funding applications received	33.0%	31
Open files	29.8%	28
Retail vacancy rates	24.5%	23
Average salary/wage offerings of new businesses	19.1%	18
Performance of funding disbursed	16.0%	15
New landed immigrants	13.8%	13
Productivity ratio	8.5%	8
Patents files/received	5.3%	5
Other (please specify)		11
answered question		94
skipped question		5

Figure 15 – Economic Development Measures - Canada



Money	Tourism Promotion	Inquiries	Job Growth
Staff/Volunteers	Business Recruitment	Project Files Opened	Capital Investment
Facilities	Retention & Expansion	Corporate Calls	Tax Assessment
Equipment/Supplies	Small Business Advisory	Clients Served	Businesses Start-ups

Source: Angelou Economics, 2005 Based on work by Harry Hatry as adapted by the author.

Figure 16 – Economic Development Measures - Canada

Src:
http://www.edac.ca/system/resources/BAhbBlsHOgZmSSJdMjAxMS8xMC8wMy8xNl81Nl8yMV81MTJfRmluYWxfUmVwb3J0X1BlcmZvcm1hbmNlX01lYXN1cmVtZW50X2luX0Vjb25vbWljX0RldmVsb3BtZW50LnBkZgY6BkVU/Final_Report_Performance_Measurement_in_Economic_Development.pdf

Appendix 1: Assessment Target Calculation

- *Assumption: a higher non-residential assessment ratio is generally desired by communities for two reasons: 1) increased ability to pay for services/amenities that in turn create a self-sustaining cycle of community investment; 2) local employment has a number of positive ramifications, from community self-sufficiency to reduced commuter ratio to increased community safety, to increased corporate support for community initiatives, events, etc.*
- *The average non-residential assessment for Town status communities in Alberta is 21% of total assessment.*
- *Recommended Black Diamond Target: 15%*
    - *acknowledges constraints related to presence of Okotoks as an established commercial service centres.*

a) Current Assessment

- Residential - $ 325,106,957
- Farmland - $7,500
- Non-Residential (non-regulated) - $34,393,145
- Non-Residential (linear property) - $2,951,620
- Machinery and Equipment - $0

Total - $362,459,222

b) Current Build Out

- Commercial: 96.19 acres
- Residential: 151.16 acres
- Public Service: 341.82
- Agricultural: 24.8

Undeveloped Residential Development: 76.52 acres
Undeveloped Commercial Development: 21.26
Urban Reserve for Residential Development: 49.49 acres

Total land area (to current municipal boundary): 766 acres

- 19% of total land area within the municipal boundary is undeveloped/urban reserve

c) Current Assessment:

- $34,393,145 non-residential (non-regulated) assessment/96.19 commercial acres = $357,554 assessment/acre
- $325,106,957 residential assessment/151.16 residential acres = $2,150,747 assessment/acre minus 10% (for MGA minimum MR requirement for residential subdivision) = $1,935,672 assessment/acre
- Current residential/non-residential assessment ratio: 89.7/10.3

d) Projected Assessment (based on 2017 tax rate)

Developable acres – 147.27
Projected new commercial assessment – 21.26 acres x $357,554 assessment/acre = $7,601,598
Projected new residential assessment – 126.01 acres (undeveloped plus urban reserve) x $1,935,672 = $243,914,029
Projected linear assessment** - $3,541,944
Projected M&E assessment** - $0

e) Total Assessment (Current Plus Projected):

Total commercial/industrial assessment (incl. linear) (built + projected) = $41,994,743
Total built plus projected residential assessment (built + projected) - $569,020,986

Total projected assessment (current plus projected new assessment) - $611,015,729
Resulting assessment ratio: 93.1/6.9

- Projected municipal tax revenue (municipal revenue only including Foothills Foundation, using 2017 tax rate: 7.9704 residential, 8.306 non-residential) to build out: $4,884,132 348808 4.535,248
- Projected municipal tax revenue using 39% non-residential tax rate differential (Okotoks) for commercial/industrial development (current Black Diamond differential is 4.2%) to build out***: $5,005,441
    - The property "tax gap" is the differential between commercial and residential property tax mill rates. Tax Gap – AB average 2.43 - http://www.cfib-fcei.ca/english/article/7893-alberta-entrepreneurs-deserve-property-tax-fairness.html . Black Diamond (municipal only) – 1.042 (Okotoks 1.395, Turner Valley 1.0725)
- Projected # years residential land supply within boundary****: 26

e) Target Assessment Ratio: 85/15

- Commercial/industrial land requirement to current boundary build out – 105 acres
    - 105 acres x $357,554 assessment/acre = $37,543,170 new assessment
- Residential land requirement - 42 acres
    - 42 acres x $1,935,672 assessment/acre = $81,298,224 new assessment

Plus current assessment:

Non-residential - $34,393,145
Residential - $325,106,957

Total assessment to build out to current boundary:

Non-residential - $71,936,315
Residential - $406,405,181
Total: $478,341,496

Ratio: 85/15

f) To Achieve Average Alberta Town Status Community Assessment Ratio: 79/21

- Commercial/industrial land requirement to current boundary build out – 147 acres
    - 147 acres x $357,554 assessment/acre = $52,560,438 new assessment
- Residential land requirement - 31 acres
    - 0 acres x $1,935,672 assessment/acre = $0 new assessment

Plus current assessment:

Non-residential - $34,393,145
Residential - $325,106,957

Total assessment to build out to current boundary:

Non-residential - $86,953,583
Residential - $325,106,957
Total: $412,060,540

Ratio: 79/21

f) Conclusions

- There is a 105 acre commercial/industrial land deficiency within the current municipal boundary to achieve an 85/15 target assessment ratio.
- There is 20+ year land supply within the municipal boundary to accommodate historical growth rates (20+ years).
- There is inadequate commercial/industrial land supply to address any kind of non-residential assessment target that diverges from the projected downward trend.
- Commercial/industrial land supply requirements are high enough for any form of 'average' targeting that location for land supply need should be sought now. *Note: Land area requirement is directly impacted by two key variables: density (e.g. lot coverage), and assessment per acre (influenced by type of enterprise). The Town should aim to encourage both factors as a matter or tax revenue.*
- In most communities in Alberta, there are differential tax rates for commercial/industrial development, which generates greater ability to pay for desired services and amenities that can otherwise not be accommodated by the residential sector alone without considerable challenge. Desired services and amenities are a critical success factor for Black Diamond given a creative/cultural target market that seeks a community of choice.

**non-residential assessment includes non-residential non-regulated, non-residential linear property, and machinery and equipment assessment.*

*** non-linear property assessment increases 20% (non-developed land area within current boundary) over 2017 assessed value ($2,951,620), M&E remains zero based on current Black Diamond tax policy.*

****2017 tax rate 8.426 (municipal. Including Foothills Foundation) with no commercial/residential variation. 34.8% commercial variation (11.358)*

*****126 acres developable residential land in boundary. 17.73 people per developed residential acre (density – 2016 – 2630 (2700-70 units total of long term care and senior's lodge)/151.16) projected with growth rate of 71 people/year (average of 2006-2016) x residentially-zoned urban reserve. Note: The Calgary Metropolitan Plan requires density of 8-10 units per acre gross (19.5-24 people per acre based on 2016 Black Diamond population of 2.44/dwelling unit), which would increase land supply availability within the current municipal boundary by 10-40%.*

Assumption –future development pattern follows current pattern (likely to intensify under regional plan tempered by market forces…can choose to intensify commercial use (e.g. mixed uses, parking variances, maximum site coverage) to raise commercial assessment/acre, thereby requiring less raw acreage). Specific types of uses are also less assessment intensive (e.g. car dealers, storage facilities, buildings with storage yards) than other uses (e.g. offices, retail, professional services).

Appendix 2: Town Status Alberta Assessment Ratios (2017)

Towns	Residential Assessment	Non-Residential Assessment
Athabasca	75.7	24.3
Banff	57	43
Barrhead	77.6	22.4
Bashaw	80.4	19.6
Bassano	72.6	27.4
Beaumont	94.3	5.7
Beaverlodge	76.5	23.5
Bentley	86.6	13.4
Black Diamond	**89.7**	**10.3**
Blackfalds	88.8	11.2
Bon Accord	96	4
Bonnyville	60.4	39.6
Bow Island	77	23
Bowden	90.5	9.5
Bruderheim	91.3	8.7
Calmar	85.3	14.7
Canmore	86.1	13.9
Cardston	86.3	13.7
Carstairs	89.4	10.6
Castor	81.7	18.3
Claresholm	82.6	17.4
Coaldale	89.3	10.7
Coalhurst	95.3	4.7
Cochrane	89.8	10.2
Coronation	69.7	30.3
Crossfield	67.6	32.4
Daysland	89.5	10.5
Devon	87.9	12.1
Didsbury	88.3	11.7
Drayton Valley	60.1	39.9
Drumheller	72.4	27.6
Eckville	82.2	17.8
Edson	67.1	28.2
Elk Point	72.1	27.9
Fairview	77.3	22.7
Falher	64.7	35.3
Fort Macleod	76.4	23.6
Fox Creek	55.7	44.3
Gibbons	93.5	6.5

Grande Cache	74.7	25.3
Granum	88.3	11.7
Grimshaw	80.4	19.6
Hanna	78.1	21.9
Hardisty	70.3	29.7
High Level	51.5	48.5
High Prairie	61.9	38.1
High River	83.9	16.1
Hinton	61.8	38.2
Innisfail	74.9	25.1
Irricana	94.8	5.2
Killam	76.8	23.2
Lamont	82.5	17.5
Legal	93.4	6.6
Magrath	93.3	6.7
Manning	71.8	28.2
Mayerthorpe	76	24
Mclennan	75.9	24.1
Milk River	81	19
Millet	91.2	8.8
Morinville	88.2	11.8
Mundare	88.9	11.1
Nanton	82.1	17.9
Okotoks	86.6	13.4
Olds	79	21
Onoway	69.2	30.1
Oyen	79	21
Peace River	69.8	30.2
Penhold	94.9	5.1
Picture Butte	81.9	18.1
Pincher Creek	75.1	24.9
Ponoka	80.6	19.4
Provost	68.9	31.1
Rainbow Lake	63.2	36.8
Raymond	93.7	6.3
Redcliff	70	30
Redwater	68.8	31.2
Rimbey	73.5	26.5
Rocky Mountain House	73.7	26.3
Sedgewick	80.7	19.3
Sexsmith	79	21
Slave Lake	72.3	27.8
Smoky Lake	79.9	20.1
Spirit River	75.1	24.9
St. Paul	76.5	23.5

Stavely	88.5	11.5
Stettler	69	31
Stony Plain	85.5	14.5
Strathmore	83.2	16.8
Sundre	78.4	21.6
Swan Hills	66.8	33.2
Sylvan Lake	87.2	12.8
Taber	70.6	29.4
Three Hills	81.6	18.4
Tofield	79.2	20.8
Trochu	81.7	18.3
Turner Valley	91.9	8.1
Two Hills	85.1	14.9
Valleyview	59.3	40.7
Vauxhall	81	19
Vegreville	69.5	30.5
Vermilion	70.9	29.1
Viking	70.9	29.1
Vulcan	81.8	18.2
Wainwright	73	27
Wembley	82.6	17.4
Westlock	74.7	25.3
Whitecourt	58.3	41.8
	Avge - 79.26%	**Avge – 20.74%**

All Town status communities in Alberta, 2011 assessment.
Non-residential assessment ratio average for Town-status communities has risen by 1.07% from 2011 to 2017
Src: http://www.municipalaffairs.alberta.ca/mc_property_assessment_and_taxation_reports.cfm.

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Appendix K
Black Diamond Annexation Lands Servicing Review 2019

URBAN systems

REPORT





Annexation Lands Servicing Review

Prepared for:

Town of Black Diamond

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Revised

January 2019

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List of Abbreviations

ac	Acres
ha	Hectares
upa	Units per acre
AT	Alberta Transportation
MR	Municipal Reserve
WRSSC	Westend Regional Sewage Services Commission
ADF	Maximum Daily Flow
MDF	Average Daily Flow
PHF	Peak Hour Flow
m^3	Cubic metres
L/c/d	Litres per capita per day
L/s	Litres per second
m^3/h	Cubic metres per hour
ADD	Average Day Demand
MDD	Maximum Day Demand
PHD	Peak Hour Demand
MLD	Mega-litres per day
mm	Millimetres
m	Metres
SMDP	Staged Master Drainage Plan
vpd	Vehicles per day
ASP	Area Structure Plan
v/c	Volume to capacity ratio

Executive Summary

The Town of Black Diamond (Town) contracted Urban Systems Ltd. (USL) in summer 2018 to assess the servicing for three individual quarter sections on the east boundary of the Town. These quarter sections, their land uses, and their proposed densities were identified in the *Joint Growth Strategy*, O2 Planning, 2016, that was undertaken by both the Town of Black Diamond and the Town of Turner Valley. The assessment of these quarter sections required a review of the existing Town systems for water, wastewater and roads, and determining the remaining capacities. Stormwater management for each quarter section was also reviewed. Additional infrastructure and upgrades were then recommended. The short term servicing of each quarter section was also reviewed to determine if any development can take place in the interim.

After this initial review, the Town requested that an additional quarter section be added to the servicing review (Area 5). The review for Area 5, however, involved two separate scenarios: Scenario 1 where Area 3 is not annexed and no development occurs, and Scenario 2 where the annexation of Area 3 proceeds and is included in the servicing review of Area 5.

After the study of all four quarter sections and the two scenarios, the following recommendations were provided and are enclosed in this report:

- A 375mm sanitary system be constructed along the western edges of Area 1 and 2, which then extends along the east and south borders of Area 3 to service Area 5.
- With the hydraulic connection of both the Westend sanitary trunk and the existing gravity system in the Town of Black Diamond, there will be sufficient capacity to handle all of the projected flows from the proposed annexation areas.
    - In Scenario 2 where Area 3 is annexed, upgrades to the gravity system upstream of the wastewater treatment lagoon will be required.
- There are currently proposed upgrades for the Wastewater Treatment Lagoon in Black Diamond (timing unknown), which will extend the design life of the treatment facility to 2036. Further upgrades will be required, and additional study will be needed in the next 20 years or if the population in both Black Diamond and Turner Valley approaches 7,989 residents, which is expected between 2030 and 2033.
- It is assumed that the NE Industrial Water Main Looping Phases 1 and 2 will proceed prior to any development in the proposed annexation areas.
- An extension of the NE Industrial Water Main Looping project is proposed south along the future road alignment to strengthen the overall system.
- Area 5 can be serviced off of existing water connections within the Willow Ridge community and along Township Road 201 (418 Avenue) for both Scenarios. Added redundancy is required in both Scenarios, however, due to only one feeder main into the Willow Ridge community;, the following is recommended:

- In Scenario 1, a 250mm water main is proposed along the east side of Highway 22 from the existing 250mm water main between Highway 22 and 1st Street SE south until Township Road 201 where the proposed 250mm main will head west to tie-in the existing 250mm main south of 3rd Street SW.
- In Scenario 2, a 250mm water main is proposed to extend from the Area 3 water main connection on Willow Ridge Boulevard south across Township Road 201 and then head west to tie in to the existing 250mm stub south of 3rd Street SW.

- Additional water license will be required as the combined population (jobs and residents) of Black Diamond approaches 8,304 people, or approximately between years 2056 and 2066.
- The Water Treatment Plant in Turner Valley (where Black Diamond receives its treated water) has recently been upgraded and its design life has been extended to the approximately year 2036. Review of the system is required prior to that date or if the population approaches the combined population of 7,989 people similarly to the Wastewater Treatment Lagoon.
- No upgrades will be required to the existing water reservoir for either Scenario 1 or 2.
- Assuming the Kaiser Area Structure Plan (ASP) area is developed, there is approximately 6.2 L/s remaining in the existing Black Diamond sanitary gravity main. This means that:
  - Assuming no other proposed annexation area proceeds, Area 1 can service 42.6ac (17.2ha) of industrial.
  - Assuming no other proposed annexation area proceeds, Area 2 can service 25.7ac (10.4ha) of residential.
  - Assuming no other proposed annexation area proceeds, Area 5 can service 25.7ac (10.4ha) of residential. The short term servicing of Area 5 is the same regardless if Area 3 is annexed.
- Area 3 can be serviced off existing sanitary and water infrastructure.
- There will be underground storm systems on the proposed roads to handle road drainage.
- It will be the responsibility of the developer(s) of each quarter section to manage stormwater runoff.
- The development of each area will spark intersection upgrades:
  - Area 3 will require 1 intersection upgrade.

- If Areas 1, 2 & 5 were to develop, 5 intersection upgrades will be required.
- If all four areas were to develop, 6 intersection upgrades will be required.

1.0 Introduction

Previously, Urban Systems Ltd. (USL) was retained by the Town of Black Diamond (Town) to prepare a servicing review of three quarter sections that are proposed for annexation. In October of 2018, after the submission of the servicing review, it was identified by the Town that there was one more possible quarter section, Area 5, to be reviewed south of the existing Town boundary. The location of Area 5 is represented in Figure 1, as well as the previous three areas that were reviewed.

As a part of this review, the Town requested that two possible servicing scenarios be reviewed: one where Area 3 is annexed to the Town (Scenario 1) and its proposed infrastructure be utilized in the servicing strategy for Area 5, and the other where Area 3 is not annexed and none of its proposed infrastructure will be in place (Scenario 2).

The scope of the review is as follows:

- Provide capacities of existing infrastructure,
- Provide short and long-term servicing for the quarter sections (Areas 1, 2, 3 and 5), including the two separate scenario reviews for Area 5,
- Identify triggers for the staging of the upgrades identified in previous studies for the above listed Areas,
- Provide high level items for consideration related to phasing and servicing an additional quarter section (Area 6), see Figure 1,
- Identify the infrastructure to be included in the Offsite Bylaw Update,
- Discuss water looping within the NE Industrial area, and
- Provide estimated costs for the proposed servicing strategy.

The information contained within this report has been prepared to assist the Town with further conversations regarding annexation. All assumptions and sources of information have been listed within the report.

2.0 Background Information

2.1 Proposed Annexation Area

Four independent quarter sections are being proposed for annexation along the SE edge of the existing Town boundary that are currently within the MD of Foothills. Each of these quarter sections has their own respective land use designations as per the *Turner Valley & Black Diamond Joint Growth Strategy,* O2 Planning & Design Inc., 2016, which is comprised of commercial, industrial and residential.

These quarter sections are identified as Areas 1, 2, 3 and 5 in Figure 1. The land uses for each quarter were identified as a part of the *Joint Growth Servicing Study* in 2016 that was undertaken by both the Town of Black Diamond and the Town of Turner Valley. More information on this study can be found in both the *Turner Valley/Black Diamond Joint Growth Strategy – Scenario 3 Design Brief*, MPE Engineering, Ltd. 2016 and the *Black Diamond and Turner Valley Joint Growth Strategy – Scenario 3,* Urban Systems Ltd., 2016. These land uses were identified for the growth of both communities and were used to develop the servicing strategy for the *Joint Growth Servicing Study*. The information from these briefs has been used and updated within the context of this report.

2.2 Population

In the *Joint Growth Servicing Strategy,* the projected population within the existing Town boundary is predicted to extend to 3,427 people. The predicted populations for the annexation lands were calculated using the proposed land use types and are summarized below in Table 1. The proposed annexation areas are projected to increase the Town population by 3,715 residents and 1,828 jobs, increasing the total projected population to 7,142 residents and 1,828 new jobs. The following sections 2.2.1 and 2.2.2 will discuss further how the population and jobs for the proposed land uses: Residential, Commercial and Industrial.

Table 1: Total Estimated Town Populations

Area	Land Use	Developable Area (ha)	Developable Area (ac)	Density		Residential Population (residents)	Work Population (jobs)
1	Industrial	43.4	107.3	9.5	jobs/ac	-	1,019
2	Residential	51.6	127.5	15.6	people/ac	1,988	-
	Industrial	10.1	25.0	9.5	jobs/ac	-	237
3	Residential	44.8	110.7	15.6	people/ac	1,727	-
	Commercial	9.6	23.7	24.1	jobs/ac	-	572
5	Residential	52.0	128.5	15.6	people/ac	2,004	-
	Commercial	3.2	8.0	24.1	jobs/ac	-	193
				Total Proposed Annexation Population		5,719	2,021
Black Diamond Ultimate Population[1]						3,427	-
					Total	9,146	2,021

It should be noted that the ultimate population within the Town of Turner Valley, including the existing Town boundary and their proposed annexation lands, is 13,464 people as per the *Joint Growth Servicing*

[1] This is the estimated population within the existing Town boundary at full build-out.

URBAN systems

Annexation Lands Servicing Review

Date: 2019/11/7

Scale 1:12,500

Legend

- Commercial
- Industrial
- Residential
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

QS-NE SEC-17 TWP-020 RGE-02 MER-5

QS-NW SEC-16 TWP-020 RGE-02 MER-5

QS-NE SEC-16 TWP-020 RGE-02 MER-5

QS-SW SEC-16 TWP-020 RGE-02 MER-5

QS-SE SEC-16 TWP-020 RGE-02 MER-5

QS-SE SEC-17 TWP-020 RGE-02 MER-5

Area 1
- **Land Uses: Industrial**
- **Developable Area: 107.3 ac/43.4 ha**
- **Population: 1,019 Jobs**

Area 1
160ac/64.7ha

3 Street NW
2 Street NW
1 Street NW
3 Street NE
1 Avenue NE
Hwy 7
Centre Avenue W
Centre Avenue E
Ford Street SW
5 Street SW
4 Street SW
1 Avenue SW
2 Avenue SW
3 Avenue SW
1 Street SW
1 Avenue SE
2 Avenue SE
1 Street SE
Maplewood Drive SE
4 Avenue SE
4 Avenue SW
5 Avenue SW
2 Street SW
6 Avenue SW
3 Street SW
Government Road S

Town of Black Diamond

QS-NW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-09 TWP-020 RGE-02 MER-5

Area 2
- **Land Uses: Industrial, Residential**
- **Developable Area: 152.5 ac/61.7 ha**
- **Population: 1,988 Residents & 237 Jobs**

Area 2
160ac/64.7ha

QS-NW SEC-10 TWP-020 RGE-02 MER-5

QS-NE SEC-08 TWP-020 RGE-02 MER-5

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

Area 3
160ac/64.7ha

QS-SE SEC-09 TWP-020 RGE-02 MER-5

Area 6
160ac/64.7ha

QS-SW SEC-10 TWP-020 RGE-02 MER-5

Area 5
- **Land Uses: Commercial, Residential**
- **Developable Area: 136.5 ac/55.2 ha**
- **Population: 2,004 Residents & 193 Jobs**

418 Avenue W

Area 3
- **Land Uses: Commercial, Residential**
- **Developable Area: 134.4 ac/54.4 ha**
- **Population: 1,727 Residents & 572 Jobs**

Area 5
160ac/64.7ha

QS-NE SEC-05 TWP-020 RGE-02 MER-5

QS-NW SEC-04 TWP-020 RGE-02 MER-5

QS-NE SEC-04 TWP-020 RGE-02 MER-5

QS-NW SEC-03 TWP-020 RGE-02 MER-5

Population and Developable Area

FIGURE 1

Strategy. A summary of the population calculations can be found in Appendix A – Population Estimation Summary.

2.2.1 Residential Population

The Town has identified that the target density for the annexation area will be 6.5 units per acre (upa), whereas 8 upa was used in the previous *Joint Growth Strategy*. This lower density was selected by the Town as it is expected to represent a more achievable density. The Town provided USL with the information that the household size in Black Diamond has been trending towards 2.4 people per unit over the last 5 years and therefore, this household size was used to estimate the residential population. By multiplying the household size by the latest density target, the population equivalent for residential becomes 15.6 people per acre.

To determine the residential population, the developable area was estimated for the areas with residential land uses. The density variables presented above were then applied to the developable area to determine the population.

Both Area 2 and Area 3 have residential land uses. The total developable residential area of Area 2 was estimated to be 51.6ha (127.5ac), which excludes non-developable lands as follows:

- the surface area of the wetland identified to be maintained in the *Kaiser Area Structure Plan (ASP) Technical Background Report,* Urban Systems Ltd., 2017,
- the future road right of way, of which a width of 26m was assumed

The developable residential area for Area 3 was estimated to be 44.8 ha (110.70 ac), which was estimated by removing the water course running north south through the quarter section. This water course was estimated at approximately 15% of the total quarter section (the size will need to be determined prior to development). The summary of the populations can be found in Table 1 in the previous section.

The developable residential area for Area 5 was estimated to be 52.0ha (128.5ac), which includes the removal of the area of the water course on the western edge of the quarter section (9.53ha) and 0.25ha for a possible wetland at the north-east corner of the quarter section.

2.2.2 Service Population

The service population describes the population generated from both commercial and industrial land uses. These populations were calculated using the same densities as were identified in the *Joint Growth Servicing Strategy*. They are as follows:

- Commercial = 24.1 jobs per acre
- Industrial = 9.5 jobs per acre

All three subject areas have some form of service area that would produce jobs for the Town. To determine the amount of potential jobs, the developable service area is estimated, similar to the residential developable area above. Area 1 is entirely industrial and is estimated to have a developable area of 43.4ha (107.3ac). This was determined by removing the following areas:

- Potential future Highway 7 expansion
- Proposed road right of way along the western edge of the quarter section (discussed further in this report)
- Approximately 3.9ha of Alberta Transportation (AT) land in the SE corner of the quarter
- 15ha to preserve the existing knoll at the western entrance to the Town

Area 2 will contain a portion of land identified as Industrial. To estimate the amount of developable Industrial area, the area of the existing County road and the area of the future road right of way on the western edge of Area 2 were removed from the Industrial developable area calculation. The estimated developable area is therefore estimated to be 10.1ha (25.0ac).

An area of commercial land use is designated for a portion of Area 3. This is estimated to be approximately 15% of the entire quarter section at 9.60ha (23.7ac).

The commercial area of Area 5 was estimated to be 5% of the entire quarter section with an estimated developable area of 3.2ha (8ac). The calculation of the developable area includes the removal of 0.1ha for the potential wetland at the north east corner of the quarter section.

2.3 Population Projection

For reference in this document, the projected population of both the Towns of Black Diamond and Turner Valley has been provided in Appendix B. The population was estimated using the lower and higher growth trends between 2015 and 2075 as identified in the *Turner Valley & Black Diamond Joint Growth Strategy* and applying them to 2016 Canadian Census population of both Black Diamond (2,700 people) and Turner Valley (2,559 people). These trends are outlined below:

- Lower Growth Trend:
  - 2015 – 2035: Growth rate of 2.50%
  - 2035 – 2055: Growth rate of 2.25%
  - 2055 – 2075: Growth rate of 2.00%

- Higher Growth Trend:
    - 2015 – 2035: Growth rate of 3.00%
    - 2035 – 2055: Growth rate of 2.75%
    - 2055 – 2075: Growth rate of 2.50%

With the population projections presented above, the timeline of infrastructure upgrades can be estimated.

3.0 Existing Wastewater Infrastructure

3.1 Existing Wastewater Gravity Pipe System

The wastewater for the entire Town is conveyed via a 300mm gravity main to the wastewater lagoon at the north end of the Town. From the *Black Diamond Proposed Annexation Study,* BSEI Municipal Consulting Engineers, 2012, it is understood that the overall capacity of the gravity system is 45 L/s; of which 31 L/s is the existing flow in the system.

In addition to the Town of Black Diamond gravity system, the Westend Regional Sewage Services Commission (WRSSC) operates a 525mm gravity main (the Westend main). This 525mm main is hydraulically connected with the 300mm gravity main upstream of the lagoon to provide an overall capacity of 280 L/s for the wastewater treatment system. Approximately 146 L/s of the 280 L/s capacity is allocated for Black Diamond. This information was presented in the *Westend Regional Sewage Services Commission - Westend Sanitary Trunkmain Relocation Design Report*, Urban Systems Ltd, 2015.

3.1.1 Existing Westend Capacities

As described above, the WRSSC operates a 525mm gravity through the Town of Black Diamond. Upstream of the gravity main is a forcemain that conveys all of the sanitary flows from Turner Valley via a pump station at the golf course. The ultimate design capacity of the forcemain and its lift station will be for 134 L/s. The design capacity of the 525mm gravity main was calculated to be 217 L/s, which has been estimated for when the pipe is at 85% of its capacity. Given the capacity of the gravity main and that only 134 L/s from Turner Valley are projected in the upstream forcemain, there is a remaining 83 L/s of spare capacity in the gravity main. Please refer to Figure 2 for the capacities within the Westend system and the Town's gravity system for more information.

3.2 Existing Wastewater Treatment Facilities

Wastewater from both Black Diamond and Turner Valley is currently treated in an aerated lagoon system located in Black Diamond operated by the WRSSC.

The WRSSC operates the Turner Valley Main Lift Station, force main and gravity system (the Westend main), the Transfer Lift Station and force main at the lagoon, as well as the overall aerated lagoon system. The capacity of the existing system is summarized below in Table 2.

URBAN systems

Annexation Lands Servicing Review

Date: 2019 / 11 / 9

Legend

- Existing Sanitary Main
- Existing 300mm Sanitary Main
- Existing Westend Sanitary System
- Annexation Areas
- Quarter Sections
- Town of Black Diamond

Scale 1:12,000

QS-SE SEC-20 TWP-020 RGE-02 MER-5

QS-SW SEC-21 TWP-020 RGE-02 MER-5

QS-SE SEC-21 TWP-020 RGE-02 MER-5

QS-NE SEC-17 TWP-020 RGE-02 MER-5

QS-NW SEC-16 TWP-020 RGE-02 MER-5

QS-NE SEC-16 TWP-020 RGE-02 MER-5

280 L/s CAPACITY AT LAGOON (WITH BOTH 300 mm & 500mm HYDRAULICALLY CONNECTE) - 134 L/s FROM TURNER VALLEY - 146 L/s FOR BLACK DIAMOND

CAPACITY OF BLACK DIAMOND 300mm MAIN IS 45 L/s UPSTREAM OF THE 300mm AND 525mm MAINS HYDRAULICALLY CONNECT

QS-SE SEC-17 TWP-020 RGE-02 MER-5

QS-SW SEC-16 TWP-020 RGE-02 MER-5

QS-SE SEC-16 TWP-020 RGE-02 MER-5

Area 1

2 Street NW

2 Avenue NE

3 Street NE

1 Avenue NE

HWY 7

WESTEND GRAVITY MAIN 85% DESIGN CAPACITY = 217 L/s ALLOCATED DESIGN FLOW = 134 L/s

Centre Avenue W

Centre Avenue E

1 Avenue SE

1 Avenue SW

Ford Street SW

4 Street SW

5 Street SW

2 Avenue SW

2 Avenue SE

3 Avenue SW

1 Street SW

1 Street SE

QS-NW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-09 TWP-020 RGE-02 MER-5

Area 2

QS-NE SEC-08 TWP-020 RGE-02 MER-5

2 Street SW

4 Avenue SW

5 Avenue SW

Maplewood Drive SE

4 Avenue SE

WESTEND FORCEMAIN AND PUMP STATION DESIGN CAPACITY = 134 L/s

POINT WHERE WESTEND FORCEMAIN ENDS AND WESTEND GRAVITY MAIN BEGINS

3 Street SW

Government Road S

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

Area 3

QS-SE SEC-09 TWP-020 RGE-02 MER-5

Area 6

Riverwood Crescent SW

Willow Ridge Blvd SW

Willow Ridge

Willow Ridge Manor SW

Manor SW

418 Avenue W

QS-NE SEC-05 TWP-020 RGE-02 MER-5

Area 5

QS-NW SEC-04 TWP-020 RGE-02 MER-5

QS-NE SEC-04 TWP-020 RGE-02 MER-5

Existing Sanitary Systems Capacity

FIGURE 2

Table 2: Existing Lagoon Capacity[2]

Item	Complete Mix Cell	Aerated Cells
Volume (m^3)	8,551	112,289
Require Retention (days)	2	28
Max. Monthly Average Daily Wastewater Volume (m^3)	4,162	4,000

On behalf of the WRSSC, MPE submitted a revised final report in late 2015 to Alberta Environment and Parks (AEP) that discussed required upgrades to the existing aerated lagoon. From the *WRSSC Revised Plan for Operating Approval*, MPE Engineering Ltd. 2015, it is estimated that these upgrades would need to take place prior to 2020 as the projected population of both Towns would exceed 5,300 people and both Towns would have a maximum monthly average daily flow of over 4,200 m^3 per day. This exceeds the lagoons design capacity of 4,000 m^3 per day. These upgrades are discussed further in Section 4.3.3.

4.0 Wastewater Servicing Concept

The overall wastewater servicing concept for Areas 1, 2 and 5 (Scenario 1) is shown in Figure 3 and the overall wastewater servicing concept for all four proposed annexation areas (Scenario 2) is demonstrated in Figure 4. A summary of the sanitary demand calculations can be found in Appendix C.

4.1 Criteria

In order to estimate the sanitary flows for the four proposed areas, criteria from the *Foothills Regional Water and Wastewater Collaborative (FRWWC) – Regional Wastewater Treatment Feasibility Study*, MPE Engineering Ltd. (MPE) & USL, 2016, was used. The criteria are summarized in Table 3 below.

Table 3: Wastewater Flow Criteria

Item	Value	Units
Total Community Wastewater Demand	264	L/c/d
MDF[3]:ADF[4] Ratio	2.2	-
PHF[5]:ADF Ratio	5.0	-

[2] Information provided from the *Black Diamond Proposed Annexation Study,* BSEI Municipal Consulting Engineers, 2012.
[3] MDF: Maximum Daily Flow
[4] ADF: Average Daily Flow
[5] PHF: Peak Hour Flow

URBAN systems

Annexation Lands Servicing Review

Date: 2019 / 11 / 14

Scale: 1:12,000

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Existing Sanitary Main
- Existing 300mm Sanitary Main
- Existing Westend Sanitary System
- Annexation Areas
- Quarter Sections
- Town of Black Diamond

QS-SE SEC-20 TWP-020 RGE-02 MER-5

QS-SW SEC-21 TWP-020 RGE-02 MER-5

QS-SE SEC-21 TWP-020 RGE-02 MER-5

QS-NW SEC-16 TWP-020 RGE-02 MER-5

QS-NE SEC-17 TWP-020 RGE-02 MER-5

QS-NE SEC-16 TWP-020 RGE-02 MER-5

TOTAL FLOW =(52.4+20.2+15.6+34+33.6)=155.8L/s
TOTAL BLACK DIAMOND ALLOCATION = 146 L/s
TOTAL OVERAGE = (155.8-146)L/s = 9.8L/s

280 L/s CAPACITY AT LAGOON
(WITH BOTH 300 mm & 500mm HYDRAULICALLY CONNECTED)
- 134 L/s FROM TURNER VALLEY
- 146 L/s FOR BLACK DIAMOND

CAPACITY OF BLACK DIAMOND 300mm MAIN IS 45 L/s UPSTREAM OF THE 300mm AND 525mm MAINS HYDRAULICALLY CONNECT

TIE IN TO EXISTING GRAVITY MAIN TO LAGOON

PROPOSED 150 HDPE FORCE MAIN

PROPOSED 450 PVC GRAVITY MAIN

PROPOSED 450 HDPE FORCE MAIN

WESTEND MAIN

PROPOSED 450 HDPE FORCE MAIN

PROPOSED 450 HDPE FORCE MAIN

PROPOSED 375 PVC GRAVITY MAIN

PROPOSED 375 PVC GRAVITY MAIN TO SERVICE 72.0 L/s FROM TURNER VALLEY AND AREA 5

Area 1

AREA 1 DEMAND = 15.6 L/s

Area 2

AREA 2 DEMAND = 34.0 L/s

Area 3

Area 5

AREA 5 DEMAND = 33.6 L/s

Area 6

AREA 6 & ADDITIONAL 72.0 L/s FROM TURNER VALLEY WILL TRIGGER UPGRADES TO GRAVITY SYSTEM

ESTIMATED FUTURE FLOWS WITHIN EXISTING TOWN BOUNDARY = 52.4 L/s

KAISER DEMAND TO 300mm MAIN = 7.8 L/s

KAISER DEMAND TO WESTEND = 20.2 L/s

QS-NW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-09 TWP-020 RGE-02 MER-5

QS-SE SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-08 TWP-020 RGE-02 MER-5

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-05 TWP-020 RGE-02 MER-5

QS-NW SEC-04 TWP-020 RGE-02 MER-5

QS-NE SEC-04 TWP-020 RGE-02 MER-5

HWY 7

1 Avenue NW
2 Avenue NE
1 Avenue NE
Centre Avenue W
Centre Avenue E
1 Avenue SE
2 Avenue SE
3 Avenue SW
4 Avenue SW
5 Avenue SW
6 Avenue SW
4 Avenue SE
418 Avenue W
1 Street NW
2 Street NW
3 Street NW
3 Street NE
5 Street SW
4 Street SW
Ford Street SW
1 Street SW
1 Street SE
3 Street SW
Maplewood Drive SE
Government Road S
Riverwood Crescent SW
Willow Ridge Blvd SW
Willow Ridge Manor SW
Willow Ridge
Manor SW

Overall Sanitary Servicing (Excluding Area 3)

FIGURE 3

URBAN systems

Annexation Lands Servicing Review

Date: 2019 / 11 / 14

N

Scale: 1:12,000

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Existing Sanitary Main
- Existing 300mm Sanitary Main
- Existing Westend Sanitary System
- Annexation Areas
- Quarter Sections
- Town of Black Diamond

QS-SE SEC-20 TWP-020 RGE-02 MER-5

QS-SW SEC-21 TWP-020 RGE-02 MER-5

QS-SE SEC-21 TWP-020 RGE-02 MER-5

QS-NE SEC-17 TWP-020 RGE-02 MER-5

QS-NW SEC-16 TWP-020 RGE-02 MER-5

QS-NE SEC-16 TWP-020 RGE-02 MER-5

TOTAL FLOW = (52.4+35.1+20.2+15.6+34+33.6) =190.9 L/s
TOTAL BLACK DIAMOND ALLOCATION = 146 L/s
TOTAL OVERAGE = (190.9-146)L/s = 44.9 L/s

280 L/s CAPACITY AT LAGOON
(WITH BOTH 300 mm & 500mm HYDRAULICALLY CONNECTED)
- 134 L/s FROM TURNER VALLEY
- 146 L/s FOR BLACK DIAMOND

CAPACITY OF BLACK DIAMOND 300mm MAIN IS 45 L/s UPSTREAM OF THE 300mm AND 525mm MAINS HYDRAULICALLY CONNECT

TIE IN TO EXISTING GRAVITY MAIN TO LAGOON

QS-SE SEC-17 TWP-020 RGE-02 MER-5

QS-SW SEC-16 TWP-020 RGE-02 MER-5

LS

PROPOSED 150 HDPE FORCE MAIN

PROPOSED 450 PVC GRAVITY MAIN

Area 1

AREA 1 DEMAND = 15.6 L/s

QS-SE SEC-16 TWP-020 RGE-02 MER-5

PROPOSED 450 HDPE FORCE MAIN

HWY 7

WESTEND MAIN

PROPOSED 450 HDPE FORCE MAIN

ESTIMATED FUTURE FLOWS WITHIN EXISTING TOWN BOUNDARY = 52.4 L/s

KAISER DEMAND TO 300mm MAIN = 7.8 L/s

QS-NW SEC-09 TWP-020 RGE-02 MER-5

LS

QS-NE SEC-09 TWP-020 RGE-02 MER-5

KAISER DEMAND TO WESTEND = 20.2 L/s

Area 2

AREA 2 DEMAND = 34.0 L/s

QS-NE SEC-08 TWP-020 RGE-02 MER-5

PROPOSED 375 PVC GRAVITY MAIN

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

Area 3

AREA 3 DEMAND = 35.1 L/s

QS-SE SEC-09 TWP-020 RGE-02 MER-5

Area 6

AREA 6 & ADDITIONAL 72.0 L/s FROM TURNER VALLEY WILL TRIGGER UPGRADES TO GRAVITY SYSTEM

PROPOSED 375 PVC GRAVITY MAIN TO SERVICE 72.0 L/s FROM TURNER VALLEY AND AREA 5

QS-NE SEC-05 TWP-020 RGE-02 MER-5

Area 5

AREA 5 DEMAND = 33.6 L/s

QS-NW SEC-04 TWP-020 RGE-02 MER-5

QS-NE SEC-04 TWP-020 RGE-02 MER-5

2 Street NW
3 Street NW
1 Street NW
2 Avenue NE
1 Avenue NW
3 Street NE
1 Avenue NE
Centre Avenue W
Centre Avenue E
Ford Street SW
5 Street SW
4 Street SW
1 Avenue SE
2 Avenue SE
1 Street SE
3 Avenue SW
1 Street SW
4 Avenue SW
5 Avenue SW
Maplewood Drive SE
4 Avenue SE
Government Road S
6 Avenue SW
3 Street SW
Riverwood Crescent SW
Willow Ridge Blvd SW
Willow Ridge
Willow Ridge Manor SW
Manor SW
418 Avenue W

Overall Sanitary Servicing (Including Area 3)

FIGURE 4

The above criteria were used to present a conservative estimate to the wastewater flows. The total community flow encompasses flows from all three land uses (commercial, industrial and residential), as well as inflow and infiltration. Peak wastewater flow rates were calculated using the peaking factors provided in Table 3.

4.2 Service Population

Using the populations calculated in Section 2.2 of this report and the criteria presented in Table 3, the flows for the three service areas were calculated as tabulated in Table 4 and Table 5.

Table 4: Anticipated Wastewater Flow per Land Use

Area	Land Use	Population	Anticipated Flows (L/s)
1	Industrial	1,019	15.7
2	Residential	1,988	30.4
	Industrial	237	3.6
3	Residential	1,727	26.4
	Commercial	572	8.7
5	Residential	2,004	30.6
	Commercial	193	2.9

Table 5: Anticipated Wastewater Flow per Area

Area	Total Flow Per Area (L/s)
Ex Town	52.4
1	15.7
2	34.0
3	35.1
5	33.6

4.3 Wastewater Servicing Concept

4.3.1 Overall System – Scenario 1 (excluding Area 3)

As demonstrated in Figure 3, a new sanitary conveyance system is proposed along the western edge of Areas 1 and 2 and along the east and south sides of Area 3. This new system will consist of a 375mm gravity main starting from the NE corner of Area 5. The gravity main will then extend to the east, to the SE corner of Area 3 and then proceed north for approximately 1,200 metres. At this point, the wastewater will be conveyed by a lift station via a 400mm force main to north of Highway 7 in Area 1. The system will convey the flows via a 375mm gravity main west to the existing sanitary system and the Westend main.

Area 1 will also utilize a 150mm force main and lift station in the NW corner of the quarter section to convey flows south to the 375mm gravity main connection to the existing system.

The proposed system has been sized to accommodate the growth of Areas 1, 2 and 5, as well as the additional flow of 72 L/s from Turner Valley, which is above their design allocation of 134 L/s in the Westend system, as described in the *Joint Growth Servicing Strategy*. The system has also been sized to accommodate future flows from Area 6. For the purposes of this review, the Kaiser development is assumed to develop prior to the proposed annexation lands, a portion of Kaiser's wastewater will tie in to the existing system leaving approximately 6 L/s of spare capacity.

Below in Table 6 is a summary of the expected sanitary demand of the overall system in Scenario 1 compared to the design capacity of 146 L/s for Black Diamond in the hydraulically connected Westend and Black Diamond gravity mains.

Table 6: Overall Sanitary Demands vs. Pipe Capacity (Scenario 1)

Area	Discharge Main	Projected Flows (L/s)
Ex Town	300mm Trunk	52.4
Kaiser	525mm Westend Trunk	20.2
1	Proposed 450mm	15.6
2	Proposed 450mm	34.0
5	Proposed 450mm	33.6
Total Capacity Required		**155.8**
Total Capacity at Lagoon		**146**
Overage		**9.8**

As can be noted above from Table 6, the existing 300mm and 525mm mains would be able to handle the future flows at the downstream end of the system.

It should be noted that the anticipated flows (52.4 L/s) assuming full build-out within the existing Town boundary are greater than the capacity of the 300mm main. Given that the projected capacity exceedance is marginal and there is excess capacity in the 525mm main, no upgrade would be required to the 300mm main. It is recommended that the Town monitor growth patterns to ensure that the growth and resulting flows match the assumptions made in this report.

Given the information above in Table 6, the additional 72 L/s of sanitary flow from Turner Valley and the development of Area 6 would trigger upgrades on the gravity system upstream of the wastewater treatment facility. A review of possible upgrades would be required if either of these situations occur.

4.3.2 Overall System – Scenario 2 (including Area 3)

In Figure 4, similarly to what was presented in Scenario 1, a new sanitary conveyance system is proposed along the western edge of Areas 1 and 2 and along the east and south sides of Area 3. This new system will consist of a 375mm gravity main starting from the NE corner of Area 5 and will extend

east to the SE corner of Area 3 and then proceed north for approximately 1,200 metres. At this point, the wastewater will be conveyed by a lift station via a 400mm force main to north of Highway 7 in Area 1. The system will convey the flows via a 375mm gravity main west to the existing sanitary system and the Westend main. Area 1 will also utilize a 150mm force main and lift station in the NW corner of the quarter section to convey flows south to the 375mm gravity main connection to the existing system. The proposed system has been sized to accommodate the growth of Areas 1, 2 and 5, as well as the additional flow of 72 L/s from Turner Valley, which is above their design allocation of 134 L/s in the Westend system, as described in the *Joint Growth Servicing Strategy*. The system has also been sized to accommodate future flows from Area 6; however, the design criteria and likelihood of annexation of Area 6 will have to be confirmed as design proceeds to ensure that Area 6 is adequately captured. For the purposes of this review, the Kaiser development is assumed to develop prior to the proposed annexation lands, a portion of Kaiser's wastewater will tie in to the existing system leaving approximately 6 L/s of spare capacity.

Below in Table 7 is a summary of the expected sanitary demand of the overall system in Scenario 2 compared to the design capacity of 146 L/s for Black Diamond in the hydraulically connected Westend and Black Diamond gravity mains.

Table 7: Overall Sanitary Demands vs. Pipe Capacity (Scenario 2)

Area	Discharge Main	Projected Flows (L/s)
Ex Town	300mm Trunk	52.4
Kaiser	525mm Westend Trunk	20.2
1	Proposed 450mm	15.6
2	Proposed 450mm	34.0
3	525mm Westend Trunk	35.1
5	Proposed 450mm	33.6
Total Capacity Required		**190.9**
Total Capacity at Lagoon		**146**
Overage		**44.9**

As demonstrated above in Table 7, the existing 300mm and 525mm mains would not be able to handle the future flows at the downstream end of the system. This indicates that the addition of Area 5 would trigger upgrades to the gravity system upstream of the wastewater treatment lagoon sooner than if Area 5 was not included. Timing for these upgrades will be dictated by rate of development within the overall annexation areas.

Given the information above in Table 7, the additional 72 L/s of sanitary flow from Turner Valley and the development of Area 6 would trigger upgrades on the gravity system upstream of the wastewater treatment facility. A review of possible upgrades would be required if either of these situations occur.

4.3.3 Wastewater Treatment

As mentioned in Section 3.2, MPE submitted a report on behalf of the WRSSC in late 2015 to AEP regarding required upgrades to the existing aerated lagoon. It had been identified that the existing system operates within the current Environment Protection and Enhancement Act (EPEA) approval requirements but would have challenges meeting future requirements as the Town grew. At this time, the understanding is that the application for these upgrades is in a queue to receive funding from AEP. The application has been in the queue since 2015 and it is unlikely these upgrades will occur in the next few years. These improvements include:

- Upgrades to the Turner Valley Main Lift Station and to the Transfer Station at the lagoon
- Removal of sludge from the existing cells
- Addition of a third partial mix cell
- Addition of a SAGR system (three cells), after the third partial mixing cell
- Addition of chemical injection, following the SAGR system
- Addition of a UV system, following the chemical injection

These upgrades were sized for an estimated population of 7,989 people in the year 2036 for both Black Diamond and Turner Valley combined (3,986 people for Black Diamond respectively). The estimated population and wastewater flows are summarized in Table 8 below.

Table 8: Projected Wastewater Generation by 2036

Year	Population	Average Day (m^3/day)	Maximum Monthly Average Daily Flow (m^3/day)	Maximum Dry Weather Flow (m^3/day)
2036	7,989	3,492	6,286	7,528

All information presented above is from the *WRSSC Revised Plan for Operating Approval*.

Using the information in the *WRSSC Revised Plan for Operating Approval*, Table 9 below summarizes the wastewater flow requirements for Black Diamond and Turner Valley if Areas 1, 2 and 3 were annexed, including the wastewater flows from within the existing Town boundaries. The Turner Valley wastewater flows are as per the *Joint Growth Servicing Strategy*. This is the anticipated population within the Turner Valley town boundary, including their proposed annexation lands.

Table 9: Black Diamond Projected Wastewater Generation

Area	Population[6]	Average Day Flow (m^3/day)	Maximum Daily Flow (m^3/day)	Peak Hour Flow (m^3/h)
Turner Valley (Full Build-out)	7,340	1,938	4,263	404
Ex. Black Diamond Boundary Build-out	3,427	905	1,990	189
1	1,019	269	592	56
2	2,226	588	1,293	122
3	2,299	607	1,335	126
Total Build-out	**18,508**	**4,886**	**10,749**	**1,018**
Total Build-out (excl. Area 3)	**16,209**	**4,279**	**9,414**	**892**
Capacity of Proposed WRSSC Upgrades (approx. 2036)	**7,989**	**3,492**	**6,286**	**-**

The average day flow listed above was calculated by applying the total community wastewater demand of 264 L/c/d (see Table 3) to the anticipated population and jobs. The maximum daily flow was then calculated by the MDF:ADF ratio of 2.2 and the peak hour flow was found using the PHF:ADF of 5.0.

From Table 9, it can be observed that the anticipated maximum daily flow of build-outs of both Towns exceeds the design maximum daily flows for the lagoon. Therefore, further upgrades to the system will be required when the Town's population is approaching the design population of 7,989 people (*Revised Plan for Operating Approval)*. Given the growth rates from Section 2.3 and Appendix B, it is projected that the design population of 7,989 people be achieved between both Towns around 2030 to 2033 depending on either a lower or higher growth trend. This is sooner than what was presented in the *WRSSC Revised Plan for Operating Approval*.

5.0 Existing Water Infrastructure

5.1 General

The Town of Black Diamond receives its water supply from the Sheep River Regional Utility Commission (SRRUC). Water is supplied and treated through the SRRUC water supply and treatment plant located in Turner Valley. The treated water is then pumped to Black Diamond through a 250mm transmission main owned and operated by SRRUC. Water is transferred to the Town via a metering station into the Town's treatment water storage reservoir.

[6] Includes the sum of all jobs and residents.

5.2 Existing Water Supply

The Town of Black Diamond has three water licenses for a total diversion capacity of 954,660m3 per year. All the Town's water licences point of diversion is located at the SRRUC water diversion system in Turner Valley. The SRRUC diverts water from the Sheep River under the restrictions for the Town's licenses and treats and delivers water to the Town.

5.3 Existing Water Treatment

As mentioned previously, Black Diamond's treated water is treated at the SRRUC water treatment plant located in Turner Valley. After the flood of 2013, the water treatment supply system was upgraded to meet the estimated 25-year demand of the SRRUC customers: the Town of Black Diamond, the Town of Turner Valley and the MD of Foothills. From the *Quad Regional Water System: Water Treatment Plan and Mechanical Upgrades - Final*, MPE Engineering Ltd., 2012, the following criteria was used to determine the plant capacity.

Table 10: Water Treatment Plant Upgrade Criteria

	Units	Black Diamond	Turner Valley	Rural	Total
Population	People	4,006	4,006	890	8,902
Per Capita Water Usage	L/c/d		410		
Average Day Demand (ADD)	m^3/d	1,642.5	1,642.5	365	3,650
Maximum Day Demand (MDD)	m^3/d	3,285	3,285	730	7,300

It should be noted that the per capita usage presented in Table 10 was the design per capita usage. The actual per capita usage for all of SRRUC's customers is less than this usage and therefore capacity could provide for a larger population.

The upgrades made to the system included:

- Ultraviolet disinfection (three reactors, low pressure)
- Three direct filtration (DF) treatment train identical to the existing treatment trains
- Clearwell (baffled) with regional distribution pumps
- Chlorine disinfection system upgrade
- Taste, odour, organic removal

- Direct intake
- Infiltration gallery and vaults were also constructed

5.4 Existing Water Storage

There is an existing below ground reservoir located at the south end of the existing Black Diamond boundary. As stated in the *Quad Regional Water System: Water Treatment Plan and Mechanical Upgrades – Final*, the storage capacity of the reservoir is 4,545 m^3. This reservoir existed when the Town of Black Diamond had their own water treatment plant, that was destroyed in the 2013 flood. Following the flood in 2013, the treated water comes from the SRRUC water treatment plant in Turner Valley via the 250mm SRRUC transmission line that comes from the south along Highway 22 and fills the Town's water storage reservoir.

6.0 Water Servicing Concept

6.1 Criteria

To determine the overall water demand for the proposed annexation areas, the criteria from the *Calgary Regional Partnership Water and Wastewater Servicing Masterplan*, 2014, for Average Consumption, the Maximum Daily Demand (MDD) to Average Day Demand (ADD) ratio, and the Peak Hour Demand (PHD) to ADD ratio were used. They are summarized in Table 11 below.

Table 11: Water Demand Criteria

Average Consumption	315	L/c/d
MDD:ADD	2.2	
PHD:ADD	4.0	

The criteria listed in Table 11 will be used to determine demand for each proposed annexed area, as well as to calculate the required reservoir size (see Section 6.6). It should be noted that the average consumption listed above is similar to the estimated per capita usage for Black Diamond once major system leaks were repaired in 2017. The estimated per capita usage is approximately 317 L/c/d.

A summary of the water demand calculations can be found in Appendix D.

6.2 Service Population

The demand for each quarter section was calculated using the criteria provided in Table 11, as well as the projected populations from Section 2.2. The ADD was calculated distributing the average consumption over the projected population. The MDD & PHD could then be calculated using the ratios provided in Table 11. Please see Table 12 below for a summary of the estimated demands.

Table 12: Anticipated Water Demand per Area

Area	Land Use	Population[7]	ADD (MLD[8])	MDD (MLD)	PHD (L/s)
1	Industrial	1,019	0.32	0.71	14.9
2	Residential	1,988	0.63	1.38	29.0
	Industrial	237	0.07	0.17	3.5
3	Residential	1,727	0.54	1.20	25.2
	Commercial	572	0.18	0.40	8.3
5	Residential	2,004	0.63	1.39	29.2
	Commercial	193	0.06	0.13	2.8
Ex Town	-	3,427	1.08	2.38	50.0
Total	**-**	**8,970**	**2.83**	**6.22**	**-**

In Table 13 and Table 14 below, the demands above were combined with an assumed 10% system loss and converted to litres per second to represent the demands of the overall system in each scenario.

Table 13: Converted Overall Water Demand (Scenario 1)

ADD	35.6	L/s
MDD	78.2	L/s
PHD	142.3	L/s

Table 14: Converted Overall Water Demand (Scenario 2)

ADD	44.8	L/s
MDD	98.5	L/s
PHD	179.1	L/s

6.3 Overall Water Servicing Concept

The overall water servicing concept for Scenario 1 is demonstrated in Figure 5 and the overall water servicing concept for Scenario 2 is presented in Figure 6.

[7] Includes the sum of all jobs and residents
[8] MLD = Megalitres per day

URBAN systems

Annexation Lands Servicing Review

Date: 2019/11/7

Scale 1:12,000

N

Legend

- PRV — Proposed Pressure Reducing Valve
- RES — Existing Water Reservoir
- Quad Regional Water Line
- Proposed Watermain
- Proposed Watermain - Phase 1
- Proposed Watermain - Phase 2
- Existing Watermain
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

QS-SW SEC-20 TWP-020 RGE-02 MER-5
QS-SE SEC-20 TWP-020 RGE-02 MER-5
QS-SW SEC-21 TWP-020 RGE-02 MER-5
QS-SE SEC-21 TWP-020 RGE-02 MER-5
QS-NE SEC-17 TWP-020 RGE-02 MER-5
QS-NW SEC-16 TWP-020 RGE-02 MER-5
QS-NE SEC-16 TWP-020 RGE-02 MER-5
QS-SE SEC-16 TWP-020 RGE-02 MER-5
QS-SE SEC-17 TWP-020 RGE-02 MER-5
QS-SW SEC-16 TWP-020 RGE-02 MER-5

PROPOSED 250 PVC WATERMAIN

Area 1

PROPOSED 250 PVC WATERMAIN PHASE 2
NE INDUSTRIAL WATERMAIN LOOPING

PROPOSED 250 PVC WATERMAIN PHASE 1
NE INDUSTRIAL WATERMAIN LOOPING
(INCLUDES PRV INSTALLATION)

QS-NE SEC-09 TWP-020 RGE-02 MER-5

Area 2

QS-NW SEC-09 TWP-020 RGE-02 MER-5
QS-NE SEC-08 TWP-020 RGE-02 MER-5
QS-SE SEC-08 TWP-020 RGE-02 MER-5
QS-SW SEC-09 TWP-020 RGE-02 MER-5
QS-SE SEC-09 TWP-020 RGE-02 MER-5

Area 3

Area 6

Regional Water Line 250

PROPOSED 250 PVC WATERMAIN
EXTENSION SOUTH OF WILLOW RIDGE BLVD

PROPOSED 200
WATERMAIN EXTENSION

PROPOSED 250 PVC
WATERMAIN TIE IN

QS-NE SEC-05 TWP-020 RGE-02 MER-5

Area 5

QS-NW SEC-04 TWP-020 RGE-02 MER-5
QS-NE SEC-04 TWP-020 RGE-02 MER-5

3 Avenue NW
2 Avenue NE
1 Avenue NW
1 Avenue NE
Centre Avenue W
Centre Avenue E
1 Avenue SW
1 Avenue SE
2 Avenue SW
2 Avenue SE
3 Avenue SW
4 Avenue SW
5 Avenue SW
4 Avenue SE
6 Avenue SW
418 Avenue W
Manor SW
1 Street NW
2 Street SW
3 Street NW
3 Street NE
4 Street SW
5 Street SW
Ford Street SW
1 Street SW
1 Street SE
Government Road S
Maplewood Drive SE
Riverwood Crescent SW
Willow Ridge Blvd SW
Willow Ridge
Willow Ridge Manor SW
HWY 7
PRV
RES

TOWN OF BLACK DIAMOND

Overall Water Servicing (Excluding Area 3)

FIGURE 5

URBAN systems

Annexation Lands Servicing Review

Date: 2019/11/7

Legend

- PRV — Proposed Pressure Reducing Valve
- RES — Existing Water Reservoir
- Quad Regional Water Line
- Proposed Watermain
- Proposed Watermain - Phase 1
- Proposed Watermain - Phase 2
- Existing Watermain
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

TOWN OF BLACK DIAMOND

N

Scale 1:12,000

QS-SW SEC-20 TWP-020 RGE-02 MER-5
QS-SE SEC-20 TWP-020 RGE-02 MER-5
QS-SW SEC-21 TWP-020 RGE-02 MER-5
QS-SE SEC-21 TWP-020 RGE-02 MER-5
QS-NE SEC-17 TWP-020 RGE-02 MER-5
QS-NW SEC-16 TWP-020 RGE-02 MER-5
QS-NE SEC-16 TWP-020 RGE-02 MER-5
QS-SE SEC-17 TWP-020 RGE-02 MER-5
QS-SW SEC-16 TWP-020 RGE-02 MER-5
QS-SE SEC-16 TWP-020 RGE-02 MER-5

PROPOSED 250 PVC WATERMAIN

Area 1

PROPOSED 250 PVC WATERMAIN PHASE 2
NE INDUSTRIAL WATERMAIN LOOPING

HWY 7

3 Avenue NW
2 Avenue NE
1 Avenue NW
3 Street NW
1 Street NW
PRV
3 Street NE
1 Avenue NE
Centre Avenue W
Centre Avenue E
Ford Street SW
1 Avenue SW
4 Street SW
5 Street SW
2 Avenue SW
2 Avenue SE
1 Avenue SE
3 Avenue SW
1 Street SW
1 Street SE
PROPOSED 250 PVC WATERMAIN PHASE 1
NE INDUSTRIAL WATERMAIN LOOPING
(INCLUDES PRV INSTALLATION)

QS-NE SEC-09 TWP-020 RGE-02 MER-5

Area 2

QS-NW SEC-09 TWP-020 RGE-02 MER-5
QS-NE SEC-08 TWP-020 RGE-02 MER-5
2 Street SW
4 Avenue SW
5 Avenue SW
Maplewood Drive SE
4 Avenue SE
RES
Government Road S
6 Avenue SW
3 Street SW

PROPOSED 250 PVC WATERMAIN

Regional Water Line 250

QS-SE SEC-08 TWP-020 RGE-02 MER-5
QS-SW SEC-09 TWP-020 RGE-02 MER-5

Area 3

QS-SE SEC-09 TWP-020 RGE-02 MER-5

Area 6

Riverwood Crescent SW
Willow Ridge Blvd SW
Willow Ridge
Willow Ridge Manor SW
Manor SW

PROPOSED 250 PVC WATERMAIN
EXTENSION SOUTH OF WILLOW RIDGE BLVD

418 Avenue W

PROPOSED 200
WATERMAIN EXTENSION

PROPOSED 250 PVC
WATERMAIN TIE IN

QS-NE SEC-05 TWP-020 RGE-02 MER-5

Area 5

QS-NW SEC-04 TWP-020 RGE-02 MER-5
QS-NE SEC-04 TWP-020 RGE-02 MER-5

Overall Water Servicing (Including Area 3)

FIGURE 6

6.3.1 NE Industrial Water Looping

It has been identified through numerous reviews of the Town's existing water system that although the NE Industrial area has sufficient fire flows to meet legislative building code requirements, the NE Industrial area within the Town does not have sufficient water pressure to maintain the Fire Underwriter Survey recommended fire flows for the area. This problem has arisen primarily due to the fact the water system in the industrial park is not looped. Some high-level reviews have been made and the recommendation is that a 250mm water main be extended from 4th Ave SE to the north. There would be two phases to the looping: the first connection would be made to the existing 250mm water main on 1st Ave NE and the second phase would continue the extension of the 250mm water main to the north border of the industrial area and head west to connect to the existing system. Phase 1 would also include the installation of a pressure reducing valve (PRV) on the 250mm main heading west of the NE Industrial Park along the main alignment of 1st Ave NE as shown in Figure 5 and Figure 6. This is required as the Industrial area and Area 1 are at a higher pressure zone than the north west corner of the Town.

For this review, it is assumed that both phases would be constructed prior to the development of any of the proposed annexation areas. The estimated cost to construct each phase is included and broken out in Section 15.0 of this report. The construction of these two phases will not only strengthen the existing water system but the first phase will also support some of the proposed annexation areas.

6.3.2 Overall System (Scenario 1)

Please refer to Figure 5 for the overall water servicing plan for Scenario 1, which excludes the annexation of Area 3. As briefly mentioned above, the construction of the first phase of the NE Industrial water main looping will benefit the proposed annexation areas and will strengthen the overall water system. Water main looping is proposed along the western edge of both Areas 1 and 2 as the two areas can both be serviced on this main.

Upon review of the utilities near Area 5, it was identified that there were several existing mains within the Willow Ridge development that could either be tied into or extended to service Area 5. Therefore, it is proposed that a 200mm water main be extended from the 200mm water main on Willow Ridge Manor, as well as a proposed connection at the existing 250mm stub on Township Road 201 (418 Avenue in Figure 5) south of 3rd Street SW.

During the review, it was identified that the Willow Ridge and Riverwood communities were serviced through two separate water connections: one main along Willow Ridge Boulevard and one along 3rd Street SW at the north end of the neighbourhood. However, the water main along 3rd Street SW has a pressure reducing valve (PRV) meaning that water is only being fed out of the neighbourhood to a lower pressure zone leaving only one water main servicing the community. In order to provide redundancy, an additional 250mm water main is proposed from the 250mm water main between Highway 22 and 1st Street SE. This proposed main would extend south along the entire western edge of Area 3 and across Highway 22 to tie in to the existing 250mm stub on Township Road 201 (418 Avenue).

6.3.3 Overall System (Scenario 2)

Similar to Scenario 1, the water main looping is proposed along the western edge of both Areas 1 and 2 as the two areas can both be serviced on this main. The looping also includes the extension of the 250mm water main south in Area 2 along the proposed road to the south and then west through Area 3 to tie into the existing system in Riverwood.

As shown in Figure 6, similar servicing to Scenario 1 is proposed for Scenario 2, where a 200mm water main is extended from the existing main on Willow Ridge Manor, as well as the proposed connection the existing 250mm stub located along Township Road south of 3rd Street SW.

However, redundancy will still be required as only one water main would be servicing the Willow Ridge/Riverwood neighbourhood. To address this in Scenario 2, a 250mm extension on Willow Ridge Boulevard from the proposed 250mm water main along the proposed road through Area 3 is proposed to extend south on the west side of Highway 22 and connect to the 250mm stub on Township Road 201 (418 Avenue in Figure 6).

6.4 Water Diversion Licensing

Given the water demands presented in Table 13 and Table 14, the population in the existing Town boundary, as well as the proposed population in the annexation areas for both scenarios, the Town will require the following volumes of water for each scenario:

- Scenario 1 = 1,476,521 m^3 per year, which is 521,842m^3 over the existing Town water license allocation as presented in Section 5.2
- Scenario 2 = 1,172,588 m^3 per year which is 217,909m^3 over the existing Town water license allocation as presented in Section 5.2

Therefore, the Town would have to explore additional water licensing options above the 954,679m^3 of current water licensing around a combined population (jobs and residents) of 8,304 people. Using the projected lower and higher growth rates as presented in Section 2.3, and applying that to the 2016 census population of Black Diamond, it is estimated that additional water licensing allocation will be required somewhere between 2056 and 2066. Please refer to Appendix B for the tabulated, detailed population projections of Black Diamond. Please note that Turner Valley's water supply and treatment was not taken into consideration.

6.5 Water Treatment

Given the parameters upon which the current water treatment facility was sized, the water treatment plant would have to be upgraded further to service the surrounding communities. Currently, the plant will service the area until there is maximum daily demand of 7,300 m^3 per day. This demand amounts to a total estimated population of 9,160 people using the per capita usage presented in Table 11. From Appendix B, it can be estimated that both Turner Valley and Black Diamond will approach this population

range between 2034 and 2039 so further study closer to that time frame is recommended. Given that water usage in the Town is steadily decreasing and a lower average consumption was used for this report compared to the design of the water treatment plant, the design life of the water treatment plant may extend past 2036 but review of the system is still recommended prior to that date or design population.

6.6 Water Storage

To calculate the required reservoir size, the AEP Standards and Guidelines for a Municipal Water Works, Wastewater and Storm Drainage Systems are used to determine the ultimate reservoir size using the following formula:

S = A + B + (Greater of C or D)

Where S = Total storage requirement, m3

A = Fire storage, m3

B = Equalization storage (approximately 25% of projected maximum daily design flow), m3

C = Emergency storage (minimum of 15% of projected average daily design flow), m3

D = Disinfection contact time (T_{10}) storage to meet the CT requirements, m3, as detailed in Section 1.10.3.7.

Using the equation supplied above and the values shown in Table 15 and Table 16: Required Reservoir Storage (Scenario 2), the required reservoir storage for both scenarios was calculated. A fire flow of 197 L/s for 2.5 hours was utilized for fire flow sizing. The equalization and emergency storage for both scenarios were calculated from the demand values presented in Table 13 and Table 14. Therefore, the required reservoir sizing for each scenario is summarized in Table 15 and Table 16 below.

Table 15: Required Reservoir Storage (Scenario 1)

A – Fire Storage	1,773	m^3
B – Equalization Storage	1,690	m^3
C – Emergency Storage	461	m^3
D – Disinfection Contact Time (T_{10}) Storage[9]	256	m^3
Total Required Storage	**3,924**	**m^3**

[9] Disinfection Contact Time (T_{10}) Storage was not used to calculate the required reservoir size as this volume was less than the required Emergency Storage.

Table 16: Required Reservoir Storage (Scenario 2)

A – Fire Storage	1,773	m^3
B – Equalization Storage	2,128	m^3
C – Emergency Storage	580	m^3
D – Disinfection Contact Time (T_{10}) Storage[10]	322	m^3
Total Required Storage	**4,482**	**m^3**

The existing reservoir storage is 4,545 m^3, there is sufficient storage to service both Scenarios 1 and 2. As this is a regional reservoir, it is still recommended that there is additional emergency storage above the remaining 530m^3 of storage in Scenario 1 and the remaining 63 m^3 of storage in Scenario 2, if the Town so chooses.

7.0 Stormwater Servicing Concept

The overall stormwater servicing for each quarter section requires a stormwater management facility for each area, as well as a system of ditches or pipes for the pond outlets. It will be the responsibility of the developer(s) to provide an ultimate stormwater management facility. As well, the developer(s) will be required to provide a detailed review of how the stormwater will be managed in each area. A Staged Master Drainage Plan (SMDP) and a Pond Report will be required to support development. The developer will be responsible for maintaining pre-development runoff rates and treating stormwater to meet AEP guidelines.

A minor system will be required under the majority of the proposed roadways to handle drainage. This will involve the construction of a system of storm mains and catch basins. Depending on the location, the stormwater from the roads will drain to the nearest stormwater management facility.

It is recommended that the Town conduct further study into their stormwater infrastructure in order to develop a framework for developers to abide by. Some examples of the types of studies include:

- Overall Stormwater Strategy for the Town, similar to a Master Drainage Plan that can implement stormwater policy for the Town.
- Wetland Investigations to determine the classes of any existing wetlands within the proposed annexed areas. This will help determine what wetlands might be of interest to the Town to preserve and what will be the development requirements around wetlands.
- Watercourse Investigation in Areas 3 and 5 to determine extents, capacity and design characteristics of the existing watercourse.

[10] Disinfection Contact Time (T_{10}) Storage was not used to calculate the required reservoir size as this volume was less than the required Emergency Storage.

8.0 Area 1 Servicing

8.1 Ultimate

Please refer to Figure 7 for the ultimate configuration to service Area 1. The existing contouring of the quarter section is shown in Figure 8 for reference. The proposed ultimate servicing for Area 1 will remain the same regardless of Scenario 1 and 2.

8.1.1 Sanitary

As previously mentioned in Section 4.3, there is a 150mm force main and lift station proposed on the west side of Area 1. This would service the anticipated ultimate sanitary demand of 15.6 L/s for Area 1. As the lift station is proposed at the lower end of the site, the sanitary mains within the quarter section will ultimately drain by gravity towards the lift station.

This force main will then connect to the 450mm gravity main that heads west to connect with the existing inlet to the wastewater lagoon. The infrastructure listed will need to be in place to service Area 1.

8.1.2 Water

It is proposed that the 250mm water main from both phases of the NE Industrial water main looping extend to the north-west corner of Area 1. This will allow Area 1 to service the projected water demand of 14.9 L/s. The developer(s) within Area 1 will also be required to provide a system that loops internally to the quarter section as well as the opportunity to connect to Area 2. There will be enough pressure in the area regardless of looping in the quarter but is recommended for redundancy.

8.1.3 Storm

A stormwater management facility is recommended at the north end of the quarter section at the existing low point (see Figure 7 and Figure 8). All stormwater within the quarter section would be collected, conveyed and discharge to the facility. The stormwater facility would then discharge towards the Sheep River via a system of ditches along the north-west corner of the quarter section. It will be the responsibility of the developer to design and construct these systems.

8.2 Short Term

It is understood from the Town that it is more likely that each quarter will develop at 10-15 acres parcels at a time by multiple developers compared to one developer developing an entire quarter. Keeping this in mind and given the constraints with the existing knoll in the south-east corner of the quarter section, it will be difficult to service sanitary and water without the infrastructure listed above. We expect that it will have a higher cost to tie in to the existing system then install the infrastructure described above which will benefit the entire quarter section.

URBAN systems

Date: 2019/11/7

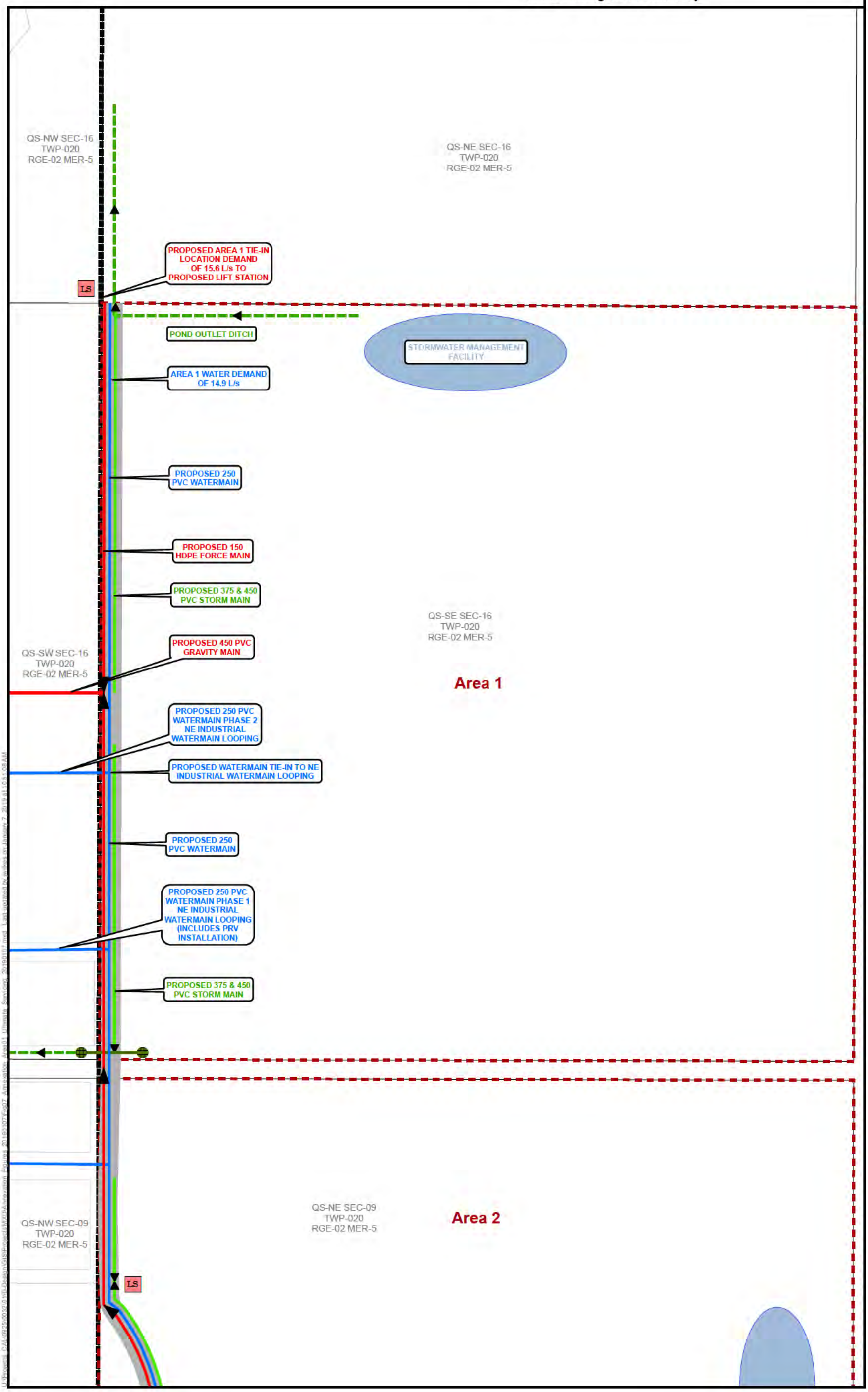
Annexation Lands Servicing Review

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Proposed Watermain
- Proposed Storm Main
- Proposed Ditches
- Proposed Culverts
- Stormwater Management Facility
- Proposed Road (26m)
- Proposed Annexation Areas
- Existing Town Boundary

TOWN OF BLACK DIAMOND

Scale 1:4,000



Area 1 - Ultimate Servicing

FIGURE 7

URBAN systems

Date: 2019 / 1 / 7

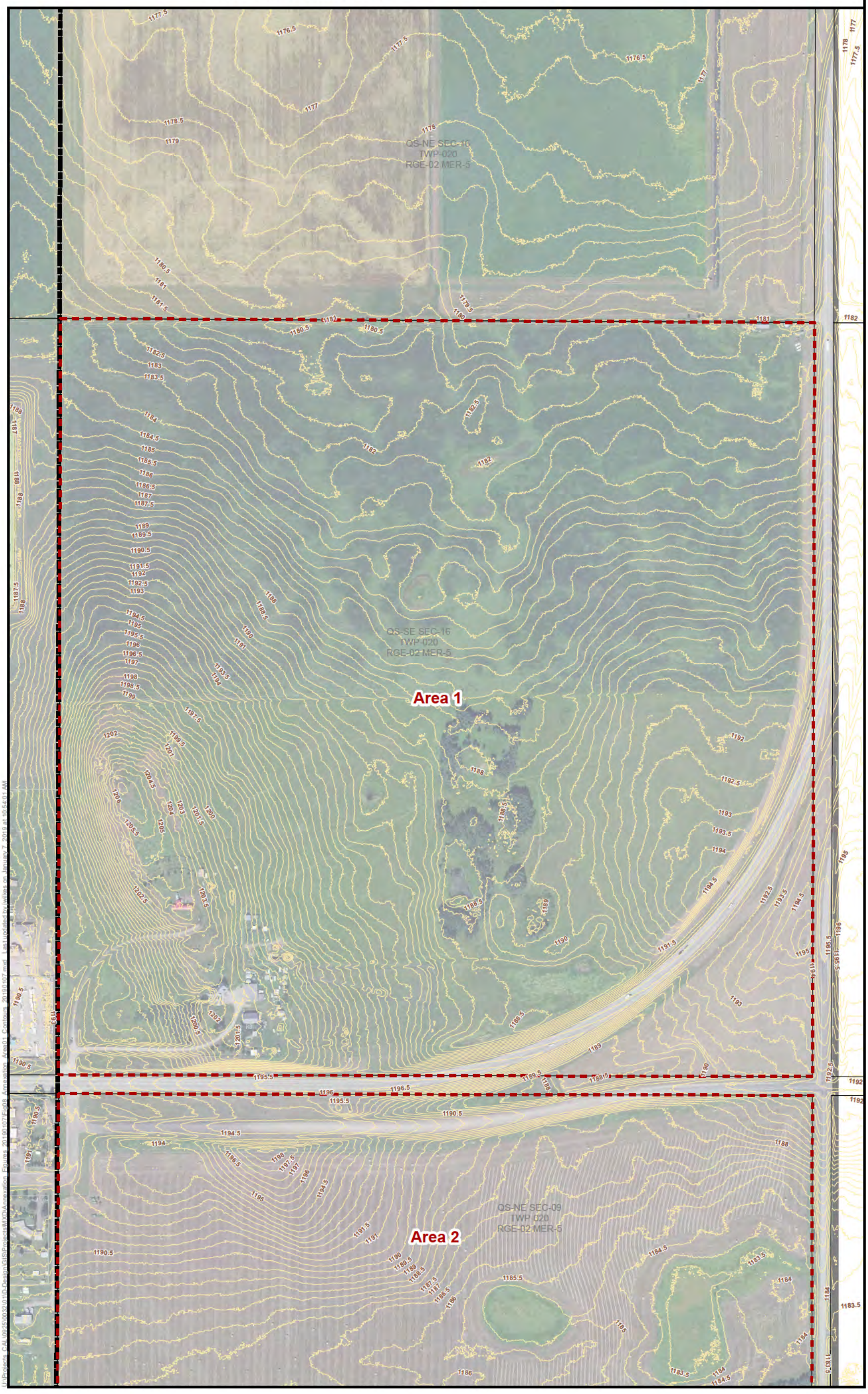
Annexation Lands Servicing Review

Legend

- Existing Contours (0.5m)
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

TOWN OF BLACK DIAMOND

Scale 1:4,000



Area 1 - Existing Contours

FIGURE 8

If a developer was to tie to the existing system, both the existing water and sanitary are located on 1st Ave NE and therefore development adjacent to 1st Avenue is expected to be more cost effective. However, given the location of the existing knoll and the Town's desire to maintain the knoll, there is not a lot of room for development in the SW corner of the quarter section. Therefore, it is likely development will occur on the east side of the knoll. To service the land east of the knoll, infrastructure would have to directionally drilled through the knoll to tie in. We expect that because of the costs associated with directional drilling, it therefore may be more cost effective to build out the infrastructure to its ultimate state as proposed.

The existing water and sanitary mains are located on 1st Ave NE. There is minimal developable area in the SW adjacent to these mains given the location of the existing knoll, and the Town's desire to maintain the knoll, with development occurring north or east of the knoll, the ultimate sanitary main is in closer proximity than the existing main on 1st Ave.

An assumption of this review is that the NE Industrial water looping (assumed construction in 2020) will be complete at the time Area 1 is developed and that the Kaiser area will also be developed. It will also be assumed that neither Area 2 or 3 would be proceeding, and only Area 1 could develop in the short term. With the NE Industrial water looping, the area could be serviced for certain but would require the construction of a connection at 1 Ave NE (or a connection at the corner of Phase 2 if it is constructed). For sanitary servicing, there is 6.2 L/s remaining in the existing Black Diamond sewer system if Kaiser is developed. That indicates the system could handle a maximum of 405 jobs within the area, which translates to only developing 42.6ac (17.2ha) total in the quarter section.

If development proceeds in the short term, in advance of the ultimate stormwater facility, an interim stormwater solution would be required by each developer, with each parcel ultimately draining to the overall stormwater management facility. A staged approach of the ultimately facility could also be considered. At this time, the overall management facility is expected to be a collective cost to all the developers.

9.0 Area 2 Servicing

9.1 Ultimate

Please refer to Figure 9 for the ultimate configuration to service Area 2. Similar to Area 1, the existing contouring of Area 2 is demonstrated in Figure 10. The proposed ultimate servicing for Area 2 will remain the same regardless of Scenario 1 and 2.

9.1.1 Sanitary

A lift station is proposed to deliver the sanitary demand of 34 L/s from Area 2 (see Figure 9). This lift station will be sized to accommodate higher flows to service portions of Area 3 and all of Area 6. A 400mm force main will then take the flows from the lift station to the 450mm gravity main headed to the wastewater lagoon.

URBAN systems

Annexation Lands Servicing Review

Date: 2019/11/17

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Proposed Watermain
- Proposed Storm Main
- Proposed Ditches
- Proposed Culverts
- Stormwater Management Facility
- Proposed Road (26m)
- Proposed Annexation Areas
- Existing Town Boundary

Scale: 1:4,000

QS-SE SEC-16
TWP-020
RGE-02 MER-5

Area 1

PROPOSED 450 HDPE FORCE MAIN

LS

PROPOSED AREA 2 TIE-IN LOCATION
DEMAND OF 34 L/s TO PROPOSED LIFT STATION

PROPOSED 450 PVC STORM MAIN

PROPOSED 250 PVC WATERMAIN PHASE 1
NE INDUSTRIAL WATERMAIN LOOPING

QS-NE SEC-09
TWP-020
RGE-02 MER-5

Area 2

STORMWATER MANAGEMENT FACILITY

POND OUTLET DITCH

PROPOSED 375 PVC GRAVITY MAIN

Area 3

QS-SE SEC-09
TWP-020
RGE-02 MER-5

Area 6

Area 2 - Ultimate Servicing

FIGURE 9

URBAN systems

Annexation Lands Servicing Review

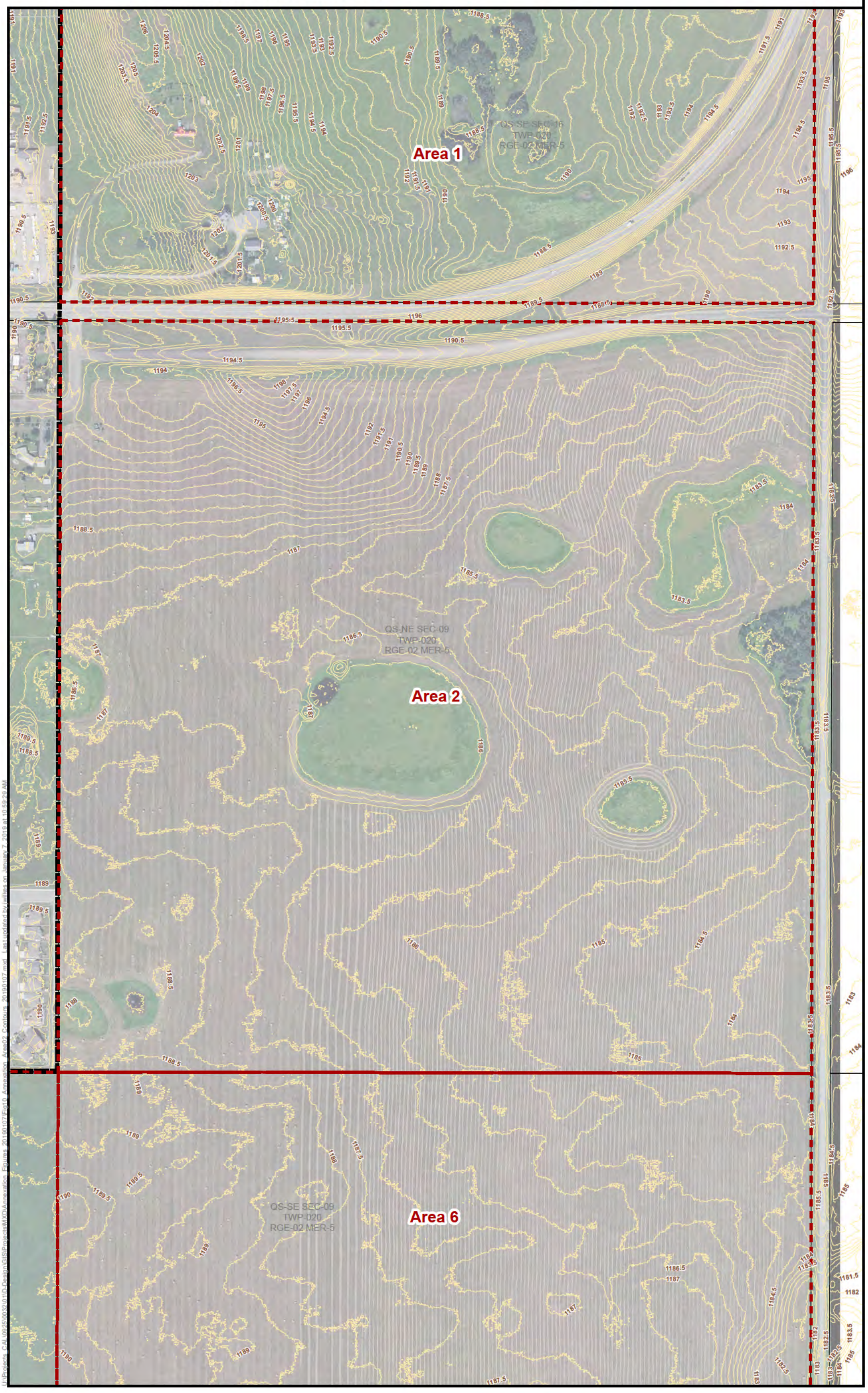
Date: 2019/1/17

Legend

- Existing Contours (0.5m)
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

TOWN OF BLACK DIAMOND

Scale 1:4,000



Area 2 - Existing Contours

FIGURE 10

A 375mm gravity main is also proposed to be extended to follow the road south of the lift station to the south-west corner of Area 2. This main has been sized for the possibility described above where Area 3 or Area 6 could tie-in.

9.1.2 Water

Similar to Area 1, we are assuming that Phase 1 of the NE Industrial water main looping will be constructed. As such, the developer will be able to tie in to the existing system to service the water demand of 32.5 L/s. The developer(s) within Area 2 would also be required to provide a system that loops

internally to the quarter section as well as connect north to Area 1 and south to Area 6. There will be enough pressure in the area regardless of whether or not the quarter section is looped; however, looping is recommended for redundancy.

9.1.3 Storm

A stormwater management facility is recommended at the east edge of the quarter section at the existing low point as shown in Figure 9 and Figure 10. All stormwater within the quarter section would have to be collected, conveyed and discharged at the facility. The stormwater facility would then discharge to the south-east towards the existing ravine via a system of ditches along the south-east corner of the quarter section. It will be the responsibility of the developer to design and construct these systems.

9.1.3.1 Wetlands

A brief desktop review of the quarter section identified the possibility of wetlands in the area. It was identified by the Town that preserving wetlands are a priority but to be conservative, for the purpose of this study, the surface areas of the wetlands were not removed from the developable area calculation. As the classes of these wetlands are unknown, the Town preferred to assume all the area is developable, therefore meaning the wetlands could be removed, in order to size infrastructure appropriately.

It is recommended that a further review of the wetlands take place at the time of an ASP to identify the class of the wetlands.

9.2 Short Term

As mentioned in Section 8.2, it is more likely that developers would develop 10-15 acres parcels at a time compared to one developer developing the entire quarter.

As such, the opportunities for Area 2 to develop in the short term were explored. Similar to Area 1, it is assumed the NE Industrial water looping and the build-out of Kaiser will have occurred prior to the development of Area 2. We have also assumed that only Area 2 would be built out in the short term and not Area 1 or 3. This is due to the capacity constraints of the existing sanitary system.

Like Area 1, Area 2 would be able to be serviced in the short and long term off the NE Industrial water main looping and could be tied in anywhere along the main that runs north-south. Again, similar to Area 1, there would only be 6.2 L/s of remaining capacity in the sanitary system if Kaiser proceeds. For the short

term, the residential portion of Area 2 could tie in to the existing sanitary on 4th Ave SE but would only be allowed to discharge the remaining capacity of 6.2 L/s. It is suggested that only the residential portion could develop, due to the proximity and existing grade of the SW corner compared to the location of the industrial area. If the industrial portion went first, it would require a force main south to the existing main on 4th Ave SE, which would be an unnecessary cost for the short term. If the residential portion did tie in to the existing system, it would be limited to the development of 25.7ac (10.4ha) similarly to Area 1. This equates to approximately 405 residents.

If development proceeds in the short term, in advance of the ultimate stormwater facility, an interim stormwater solution would be required by each developer, with each parcel ultimately draining to the overall stormwater management facility. A staged approach of the ultimately facility could also be considered. At this time, the overall management facility is expected to be a collective cost to all the developers.

10.0 Area 3 Servicing

10.1 Ultimate

Please refer to Figure 11 for the ultimate configuration to service Area 3. Similar to Areas 1 and 2, the existing contouring of Area 3 is demonstrated in Figure 12. The servicing for Area 3 will only apply in Scenario 2.

10.1.1 Sanitary

Similar to the *Joint Growth Servicing Strategy*, it is proposed that Area 3 tie in to the existing Westend sanitary trunk main that discharges to the wastewater lagoon. From the *Westend Regional Sewage Services Commission - Westend Sanitary Trunkmain Relocation Design Report*, it is stated that the system was designed for a total capacity of 280 L/s, 146 L/s of which is allocated for the Town of Black Diamond. At this time, it is proposed that a portion of the Kaiser ASP will contribute 20.2 L/s to the Westend main in future. It is proposed that the entire flow of 35.1 L/s from Area 3 be directed to the Westend main. The proposed tie-in location is sanitary manhole S01.

It is recommended that the process be initiated with WRSSC for Black Diamond to connect to the Westend main.

10.1.2 Water

The water demand of 33.5 L/s for Area 3 can be serviced off the existing system by tying into the existing 250mm main on Willow Ridge Gate SW or the 150mm main on Maple Wood Way. Additionally, it is recommended to extend the 250mm water main from the tie-in point on 4th Ave SE in Area 2 south and east along the proposed roadway. This would strengthen the overall system and provide additional looping.

URBAN systems

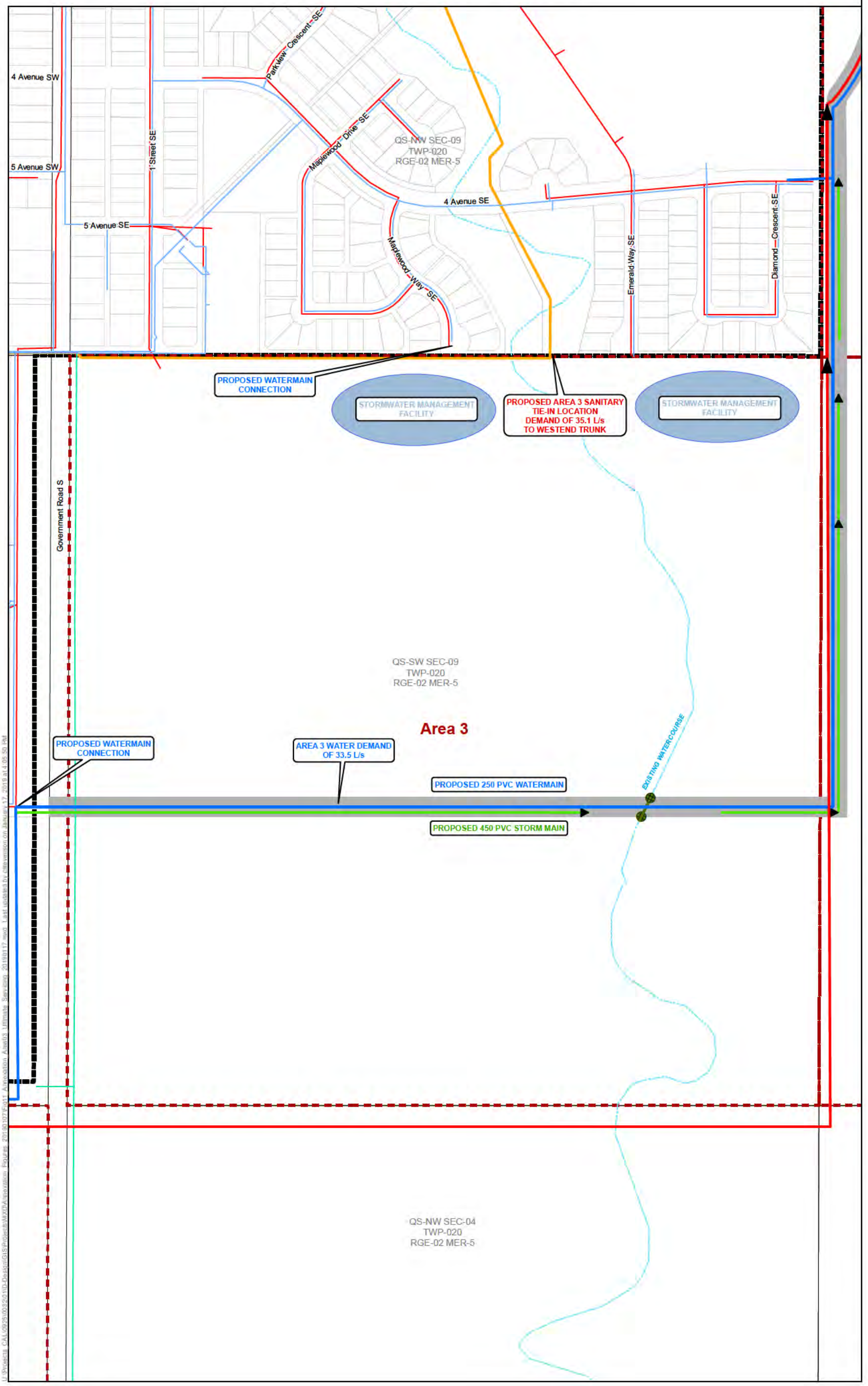
Annexation Lands Servicing Review

Date: 2019 / 1 / 17

Scale 1:4,000

Legend

- Proposed Watermain
- Proposed Storm Main
- Proposed Ditches
- Proposed Culverts
- Existing Westend Sanitary System
- Existing Sanitary Main
- Existing Watermain
- Quad Regional Water Line
- Stormwater Management Facility
- Proposed Road (26m)
- Proposed Annexation Areas
- Existing Town Boundary



Area 3 - Ultimate Servicing

FIGURE 11

URBAN systems

Date: 2019/1/17

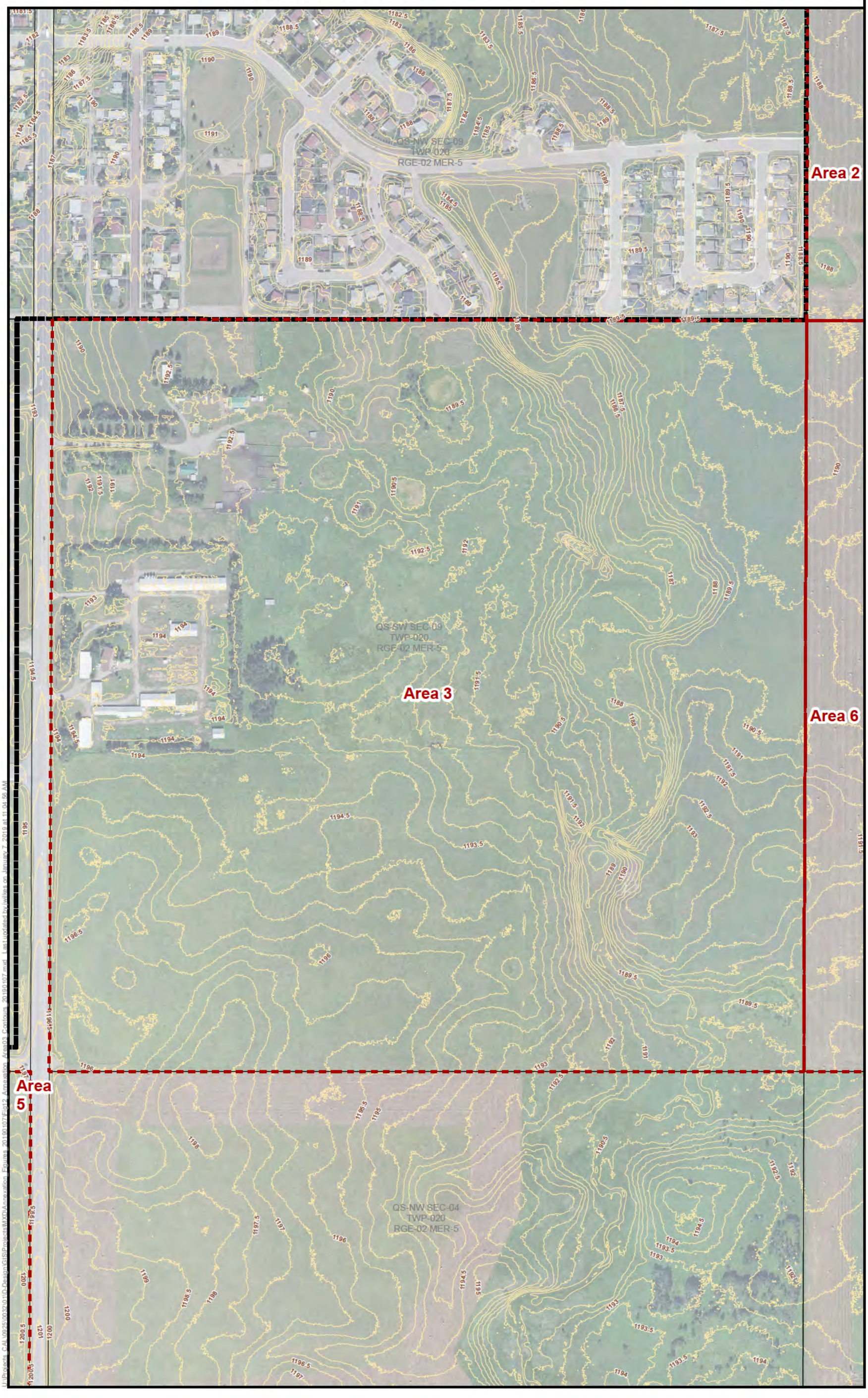
Annexation Lands Servicing Review

Legend

- Existing Contours (0.5m)
- Proposed Annexation Areas
- Quarter Sections
- Existing Town Boundary

TOWN OF BLACK DIAMOND

Scale 1:4,000



Area 3 - Existing Contours

FIGURE 12

To further strengthen the system, the developer(s) within Area 3 would also be required to provide a system that loops internally to the quarter section to strengthen the system and provide redundancy.

10.1.3 Storm

A stormwater management facility is recommended at the north end of the quarter section at the existing low point, west of the existing water course. All stormwater within the quarter section would have to be collected, conveyed and discharge at the facility. The stormwater facility would then discharge to the existing water course, maintaining the existing drainage pattern.

An additional pond is proposed at the north end east of the existing watercourse to manage all drainage from the east side of the water course. This pond would also discharge to the existing drainage course. If Area 6 were to develop prior to Area 3, the area east of the drainage course could possibly drain east to the Area 6 stormwater management facility to minimize the number of facilities in the area.

It would be the developer's responsibility and cost to develop both systems.

10.2 Short Term

Given the geographic location of Area 3 and its proximity to existing infrastructure, the entire quarter section will be serviced by existing infrastructure, with development starting at the north end of the site. A stormwater management facility will be required to retain stormwater. Similar to Areas 2 & 3, if development proceeds in the short term, staged construction of the facility will be considered. An interim stormwater facility could be constructed by each developer that would ultimately tie in to the overall stormwater management facility. The overall management facility would be a collective cost to all the developers.

11.0 Area 5 Servicing

11.1 Ultimate (Scenario 1)

Please refer to Figure 13 for the ultimate configuration to service Area 5 for Scenario 1. Figure 15 in Section 11.2 can be referenced for the existing contouring of the quarter section.

11.1.1 Sanitary

To service the Area 5 demand of 33.6 L/s, it is proposed that a 375mm gravity main from Area 5 tie into the proposed 375mm stub in the SW corner of Area 2. The pipe would extend from the proposed stub in Area 2 to the south along the east edge of Area 3 and then proceed west along the southern border of Area 3. The pipe would then cross Highway 22 into the NE corner of Area 5. This option would also allow for efficiencies in the system and provide Turner Valley the option of extending the main to service their additional 72 L/s of projected sanitary flow from their proposed annexed lands.

URBAN systems

Annexation Lands Servicing Review

Date: 2019 / 1 / 14

N

Scale 1:4,000

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Proposed Watermain
- Proposed Storm Main
- Proposed Ditches
- Proposed Culverts
- Existing Westend Sanitary System
- Existing Sanitary Main
- Existing Watermain
- Quad Regional Water Line
- Stormwater Management Facility
- Proposed Road (26m)
- Proposed Annexation Areas
- Existing Town Boundary

TOWN OF BLACK DIAMOND

QS-NE SEC-08 TWP-020 RGE-02 MER-5

QS-NW SEC-09 TWP-020 RGE-02 MER-5

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-05 TWP-020 RGE-02 MER-5

QS-NW SEC-04 TWP-020 RGE-02 MER-5

5 Avenue SE

6 Avenue SW

418 Avenue W

1 Street SW

2 Street SW

3 Street SW

1 Street SE

Government Road S

Riverwood Way SW

Riverwood Crescent SW

Willow Ridge Blvd SW

Willow Ridge Gate SW

Willow Ridge Manor SW

Willow Ridge Crescent SW

Willow Ridge Link SW

Willow Ridge Close SW

Willow Ridge Way SW

Ridgestone Lane SW

PROPOSED 250 PVC WATERMAIN CONNECTION

PROPOSED 200 WATERMAIN EXTENSION

PROPOSED WATER CONNECTION

PROPOSED 250 PVC WATERMAIN

PROPOSED PVC STORM MAIN

STORMWATER MANAGEMENT FACILITY

PROPOSED SANITARY TIE-IN

PROPOSED 375 PVC GRAVITY MAIN

QUAD REGIONAL WATER LINE

Area 5

PROPOSED WATER DEMAND = 32.0 L/s
PROPOSED SANITARY DEMAND = 33.6 L/s

Area 5 - Ultimate Servicing (Excluding Area 3)

FIGURE 13

Discussions with Turner Valley are recommended to determine the best option in servicing their additional 72 L/s. The Westend forcemain does not have capacity for the additional 72 L/s, yet the Westend gravity portion does. As previously mentioned, the remaining capacity in the Westend gravity main has not been allocated between Turner Valley and Black Diamond. Turner Valley could construct a gravity system to convey their additional sanitary flows to the Westend gravity main (north of Area 5 and east of Area 3) and discharge all of their sanitary through the Westend system. Due to inefficiencies in the system of running parallel sanitary mains, this is not the preferred recommendation. This option could be explored given the timing to service the additional 72 L/s when compared to the development of Black Diamond's annexed areas.

In the event that the development of Area 5 proceeds all other annexation areas and that Turner Valley has not reached their need to service for the additional 72 L/s of flow, the possibility of Area 5 tying directly to the Westend main could be explored as there is the 83 L/s of spare capacity as mentioned in Section 3.1.1.

It should be noted that the option of tying into the existing Westend forcemain was explored in order to service Area 5. Based on the *Turner Valley/Black Diamond Joint Growth Strategy – Scenario 3 Design Brief* prepared by MPE Engineering, the capacity in the forcemain is allocated to Turner Valley flows from the current town boundary. This option is not recommended as a gravity system is always the preferred option, which will eliminate the need for temporary infrastructure and additional lift stations.

11.1.2 Water

The water demand of 32.0 L/s for Area 5 can be serviced off the existing system in Willow Ridge by tying into existing two water main locations: at the existing 200mm water main on Willow Ridge Manor and at the existing 250mm stub south of 3rd Street SW on Township Road 201 (418 Avenue).

Additionally, a 250mm water main is proposed along the east side of Highway 22 from the existing 250mm water main between Highway 22 and 1st Street SE south until Township Road 201 where the proposed 250mm main will head west to tie-in the existing 250mm main south of 3rd Street SW. This is recommended for redundancy for both Area 5 and for the Willow Ridge/Riverwood community as it was discovered that there is only one water main providing water to the Willow Ridge/Riverwood community. The other water connection into the neighbourhood on 3rd Street SW at the north end of the development has a PRV installed that provides water to the north (i.e. the lower pressure zone). The added redundancy would provide added looping in the case that the water main on Willow Ridge Boulevard was ever need of repair.

To further strengthen the system, the developer(s) within Area 5 would also be required to provide a system that loops internally to the quarter section to strengthen the system and provide redundancy.

It should be noted that although the SRRUC Quad Regional main runs along Highway 22 parallel to the east of Area 5, the quarter section cannot tie into this main, as it is a transmission main that supplies the water to the reservoir.

11.1.3 Storm

A stormwater management facility is recommended at the north-east corner of the quarter section at the existing low point (see Figure 15). All stormwater within the quarter section would be collected, conveyed and discharge to the facility. Currently, the overland flows generally flow to the north-east and ultimately to the watercourse that is located in Area 3. However, given the proximity of the watercourse on the west side of the quarter section, it is recommended that the stormwater facility discharge towards the water course along the western edge of the quarter section via a piped system. It will be the responsibility of the developer to design and construct these systems. This recommendation is the same for both Scenario 1 and 2.

11.2 Ultimate (Scenario 2)

Please refer to Figure 14 for the ultimate configuration to service Area 5 for including the annexation of Area 3 (Scenario 2). As previously mentioned, the existing contouring of Area 5 is demonstrated in Figure 15.

11.2.1 Sanitary

Similar to what was described for Scenario 1 in Section 11.1.1, it is proposed that the proposed 375mm sanitary main in Area 2 be extended south along the eastern edge of Area 3 and then west along the south border of Area 3 towards Area 5. The proposed 375mm would then cross Highway 22 to service Area 5. The 375mm main is sized to accommodate the projected sanitary flows from Area 5, as well as the additional 72 L/s from Turner Valley, which would also allow for efficiencies in the system and provide Turner Valley the option of extending the main to service their additional 72 L/s of projected sanitary flow from their proposed annexed lands.

As mentioned in the sanitary servicing for Scenario 1, there is an opportunity for Turner Valley to service their additional 72 L/s through the Westend gravity main; however, there is not sufficient capacity in the Westend gravity main for both the additional 72 L/s and Area 3. Therefore, Area 3 would have to convey the projected sanitary flows through the proposed 375mm main in Area 2. In order to tie in to the 375mm, a syphon would be required under the existing watercourse given the elevation differential in the area. At this time, this is not the preferred recommendation, but this option could be explored given the timing of the need to service the additional 72 L/s when compared to the development of Black Diamond's annexed areas. Discussions with Turner Valley are recommended to determine the best option in servicing their additional 72 L/s.

In the event that the development of Area 5 proceeds all other annexation areas and that Turner Valley has not reached their need to service for the additional 72 L/s of flow, the possibility of Area 5 tying directly to the Westend main could be explored as there is the 83 L/s of spare capacity as mentioned in Section 3.1.1. In this option, both Areas 3 and 5 could be serviced off the Westend gravity main given the remaining capacity and the sanitary demands for both areas.

Similar to Scenario 1, the option of tying into the existing Westend forcemain was explored in order to service Area 5. Based on the *Turner Valley/Black Diamond Joint Growth Strategy – Scenario 3 Design*

URBAN systems

Annexation Lands Servicing Review

Date: 2019 / 1 / 14

N

Scale 1:4,000

Legend

- LS Proposed Lift Station
- Proposed Sanitary Main
- Proposed Watermain
- Proposed Storm Main
- Proposed Ditches
- Proposed Culverts
- Existing Westend Sanitary System
- Existing Sanitary Main
- Existing Watermain
- Quad Regional Water Line
- Stormwater Management Facility
- Proposed Road (26m)
- Proposed Annexation Areas
- Existing Town Boundary

TOWN OF BLACK DIAMOND

QS-NE SEC-08 TWP-020 RGE-02 MER-5

QS-NW SEC-09 TWP-020 RGE-02 MER-5

QS-SE SEC-08 TWP-020 RGE-02 MER-5

QS-SW SEC-09 TWP-020 RGE-02 MER-5

QS-NE SEC-05 TWP-020 RGE-02 MER-5

QS-NW SEC-04 TWP-020 RGE-02 MER-5

5 Avenue SE

1 Street SE

1 Street SW

2 Street SW

3 Street SW

6 Avenue SW

Government Road S

Riverwood Way SW

Riverwood Crescent SW

Willow Ridge Blvd SW

Willow Ridge Gate SW

Willow Ridge Manor SW

Willow Ridge Crescent SW

Willow Ridge Link SW

Ridgestone Lane SW

Willow Ridge Close SW

Willow Ridge Way SW

418 Avenue W

PROPOSED WATERMAIN CONNECTION

PROPOSED 200 WATERMAIN EXTENSION

PROPOSED WATER CONNECTION

PROPOSED 250 PVC WATERMAIN

PROPOSED PVC STORM MAIN

STORMWATER MANAGEMENT FACILITY

PROPOSED SANITARY TIE-IN

PROPOSED 375 PVC GRAVITY MAIN

QUAD REGIONAL WATER LINE

Area 5

PROPOSED WATER DEMAND = 32.0 L/s
PROPOSED SANITARY DEMAND = 33.6 L/s

Area 5 - Ultimate Servicing (Including Area 3)

FIGURE 14

URBAN systems

Annexation Lands Servicing Review

Date: 2019/11/7

Legend

- Watercourse
- Existing Contours (0.5m)
- Annexation Areas
- Quarter Sections
- Town of Black Diamond

Scale 1:4,000



Area 5 - Existing Contours

FIGURE 15

Brief prepared by MPE Engineering, the capacity in the forcemain is allocated to Turner Valley flows from the current town boundary. This option is not recommended as a gravity system is always the preferred option, which will eliminate the need for temporary infrastructure and additional lift stations.

11.2.2 Water

The water servicing strategy for Scenario 2 is the exact same as Scenario 1, Area 5 can be serviced off the existing system in Willow Ridge by extending off the existing 200mm water main on Willow Ridge Manor and tying in to the existing 250mm stub south of 3rd Street SW on Township Road 201 (418 Avenue).

Based on the requirement of a redundant water main as described in the water servicing for Scenario 1, a redundant main will also be required for Scenario 2. However, the location of the redundant main for Scenario 2 will differ from the alignment of Scenario 1. A 250mm water main is still proposed but this water main will extend from the Area 3 water main connection on Willow Ridge Boulevard south across Township Road 201 and then head west to tie in to the existing 250mm stub south of 3rd Street SW. Again, the added redundancy would provide added looping in the case that the water main on Willow Ridge Boulevard was ever need of repair and provide additional flows in the area.

To further strengthen the system, the developer(s) within Area 5 would also be required to provide a system that loops internally to the quarter section to strengthen the system and provide redundancy.

As mentioned in Scenario 1, it should be noted that although the SRRUC Quad Regional main runs along Highway 22 parallel to the east of Area 5, the quarter section cannot tie into this main. This transmission main supplies the water to the reservoir.

11.2.3 Storm

The stormwater servicing for Area 5 is the same regardless of the Scenario. Please refer to Section 11.1.3 for more information.

11.3 Short Term

The Town has identified that it is more likely that developers would develop 10-15 acres parcels at a time compared to one developer developing the entire quarter.

As such, the opportunities for Area 5 to develop in the short term were explored. For the purposes of this short term review, it is assumed that only Area 5 would be built out in the short term and not Areas 1, 2 or 3. This is due to the capacity constraints of the existing sanitary system. The short term servicing of Area 5 would be the same regardless if it is Scenario 1 or 2.

Given the location of Area 5, it would be able to service water off the existing infrastructure in Willow Ridge as recommended in the overall water servicing. However, the redundant loop on the east side of Highway 22 would still be required.

As stated previously, there is only 6.2 L/s of remaining capacity in the sanitary system if Kaiser proceeds; therefore, Area 5 would be limited to a discharge of the remaining capacity of 6.2 L/s. For the short term, the residential or commercial portion of Area 5 could tie in to the existing 250mm sanitary main that is stubbed at the south end of 3rd Street SW. For our estimated of the sanitary flows from the Willow Ridge development, there is enough spare capacity in their sanitary mains to accommodate the 6.2 L/s. From the *2010 Wastewater Flow Monitoring Study for the Sanitary Trunk Mains*, BSEI Municipal Consulting Engineers, 2011, it was identified that there was sufficient capacity to service the 6.2 L/s in three downstream manholes that were monitored, even with the full build-out flows of Riverwood. Based on this limited capacity, it is expected that only the residential would proceed as it would limit the need for an additional sanitary main. If the commercial area developed first, a sanitary main draining west would be required to tie in to the existing main where it would ultimately drain the north-east corner of the quarter section. It would be possible to install if the Town preferred to have commercial and depending on the rate of growth, but for the purposes of this short term review, we will assume only residential will proceed. If the residential portion did tie in to the existing system, it would be limited to the development of 25.7ac (10.4ha), which equates to approximately 405 residents.

If development proceeds in the short term, in advance of the ultimate stormwater facility, an interim stormwater solution would be required by each developer, with each parcel ultimately draining to the overall stormwater management facility. A staged approach of the ultimately facility could also be considered. At this time, the overall management facility is expected to be a collective cost to all the developers.

12.0 Transportation

In addition to the civil servicing, the Town existing transportation network was reviewed to determine possible upgrades required to support the potential growth areas. The proposed annexation areas are connected to Highway 7 and Highway 22 that bisects the Downtown Core. Highway 7 transition to Highway 22 and provides an east-west connection to the Town to Okotoks to the east, High River and Highway 2 to the east and currently carries 5,000 vehicles per day (vpd). Highway 22 provides a north-south connection to Turner Valley to the west and Highway 22X to the north and currently carries between 2,000 and 3,000 vpd.

With the proposed annexation areas, new road connections and accesses will be required to support the full build-out of the lands. The proposed growth areas will require a new north-south connection currently aligned with the 6 Street E corridor to alleviate the estimated demand on the existing network. The proposed north-south corridor is approximately 2,000m and will provide key connections between Areas 1, 2, 3, and 5. Within Area 3, a new east-west connection approximately 800m connecting the proposed north-south corridor with Highway 22.

These new corridors provide an additional layer of mobility and connectivity into the existing transportation network. The high-level grid network provides a level of redundancy into the network, shift demand during the peak period and providing commuters in the area additional routes to and from their destinations.

The analysis and assumptions provided during this stage of the assignment is considered conceptual understanding internal servicing requirements for the annexed areas have not be detailed. Certainty related to phasing and intersection configuration will be further determined at the area structure plan and as potential developers begin to influence the details of these lands.

These proposed road alignment and annexation areas are illustrated in Figure 16 below.

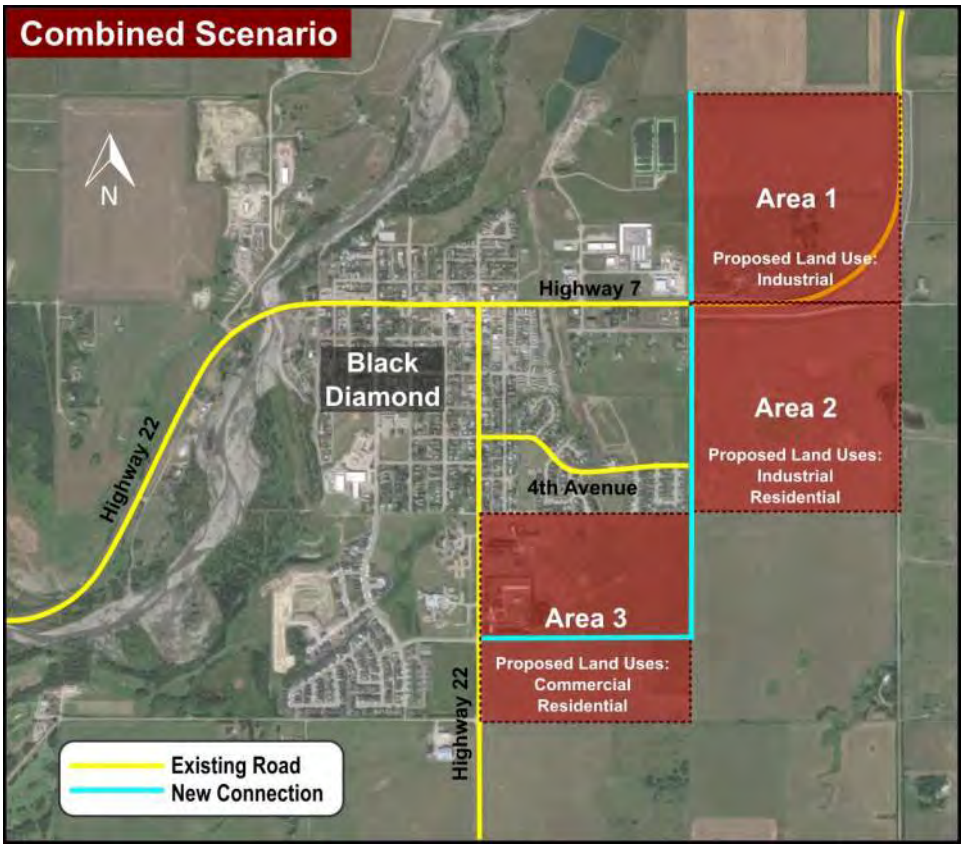


Figure 16: Combined Scenario

12.1 Annexation Assumptions

12.1.1 Trip Generation Assumptions

The Institute of Transportation Engineers (ITE) Trip Generation Manual was used to estimate the number of vehicle trips that can be generated within the proposed annexation areas based on their land uses. It should be noted that to be conservative, the PM peak hour was selected for analysis and 100% of the trips generated will assumed to be personal vehicle trips. Table 16 summarizes the trip generation rates assumed for each of the proposed land uses.

Table 16: ITE Trip Generation Rates Used for Analysis

Land Use	ITE Code	Description	Trip Generation Rate	Unit
Industrial	130	Industrial Park	0.40	1000 sq. ft. GFA
Commercial	820	Shopping Center	3.81	1000 sq. ft. GFA
Residential	210	Single Family Detached	0.99	Dwelling Unit

Based on the selected trip generation rates, the total number of vehicle trips from each annexation area was determined and shown in Table 17. For the industrial and commercial uses, a 0.3 FAR was assumed and applied to the total developable lands for the purposes of estimating potential trips.

Table 17: Generated Vehicle Trips Per Scenario

Area	Land Use	% In	% Out	Generated Trips		
				In	Out	Total
1	Industrial	21%	79%	118	443	561
2	Industrial	21%	79%	28	103	131
	Residential	63%	37%	517	303	820
3	Commercial	48%	52%	567	614	1181
	Residential	63%	37%	449	264	713
5	Commercial	48%	52%	192	208	400
	Residential	63%	37%	521	306	827

12.1.2 Trip Distribution Assumptions

Several assumptions were made within the traffic model to best represent the expected future conditions of the network under each of the scenarios. The assumptions made in estimating the overall proportion of trips originating and ending outside of the study area (trips from out of town) and those that originate and end within the study area (trips from within the town) are describe below. While our study focuses explicitly on areas within Black Diamond, our modeling approach was also influenced by Turner Valley given the proximity and the previous partnerships between the Towns.

- The Water Treatment Plant in Turner Valley (where Black Diamond receives its treated water) has recently been upgraded and its design life has been extended to the year 2036 approximately. Review of the system is required prior to that date or if the population approaches the combined population of 7,989 people similarly to the Wastewater Treatment Lagoon.
- Under Area 1, a much higher proportion of external trips (80%) were assumed given that majority of the jobs from the industrial land use are expected to be supported by populations from outside of Black Diamond.

- Under Area 2, the proportion of external and internal trips are estimated to be roughly equal (50% each) under the assumption that the mix of residential and industrial land uses would provide job opportunities for residents within the area.
- Under Area 3 and Area 5, it was assumed 60% of the new trips will be internalized between the Town, annexed areas and the proposed commercial hub. This assumption is valid for local, specialized small commercial retail unit. Larger scale regional commercial such as large format retail (Costco, Home Depot, etc) would attract more external trips.
- To be conservative in the loading of the main highways and corridors in the study area, cross-over trips between the annexation areas (i.e. originating in one area and ending in another) were assumed to be negligible.

At the time of this report, these distribution assumptions are based high level planning principles and the opportunities the adjust these estimated can occur as more details in the travel behaviour and uses become more established. Future studies needed to support the annexed areas in detail will provide a more up to date analysis at that time.

Table 18 shows a summary of the external and internal trip distributions for each scenario.

Table 18: External and Internal Trip Distribution Percentages

Area (Scenario)	Percentage of External Trips	Percentage of Internal Trips (includes Black Diamond and Turner Valley)
1	80%	20%
2	50%	50%
3	40%	60%
5	40%	60%

Furthermore, the external trips are assigned to three major routes leading in and out of the study area. These three routes are the following:

- Eastbound Hwy 7 (East of Black Diamond)
- Southbound Hwy 22 (South of Black Diamond)
- Northbound Hwy 22 (North of Turner Valley)

In terms of internal trips, it was assumed a larger distribution of future trips would be generated from Turner Valley (to/from the west). This assumption is consistent with the previous population forecasts completed for the *Joint Growth Strategy*.

12.2 Scenario Evaluation

Traffic assignment and analysis was performed for the study area under the above-mentioned assumptions using Vistro and Synchro. The key traffic performance indicators for each development scenario are summarized in the sections below. Upgrades to the road network and intersection locations were developed based on the following parameters:

- Daily 2-way corridor volumes (estimated from PM peak volumes using a factor of 10)
- Intersection Level of Service (LOS)
- Intersection volume to capacity ratio (v/c ratio)

The major road corridors considered for traffic analysis are as follows:

- Highway 7
- Highway 22
- 4th Avenue SE
- Proposed north-south connection (Aligned with 6 Street NE/SE)
- Proposed east-west Willow Ridge Road connection (in Area 3)

It should be noted that 4th Avenue SE was selected due to its significance in providing connectivity from Highway 22 to the proposed north-south road connection.

As more details evolve from these annexed areas, a better understanding into the type of intersection control (traffic signal, roundabout, all-way stop, etc), approach layout, upgrade phasing can be determined during the development of the neighbourhood plan stage. Transportation infrastructure required to access and service the annexed lands were considered local and were not included in the analysis.

The background daily volumes for the existing road network is shown in Figure 17.

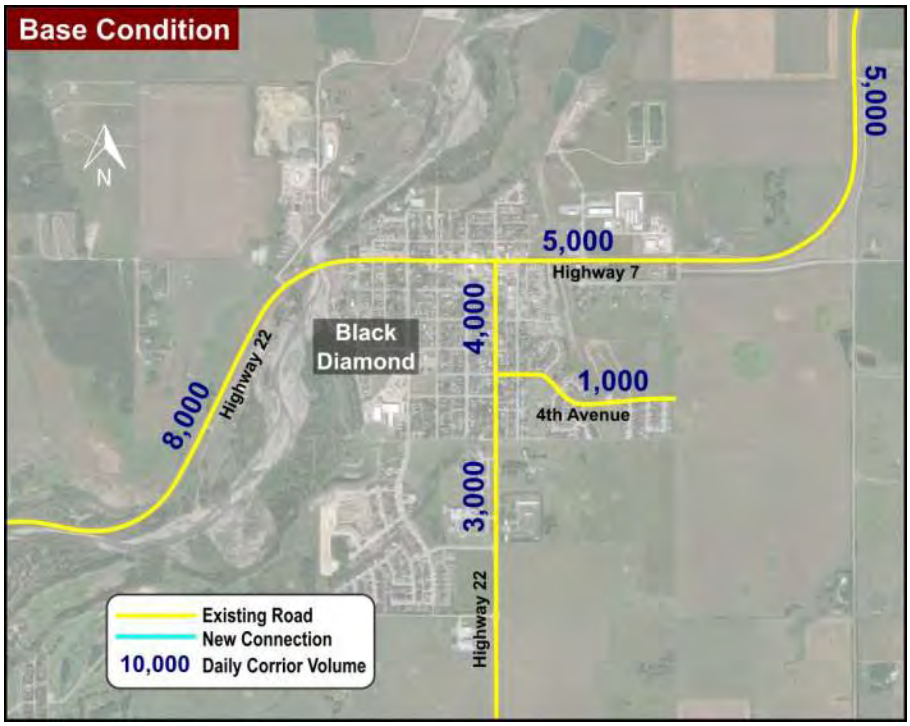


Figure 17: Base Condition Daily Corridor Volumes

12.2.1 Area 1 (Scenario 1)

The estimated daily corridor volumes based on the expected traffic impact from Area 1 are shown in Figure 18. The results from Area 1 will be referred to as Scenario 1 in the Transportation section of this report. Under Scenario 1, Highway 7 between Highway 22 and the proposed north-south connection are expected to experience a substantial increase in daily traffic volume (from 5,000 to 9,000 daily trips), while the other major corridors are expected to remain relatively stable.

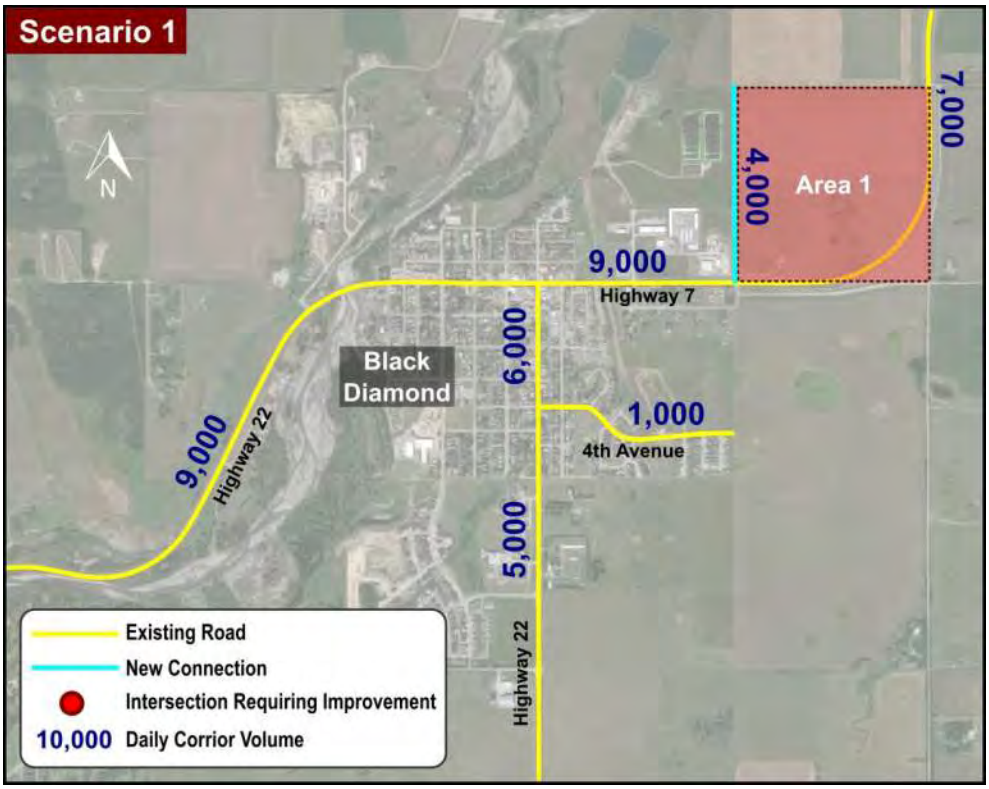


Figure 18: Scenario 1 Daily Corridor Volumes

The need to improve the transportation network and intersection are limited for Area 1. The current plans identify the requirement for a new north-south segment along the west edge of Area 1. The results of the intersection analysis are summarized in Table 19.

It should be noted for this annexation analyses, intersections that require upgrades to support the proposed growth areas were identified. The possible treatments to improve the LOS should be further explored as ASPs are developed to understand the property implications. Possible treatments that may improve peak hour operations include, traffic signals, roundabouts, or four-way stops.

Table 19: Scenario 1 (Area 1) Intersection Analysis Summary

Intersection	Control Type	Scenario 1		Improvement Required?
		Intersection LOS	v/c[11]	
Highway 22 & 3 St SW/NW	Unsignalized	A	0.19	No
Highway 22 & Highway 7	Signalized	B	0.75	No
Highway 7 & 3 St SE/NE	Unsignalized	A	0.22	No
Highway 7 & 6 St E	Unsignalized	A	0.43	No
Highway 7 & Range Road 23	Unsignalized	A	0.2	No
Highway 22 & 4th Ave SE/SW	Unsignalized	A	0.04	No
Highway 22 & Willow Ridge Blvd	Unsignalized	A	0.05	No

12.2.2 Area 2 (Scenario 2)

The estimated daily corridor volumes based on the expected traffic impact from Area 2 are shown Figure 19. The results from Area 2 will be named Scenario 2 within the Transportation section of this report. Under Scenario 2, the main traffic increase is expected to occur along Highway 22/Highway 7 in the east-west direction, notably along the segment leading to and from west of the town. The daily trips on this corridor are expected to grow by roughly 3,000 vehicles. 4th Avenue SE is also expected to see a substantial increase in volume (from 1,000 to 3,000 daily trips).

[11] v/c = Volume to capacity ratio

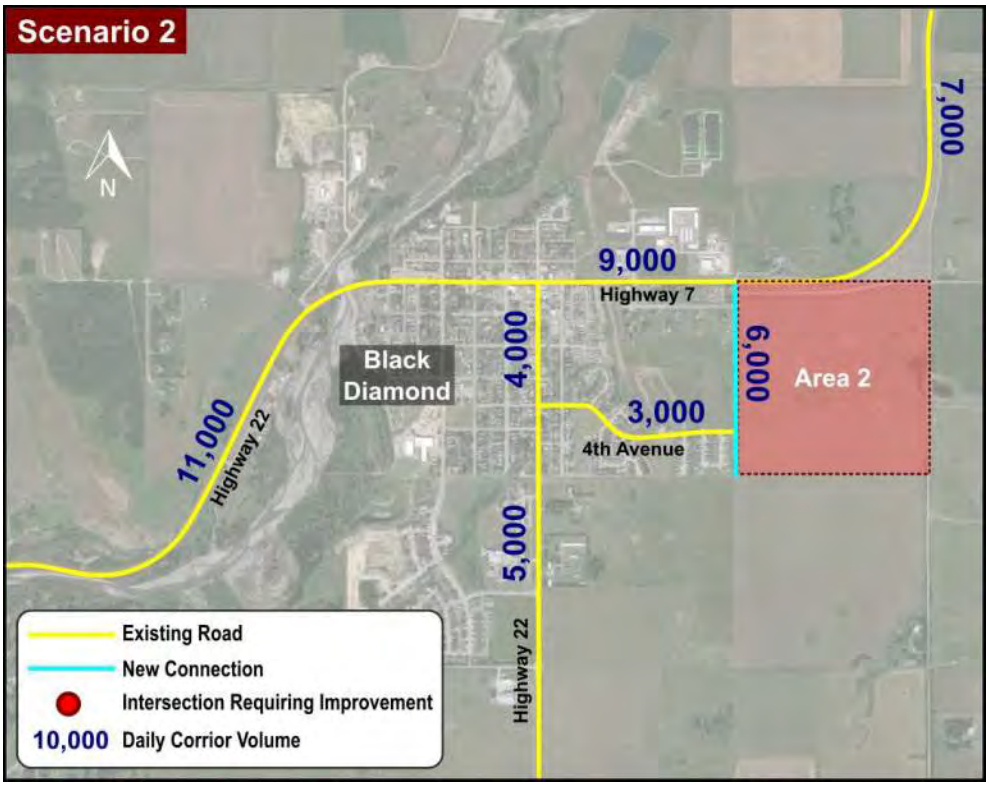


Figure 19: Scenario 2 Daily Corridor Volumes

Similar to Area 1, the intersection analysis reported acceptable performances for all of the intersection locations under Scenario 2. The intersection results for Scenario 2 are summarized in Table 20.

Intersection upgrades will need to be explored in detail during the ASP to understand property implication.

Table 20: Scenario 2 Intersection Analysis Summary

Intersection	Control Type	Scenario 2		Improvement Required?
		Intersection LOS	v/c[12]	
Highway 22 & 3 St SW/NW	Unsignalized	A	0.28	No
Highway 22 & Highway 7	Signalized	A	0.51	No
Highway 7 & 3 St SE/NE	Unsignalized	A	0.20	No
Highway 7 & 6 St E	Unsignalized	C	0.94	No
Highway 7 & Range Road 23	Unsignalized	A	0.16	No
Highway 22 & 4th Ave SE/SW	Unsignalized	A	0.32	No
Highway 22 & Willow Ridge Blvd	Unsignalized	A	0.05	No
4 Ave SE and New North/South Road	Unsignalized	A	0.18	No

12.2.3 Area 3 (Scenario 3)

The estimated daily corridor volumes based on the expected traffic impact from Area 3 in Figure 20. The results from Area 3 will be named Scenario 3. As shown in the Figure 20 under Scenario 3, the majority of the existing corridors are expected to experience increased daily traffic. It should be noted under this scenario, an assumption was made in the model that half of the trips from Area 3 that travel to and from the west (i.e. Turner Valley and beyond) would opt to use the 4th Avenue connection to access Highway 22, while the remainder would take the new east-west connection at Willow Ridge Boulevard. This assumption resulted in notable increase in daily trips for both 4th Avenue (increased of 3,000 trips) and the new east-west connection (increase of 10,000 trips), in addition to the substantial traffic increase along the major highways.

[12] v/c = Volume to capacity ratio

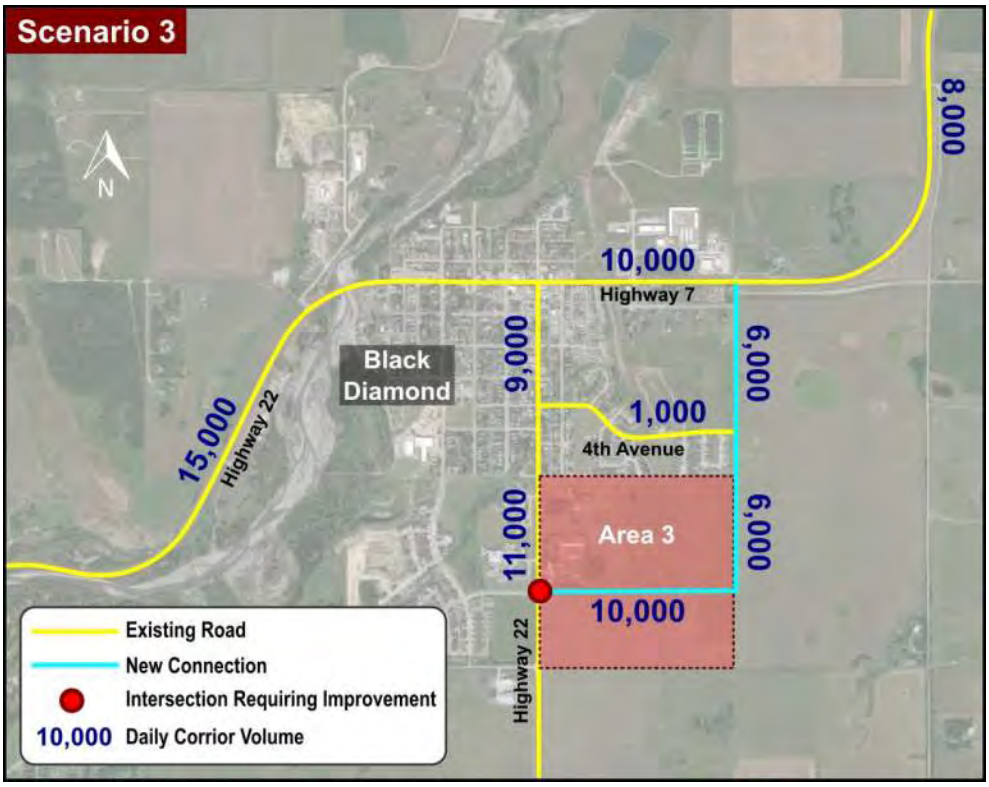


Figure 20: Scenario 3 Daily Corridor Volumes

Several intersections experience LOS D or worse under Scenario 3. Notably, due to projected high usage of the proposed Willow Ridge connection the intersection at Highway 22 from the new east-west alignment through Area 3. . In addition, the intersection of Highway 22 and Highway 7 will potentially be operating near/at capacity under this scenario. To mitigate potential impacts to existing businesses at the intersection from significant intersection upgrades, it was assumed that as demand during the peak period increases, travel patterns would adapt to utilize the new north-south connection on the east side of the Town. By maintaining the current form at Highway 22/Highway 7, travel behaviour is expected to shift to take advantage of the new corridor connecting commuter to Area 3. Intersection results for Scenario 3 are summarized in Table 21.

Table 21: Scenario 3 Intersection Analysis Summary

Intersection	Control Type	Scenario 3		Improvement Required?
		Intersection LOS	v/c[13]	
Highway 22 & 3 St SW/NW	Unsignalized	A	0.58	No
Highway 22 & Highway 7	Signalized	C	0.88	No
Highway 7 & 3 St SE/NE	Unsignalized	A	0.22	No
Highway 7 & 6 St E	Unsignalized	D	1.14	No
Highway 7 & Range Road 23	Unsignalized	A	0.20	No
Highway 22 & 4th Ave SE/SW	Unsignalized	A	0.16	No
Highway 22 & Willow Ridge Blvd	Unsignalized	F	1.55	**Yes**
4 Ave SE and New North/South Road	Unsignalized	A	0	No

12.2.4 Areas 1, 2, 3 (Scenario 4)

The estimated daily corridor volumes based on the projected traffic impact from a combination of Areas 1, 2, and 3 are shown in Figure 21. This scenario will be referred to as Scenario 4. As expected, the full buildout of these three proposed annexation areas will result in significant increase of traffic volumes throughout the major corridors in the study area.

[13] v/c = Volume to capacity ratio

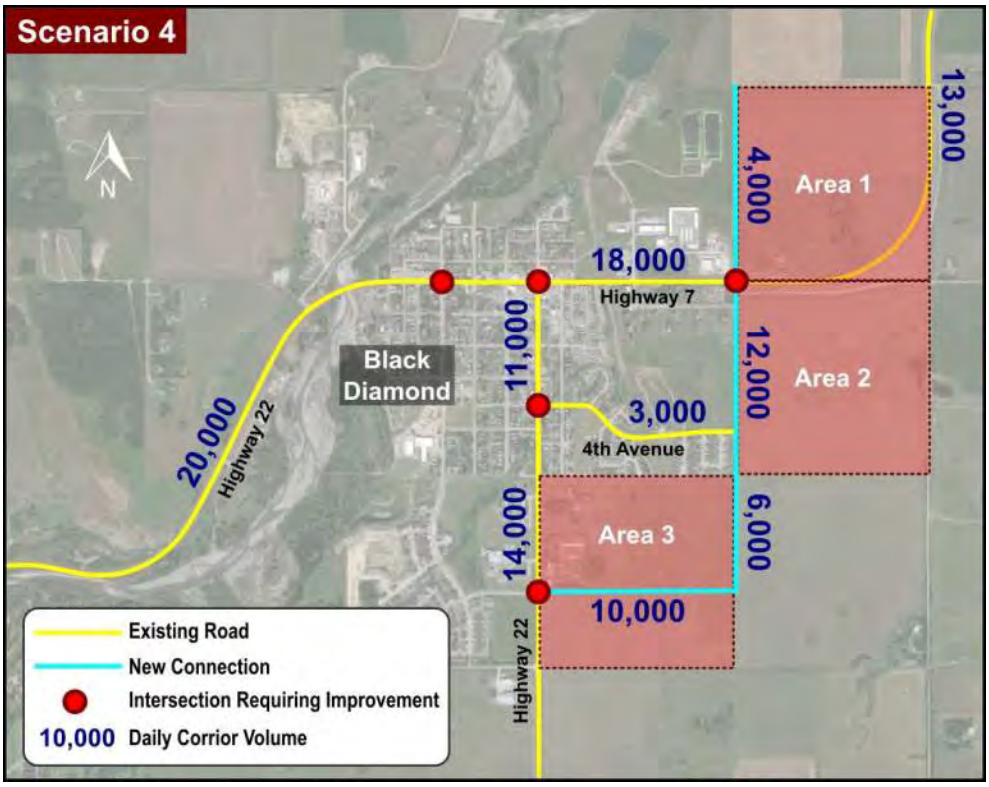


Figure 21: Scenario 4 Daily Corridor Volumes

The intersection analysis results for the Scenario 4 are summarized in Table 22. The traffic analysis indicates that most of the existing intersections within the area will not be able to support the proposed annexed area based on its existing layout. The preliminary traffic analysis identified five intersections (shown in the table below) that will require upgrades to address the future demand. Intersection upgrades will need to be explored in detail during the ASP to understand property implication.

Table 22: Scenario 4 Intersection Analysis Summary

Intersection	Control Type	Combined Scenario		Improvement Required?
		Intersection LOS	v/c[14]	
Highway 22 & 3 St SW/NW	Unsignalized	F	3.90	**Yes**
Highway 22 & Highway 7	Signalized	D	1.19	**Yes**
Highway 7 & 3 St SE/NE	Unsignalized	A	0.82	No
Highway 7 & 6 St E	Unsignalized	F	17.62	**Yes**
Highway 7 & Range Road 23	Unsignalized	A	0.34	No
Highway 22 & 4th Ave SE/SW	Unsignalized	F	1.94	**Yes**
Highway 22 & Willow Ridge Blvd	Unsignalized	F	2.47	**Yes**
4 Ave SE and New North/South Road	Unsignalized	A	0.41	No

12.2.5 Areas 1, 2, 5 (Scenario 5)

The estimated daily corridor volumes based on the projected traffic impact from a combination of Areas 1, 2, and 5 are shown in Figure 22. Similar to Scenario 4, the full buildout of these proposed annexation areas will result in significant increase of traffic volumes throughout the major corridors in the study area. A notable exception, however, is that more traffic will be concentrated along Highway 22 under Scenario 5 since parts of the north-south connection and the Willow Ridge connection are not required to be build under this scenario and trips generated for Scenario 5 will have less vehicle generate trips understanding the commercial areas will be reduced.

[14] v/c = Volume to capacity ratio

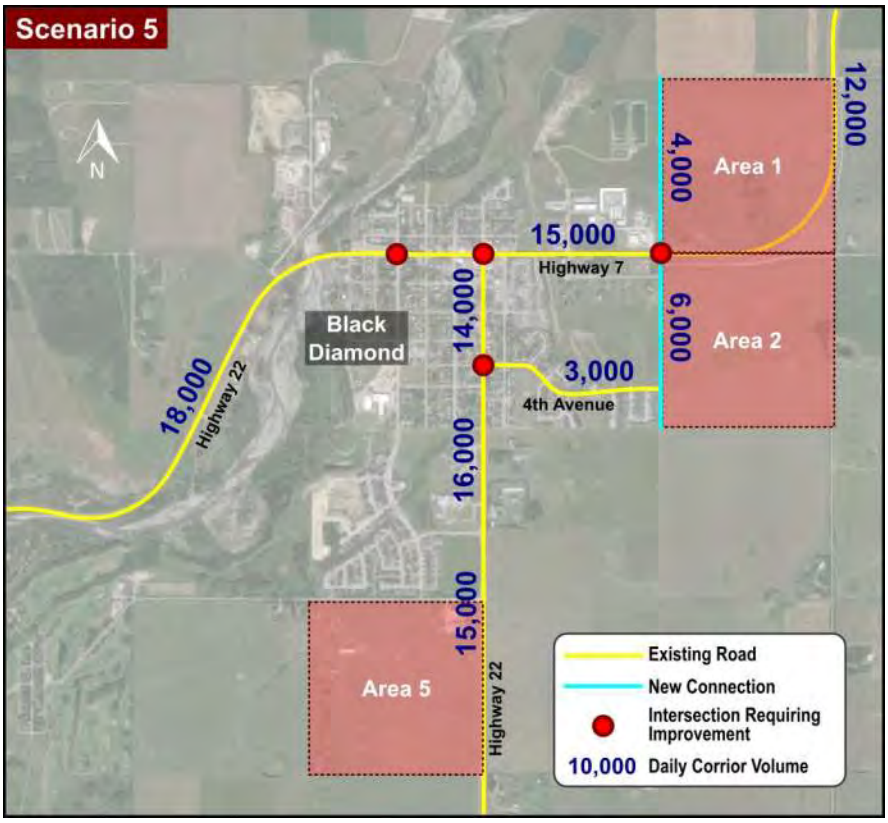


Figure 22: Scenario 5 Daily Corridor Volumes

Table 23: Scenario 5 Intersection Analysis Summary

Intersection	Control Type	Combined Scenario		Improvement Required?
		Intersection LOS	v/c[15]	
Highway 22 & 3 St SW/NW	Unsignalized	D	1.55	**Yes**
Highway 22 & Highway 7	Signalized	F	1.39	**Yes**
Highway 7 & 3 St SE/NE	Unsignalized	A	0.46	No
Highway 7 & 6 St E	Unsignalized	F	5.45	**Yes**
Highway 7 & Range Road 23	Unsignalized	A	0.31	No
Highway 22 & 4th Ave SE/SW	Unsignalized	F	3.05	**Yes**
Highway 22 & Willow Ridge Blvd	Unsignalized	A	0.26	No
4 Ave SE and New North/South Road	Unsignalized	A	0.18	No

[15] v/c = Volume to capacity ratio

In addition to the four intersections identified in Table 23 above that will be requiring improvements, the intersection at the future access to Area 5 is also expected to require upgrades as the magnitude of the development volumes from Area 5 likely cannot be accommodated by a stop-controlled access. Therefore, a total of five existing intersections are identified as requiring improvements under Scenario 5.

12.2.6 Areas 1, 2, 3, 5 (Scenario 6)

The estimated daily corridor volumes based on the projected traffic impact from all four proposed annexation areas are shown in Figure 23. This scenario will be referred to as Scenario 6. As expected, the full buildout of all four proposed annexation areas will result in significant increase of traffic volumes throughout the major corridors in the study area.

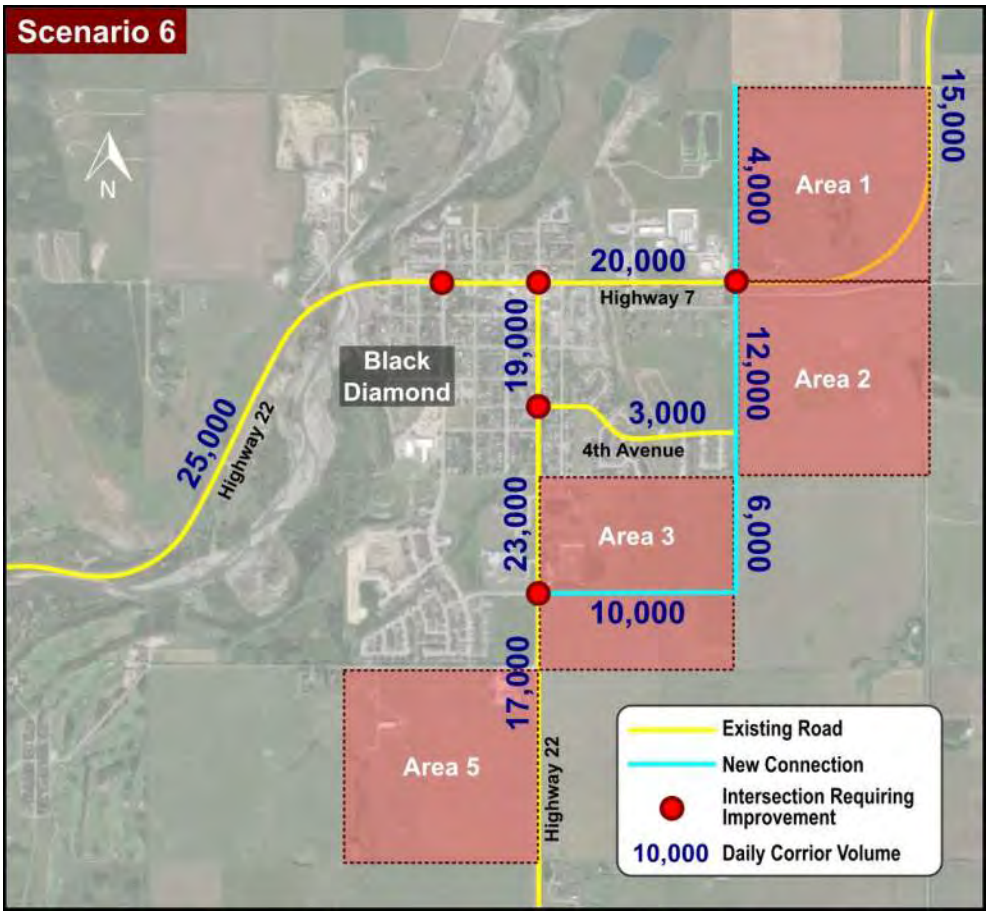


Figure 23: Scenario 6 Daily Corridor Volumes

The intersection analysis results for the Scenario 6 are summarized in Table 24 below. To support all four annexed areas, transportation improvements into the existing and expanded network will be required understanding the substantial growth anticipated from these lands. The preliminary traffic analysis identified six intersections (shown in the table below), both existing and new, that will require upgrades to address the future demand.

In addition to the five existing intersections identified in the table above that will be requiring improvements, the intersection at the future access to Area 5 is also expected to require a form of intersection control to accommodate the estimated development growth volumes. It is likely that development of Area 5 cannot be supported by a stop-controlled access. Therefore, a total of six intersections are identified as requiring improvements under Scenario 6.

As all four potential areas fully develop within the Town, traffic along Highway 22 will increase as a result of growth and it is expected that a need to provide four travel lane to support the future travel demands.

North-south connections to access the proposed lands will likely create challenges to existing intersections, and while providing additional lanes on existing corridors can alleviate potential delays, expanding the network to connect to these new areas will likely contribute to a more resiliency transportation networks. Additional connections that can be considered as Scenario 6 develops is to revisit how Area 5 will connect to the overall systems. Extending the 3 Street connection can provide a more robust network with less reliance on the Province Highways.

Table 24: Scenario 6 Intersection Analysis Summary

Intersection	Control Type	Combined Scenario		Improvement Required?
		Intersection LOS	v/c[16]	
Highway 22 & 3 St SW/NW	Unsignalized	F	Error[17]	**Yes**
Highway 22 & Highway 7	Signalized	F	3.14	**Yes**
Highway 7 & 3 St SE/NE	Unsignalized	C	1.87	No
Highway 7 & 6 St E	Unsignalized	F	33.71	**Yes**
Highway 7 & Range Road 23	Unsignalized	A	0.40	No
Highway 22 & 4th Ave SE/SW	Unsignalized	F	Error	**Yes**
Highway 22 & Willow Ridge Blvd	Unsignalized	F	19.68	**Yes**
4 Ave SE and New North/South Road	Unsignalized	A	0.41	No

A summary table of the recommendations for every scenario can be found in Appendix E.

[16] v/c = Volume to capacity ratio
[17] Error indicates intersection is extremely over capacity

12.3 Cross Section and Access

Cross sections for the new road alignments will follow closely with the *City of Calgary Design Guidelines for Subdivision Servicing* (DGSS), 2014, and mirror the customized cross sections developed for the *Kaiser ASP*. Three potential cross sections can be used for the proposed annexation areas, with possible modifications based on community design requirements.

Table 25 summarizes the required right of way and the recommended vehicle carrying capacities.

Table 25: Road Types Developed for Kaiser

Road Type	ROW	Pavement Width	Daily Volumes
Collector Street with Parking on Both Side	25.2m	15.0m	2,000 to 8,000
Collector Street with Parking on One Side	22.5m	12.3m	2,000 to 8,000
Residential Street	16m	9.0m	2,000

The potential carrying capacities illustrated in Table 25 were developed with the intention of maintain a level of service benchmark acceptable to the City of Calgary.

Depending on the function of the street, it is acceptable to increase the two-lane street corridor from the 8,000 vpd maximum to 15,000 vpd. With the increase in vehicles, trade-off can be expected such as travel times and wait time at intersections. Table 26 summarizes the characteristic of an “Activity Centre Street” as part of the DGSS and is recommended for corridors exceeding 10,000 vpd.

Table 26: Road Type for Volumes Over 10,000 vpd

Road Type	ROW	Pavement Width	Daily Volumes
Activity Centre Street	26.0m	15.4m	3,000 to 15,000

Minimum accesses requirements to meet fire and emergency standards are stipulated by the National Fire Protection Association Section 1141 “Standard for Fire Protection Infrastructure for And Development in all Suburban and Rural Areas”. Table 27 summarizes the access requirements based on household units.

Table 27: Access Requirements

No. Households	Minimum Access Requirement
Up to 100 units	1 access point
Between 101 to 600 units	2 access points
Over 600 units	3 access points

In additional to providing the appropriate points of public access onto from the development sites and sizing the roads accordingly. The Town will likely need to review its long-term strategy on how it can provide a more resilient road network capable of managing peak hour flows and unpredictable conditions. Part of this strategy will involve exploring ways to increase roads within the Town or better connect existing roads to new networks increasing connectivity and redundancy within the system. The intent is to rebalance peak hour demand and better utilize the Town’s key intersections.

13.0 Road Right of Way & Utility Corridors

Roadway dedication will be required along the west side of Areas 1 and 2 to accommodate future utilities and the proposed 26m collector roadway. A right of way along the east and south borders of Area 3 will also be required to accommodate the proposed sanitary main in both Scenarios 1 and 2. An initial utility right of way may be required prior to roadway dedication if the utilities are required prior to roadway construction.

14.0 Area 6 Servicing

Future servicing for an additional quarter section, titled Area 6, was also considered. Please refer to Figure 24 for existing contours of Area 6. Given the location of this quarter section between Areas 2 and 3, Area 6 could be serviced by the 375mm sanitary main, as well as the proposed water loop. At this time, populations have not been provided, as land uses have not been proposed. Given the grade in the area, it may be easier to tie in to the proposed Black Diamond sanitary system through Area 2. The 375mm sanitary main has been sized to accommodate flows from Area 6 with an assumed residential land use. It is recommended that the sanitary main through Area 2 be oversized to accommodate flows from Area 6.

As mentioned in Section 10.1.3, a stormwater management facility is required on the east side of the quarter section, which could also service Area 3 east of the existing water course. Similar to the other areas, the stormwater management facility will be at the cost of the developer.

Area 6 would be able to access off the proposed road on the eastern edge of Area 3 for connectivity to the community. In Scenario 1 where Area 3 is not annexed, a road extension from 4th Avenue could be built to service the area in the short term. The connectivity and any required intersection upgrades regarding Area 6 would have to be explored further if Area 6 proceeds under Scenario 1 conditions to verify the serviceability of the quarter section.

15.0 Cost Estimates

15.1 Civil Cost Estimates

The high-level costs to design and construct the civil infrastructure for all three of the proposed annexation areas were estimated and are presented below in Table 28 and Table 29.

URBAN systems

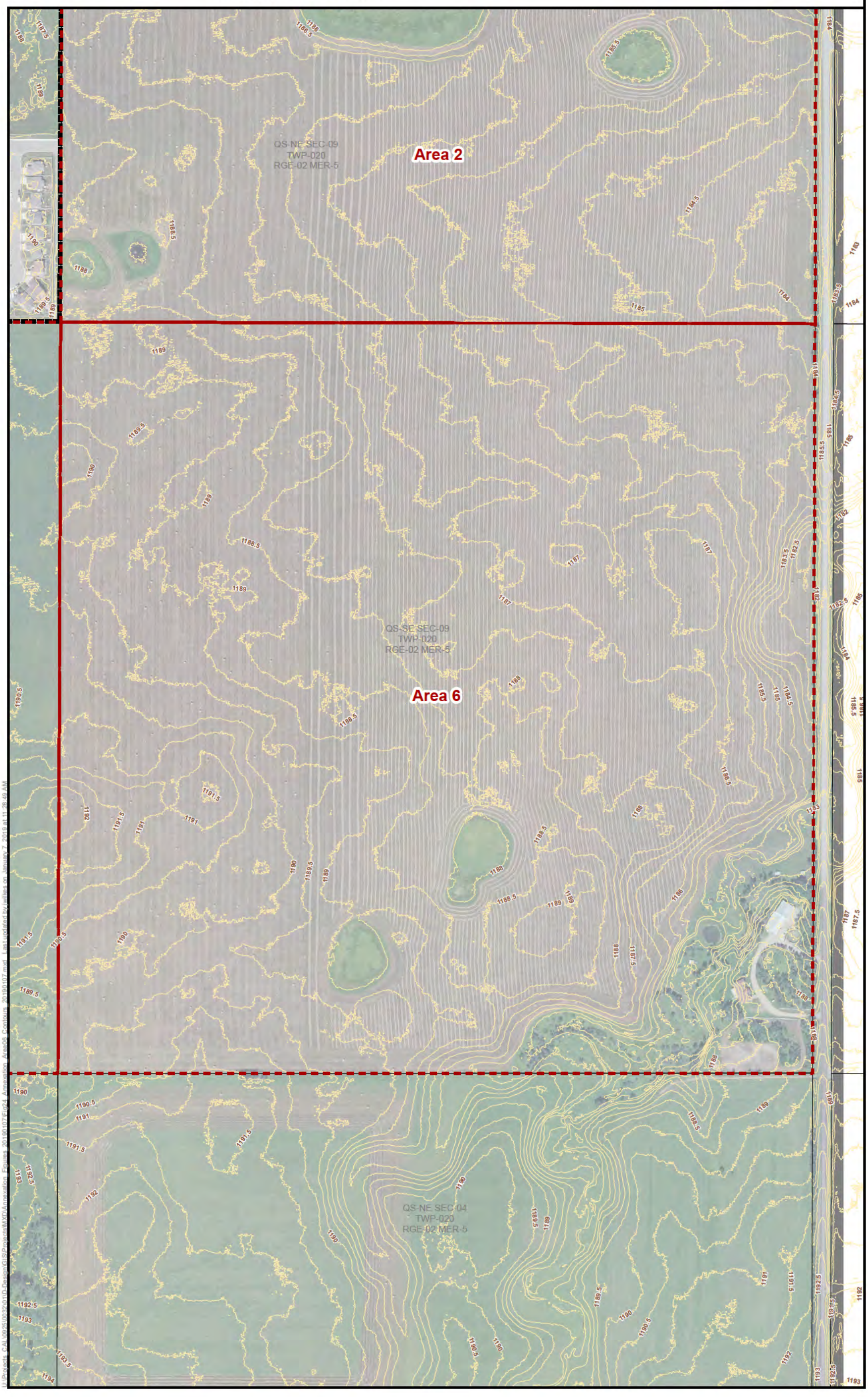
Annexation Lands Servicing Review

Date: 2019 / 1 / 7

Legend

- Existing Contours (0.5m)
- Annexation Areas
- Quarter Sections
- Town of Black Diamond

Scale 1:4,000



Area 6 - Existing Contours

FIGURE 24

Table 28: Civil Servicing Cost Estimates (Scenario 1)

Infrastructure Type	Estimated Cost
Site Works	$1,084,000
Sanitary	$4,861,000
Wastewater Treatment Plant[18]	$14,890,000
Water	$3,823,000
NE Industrial Water Main Looping - Phase 1	*$1,889,000*
NE Industrial Water Main Looping - Phase 2	*$498,000*
Remainder of Water Costs	*$1,436,000*
Water Treatment Plant[19]	$69,863,000
Storm	$1,081,000
Total	**$95,809,000**

Table 29: Civil Servicing Cost Estimates (Scenario 2)

Infrastructure Type	Estimated Cost
Site Works	$1,976,000
Sanitary	$4,867,000
Wastewater Treatment Plant[20]	$14,890,000
Water	$4,316,000
NE Industrial Water Main Looping - Phase 1	*$1,889,000*
NE Industrial Water Main Looping - Phase 2	*$498,000*
Remainder of Water Costs	*$1,929,000*
Water Treatment Plant[21]	$69,863,000
Storm	$2,466,000
Total	**$98,378,000**

[18] Anticipated costs for the overall upgrade to the Wastewater Treatment Plant that will take place in the next few years. The allocations of these costs have not yet been determined so the overall cost has been included in this table. This price is subject to funding from the government and cost sharing between Black Diamond and Turner Valley.
[19] Estimated costs from the *Joint Growth Servicing Strategy* for further upgrades in approximately 20 years time. Similar to the Wastewater Treatment Plant, these costs will be subject to cost sharing and additional funding from the government.
[20] Anticipated costs for the overall upgrade to the Wastewater Treatment Plant that will take place in the next few years. The allocations of these costs have not yet been determined so the overall cost has been included in this table. This price is subject to funding from the government and cost sharing between Black Diamond and Turner Valley.
[21] Estimated costs from the *Joint Growth Servicing Strategy* for further upgrades in approximately 20 years time. Similar to the Wastewater Treatment Plant, these costs will be subject to cost sharing and additional funding from the government.

When reviewing the costs presented above, the following should be noted:

- All of the above prices include 35% contingency and 15% for engineering services.
    - Wastewater Treatment Plant upgrades include 20% contingency, 15 % engineering and 3% for third party testing.
- The price of $3,823,000 (Scenario 1) and $4,316,000 (Scenario 2) listed for Water Infrastructure includes both phases of the proposed water main looping. The costs for the individual phases have been broken out for reference.
- The cost for the storm infrastructure does not include any pricing for a stormwater management facility as this cost will be that of the developer(s).
- The costs above should not be used for budgetary purposes and are provided to inform the Town of the possible scale of costs for this infrastructure.
- A detailed cost estimate for the overall infrastructure costs can be found in Appendix F.

15.2 Transportation Cost Estimates

A functional evaluation must be completed to provide a more accurate cost estimate for budget purposes. The functional evaluation will also detail the environmental and geotechnical requirements for the study area. The public will also be engaged as part of the functional study to capture the community concerns. In addition, the future functional study will determine the cost required to improve the existing network to support the additional volume and frequency of vehicles operating on the corridors. It will be important to understand the existing road structure and its current life cycle to ensure the corridor can support the additional volume.

Intersections in the study area identified for new construction or upgrades will need to consider the appropriate roundabout or traffic signal treatment through a more detailed traffic impact assessment. These subsequent evaluations will capture the increased details related to the land use characteristics such as, gas station, schools, shopping centre, fast-food restaurants, etc. From there, the appropriate intersection treatment will be selected to ensure operational, safety and property requirements are met.

It should be noted that the cost provided in this study should be used for comparisons purposes only. Using the planning level cost estimate for budgetary or cost to construct is not appropriate. Should cost to construct or detailed cost estimates be required, a functional study or detailed design exercise should be completed as the next stage in the process.

Table 30 and Table 31 summarizes the evaluation for each annexation scenario. The planning level cost estimate should not be used for budgetary purposes or cost to construct.

Table 30: Transportation Cost Estimate Summary (Scenario 1 – Area 1, 2 & 5)

	AREA 1	AREA 2	AREA 5	COMBINED
New Roads (m)	810	820	800	2,240
Intersection Improvements (Only signals – no property or other impacts included in cost)	-	-	-	5
Cost (Planning level)	**$2,900,000**	**$2,900,000**	**$2,800,000**	**$13,500,000**

Table 31: Transportation Cost Estimate Summary (Scenario 2 – Areas 1, 2, 3 & 5)

	AREA 1	AREA 2	AREA 3	AREA 5	COMBINED
New Roads (m)	810	820	2,130	800	3,740
Intersection Improvements (Only signals – no property or other impacts included in cost)	-	-	1	-	6
Cost (Planning level)	**$2,900,000**	**$2,900,000**	**$9,700,000**	**$2,800,000**	**$19,800,000**

Please note that the intersection improvement costs summarized above are for signalized intersections. If the Town were to proceed with roundabout designs instead, it is expected that the cost will be 50% more than a signalized intersection.

Additional evaluations will be required to understand the detailed property requirements and capital investments to support the annexation scenarios. These studies include:

- **Transportation Master Plan** – is prepared as a long-term plan to guide the development of transportation infrastructure to support goal and objectives of the Community. The TMP evaluates current travel conditions, forecasts future travel conditions and develops appropriate long-term transportation strategies for the community to consider.
- **Functional Road Study** – this document is prepared to understand the “ground-level” conditions by providing detailed technical analysis and design to support future road alignments ensuring environmental, geotechnical, community and property considerations are evaluated.
- **Traffic Data Collection** – the Communities in the study area should allocate resources for traffic data collection on priority corridor to identify changing travel patterns and demand period. The data can provide useful insights to make traffic management decisions such as when to implement traffic calming measures, road improvements and traffic and parking regulations.

15.3 Offsite Levy Considerations

Please see Table 32 and Table 33 that summarize all the costs from both the civil and transportation infrastructure for Scenarios 1 (Areas 1, 2, & 5) and 2 (Areas 1, 2, 3 & 5).

Table 32: Overall Cost Estimates (Scenario 1)

Infrastructure Type	Estimated Cost
Site Works	$1,084,000
Sanitary	$4,838,000
Wastewater Treatment Plant	$14,890,000
Water	$3,823,000
Water Treatment Plant	$69,863,000
Storm	$1,081,000
Roads	$13,500,000
Total	**$109,039,000**

Table 33: Overall Cost Estimates (Scenario 2)

Infrastructure Type	Estimated Cost
Site Works	$1,976,000
Sanitary	$4,844,000
Wastewater Treatment Plant	$14,890,000
Water	$4,316,000
Water Treatment Plant	$69,863,000
Storm	$2,466,000
Roads	$19,800,000
Total	**$118,115,000**

Please note that the costs for the water and wastewater treatment plant upgrades provided in Table 32 and Table 33 are the total costs for the regional systems in both scenarios and do not take into consideration the cost sharing requirements between both the Towns of Black Diamond and Turner Valley, nor any additional funding that could be used to pay for the systems. The costs provided in Table 32 and Table 33 do not break down the individual costs to service each area as all of the infrastructure recommended would strengthen the infrastructure network of the surrounding area compared to benefitting one specific area. As such, it is recommended that the overall cost for the proposed infrastructure be used in further conversation regarding infrastructure cost sharing. In order to understand the benefits and which areas should contribute to certain costs, the matrix below in Table 34 specifies which of the proposed infrastructure costs could relate to a specific area. These areas include the proposed annexation areas, as well as Area 6, the Kaiser ASP and the existing Town.

Table 34: Infrastructure Cost Matrix

Infrastructure Type	Area 1	Area 2	Area 3	Area 6	Kaiser	Town
Site Works	✓	✓	✓	✓	✓	✓
Sanitary	✓	✓		✓		
Water	✓	✓	✓	✓	✓	✓
Storm	✓	✓	✓	✓	✓	
Roads	✓	✓	✓	✓	✓	✓

Given the information presented in this report, it is recommended that further study be performed in order to accurately determine offsite levies, using this report as a supporting document.

16.0 Recommendations

It is understood that it is important to the Town to comprehend the extents to which the proposed annexation areas can be serviced on the existing infrastructure. Below is a summary of the status and required upgrades of the Town's infrastructure.

- With the hydraulic connection of both the Westend sanitary trunk and the existing gravity system in the Town of Black Diamond, there will be sufficient capacity to handle all of the projected flows from the proposed annexation areas in Scenario 1. If Scenario 2 were to proceed, upgrades to the gravity system upstream of the wastewater treatment lagoon would be required as there would be a sanitary capacity overage of 44.9 L/s in the system as presented in Table 7.
- There are currently proposed upgrades for the Wastewater Treatment Lagoon in Black Diamond (timing unknown), which will extend the design life of the treatment facility to 2036. Further upgrades will be required, and additional study will be needed in the next 20 years or if the population in both Black Diamond and Turner Valley approaches 7,989 residents, which is expected between 2030 and 2033.
- It is assumed that the NE Industrial Water Main Looping Phases 1 and 2 will proceed prior to any development in the proposed annexation areas.
- Additional water license will be required as the combined population (jobs and residents) of Black Diamond approaches 8,304 people, or approximately between years 2056 and 2066.
- The Water Treatment Plant in Turner Valley (where Black Diamond receives its treated water) has recently been upgraded and its design life has been extended to the year 2036 approximately. Review of the system is required prior to that date or if the population approaches the combined population of 7,989 people similarly to the Wastewater Treatment Lagoon.

- No upgrades will be required to the existing water reservoir.
- Assuming Kaiser is developed, there is roughly 6.2 L/s remaining in the existing Black Diamond sanitary gravity main. This means that:
    - Assuming no other proposed annexation area proceeds, Area 1 can service 42.6ac (17.2ha) of industrial.
    - Assuming no other proposed annexation area proceeds, Area 2 can service 25.7ac (10.4ha) of residential.
    - Assuming no other proposed annexation area proceeds, Area 5 can service 25.7ac (10.4ha) of residential in both Scenarios 1 and 2. The construction of a redundant water main would be required in both scenarios.
- Area 3 can be serviced off existing sanitary and water infrastructure.
- Area 5 can be serviced off existing water infrastructure; however, a redundant water main would be required in both Scenarios 1 and 2.
- The development of the areas will spark intersection upgrades:
    - Area 3 will require 1 intersection upgrades.
    - If Areas 1, 2 and 5 proceed, 5 intersection upgrades would be required.
    - If all four areas were to develop, 6 intersection upgrades would be required.

In addition to infrastructure upgrades, it will be beneficial for the Town to undertake additional study to prepare for the development of the proposed annexation areas. The following studies/next steps are recommended:

- Preliminary and detailed design for the NE Industrial Water Main Looping
- Further upgrades to the Wastewater Treatment Lagoon past 2036
- Conversations with WRSSC regarding the proposed Area 3 sanitary tie-in
- Further upgrades to the Water Treatment Plant past 2036
- Conversations with SRUCC to inform on the proposed water servicing strategy
- Overall Stormwater Strategy for the Town

- Detailed Wetland Investigation
- Watercourse Investigation in Areas 3 and 5
- Transportation Master Plan
- Functional Road Study
- Traffic Data Collection
- Establish policy for road right of way dedication and/or purchase
- Offsite Levy Bylaw Updates (already approved by the Town)

17.0 Closure

This document, entitled *Annexation Lands Servicing Review – Revised Report*, is prepared by Urban Systems Ltd. for the Town of Black Diamond. This report documents the infrastructure requirements for the Town in order to service three proposed quarter section for annexation. If there are any questions or clarifications regarding information in this report, please contact the undersigned.

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18.0 References

1. *Black Diamond Proposed Annexation Study,* BSEI Municipal Consulting Engineers, 2012
2. *Quad Regional Water System: Water Treatment Plan and Mechanical Upgrades - Final*, MPE Engineering Ltd., 2012
3. *Quad Regional Water Partnership, Regional Raw Water and Treated Water Transmission Lines Preliminary Design Report, Urban Systems December 2012*
4. *City of Calgary Design Guidelines for Subdivision Servicing* (2014)
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6. *Westend Regional Sewage Services Commission - Westend Sanitary Trunkmain Relocation Design Report*, Urban Systems Ltd., 2015
7. *WRSSC Revised Plan for Operating Approval*, MPE Engineering Ltd. 2015
8. *Turner Valley & Black Diamond Joint Growth Strategy,* O2 Planning & Design Inc., 2016
9. *Turner Valley/Black Diamond Joint Growth Strategy – Scenario 3 Design Brief*, MPE Engineering, Ltd. 2016
10. *Black Diamond and Turner Valley Joint Growth Strategy – Scenario 3,* Urban Systems Ltd., 2016
11. *Kaiser Area Structure Plan (ASP) Technical Background Report,* Urban Systems Ltd., 2017

Appendix A

Population Estimation Summary

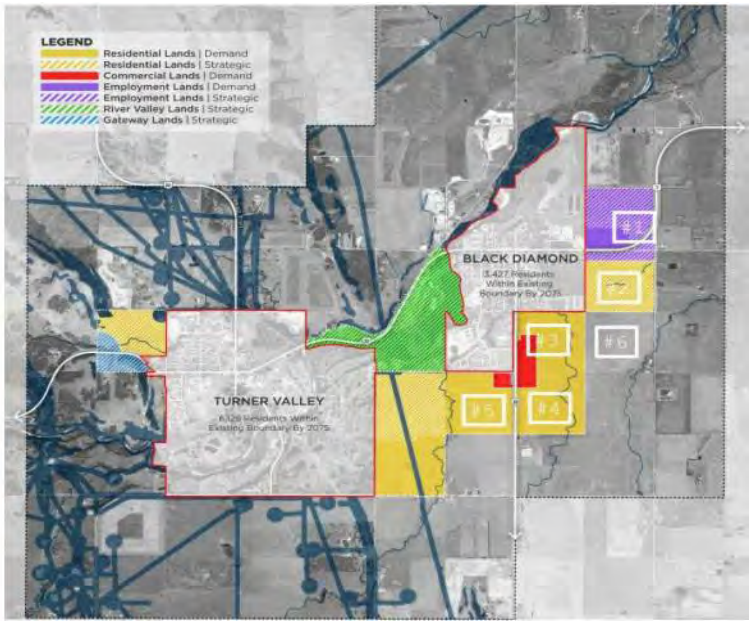
Appendix A - Population Estimation Summary

	Study Area - Black Diamond	Areas (ha)[1]	Developable Areas[2]	Units	Developable Areas[2]
	Black Diamond - within Town Boundary	-	-	-	-
Area 1	Industrial	64.75	43.41	Hectares	107.26
Area 2	Residential	54.54	51.58	Hectares	127.46
	Industrial	10.21	10.11	Hectares	24.99
Area 3	Commercial	9.60	9.60	Hectares	23.72
	Residential	44.80	44.80	Hectares	110.70
Area 5	Commercial	3.24	3.24	Hectares	8.00
	Residential	51.98	51.98	Hectares	128.45

1 Areas for the respective landuses were estimated from the figure below

2 Assumed certain allocations for wetlands, ROW widenings, etc. and converted to acres

	Study Area - Black Diamond	Residential Population	Service Population	Population Equivalent	
	Black Diamond - within Town Boundary	3,427		3,427	People
Area 1	Industrial	-	1,019	9.5	jobs/acre
Area 2	Residential	1,988		15.6	people/acre
	Industrial	-	237	9.5	people/acre
Area 3	Commercial	-	572	24.1	jobs/acre
	Residential	1,727		15.6	people/acre
Area 5	Commercial	-	193	24.1	jobs/acre
	Residential	2,004		15.6	people/acre
	TOTAL	**9,146**	**2,021**		



Appendix B

Population Projections Table

Appendix B - Population Projection Table

Year	Black Diamond				Turner Valley			
	Lower Growth Trend	Population	Higher Growth Trend	Population	Lower Growth Trend	Population	Higher Growth Trend	Population
2016*	-	2,700	-	2,700	-	2,559	-	2,559
2017	2 50%	2,768	3.00%	2,781	2 50%	2,623	3.00%	2,636
2018	2 50%	2,838	3.00%	2,865	2 50%	2,689	3.00%	2,716
2019	2 50%	2,909	3.00%	2,951	2 50%	2,757	3.00%	2,798
2020	2 50%	2,982	3.00%	3,040	2 50%	2,826	3.00%	2,882
2021	2 50%	3,057	3.00%	3,132	2 50%	2,897	3.00%	2,969
2022	2 50%	3,134	3.00%	3,226	2 50%	2,970	3.00%	3,059
2023	2 50%	3,213	3.00%	3,323	2 50%	3,045	3.00%	3,151
2024	2 50%	3,294	3.00%	3,423	2 50%	3,122	3.00%	3,246
2025	2 50%	3,377	3.00%	3,526	2 50%	3,201	3.00%	3,344
2026	2 50%	3,462	3.00%	3,632	2 50%	3,282	3.00%	3,445
2027	2 50%	3,549	3.00%	3,741	2 50%	3,365	3.00%	3,549
2028	2 50%	3,638	3.00%	3,854	2 50%	3,450	3.00%	3,656
2029	2 50%	3,729	3.00%	3,970	2 50%	3,537	3.00%	3,766
2030	2 50%	3,823	3.00%	4,090	2 50%	3,626	3.00%	3,879
2031	2 50%	3,919	3.00%	4,213	2 50%	3,717	3.00%	3,996
2032	2 50%	4,017	3.00%	4,340	2 50%	3,810	3.00%	4,116
2033	2 50%	4,118	3.00%	4,471	2 50%	3,906	3.00%	4,240
2034	2 50%	4,221	3.00%	4,606	2 50%	4,004	3.00%	4,368
2035	2 25%	4,316	2.75%	4,733	2 25%	4,095	2.75%	4,489
2036	2 25%	4,414	2.75%	4,864	2 25%	4,188	2.75%	4,613
2037	2 25%	4,514	2.75%	4,998	2 25%	4,283	2.75%	4,740
2038	2 25%	4,616	2.75%	5,136	2 25%	4,380	2.75%	4,871
2039	2 25%	4,720	2.75%	5,278	2 25%	4,479	2.75%	5,005
2040	2 25%	4,827	2.75%	5,424	2 25%	4,580	2.75%	5,143
2041	2 25%	4,936	2.75%	5,574	2 25%	4,684	2.75%	5,285
2042	2 25%	5,048	2.75%	5,728	2 25%	4,790	2.75%	5,431
2043	2 25%	5,162	2.75%	5,886	2 25%	4,898	2.75%	5,581
2044	2 25%	5,279	2.75%	6,048	2 25%	5,009	2.75%	5,735
2045	2 25%	5,398	2.75%	6,215	2 25%	5,122	2.75%	5,893
2046	2 25%	5,520	2.75%	6,386	2 25%	5,238	2.75%	6,056
2047	2 25%	5,645	2.75%	6,562	2 25%	5,356	2.75%	6,223
2048	2 25%	5,773	2.75%	6,743	2 25%	5,477	2.75%	6,395
2049	2 25%	5,903	2.75%	6,929	2 25%	5,601	2.75%	6,571
2050	2 25%	6,036	2.75%	7,120	2 25%	5,728	2.75%	6,752
2051	2 25%	6,172	2.75%	7,316	2 25%	5,857	2.75%	6,938
2052	2 25%	6,311	2.75%	7,518	2 25%	5,989	2.75%	7,129
2053	2 25%	6,453	2.75%	7,725	2 25%	6,124	2.75%	7,326
2054	2 25%	6,599	2.75%	7,938	2 25%	6,262	2.75%	7,528
2055	2 00%	6,731	2.50%	8,137	2 00%	6,388	2 50%	7,717
2056	2 00%	6,866	2.50%	8,341	2 00%	6,516	2 50%	7,910
2057	2 00%	7,004	2.50%	8,550	2 00%	6,647	2 50%	8,108
2058	2 00%	7,145	2.50%	8,764	2 00%	6,780	2 50%	8,311
2059	2 00%	7,288	2.50%	8,984	2 00%	6,916	2 50%	8,519
2060	2 00%	7,434	2.50%	9,209	2 00%	7,055	2 50%	8,732
2061	2 00%	7,583	2.50%	9,440	2 00%	7,197	2 50%	8,951
2062	2 00%	7,735	2.50%	9,676	2 00%	7,341	2 50%	9,175
2063	2 00%	7,890	2.50%	9,918	2 00%	7,488	2 50%	9,405
2064	2 00%	8,048	2.50%	10,166	2 00%	7,638	2 50%	9,641
2065	2 00%	8,209	2.50%	10,421	2 00%	7,791	2 50%	9,883
2066	2 00%	8,374	2.50%	10,682	2 00%	7,947	2 50%	10,131
2067	2 00%	8,542	2.50%	10,950	2 00%	8,106	2 50%	10,385
2068	2 00%	8,713	2.50%	11,224	2 00%	8,269	2 50%	10,645
2069	2 00%	8,888	2.50%	11,505	2 00%	8,435	2 50%	10,912
2070	2 00%	9,066	2.50%	11,793	2 00%	8,604	2 50%	11,185
2071	2 00%	9,248	2.50%	12,088	2 00%	8,777	2 50%	11,465
2072	2 00%	9,433	2.50%	12,391	2 00%	8,953	2 50%	11,752
2073	2 00%	9,622	2.50%	12,701	2 00%	9,133	2 50%	12,046
2074	2 00%	9,815	2.50%	13,019	2 00%	9,316	2 50%	12,348

* Represents population from Canadian 2016 Census

Appendix C

Sanitary Demand Calculations

Appendix C - Sanitary Demand Calculations

1. Sanitary Sewer Flows

Population Flow Equivalents

Total Wastewater Demand	**264**	L/c/d
MDF ADF Ratio	**2.2**	
PHF ADF Ratio	**5.0**	
Westend Forcemain TV Capacity	**482.40**	m3/h
	134.00	L/s

2. Calculate Sanitary Flows for Proposed Annexation Areas

Scenario 1 - Excluding Area 3

		Residential Population	Service Population	ADF (m^3/d)	MDF (m^3/d)	PHF (m3/h)	Catchment
	Black Diamond - within Town Boundary	3,427		904.7	1990.4	188.5	Ex
Area 1	Industrial		1,019	269.0	591.8	56.0	1
Area 2	Residential	1,988		524.9	1154.8	109.4	2
	Industrial		237	62.7	137.9	13.1	2
Area 3	Commercial		0	0.0	0.0	0.0	3
	Residential	0		0.0	0.0	0.0	3
Area 5	Commercial		193	50.9	112.0	10.6	5
	Residential	2,004		529.0	1163.8	110.2	5
	TOTAL	**7,419**	**1,449**	**2,341**	**5,151**	**488**	

Scenario 2 - Including Area 3

		Residential Population	Service Population	ADF (m^3/d)	MDF (m^3/d)	PHF (m3/h)	Catchment
	Black Diamond - within Town Boundary	3,427		904.7	1990.4	188.5	Ex
Area 1	Industrial		1,019	269.0	591.8	56.0	1
Area 2	Residential	1,988		524.9	1154.8	109.4	2
	Industrial		237	62.7	137.9	13.1	2
Area 3	Commercial		572	150.9	332.0	31.4	3
	Residential	1,727		455.9	1003.0	95.0	3
Area 5	Commercial		193	2030.6	4467.3	423.0	5
	Residential	2,004		615.9	1354.9	128.3	5
	TOTAL	**9,146**	**2,021**	**2,948**	**6,486**	**614**	

3. Area Catchment Flows

Scenario 1 - Excluding Area 3

			Flow (L/s)				
Study Area - Black Diamond		Catchment	Ex	1	2	3	5
	Black Diamond - within Town Boundary	Ex	52.36				
Area 1	Industrial	1		15.57			
Area 2	Residential	2			30.38		
	Industrial	2			3.63		
Area 3	Commercial	3				0.00	
	Residential	3				0.00	
Area 5	Commercial	5					2.95
	Residential	5					30.61
		TOTAL	**52.4**	**15.6**	**34.0**	**35.1**	
		Required Sewer Capacity (86% Full)	60.880	18.102	39.540	40.836	

Scenario 2 - Including Area 3

			Flow (L/s)				
Study Area - Black Diamond		Catchment	Ex	1	2	3	5
	Black Diamond - within Town Boundary	Ex	52.36				
Area 1	Industrial	1		15.57			
Area 2	Residential	2			30.38		
	Industrial	2			3.63		
Area 3	Commercial	3				8.73	
	Residential	3				15.57	
Area 5	Commercial	5					2.95
	Residential	5					30.61
		TOTAL	**52.4**	**15.6**	**34.0**	**35.1**	
		Required Sewer Capacity (86% Full)	60.880	18.102	39.540	40.836	

Peak Hour Flow per Area

Ex	52	L/s
1	15.6	L/s
2	34.0	L/s
3	35.1	L/s
5	33.6	L/s
Projected Additional TV Flows	72	L/s
Westend Forcemain - TV Flows	134.0	L/s

Appendix C - Force Main Sizing

Area 1

			Known Value
Required Flow Rate	0.0000	m^3/s	Entered Value
Diameter Size (I.D.)	0.13589	m	
HDPE DR11 Size	150	mm	
Area	0.014503235	m2	
Velocity	0.0000	m/s	[Must be a minimum of 0.6m/s as per AEP requirements]

Area 2 & TV Flows

Required Flow Rate	0.1393	m3/s	Includes the 72 L/s from TV and flow from Area 2
Diameter Size (I.D.)	0.36906	m	
HDPE DR11 Size	450	mm	
Area	0.10697538	m2	
Velocity	1.3018	m/s	[Must be a minimum of 0.6m/s as per AEP requirements]

Urecon Pre-Insulated HDPE Core Pipe DR 11
Dimensions 19 mm (¾ in) to 500 mm (20 in)

Nominal Pipe Size		Outside Pipe Dia.		Insulation O.D.				DR 11, 1103 kPa (160 psi)					
				Insulation Thickness				Avg. Pipe I.D.		Min. Wall Thickness		Total Weight	
mm	in	mm	in	40 mm	1.5 in	50 mm	2 in	mm	in	mm	in	kg/m	lbs/ft
19 CTS	¾ CTS	22.2	0.875	108	4.25	133	5.25	18.03	0.71	2.03	0.08	0.68	0.46
25 CTS	1 CTS	28.6	1.125	108	4.25	133	5.25	23.11	0.91	2.54	0.10	0.76	0.51
40	1.5	48	1.90	139	5.50	155	6.13	38.86	1.53	4.31	0.17	1.29	0.87
50	2	60	2.375	155	6.13	165	6.50	48.77	1.92	5.59	0.22	1.65	1.11
75	3	88	3.50	171	6.75	196	7.75	71.88	2.83	8.12	0.32	3.02	2.03
100	4	114	4.50	196	7.75	228	9.00	92.20	3.63	10.41	0.41	4.64	3.12
150	6	168	6.625	247	9.75	279	11.00	135.89	5.35	15.24	0.60	8.94	6.01
200	8	219	8.625	304	12.00	336	13.25	176.78	6.96	19.81	0.78	14.57	9.79
250	10	273	10.75	355	14.00	393	15.50	220.47	8.68	24.89	0.98	21.97	14.76
300	12	324	12.75	406	16.00	438	17.50	261.37	10.29	29.46	1.16	30.22	20.34
350	14	355	14.00	438	17.25	476	18.75	287.02	11.30	32.26	1.27	41.94	28.18
400	16	406	16.00	N/A	N/A	527	20.75	328.17	12.92	37.08	1.46	52.33	35.16
450	18	457	18.00	N/A	N/A	597	23.50	369.06	14.53	41.66	1.64	64.86	43.59
500	20	508	20.00	N/A	N/A	635	25.00	410.21	16.15	46.23	1.82	76.43	51.35

1. Other sizes and metric dimensional pipe available on request.
2. Insulation thickness for freeze protection 50 mm (2 in) minimum; other thicknesses available on request.
3. Insulation thickness for chilled water 40 mm (1.5 in) minimum; other thicknesses available on request.
4. Jacketing 1.27 mm (50 mil) thick polyethylene; other types and thicknesses available on request.
5. Pressure rating of DR 11 @ 1103 kPa (160 psi) at 23°C (73.4°F).
6. Insulated pipe available in standard industry lengths of 12.19 m (40 ft) and 15.24 m (50 ft); other lengths available on request.
7. Insulation cut back for standard butt fused joint is 230 mm (9 in); other cut backs available on request. Call your Urecon representative to discuss your application requirements.
8. Each pipe length shipped with suitable insulation kit for butt fused joint (unless advised otherwise).
9. Data may vary slightly from one pipe manufacturer to another.
10. Reference specifications (core pipe): see pipe specifications.

http //www.urecon.com/documents/documents_hdpe.html

Appendix D

Water Demand Calculations

Appendix D - Water Demand Calculations

1. Potable Water Demands

Population Equivalent Flow Values

Areas		
Average Consumption	315	l/c/day
Commercial/Employment Ratio	315	l/c/day
MDD ADD Ratio	2.2	
PHD ADD Ratio	4.0	

2. Calculate Potable Demands

	Study Area - Black Diamond	Residential Population	Service Population	ADD (MLD)	MDD (MLD)	PHD (L/s)
	Black Diamond - within Town Boundary	3,427	-	1.08	2.375	50.0
Area 1	Industrial	-	1,019	0.32	0.706	14.9
Area 2	Residential	1,988	-	0.63	1.378	29.0
	Industrial	-	237	0.07	0.165	3.5
Area 3	Commercial	-	572	0.18	0.396	8.3
	Residential	1,727	-	0.54	1.197	25.2
Area 5	Commercial	-	193	0.06	0.13	2.81
	Residential	2,004	-	0.63	1.39	29.22
	TOTAL	**9,146**	**2,021**	**3.52**	**7.74**	
	Ratio Commerical Residential	0.26				

Adding System Losses (10%)	10%		0.28	0.62	[AEP Standards and Guidelines for Municipal Waterworks,
Adding WTP Residuals Wasted (1-5%)	5%		0.14	0.31	Wastewater and Storm Drainage Systems]
Raw Water Demand		2,825,682	3.25	7.15	

Peak Hour Flow per Catchment

Ex	50.0	L/s
1	14.9	L/s
2	32.5	L/s
3	33.5	L/s
5	32.0	L/s
Min. Fire Flow	197	L/s

[Min. basic fire flow requirement]

3. Required Reservoir Storage

Scenario 1 - Excluding Area 3

T10/T - baffling coefficient	0.4	[Assume average baffling conditions-Baffled Inlet or outlet with some inter-basin baffling]
PHD ADD	4.0	
MDD ADD	2.2	

ADD	35.57	l/s	[user demand + pipe losses only (no residuals)]
MDD	78.24	l/s	[user demand + pipe losses only (no residuals)]
PHD	142.26	l/s	[user demand + pipe losses only (no residuals)]

[A-Fire Storage]

	Q (L/min)	Duration (min	Volume (M^3)	
Single family homes	4,091	90	368	[Fire Underwriters Survey for BD]
Commerical & Industrial	10,910	120	1,309	[Fire Underwriters Survey for BD]
Minimum Basic Fire flow	11,820	150	1,773	[2600lgpm; Fire Underwriters Survey for Black Diamond]
	196.993333			

STORAGE	Volume	Unit
A - Fire Storage	1,773	m3
B - Equalization Storage	1,690	m3
C - Emergency Storage	461	m3

AEP Standards and Guidelines April 2012

2.5 Potable Water Storage

2.5.1 Sizing

The total water storage requirements for a given water supply system where the treatment plant is only capable of satisfying the maximum daily design flow may be calculated using the following empirical formula:

S = A + B + (the greater of C or D)

where S = Total storage requirement, m^3
A = Fire storage, m^3
B = Equalization storage (approximately 25% of projected maximum daily design flow), m^3
C = Emergency storage (minimum of 15% of projected average daily design flow), m^3
D = Disinfection contact time (T_{10}) storage to meet the CT requirements, m^3, as detailed in 1.10.3.7.

The level of fire protection is the responsibility of the municipality. The level of storage may be further reduced if the water treatment plant is capable of supplying more than the maximum daily design flow or if there is sufficient flow data to support a lower peaking factor than would be normally used for the given population range.

Fire Underwriter's Survey for Fire Flows

REQUIRED DURATION OF FIRE FLOW	
Fire Flow Required (litres per minute)	Duration (hours)
2,000 or less	1.0
3,000	1.25
4,000	1.50
5,000	1.75
6,000	2.0
8,000	2.0
10,000	2.0
12,000	2.5
14,000	3.0
16,000	3.5
18,000	4.0
20,000	4.5
22,000	5.0
24,000	5.5
26,000	6.0
28,000	6.5
30,000	7.0
32,000	7.5
34,000	8.0
36,000	8.5
38,000	9.0
40,000 and over	9.5

RVC Servicing Standards (none found for MD Foothills)

Type	Flow***	Duration	Volume
Country Residential*	60 l/s + MDD (3000l/m +MDD)	1.5 hours	270 m^3 + MDD
Single Family Residential	100 l/s + MDD (5,000l/m + MDD)	2.0 hours	720 m^3 + MDD
Multi - Family Residential	166 l/s + MDD (10,000l/m + MDD)	2.0 hours	1200 m^3 + MDD
High Density Residential (Apartments)	250 l/s + MDD (15,000l/m + MDD)	3.5 hours	2700 m^3 + MDD
Commercial	166ls-250l/s + MDD	2.0 to 3.5	1200-2700 m^3 +
Industrial**	(10,000l/m-15,000l/m + MDD)	hours	MDD

*If the developer proposes a hydrant system or required at the discretion of Council. Country Residential is considered any lot that is 2 acres or greater and have a minimal building excavation of 10 m or greater

**Range in the flows depending on scale of project i.e., "light" industrial commercial versus "regular" industrial commercial

***Flows shown in chart are independent of MDD

[D-Disinfection Contact Time]

Assume chlorine residual of (mg/l)	1.0	(Assume)
Temperature (oC)	0.5	

CT Tables Converted into Line of best fit to Calculate Required CT for Virus Inactivation by Free Chlorine for temperatures in the range of 0.5 to 15 oC. Refer to table B-1 CT Values for Inactivation of Viruses by Free Chlorine in the Alberta Standards and Guide ines for municipal waterworks wastewater and Storm Drainage Systems.

Using CT tables provided by AESRD for virus inactivation using Free Chlorine

LOG REDUCTION FOR VIRUSES	CT VALUE
2 log reduction	6
3 log reduction	9
4 log reduction	12

D - Solve for Disinfection Contact Time Storage (m3)

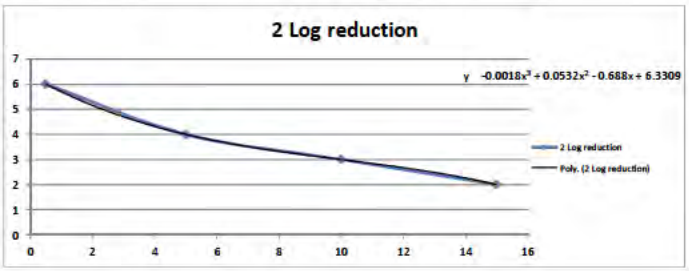
2 log reduction	128	m3
3 log reduction	192	m3
4 log reduction	256	m3

S - Required Reservoir Storage (m3)

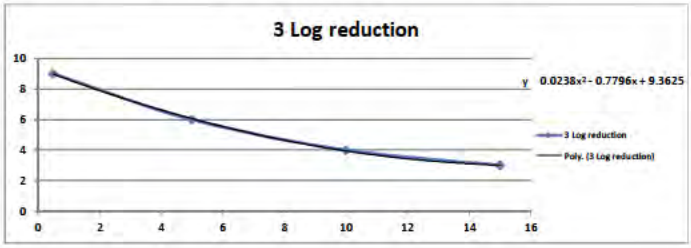
2 log reduction	3,924	m3
3 log reduction	3,924	m3
4 log reduction	**3,924**	**m3**

4,545 m3

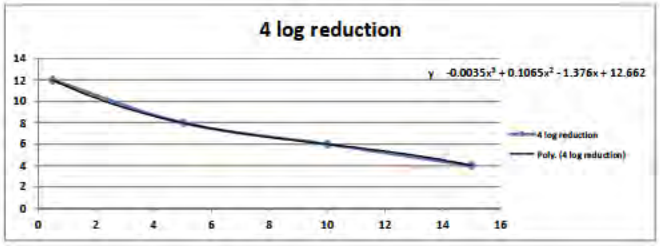
Required Storage	**3,924**	**m3**
Available Storage	**4,545**	**m3**



2 Log reduction	
0.5	6
5	4
10	3
15	2



3 Log reduction	
0.5	9
5	6
10	4
15	3



4 Log reduction	
0.5	12
5	8
10	6
15	4

Required Storage for Black Diamond Growth	-621	m3	Residential Pop. Eq.	
Triggers upgrade at (ADD)	4	MLD	10,907 Capita	[Assumes Commerical/Employment and Residential Grow at Equal Rates]

Scenario 2 - Including Area 3

T10/T - baffling coefficient	0.4	[Assume average baffling conditions-Baffled Inlet or outlet with some inter-basin baffling]
PHD ADD	4.0	
MDD ADD	2.2	

ADD	44.78	l/s	[user demand + pipe losses only (no residuals)]
MDD	98.53	l/s	[user demand + pipe losses only (no residuals)]
PHD	179.14	l/s	[user demand + pipe losses only (no residuals)]

[A-Fire Storage]

	Q (L/min)	Duration (min	Volume (M^3)	
Single family homes	4,091	90	368	[Fire Underwriters Survey for BD]
Commerical & Industrial	10,910	120	1,309	[Fire Underwriters Survey for BD]
Minimum Basic Fire flow	11,820	150	1,773	[2600lgpm; Fire Underwriters Survey for Black Diamond]
	196.993333			

STORAGE	Volume	Unit
A - Fire Storage	1,773	m3
B - Equalization Storage	2,128	m3
C - Emergency Storage	580	m3

AEP Standards and Guidelines April 2012

2.5 Potable Water Storage

2.5.1 Sizing

The total water storage requirements for a given water supply system where the treatment plant is only capable of satisfying the maximum daily design flow may be calculated using the following empirical formula:

S = A + B + (the greater of C or D)

where S = Total storage requirement, m^3
A = Fire storage, m^3
B = Equalization storage (approximately 25% of projected maximum daily design flow), m^3
C = Emergency storage (minimum of 15% of projected average daily design flow), m^3
D = Disinfection contact time (T_{10}) storage to meet the CT requirements, m^3, as detailed in 1.10.3.7.

The level of fire protection is the responsibility of the municipality. The level of storage may be further reduced if the water treatment plant is capable of supplying more than the maximum daily design flow or if there is sufficient flow data to support a lower peaking factor than would be normally used for the given population range.

Fire Underwriter's Survey for Fire Flows

REQUIRED DURATION OF FIRE FLOW	
Fire Flow Required (litres per minute)	Duration (hours)
2,000 or less	1.0
3,000	1.25
4,000	1.50
5,000	1.75
6,000	2.0
8,000	2.0
10,000	2.0
12,000	2.5
14,000	3.0
16,000	3.5
18,000	4.0
20,000	4.5
22,000	5.0
24,000	5.5
26,000	6.0
28,000	6.5
30,000	7.0
32,000	7.5
34,000	8.0
36,000	8.5
38,000	9.0
40,000 and over	9.5

RVC Servicing Standards (none found for MD Foothills)

Type	Flow***	Duration	Volume
Country Residential*	30 l/s + MDD (3000l/m +MDD)	1.5 hours	270 m^3 + MDD
Single Family Residential	100 l/s + MDD (6,000l/m + MDD)	2.0 hours	720 m^3 + MDD
Multi - Family Residential	166 l/s + MDD (10,000l/m + MDD)	2.0 hours	1200 m^3 + MDD
High Density Residential (Apartments)	250 l/s + MDD (15,000l/m + MDD)	1.5 hours	2700 m^3 + MDD
Commercial	166l/s-250l/s + MDD	1.0 to 1.5	1200-2700 m^3 +
Industrial**	(10,000l/m-15,000l/m + MDD)	hours	MDD

*If the developer proposes a hydrant system or required at the discretion of Council. Country Residential is considered any lot that is 2 acres or greater and have a nominal building separation of 10 lm or greater.

**Range in fire flows depending on scale of project i.e., "light" industrial commercial versus "regular" industrial commercial.

***Flows shown in chart are independent of MDD

[D-Disinfection Contact Time]

Assume chlorine residual of (mg/l)	1.0	(Assume)
Temperature (oC)	0.5	

CT Tables Converted into Line of best fit to Calculate Required CT for Virus Inactivation by Free Chlorine for temperatures in the range of 0.5 to 15 oC Refer to table B-1 CT Values for Inactivation of Viruses by Free Chlorine in the Alberta Standards and Guide ines for municipal waterworks wastewater and Storm Drainage Systems.

Using CT tables provided by AESRD for virus inactivation using Free Chlorine

LOG REDUCTION FOR VIRUSES	CT VALUE
2 log reduction	6
3 log reduction	9
4 log reduction	12

D - Solve for Disinfection Contact Time Storage (m3)

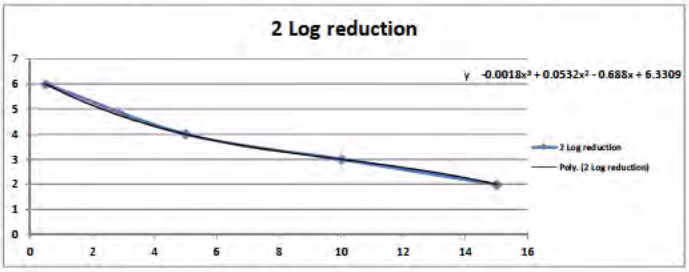
2 log reduction	161	m3
3 log reduction	241	m3
4 log reduction	322	m3

S - Required Reservoir Storage (m3)

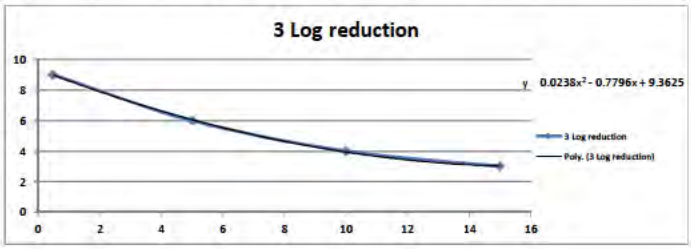
2 log reduction	4,482	m3
3 log reduction	4,482	m3
4 log reduction	**4,482**	**m3**

4,545 m3

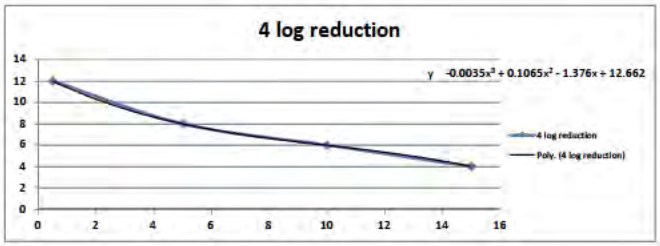
Required Storage	**4,482**	**m3**
Available Storage	**4,545**	**m3**



2 Log reduction	
0.5	6
5	4
10	3
15	2



3 Log reduction	
0.5	9
5	6
10	4
15	3



4 Log reduction	
0.5	12
5	8
10	6
15	4

Required Storage for Black Diamond Growth	-63	m3	Residential Pop. Eq.		
Triggers upgrade at (ADD)	4	MLD	10,678	Capita	[Assumes Commerical/Employment and Residential Grow at Equal Rates]

4. Water License

Scenario 1 - Excluding Area 3

Black Diamond	954,679	m3/annum
2075 Raw Water Demands	1,172,588	m3/annum
Required additional License -	217,909	m3/annum

Scenario 2 - Including Area 3

Black Diamond	954,679	m3/annum
2075 Raw Water Demands	1,476,521	m3/annum
Required additional License -	521,842	m3/annum

Appendix E

Transportation Summary

URBAN systems

Table 0-1: Transportation Summary

	PLANNING COST	NOTES
Area 1 (Scenario 1)	$2.9M	• New North South Corridor, west edge of Area 1
Area 2 (Scenario 2)	$2.9M	• New North South Corridor, west edge of Area 2
Area 3 (Scenario 3)	$8.6M	• New East West Corridor in Area 3 • New North South Corridor from Highway 7 connecting to new East West Corridor in Area 3 • New traffic signals at Highway 22 and Willow Ridge Blvd

Areas 1, 2, 3 (Scenario 4)	$15.9M	• New North South Corridor, west edge of Area 1
		• New North South Corridor, west edge of Area 2
		• New East West Corridor in Area 5
		• New traffic signals at:
		  ○ Highway 7 and New North South Connection
		  ○ Highway 22 and 4 Avenue
		  ○ Highway 22 and Willow Ridge Blvd
		• Intersections to be upgraded:
		  ○ Highway 22 at Highway 7
		  ○ Highway 22 at 3 Street

Areas 1, 2, 5 (Scenario 5)	$13.5M	• New North South Corridor, west edge of Area 1
		• New North South Corridor, west edge of Area 2
		• New East West Corridor in Area 5
		• New traffic signals at:
		  ○ Highway 7 and New North South Connection
		  ○ Highway 22 and 4 Avenue
		  ○ Highway 22 and Area 5 East West Corridor
		• Intersections to be upgraded:
		  ○ Highway 22 at Highway 7
		  ○ Highway 22 at 3 Street

Areas 1, 2, 3, 5 (Scenario 6)	$19.8M	• New North South Corridor, west edge of Area 1
		• New North South Corridor, west edge of Area 2
		• New East West Corridor in Area 3
		• New East West Corridor in Area 5
		• New traffic signals at:
		  ○ Highway 7 and New North South Connection
		  ○ Highway 22 and 4 Avenue
		  ○ Highway 22 and Willow Ridge Blvd
		  ○ Highway 22 and Area 5 East West Corridor
		• Intersections to be upgraded:
		  ○ Highway 22 at Highway 7
		  ○ Highway 22 at 3 Street

Appendix F

Detailed Cost Estimate

URBAN systems

Project: Annexation Lands Servicing Review
Project Number: 0925.0032.01
Project Location: Town of Black Diamond

		Unit	Quantity	UNIT $	TOTAL
Combined Areas - Scenario 1 (excluding Area 3)					
Schedule "A" - Site Works					
A.1	Mobilization & Demobilization	l.s.	1	$100,000.00	$100,000.00
A.2	Traffic Accommodation	l.s.	1	$20,000.00	$20,000.00
A.3	Erosion & Sediment Control	l.s.	1	$67,500.00	$67,500.00
A.4	Common Excavation to Embankment	cu.m.	10,950	$7.10	$77,745.00
A.5	Topsoil Stripping to Stockpile	cu.m.	14,363	$8.00	$114,904.00
A.6	Topsoil Stockpile to Placement	cu.m.	8,823	$10.00	$88,232.00
A.7	Suitable Fill Import (Op ional)	cu.m.	1,650	$15.50	$25,575.00
A.8	Remove and Replace Swing Gate	ea.	1	$1,000.00	$1,000.00
A.9	Remove and Replace Wooden Fence	l m.	80	$150.00	$12,000.00
A.10	Sawcutting	l m.	20	$10.00	$200.00
A.11	Asphalt Removal	s m.	2,316	$5.00	$11,580.00
A.12	Full Gravel Removal	s m.	2,316	$10.00	$23,160.00
A.13	Subgrade Preparation	s m.	2,316	$5.00	$11,580.00
A.14	Prime Coat	s m.	2,316	$1.00	$2,316.00
A.15	Gravel Placement	s m.	2,316	$30.00	$69,480.00
A.16	Asphalt Placement	s m.	2,316	$30.00	$69,480.00
A.17	Remove and Replace Monowalk	l m.	10	$250.00	$2,500.00
	Total Schedule "A"				**$697,252.00**
Schedule "B" - Utilities - Sanitary					
B.1	Install Sanitary Sewer Main				
a)	250 mm PVC SDR 35	l m.	0	$275.00	$0.00
b)	300 mm PVC SDR 35	l m.	0	$300.00	$0.00
c)	375 mm PVC SDR 35	l m.	2,240	$300.00	$672,000.00
d)	450 mm PVC SDR 35	l m.	600	$325.00	$195,000.00
e)	150 mm Forcemain Installa ion	l m.	400	$350.00	$140,000.00
f)	450 mm Forcemain Installa ion	l m.	700	$600.00	$420,000.00
B.2	Sanitary Sewer Main Tie-in	ea.	2	$6,500.00	$13,000.00
B.3	Sanitary Manhole	ea.	25	$6,010.00	$150,250.00
B.4	Initial Flushing, Mandrel Testing and Video Inspection at Substantial Performance	l.s.	1	$69,075.00	$69,075.00
B.5	Final Flushing, Mandrel Testing and Video Inspection at Contract Acceptance	l.s.	1	$84,835.00	$84,835.00
B.6	Sanitary Lift Station - Area 1	l.s.	1	$682,500.00	$682,500.00
B.7	Sanitary Lift Station - Area 2	l.s.	1	$1,470,000.00	$1,470,000.00
	Total Schedule "B"				**$3,896,660.00**
Schedule "C" - Utilities - Water					
C.1	Remove Water Main				
a)	150mm PVC DR18	l m.	75	$50.00	$3,750.00
b)	200mm PVC DR18	l m.	90	$75.00	$6,750.00
C.2	Install Water Main				
a)	200mm PVC DR18	l m.	80	$200.00	$16,000.00
b)	250mm PVC DR18	l m.	1645	$320.00	$526,400.00
C.3	Install Water Valves				
a)	250 mm	ea.	27	$3,700.00	$100,640.00
C.4	Install Water Fittings	ea.	6	$1,600.00	$9,600.00
C.5	Water Main Tie-in	ea.	5	$12,500.00	$62,500.00
C.6	NE Industrial Water Main Looping				
a)	Phase 1	l.s.	1	$1,215,700.00	$1,215,700.00
b)	Phase 2	l.s.	1	$320,717.50	$320,717.50
C.7	450mm Directional Drilled Steel Encasement Pipe	l m.	80	$2,500.00	$200,000.00
	Total Schedule "C"				**$2,462,057.50**
Schedule "D" - Utilities - Storm Sewer					
D.1	Install Storm Sewer Main				
a)	375 mm PVC SDR 35	l m.	210	$300.00	$63,000.00
b)	450 mm PVC SDR 35	l m.	720	$320.00	$230,400.00
D.2	Storm MH	ea.	14	$6,010.00	$84,140.00
D.3	Catchbasins	ea.	28	$3,600.00	$100,800.00
D.4	Catchbasin Lead	l m.	840	$215.00	$180,600.00
D.5	Initial Flushing, Mandrel Testing and Video Inspection at Substantial Performance	l m.	930	$ 17.50	$16,275.00

D.6	Final Flushing, Mandrel Testing and Video Inspection at Contract Acceptance	l m.	930	$ 22.50	$20,925.00
	Total Schedule "D"				**$696,140.00**
	Schedule "A" - Site Works				$697,252.00
	Schedule "B" - Utilities - Sanitary				$3,896,660.00
	Schedule "C" - Utilities - Water				$2,462,057.50
	Schedule "D" - Utilities - Storm Sewer				$696,140.00
	SUBTOTAL				**$7,752,109.50**
	CONTINGENCY (35%)				$1,959,863.33
	ENGINEERING (15%)				$1,133,920.92
	TOTAL				**$10,845,893.75**
Note: Cost for Lift Stations already includes contingency and engineering. This is not included in the Contigency and engineering totals, only the overall total					

		Unit	Quantity	UNIT $	TOTAL
Combined Areas - Scenario 2 (including Area 3)					
Schedule "A" - Site Works					
A.1	Mobilization & Demobilization	l.s.	1	$100,000.00	$100,000.00
A.2	Traffic Accommodation	l.s.	1	$20,000.00	$20,000.00
A.3	Erosion & Sediment Control	l.s.	1	$67,500.00	$67,500.00
A.4	Common Excavation to Embankment	cu.m.	47,350	$7.10	$336,185.00
A.5	Topsoil Stripping to Stockpile	cu.m.	24,797	$8.00	$198,376.00
A.6	Topsoil Stockpile to Placement	cu.m.	8,112	$10.00	$81,122.00
A.7	Suitable Fill Import (Op ional)	cu.m.	18,650	$15.50	$289,075.00
A.8	Remove and Replace Swing Gate	ea.	1	$1,000.00	$1,000.00
A.9	Remove and Replace Wooden Fence	l m.	60	$150.00	$9,000.00
A.10	Sawcutting	l m.	20	$10.00	$200.00
A.11	Asphalt Removal	s m.	2,046	$5.00	$10,230.00
A.12	Full Gravel Removal	s m.	2,046	$10.00	$20,460.00
A.13	Subgrade Preparation	s m.	2,046	$5.00	$10,230.00
A.14	Prime Coat	s m.	2,046	$1.00	$2,046.00
A.15	Gravel Placement	s m.	2,046	$30.00	$61,380.00
A.16	Asphalt Placement	s m.	2,046	$30.00	$61,380.00
A.17	Remove and Replace Monowalk	l m.	15	$250.00	$3,750.00
	Total Schedule "A"				**$1,271,934.00**
Schedule "B" - Utilities - Sanitary					
B.1	Install Sanitary Sewer Main				
a)	250 mm PVC SDR 35	l m.	0	$275.00	$0.00
b)	300 mm PVC SDR 35	l m.	0	$300.00	$0.00
c)	375 mm PVC SDR 35	l m.	2,240	$300.00	$672,000.00
d)	450 mm PVC SDR 35	l m.	600	$325.00	$195,000.00
e)	150 mm Forcemain Installa ion	l m.	400	$350.00	$140,000.00
f)	450 mm Forcemain Installa ion	l m.	700	$600.00	$420,000.00
B.2	Sanitary Sewer Main Tie-in	ea.	2	$6,500.00	$13,000.00
B.3	Sanitary Manhole	ea.	25	$6,010.00	$150,250.00
B.4	Initial Flushing, Mandrel Testing and Video Inspection at Substantial Performance	l m.	3,940	$17.50	$68,950.00
B.5	Final Flushing, Mandrel Testing and Video Inspection at Contract Acceptance	l m.	3,940	$22.50	$88,650.00
B.6	Sanitary Lift Station - Area 1	l.s.	1	$682,500.00	$682,500.00
B.7	Sanitary Lift Station - Area 2	l.s.	1	$1,470,000.00	$1,470,000.00
	Total Schedule "B"				**$3,900,350.00**
Schedule "C" - Utilities - Water					
C.1	Remove Water Main				
a)	150mm PVC DR18	l m.	75	$50.00	$3,750.00
b)	200mm PVC DR18	l m.	90	$75.00	$6,750.00
C.2	Install Water Main				
a)	200mm PVC DR18	l m.	80	$200.00	$16,000.00
b)	250mm PVC DR18	l m.	2565	$320.00	$820,800.00
C.3	Install Water Valves				
a)	250 mm	ea.	27	$3,700.00	$98,605.00
C.4	Install Water Fittings	ea.	6	$1,600.00	$9,600.00
C.5	Water Main Tie-in	ea.	7	$12,500.00	$87,500.00
C.6	NE Industrial Water Main Looping				
a)	Phase 1	l.s.	1	$1,215,700.00	$1,215,700.00
b)	Phase 2	l.s.	1	$320,717.50	$320,717.50
C.7	450mm Directional Drilled Steel Encasement Pipe	l m.	80	$2,500.00	$200,000.00
	Total Schedule "C"				**$2,779,422.50**
Schedule "D" - Utilities - Storm Sewer					
D.1	Install Storm Sewer Main				
a)	375 mm PVC SDR 35	l m.	210	$300.00	$63,000.00
b)	450 mm PVC SDR 35	l m.	2,045	$320.00	$654,400.00
D.2	Storm MH	ea.	30	$6,010.00	$180,300.00
D.3	Catchbasins	ea.	60	$3,600.00	$216,000.00
D.4	Catchbasin Lead	l m.	1,800	$215.00	$387,000.00
D.5	Initial Flushing, Mandrel Testing and Video Inspection at Substantial Performance	l.s.	1	$ 39,000.00	$39,000.00

D.6	Final Flushing, Mandrel Testing and Video Inspection at Contract Acceptance	l.s.	1	$ 48,000.00	$48,000.00
	Total Schedule "D"				**$1,587,700.00**
	Schedule "A" - Site Works				$1,271,934.00
	Schedule "B" - Utilities - Sanitary				$3,900,350.00
	Schedule "C" - Utilities - Water				$2,779,422.50
	Schedule "D" - Utilities - Storm Sewer				$1,587,700.00
	SUBTOTAL				**$9,539,406.50**
	CONTINGENCY (35%)				$2,585,417.28
	ENGINEERING (15%)				$1,495,848.57
	TOTAL				**$13,620,672.34**
Note: Cost for Lift Stations already includes contingency and engineering. This is not included in the Contigency and engineering totals, only the overall total					

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Appendix L
Black Diamond Transportation Study 2015

Alberta Transportation

BLACK DIAMOND

TRANSPORTATION STUDY

DRAFT

Prepared By:

John Infante, E.I.T. , Operations Engineer Intern

Supervised By:

Jerry Lau, P.Eng., Infrastructure Engineer

Alberta Transportation

Southern Region

DRAFT November 2015

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Appendices

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Appendix B – Turning Movement Diagrams – Background Traffic

Appendix C – Alberta Transportation Standard At-Grade Intersection Layouts for Two-Lane Highways

Appendix D – Trip Generation Tables

Appendix E – Traffic Volume Map

Appendix F – Synchro Output

Executive Summary

Background

The Town of Black Diamond (Town) expects future developments to take place within the 10, 20 and 30 year horizons in order to cope with the Town's growth and needs. These developments are expected to generate trips which would impact the highway network within the Town. Alberta Transportation (AT) proposed to conduct an in-house Transportation Study in order to identify necessary upgrades to intersections along Highway 7 and Highway 22 within the Town. 11 intersections were identified for this study where the Town performed Traffic Counts at the following locations listed below,

1. Hwy 7 and Range Road 23
2. Hwy 7 and 6th Street East
3. Hwy 7 and 3rd Street East
4. Hwy 7 and 1st Street East
5. Hwy 7 and Hwy 22
6. Hwy 22 and 1st Street West
7. Hwy 22 and 3rd Street West
8. Hwy 22 and 1st Avenue South
9. Hwy 22 and 2nd Avenue South
10. Hwy 22 and 4th Avenue South
11. Hwy 22 and Willow Ridge Boulevard

Identifying the necessary upgrades will allow the Town to plan for the construction and financing of these upgrades. It will also give the Town, the Province, and developers some long-term certainty of the future transportation network to accommodate present and future needs.

Key Findings

Background Traffic Conditions

A traffic analysis was conducted using Synchro on the existing 2014 traffic volumes and the only intersection that is not meeting acceptable LOS is the intersection of Hwy 7 and Hwy 22 in the Town's core. The intersection warranted signalization which would improve LOS, however the lack of space around the intersection due to the existing Town infrastructure restricts the installation of a conventional traffic signal. It was suggested that an innovative method of "stringing up" the traffic signals should be looked at further by a Consultant who specializes in traffic signal infrastructure design.

A 2.5% linear growth was used to forecast the background conditions without any development impact in the 10, 20, 30 year horizons. In the 10 year horizon most intersections are operating at an acceptable LOS, the intersection that requires attention is Hwy 7 and 3rd Street East, a Type IVc intersection

treatment would be needed in order to increase the through movement capacity of the westbound and eastbound traffic so that the minor streets would have acceptable gap opportunities to make their turn movements. The 20 year horizon analysis shows that Hwy 7 and 3rd St. West and Hwy 7 and 3rd St. East both warrant signalization. A Type IVc intersection treatment is needed for the intersection of Hwy 7 and 4th Ave. South. The intersection of Hwy 7 and Hwy 22 also requires right turn bays in all legs of the intersection to accommodate the increase of traffic entering and exiting the Town core. This can be accommodated by simply limiting the on street parking away from the intersection and adding line makrings. In the 30 year horizon removing on-street parking between Hwy 22 and 1st St. West to Hwy 7 and 1st St. East is vital to increase the capacity at the centre of the Town. The intersection of Hwy 22 and 4th Ave. South warrants traffic signals. The table blow summarizes the upgrades required in table format.

With increasing traffic volume over the 10, 20 and 30 year horizons, it was found that eastbound and westbound traffic capacity as you enter the Town core would need to be increased to meet through traffic volume. Some of the approaches that do not meet acceptable LOS are approaches from a minor road turning into a major road. It is expected that these motorist will either wait for an acceptable gap to make their turn or revise their route to meet their needs. Table 1 below summarizes the required upgrades to accommodate the increase in traffic volume in the 10, 20, 30 year background conditions.

Background Traffic Conditions		
Horizon	Intersection	Upgrades Required
10 Year	Hwy 7 & 3rd St. East	• Type IVc intersection treatment
20 Year	Hwy 7 & 3rd St. East	• Traffic Signal
	Hwy 22 & 3rd St. West	• Traffic Signal
	Hwy 7 & Hwy 22	• All Directions – Right Turn Bays
	Hwy 22 & 4th Ave South	• Type IVc intersection treatment
30 Year	Hwy 7 and Hwy 22	• Removing on-street parking between Hwy 22 and 1st St. West to Hwy 7 and 1st St. East and pavement marking revisions
	Hwy 22 and 4 Ave. South	• Traffic Signal

Table 1: Upgrade Requirements for Background Conditions

Development Impact

Traffic volumes were forecasted in the 10, 20, 30 year horizons with expected developments to progress in Town. Trips were generated using the Trip Generation Manual. Development within the Town is to progress on the east side of Town as shown. At the 10 Year Horizon the intersections greatly impacted are, 3rd St. East and 6th St. East along Highway 7, with 3rd St. East warranting signalization. Hwy 7 and Hwy 22 will also require an eastbound left turn bay and a northbound right turn bay to meet the increased traffic volume in the Town's downtown core. It is recommended that the 6 St. East road be built and maintained by the Town. It would be ideal if 6th St. East extends all the way south to connect to 4th Ave South, as this will help alleviate traffic from the Town's downtown core and improve traffic flow by providing an alternate route through 6th Street East as shown in Figure 1.

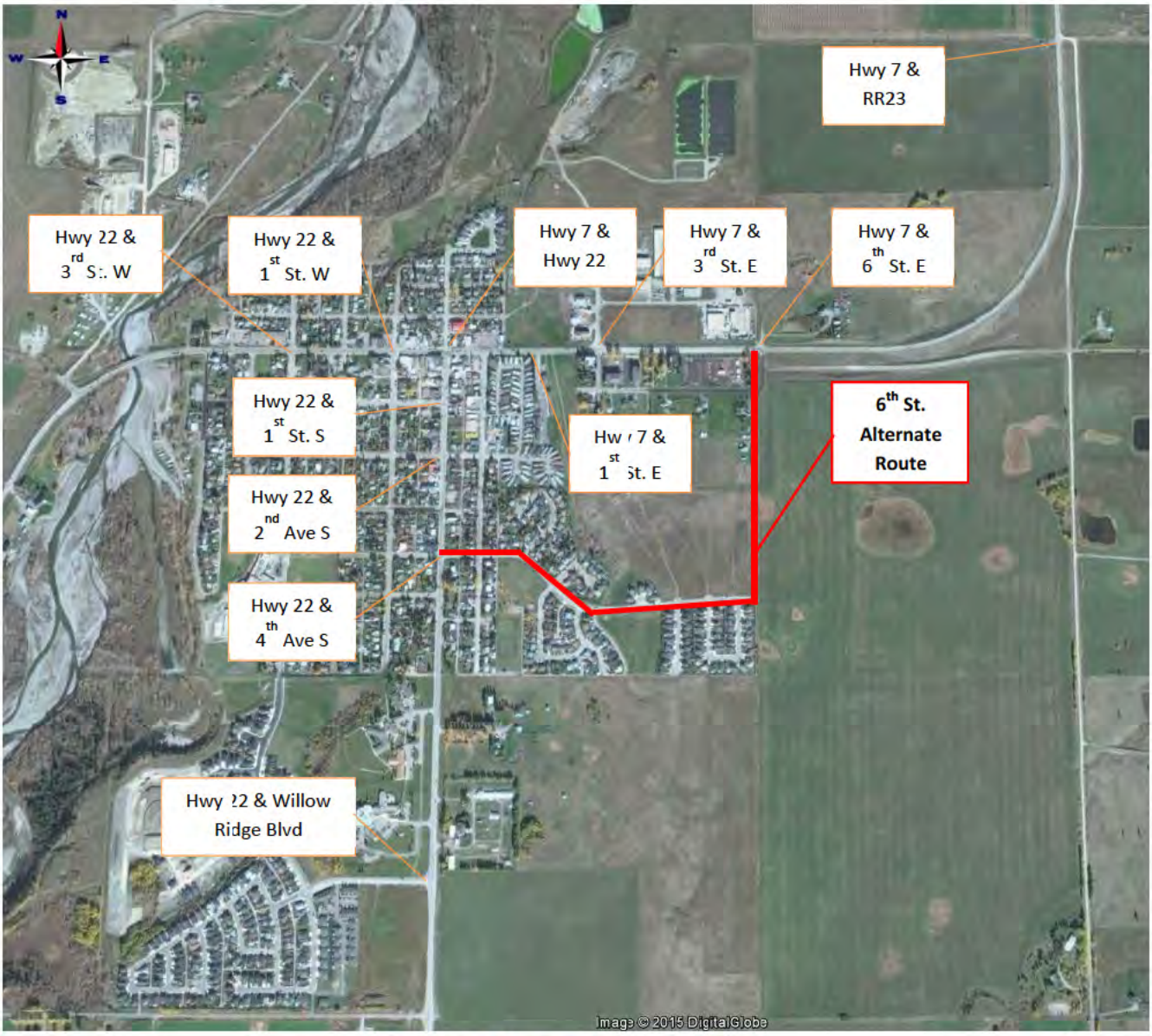


Figure 1: Proposed Alternate 6 Street East Route

At the 20 Year Horizon, development is expected to more than double the 10 Year Horizon development. 6th St. East along Highway 7 will be significantly impacted as it is the only gateway to the development. It is recommended that RR 23 be built and maintained by the Town to provide an alternate access to and from the development. It would be ideal if this road extended all the way south as a collector standard to the Willow Ridge Blvd intersection on Hwy 22, to provide an alternate route as shown in Figure 2. If built properly to accommodate commercial trucks, it could serve as an alternate route for commercial heavy vehicles commuting east, which would relieve the movement of eastbound commercial heavy vehicle traffic within the Town. This route would provide a more ideal route for commercial heavy vehicles because it would impact less residential development compared to using the 6th St. East route for commercial heavy vehicles.

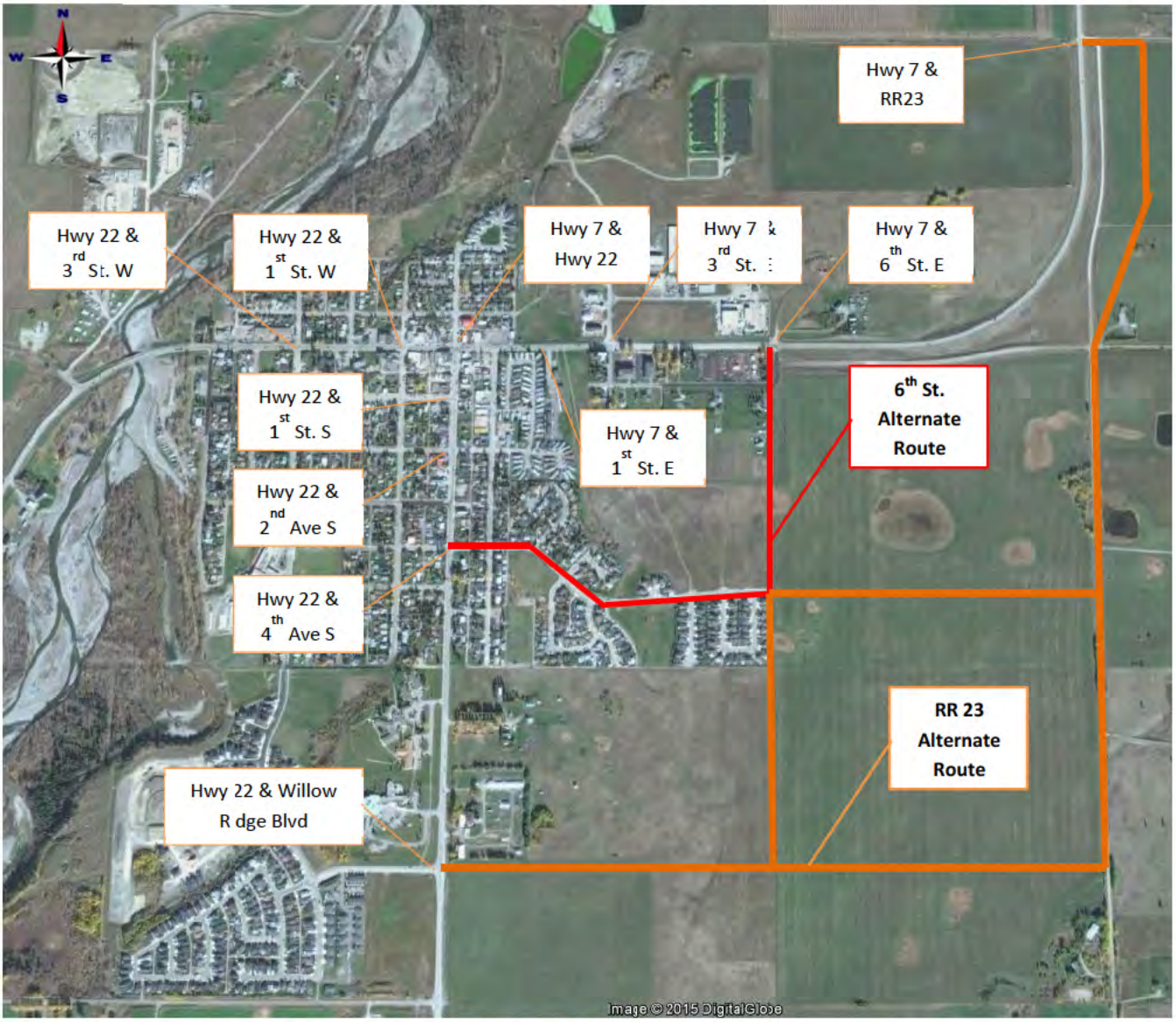


Figure 2: Proposed Alternate Routes in the 20 Year Development Horizon

It was determined that at the 30 Year Horizon development phase, the upgrades required to the roadway infrastructure was deemed not feasible as it requires significant land space which would adversely impact the Town's existing building infrastructure. It is possible that a bypass of the Town would need to be implemented to maintain a high level of service on the highway. This horizon may be longer if development does not proceed as expected.

Table 2 below summarizes the expected upgrades required with each horizon as development progresses.

Development Impact Traffic Conditions		
Horizon	Intersection	Upgrades Required
10 Year	Hwy 7 & 6th St. East	• Traffic Signal
	Hwy 7 & 3rd St. E	• Traffic Signal
	Hwy 7 & Hwy 22	• Westbound – Left Turn Bay • Northbound – Right Turn Bay
	Hwy 7 & 3rd St. W	• Traffic Signals
20 Year	Hwy 7 & RR23	• Westbound – Channelized Free Right Turn • Northbound / Southbound – Twinning
	Hwy 7 & 6th St. East	• Eastbound / Westbound – Twinning • Northbound – Channelized Free Right Turn
	Hwy 22 & 3rd St. W	• Eastbound / Westbound – Twinning
	Hwy 7 & Hwy 22	• All Directions – Twinning
	Hwy 22 & 1st St. West	• Eastbound / Westbound – Twinning
	Hwy 22 & 3rd St. West	• Eastbound / Westbound – Twinning
	Hwy 22 & 4th Ave South	• Traffic Signals
30 Year	Hwy 7 & RR23	• Traffic Signals • Southbound – Dual Left Turns
	Hwy 7 & 6th St. East	• Westbound – Dual Left Turns • Eastbound – Left Turn Bay • Northbound / Southbound – Twinning
	Hwy 7 & Hwy 22	• Westbound – Left Turn Bay • Eastbound / Northbound – Dual Left Turns • Eastbound – Channelized Free Right Turn
	Hwy 22 & 1st St. West	• Eastbound – Left Turn Bay
	Hwy 22 & 1st Ave. South	• Southbound / Northbound - Twinning
	Hwy 22 & 2nd Ave. South	• Southbound / Northbound – Twinning
	Hwy 22 & 4th Ave. South	• Eastbound / Westbound – Twinning • Northbound / Southbound – Twinning • Southbound – Left Turn Bay
	Hwy 22 & Willow Ridge Blvd.	• All Directions - Twinning

Table 2: Upgrade Requirements for Traffic Conditions Impacted by Development

1.0 INTRODUCTION

1.1 Purpose

This report was prepared by Alberta Transportation (AT) in response to a request from the Town of Black Diamond (the Town) in regards to conducting a transportation study to identify necessary upgrades to intersections along Highways 7 and 22 within the Town. These upgrades are necessary to accommodate the additional traffic at these intersections as a result of increased traffic volumes on the highways, new development within the Town and to accommodate future developments. Identifying the necessary upgrades will allow the Town to plan for the construction and financing of these upgrades. It will also give the Town, the Province, and developers some long-term certainty of the future transportation network to accommodate present and future needs. This Transportation study included safety, traffic and operational analysis.

1.2 Site Description

The Town of Black Diamond is located south of Calgary, 18.1 km West of the Town of Okotoks. The Town of Turner Valley is approximately 3.1 km west of the Town. As shown in Figure 3, Highway 7 runs east of the town where it intersects with Highway 22 which runs west and south of the town. Highway 22 is a Level 2 highway which accommodates the intra-provincial movement of goods, people and services. This roadway typically serves longer trip lengths. Highway 7:08 is a Level 3 highway that carry traffic from major generators such as communities and developments with shorter travel distances.

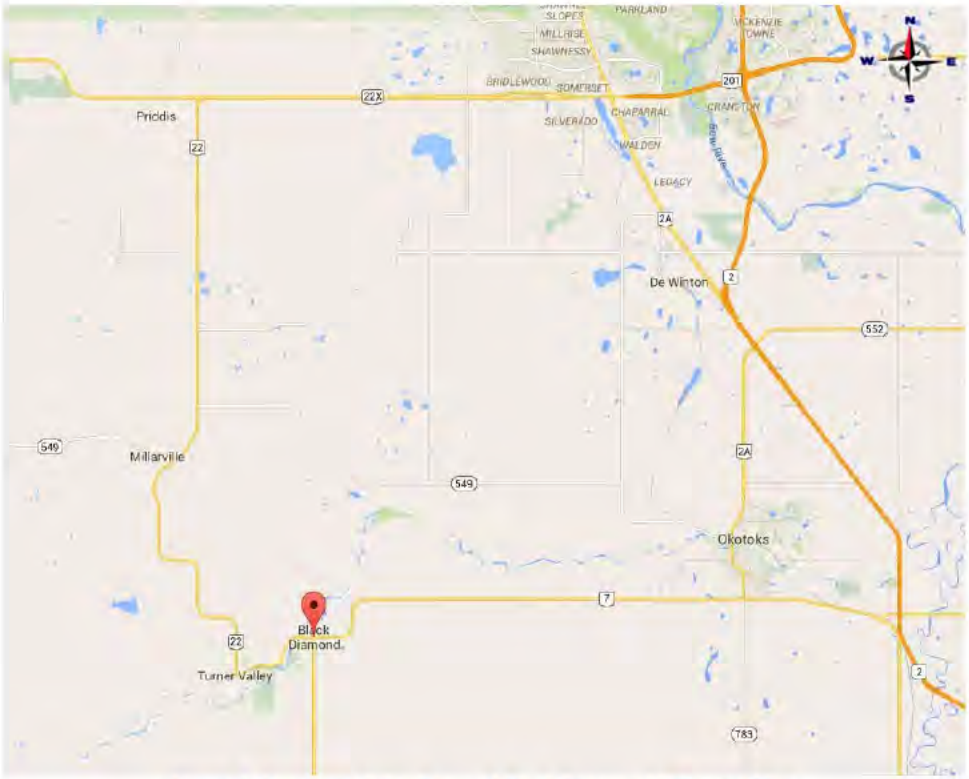


Figure 3: Location of the Town of Black Diamond – Google Map

1.3 To vn Backg ound

The Tow ı of Black Diamond is a small town community with a population of 2,474. It is a closely knit community and home to many talented artists and musician ɜ. Together ıith the sister town, Turner Valley, the Town hold ı several events such as the Diamond 'alley Parade, a Canada Celebration and the Diamond Valley Christmas Market and Light-up in December. There are several amenities within the Town such as the Oilfi ɜlds General Hospital, several local eateries and retail stores, and schools accomm ıdating K to 12 , just to name a few. The Town receives a daily a ıerage traffic of 5,000 to 10,000 vehicles travelling thr ıugh. The following intersections on Highway 7:08 ınd Highway 22:12 were reviewed as shown in Figure 4.



Figure 4: Intersections Reviewed in the ˙ransportation ɜtudy

1.3 Proposed Development

The Kaiser Area Structural Plan (Kaiser ASP) that was developed in 1992 provided the framework for subsequent subdivision and development of an area of land within the Town's Municipal boundaries. This plan specifically outlined the future development of the southeast quadrant of the Town. There have been several amendments to the plan thus far in order to meet the evolving needs of the community. The current proposed development can be seen in Figure 5, shows three stages of future land use and infrastructure. The stages are separated by several years and comprise of commercial, residential and general business use. It can be seen that the proposed development will continue to take place in the SE quadrant of the town, adhering to the Kaiser ASP. The Town also expects to re-densify over the next 20 years as the Town re-develops as shown in Figure 6.

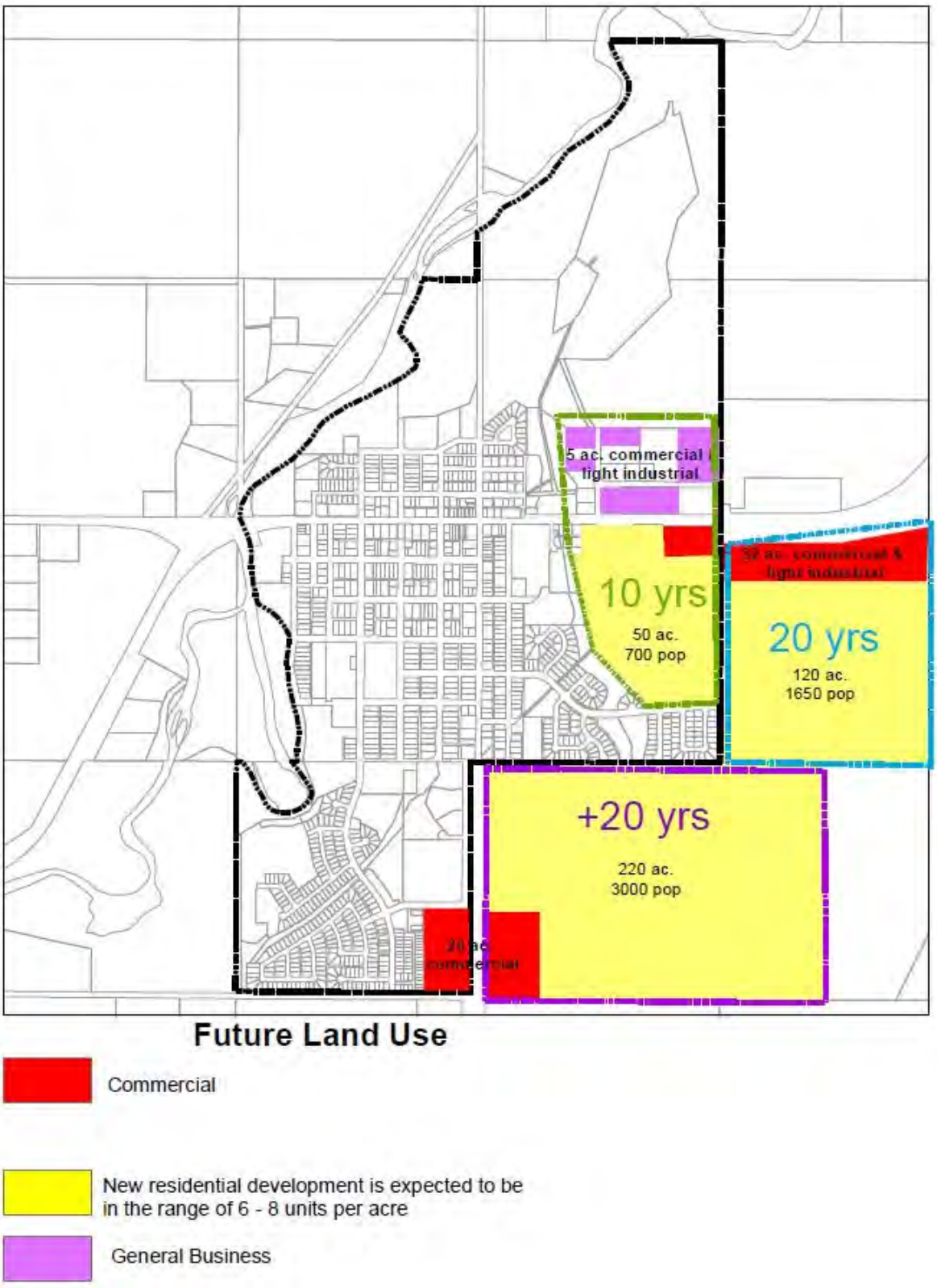


Figure 5: Town of Black Diamond Proposed Development Areas

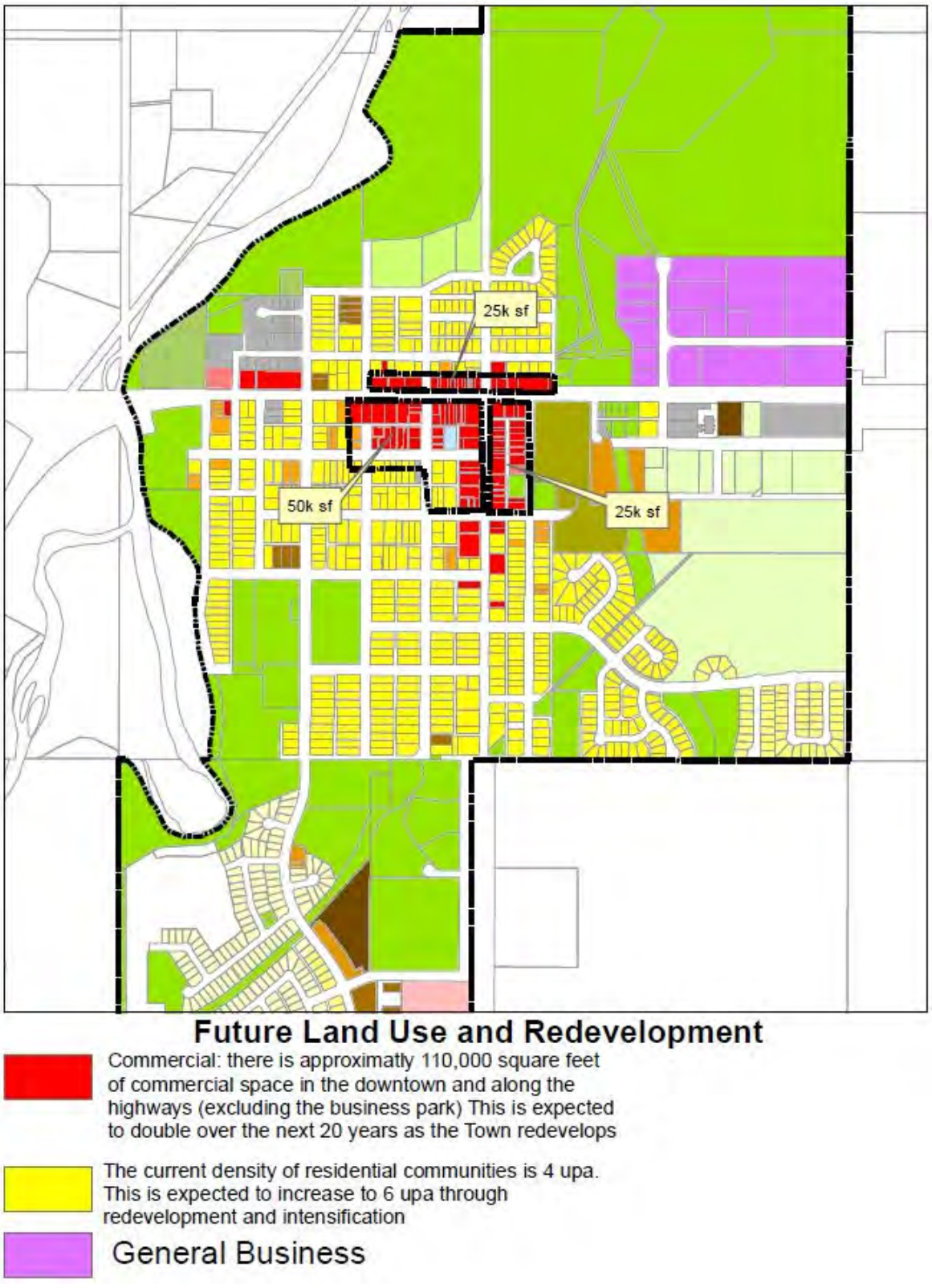


Figure 6: Town of Black Diamond Proposed Re-densification

1.4 Previous Study

A mini functional study for Highway 7 within the Town's limits was conducted by BSEI Municipal Consulting Engineers (BSEI) and Bunt & Associates in August 2006. The study was to undertake a cursory planning review of laning and right of way requirements. Their objectives were to confirm the long term (25 year) lane requirement, identify left turn requirement at the intersection with Highway 22 and provide recommendation for a reasonable road cross section based on the laning requirements. The recommendation was a four lane divided highway section with a raised median, left/right turn lanes and tapers at access intersection locations by 2031. The right/left turn lanes were implemented through the use of a painted median in which motorist were allowed to turn both ways. AT did not support this recommendation of a two way left turn lane due to safety concerns as well as not meeting AT standards. Figure 7 below shows the proposed two way left turn lane.

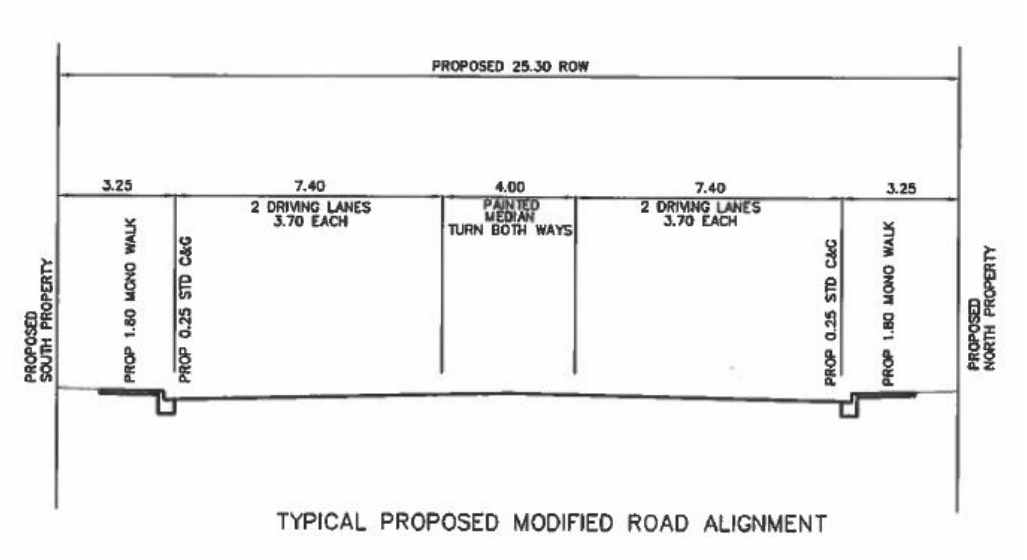


Figure 7: BSEI Proposed 4-Laned Section with Two-way Left Turns

2.0 METHODOLOGY

The methodology used to complete this study is summarized in the following subsections.

2.1 Safety Analysis

Using the AT's Network Expansion Support System (NESS), an application designed to support department staff in managing roadway infrastructure and network expansion needs. NESS collects data on collisions that have occurred near or at the intersection and computes a total collision rate measured as the total number of collisions occurring at the intersection per 100 million vehicles entering the intersection site over a 5 year period. A Benchmark (BM) is used as a threshold to compare the actual and the expected rate. This is determined using the average number of total collisions plus one standard deviation for intersections having similar volumes. If the actual rate were to be significantly higher than what was expected then further investigation would have to be conducted. Using the data that NESS collects, we are able to determine collision patterns and if intervention is required to reduce the number of collisions.

2.2 Establish Traffic Volumes

AT requested the Town to conduct traffic counts on the intersections of interest along Highway 7 and Highway 22 within the Town limits as well as the intersection on Highway 7 at Range Road 23. Traffic counts were conducted in March, October and December 2014 during weekdays in the probable peak hours in the morning from 7:00 – 9:00 am and in the afternoon from 4:00 – 6:00 pm. A template was provided by AT for the Town to use. These traffic counts are found in the Appendix A. Turning Movement Diagrams were generated based on these traffic counts which can be found in the Appendix B.

2.3 Establish 100th Highest Hour Estimates

The 100th highest hour estimates were converted from the peak hours from the traffic counts conducted by the Town. The nearest Automated Traffic Recorders (ATR) was used to determine the ratios required to convert to 100th highest hour. In order to get an accurate representation of the traffic volume at each intersection, ATR 50070880 was used for intersections East or West of Highway 7 and 22 and ATR 60221260 was used for intersections South of Highway 7 and 22.

For intersections East or West of Highway 7 and Highway 22, a calculated ratio of 1.896 and 1.048 were used for the morning and afternoon peak hours. For intersections South of Highway 7 and 22, a calculated ratio of 2.165 and 1.333 were used for the morning and afternoon peak hours.

See Appendix # for a copy of the ATR printouts and the methodology used to obtain the conversion ratios. These 100th highest hour estimates were put into a Turning Movement Diagram (TMD) to better showcase the traffic volume at each intersection.

2.4 Projecting Traffic Volumes – 10, 20, 30

Using a linear growth model, traffic volumes were projected to 10, 20 and 30 years. It was determined that the growth rate used at the time of the study was 2.5%. See Appendix B for the turning movement diagrams of the projected traffic volumes.

2.5 Trip Generation due to developments

Trips were generated using the Trip Generation Manual 7th Edition published by the Institute of Transportation Engineers. A map was given by the Town which showed the forecasted development to take place in the next 10, 20 and 20 plus years. These trips were then distributed throughout the intersections of interest along Highway 7 and Highway 22 based on what the author considered reasonable at the time.

3.0 EXISTING CONDITIONS

3.1 Highway 7 and Range Road 23

The intersection of Highway 7:08 at Range Road 23 is located outside of the Town limits prior to the East entrance of the Town. Using Alberta Transportation's Linear Referencing System (LRS) the approximate centre of the intersection is located at LRS: 7:08 C1 2.247 and it is identified in TIMS as intersection 12521. This intersection is classified as a Type 1a at-grade t-intersection with a field access on the west side as shown in Appendix C. Highway 7:08 runs in a north-south direction and Range Road 23 runs in the east direction. Highway 7:08 at this area is that of a 2-lane highway with painted shoulders on each side. The posted speed limit on Highway 7 as you approach the intersection from the North and South is 100 km/h. A stop control sign is located on the east leg and there is no posted speed limit on the gravel road. See Figure 8 for a view of the intersection looking south.



Figure 8: Hwy 7 and RR 23 – Looking South

3.2 Highway 7 and 6th Street East

The intersection of Highway 7:08 at 6th Street is located in the North East quadrant within the Town and identified in TIMS as intersection 12520. Using Alberta Transportation's Linear Referencing System (LRS) the approximate centre of the intersection is located at LRS: 7:08 C1 0.829. This intersection is classified as a Type 1b at-grade intersection as shown in Appendix C. The posted speed limit on Highway 7 as you approach the intersection from the East and West is 70 km/h and 50 km/h respectively. A stop control sign is located on the south leg of the intersection, 6th Street is assumed have a speed limit of 50 km/h. An access exists on the north leg of the intersection that services a few residential houses. Highway 7 transitions from a 2 lane highway with painted shoulders as you approach the intersection and becomes a 4 lane unmarked roadway as you leave the intersection. On-street parking is evident as you travel further west into the Town. See Figure 9 for a view of the intersection looking west.



Figure 9: Hwy 7 and 6th Street East – Looking West

3.3 Highway 7 and 3rd Street East

The intersection of Highway 7:08 at 3rd Street is located in the North East quadrant within the Town and identified in TIMS as intersection 12519. Using Alberta Transportation's Linear Referencing System (LRS) the approximate centre of the intersection is situated at LRS: 7:08 C1 0.401. This intersection is classified as a Type 2b right angled intersection as shown in Appendix C. The posted speed limit on Highway 7 as you approach the intersection from both the East and West leg is 50 km/h. The posted speed limit on the South and North leg is 50 km/h, each with a stop control sign. Figure 8 below shows a view of the intersection looking west. Figure 10 shows a view of the intersection looking west.



Figure 10: Hwy 7 and 3rd Street East – Looking West

3.4 Highway 7 and 1st Street East

The intersection of Highway 7:08 and 1st Street is located east of the Town and identified in TIMS as intersection 12548. Using Alberta Transportation's LRS the approximate centre of the intersection is situated at LRS: 7:08 C1 0.100. This intersection is classified as a Type 2a t-intersection. The posted speed limit as you approach the intersection is 50km/h in all directions. A stop control sign is located at the south leg. Figure 11 shows a view of the intersection looking west.



Figure 11: Hwy 7 and 1st Street East – Looking West

3.5 Highway 7 and Highway 22

The intersection of Highway 7:08 and Highway 22:12 is located in the centre of the Town and identified in TIMS as intersection 1411. Using Alberta Transportation's Linear Referencing System (LRS) the approximate centre of the intersection is located at LRS: 7:08 C1 0.000. This intersection is classified as a Type 2c right angled intersection as shown in Appendix C. The posted speed limit is 50 km/h as you approach the intersection from all directions. A 4-Way stop sign is implemented at the intersection and painted pedestrian crossings are evident. Figure 12 shows a view of the intersection looking west.



Figure 12: Hwy 7 and Hwy 22 – Looking West

3.6 Highway 22:12 and 1st Street West

The intersection of Highway 22:12 and 1st Street is located West of the Town and identified in TIMS as intersection 9052. The approximate centre of the intersection is located at LRS: 22:12 C1 17.947. This intersection is classified as a Type 2c right angled intersection as shown in Appendix C. A pedestrian control exists on the north – south direction of the intersection, crossing Highway 22:12. The posted speed limit is 50km/h as you approach the intersection from all directions. Figure 13 below shows a view of the intersection looking west.



Figure 13 – Looking West: Hwy 22 and 1st Street West

3.7 Highway 22:12 and 3rd Street West

The intersection of Highway 22:12 and 3rd Street is located west of the Town and identified in TIMS as intersection 2579. The approximate centre of the intersection is located at LRS: 22:12 C1 18.215. This intersection is classified as a Type 2b right angle intersection as shown in Appendix C. A pedestrian control exists on the north-south direction of the intersection, crossing Highway 22:12. The posted speed limit is 50km/h as you approach the intersection from all directions. Figure 12 shows a view of the intersection looking west.



Figure 14: Hwy 22 and 3rd Street West – Looking West

3.8 Highway 22:12 and 1st Avenue South

The intersection of Highway 22:12 and 1st Ave is located south of the Town and identified in TIMS as intersection 4636. The approximate centre of the intersection is located at LRS 22:12 C1 17.680. The intersection is classified as a Type 2a t- intersection as shown in Appendix C. A pedestrian control exists on the south leg of the intersection crossing Highway 22:12. Posted speed limits are 50km/h in all directions. Figure 15 shows a view of the intersection looking south.



Figure 15: Hwy 22 and 1st Ave South – Looking South

3.9 Highway 22:12 and 2nd Avenue South

The intersection of Highway 22:12 and 4th Ave is located South of the Town and identified in TIMS as intersection 9051. The approximate centre of the intersection is located at LRS 22:12 C1 17.549. The intersection is classified as a Type 2b right angled intersection as shown in Appendix C. Posted speed limits are 50km/h in all directions. Figure 16 below shows a view of the intersection looking south.



Figure 16: Hwy 22 and 2nd Ave South – Looking South

3.11 Highway 22:12 and 4th Avenue South

The intersection of Highway 22:12 and 4th Ave is located South of the Town and identified in TIMS as intersection 2574. The approximate centre of the intersection is located at LRS 22:12 C1 17.298. The intersection is classified as a Type 2b right angled intersection as shown in Appendix C. A pedestrian control exists on the North leg of the intersection crossing Highway 22:12. Posted speed limits are 50km/h. Figure 17 shows a view of the intersection looking south.



Figure 17: Hwy 22 and 4th Ave South – Looking South

3.12 Highway 22:12 and Willow Ridge Blvd.

The intersection of Highway 22:12 and Willow Ridge Blvd is located at the South end of the Town and identified in TIMS as intersection 9045. The approximate centre of the intersection is located at LRS: 22:12 C1 16.517. It is classified as a Type 4d t-intersection with a stop control sign on the West leg. The posted speed limit as you approach the intersection is 50 km/h in all directions. As you keep travelling south, the speed limit increases to 70 km/h. Figure 18 below shows a view of the intersection looking south.



Figure 18: Hwy 22 and Willow Ridge Blvd – Looking South

4.0 SAFETY ANALYSIS

The latest accident collisions for the intersections were obtained from Alberta Transportation's Network Expansion Support System (NESS) over a five year period from 2008 – 2012. The findings are summarized in Table 1. The data reveals that there have been little to no collisions at the intersections and the Actual Collision Rate falls behind the Benchmark Collision Rate, hence there was no need to go further with the analysis.

Intersection	Collision Type				Collision Rate	
	Property Damage Only	Minor	Major	Fatal	Actual	Benchmark
Hwy 7 & RR23	0	0	0	0	0	62.3
Hwy 7 & 6th St. E	0	0	0	0	0	62.3
Hwy 7 & 3rd St. E	1	1	0	0	18.8	62.3
Hwy 7 & 1st St. E	1	1	0	0	18.8	62.3
Hwy 7 & Hwy 22	6	1	0	0	37.8	62.3
Hwy 22 & 1st St. W	0	0	0	0	0	64.2
Hwy 22 & 3rd St. W	0	0	0	0	0	64.2
Hwy 22 & 1st Ave. S	1	0	0	0	9.4	62.3
Hwy 22 & 2nd Ave. S	2	0	0	0	32.7	63.3
Hwy 22 & 4th Ave. S	0	0	0	0	0	63.3
Hwy 22 & Willow Ridge Blvd.	0	1	0	0	16.4	63.3

Table 3: Collision Statistics from 2008 – 2012

5.0 TRAFFIC VOLUMES

5.1 Existing Volumes

From the Turning Movement Diagrams (TMD) found in Appendix B, it can be seen that for intersections along Highway 7:08, a majority of the commuters are turning into Highway 7 and proceeding through, heading East or West. This traffic movement is most likely due to commuters exiting out of the Town. Commuters travelling west are likely commuting to travel to Turner Valley or connecting to Highway 22X from Highway 22. Commuters traveling east are likely commuting to Okotoks or connecting to Highway 2 to travel North to Calgary or South to High River.

The majority of the traffic of the intersections along Highway 22:12 running South of the Town are through traffic heading North or South, with Northbound traffic slightly higher than Southbound traffic. It can be seen that a majority of the local traffic movement are turning into Highway 22:12.

The traffic volumes in the afternoon peak hours are slightly higher than the traffic volumes on the morning peak hours, but the distribution of the traffic are virtually the same from the morning and the afternoon. The slight increase in afternoon traffic volumes can be attributed to visitors visiting the Town.

It is evident from the TMDs that the majority of the traffic of the Town relies heavily on the two provincial highways. Most of the movements seen are either through traffic along the highways or movements that enable the motorist to turn onto the highway.

Refer to Appendix E for traffic volumes at various horizons.

6.0 TRIP GENERATION

6.1 Future Land use and Infrastructure

Discussions with the Town were setup in order to determine the type of development expected over the next several years. During the discussions with the Town it was mentioned that the Town would like to see more multi-family residential dwellings such as townhouses and apartment buildings. They expect that with the increasing population as living dwellings are built, it would entice ‘Big Box’ stores such as Wal-Mart to construct a store to serve the population. Fast food chains such as Tim Hortons and McDonalds were also expected to be placed in town. Also with increasing population, the Town will require supplementary infrastructure such as schools and other facilities such as a Recreational Community Centre to meet the needs of the community.

Table 4 and 5 summarizes the estimation of Peak Hour Morning and Afternoon Trips expected at each stage of development. A more detailed table can be found in Appendix D.

Stage	Land Use	Units	AM Average Trip Generations per unit	AM Trips (Enter)	AM Trips (Exit)	Total
10 Years	Single-Family Detached Housing	350 Dwelling Units	0.77 / Dwelling (26% / 74%)	70	200	270
	General Light Industrial	10 Acres	7.96 / Acre (85% / 15%)	68	12	80
	Shopping Centre	214,000 Sq. Ft	1.03 / 1000 Sq. Ft (61% / 39%)	137	88	225
	Fast Food Restaurant with Drive-Thru	2703 Sq. Ft	53.11 (50% / 50%)	72	72	144
20 Years	Single-Family Detached Housing	630 Dwelling Units	0.77 / Dwelling (26% / 74%)	126	360	486
	Residential Condominium/Townhouse	210 Dwelling Units	0.44 / Dwelling (18% / 82%)	17	76	93
	General Light Industrial	16 Acres	7.96 / Acre (85% / 15%)	109	20	129
	Elementary School	75,000 Sq. Ft	4.69 / 1000 Sq. Ft (54% / 46%)	191	162	353
	Shopping Centre	175,000 Sq. Ft	1.03 / 1000 Sq. Ft (61% / 39%)	110	71	181
	General Office Building	175,000 Sq. Ft	1.55 / 1000 Sq. Ft (88% / 12%)	239	33	272
	North Downtown Specialty Retail Centre	25,000 Sq. Ft	6.84 / 1000 Sq. Ft (48% / 52%)	83	89	172
	Southwest Downtown Specialty Retail Centre	50,000 Sq. Ft	6.84 / 1000 Sq. Ft (48% / 52%)	165	178	343
	Southeast Downtown Specialty Retail Centre	25,000 Sq. Ft	6.84 / 1000 Sq. Ft (48% / 52%)	83	89	172
30 Years	Single-Family Detached Housing	1155 Dwelling Units	0.77 / Dwelling (26% / 74%)	232	659	891
	Residential Condominium/Townhouse	385 Dwelling Units	0.44 / Dwelling (18% / 82%)	31	140	171
	Middle School / Junior High	75,000 Sq. Ft	4.35 / 1000 Sq. Ft (55% / 45%)	180	148	328
	High School	100,000 Sq. Ft	3.06 / 1000 Sq. Ft (71% / 29%)	218	89	237
	Shopping Centre	175,000 Sq. Ft	1.03 / 1000 Sq. Ft (61%/ 39%)	110	71	181

	General Office Centre	175,000 Sq. Ft	1.55 / 1000 Sq. Ft (88% / 12%)	239	33	272
	Recreational Community Centre	131,000 Sq. Ft	2.69 / 1000 Sq. Ft (53% / 47%)	187	166	353

Table 4: AM Peak Hour Trip Generation

Stage	Land Use	Units	PM Average Trip Generations per Unit	PM Trips (Enter)	PM Trips (Exit)	Total
10 Years	Single-Family Detached Housing	350 Dwelling units	1.02 / Dwelling (64% / 36%)	229	129	358
	General Light Industrial	10 Acres	8.77 / Acre (30% / 70%)	27	62	89
	Shopping Centre	214,000 Sq. Ft	1.1 / 1000 Sq. Ft (48% / 52%)	115	125	240
	Fast Food Restaurant with Drive-Thru	2703 Sq. Ft	34.64/ 1000 Sq. Ft (52% / 48%)	49	46	95
20 Years	Single-Family Detached Housing	630 Dwelling units	1.02 / Dwelling (64% / 36%)	412	232	644
	Residential Condominium/Townhouse	210 Dwelling units	0.52 / Dwelling (64% / 36%)	71	40	111
	General Light Industrial	16 Acres	8.77 / Acre (30% / 70%)	43	99	142
	Elementary School	75,000 Sq. Ft	3.13 / 1000 Sq. Ft (43% /57 %)	102	134	236
	Shopping Centre	175,000 Sq. Ft	3.75 / 1000 Sq. Ft (48% / 52%)	314	341	655
	General Office Building	175,000 Sq. Ft	1.49 / 1000 Sq. Ft (17% / 83%)	45	216	261
	North Downtown Specialty Retail Centre	25,000 Sq. Ft	5.02 / 1000 Sq. Ft (56% / 44%)	71	56	127
	Southwest Downtown Specialty Retail Centre	50,000 Sq. Ft	5.02 / 1000 Sq. Ft (56% / 44%)	141	111	252
	Southeast Downtown Specialty Retail Centre	25,000 Sq. Ft	5.02 / 1000 Sq. Ft (56% / 44%)	71	56	127
30 Years	Single-Family Detached Housing	1155 Dwelling units	1.02 / Dwelling (64% / 36%)	755	425	1180
	Residential Condominium/Townhouse	385 Dwelling	0.52 / Dwelling (64% / 36%)	129	73	202

		units				
	Middle School / Junior High	75,000 Sq. Ft	2.52 / 1000 Sq. Ft (45% / 55%)	86	104	190
	High School	100,000 Sq. Ft	2.12 / 1000 Sq. Ft (31% / 69%)	66	147	213
	Shopping Centre	175,000 Sq. Ft	3.75 / 1000 Sq. Ft (48% / 52%)	314	341	655
	General Office Centre	175,000 Sq. Ft	1.49 / 1000 Sq. Ft (17% / 83%)	45	216	261
	Recreational Community Centre	131,000 Sq. Ft	2.39 / 1000 Sq. Ft (40% / 60%)	126	188	314

Table 5: PM Peak Hour Trip Generation

6.2 Trip Distribution

Trips were distributed using Engineering judgement. A vital factor to consider in the distribution of these trips is the geographical location of the Town. Calgary and Okotoks are located north and east respectively while High River is found southeast of the Town. It is expected that the majority of the non-local traffic in the Town will be concentrated on the east side of Town. Millarville and Turner Valley would contribute to the non-local traffic entering from the West side of the Town, while Longview would contribute to the non-local traffic entering from the South. As the Town develops providing more services, it is expected that there will be an increase in exchange of traffic entering and exiting the Town. As such the distribution assignments are found in the tables below. It was assumed that 10% of the distributed trips were to be local traffic at each stages of the development. Table 6 below summarizes the distribution assignment over the three stages of development. Appendix E shows the traffic volumes in each stage of development.

Stage	Direction	Assignment
10 Years	To / From the East on Highway 7	70%
	To / From the West on Highway 7	15%
	To / From the South on Highway 22	5%
	Local Traffic	10%
20 Years	To / From the East on Highway 7	70%
	To / From the West on Highway 7	15%
	To / From the South on Highway 22	5%
	Local Traffic	10%
30 Years	To / From the East on Highway 7	70%
	To / From the West on Highway 7	15%
	To / From the South on Highway 22	5%
	Local Traffic	10%

Table 6: Trip Generation Distribution

7.0 TRAFFIC CAPACITY ANALYSIS

Synchro, a macroscopic analysis and optimization traffic software was used to determine the Level of Service (LOS) for each intersection. The software supports the Highway Capacity Manual's methodology (2000 and 2010 methods) for determining capacity. Level of Service is a quantitative classification of a performance measure or measures that represents quality of service. The criteria for defining LOS for an intersection is based on the length of time the motorist waits at the intersection, known as "Average Control Delay (sec/veh)" and the Volume to Capacity ratio (v/c), a ratio of flow rate to capacity for a transportation facility. These two key parameters are widely used in the profession to assess the performance of an intersection.

The following tables represent the LOS criteria measures taken from the Highway Capacity Manual. The LOS criteria are different for the un-signalized and signalized intersections due to motorist perceptions differ among the transportation facility. Table 7 represents the LOS criteria for un-signalized intersections and Table 8 represents the LOS criteria for signalized intersections. Appendix F shows the results of the Synchro analysis. The acceptable limits under AT standard are a LOS D and a v/c < 0.9.

Control Delay (sec/veh)	LOS by Volume-to-Capacity Ratio
	v/c ≤ 1.0
0 – 10	A
> 10 – 15	B
> 15 – 25	C
> 25 – 35	D
> 35 – 50	E
>50	F

Table 7: LOS Criteria for Un-signalized Intersections

Control Delay (sec/veh)	LOS by Volume-to-Capacity Ratio
	v/c ≤ 1.0
≤ 10	A
> 10 – 20	B
> 20 – 35	C
> 35 – 55	D
> 55 – 80	E
>80	F

Table 8: LOS Criteria for Signalized Intersections

7.1 Background Traffic Capacity Analysis

To assess the impacts of the proposed development on the roadway infrastructure, it was first necessary to establish background traffic volumes without taking into consideration the trips generated from the developments. The estimation of traffic volumes is discussed in the previous sections of this report. The following sections describe the traffic operations of the infrastructure associated with the existing traffic volumes and the growth in traffic volumes in the next 10, 20, and 30 year horizons. Intersection upgrades were implemented to meet acceptable LOS and these upgrades were carried through to the next horizons.

7.1.1 2014 Background Traffic Conditions

Existing conditions show that most intersections are operating at an acceptable LOS based on the criteria presented Table 7, with the exception of the intersection of Hwy 7 and Hwy 22, which is operating at a LOS F in the Eastbound, Westbound and Northbound approach movements in the morning traffic as shown in Table 9 and LOS E in the Westbound approach movement in the afternoon as shown in Table 10.

Signalizing the intersection of Hwy 7 and Hwy 22 with an optimized cycle length would yield a better LOS for all movements in the morning and afternoon peak hour as shown in Table 11 and 12. However the existing infrastructure of Hwy 7 and Hwy 22 restricts the installation of normal traffic signals. The minimum space required to install traffic signals are not met due to the existing building infrastructure. It was proposed that an innovative method of stringing up the traffic signals would be a feasible option in order to signalize the intersection and improve LOS. The detailed design of this option is outside of the scope of this study and would have to be designed by a Consultant specialized in traffic signal infrastructure design.

2014 100th Highest Hour – Background AM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.00	0.21	0.00
	95% Queue	NA	0.1	0.0	0.0
Hwy 7 & 6th St. E	LOS	A	A	A	A
	v/c	0.00	0.01	NA	NA
	95% Queue	0.0	0.2	NA	NA
Hwy 7 & 3rd St. E	LOS	A	A	C	B
	v/c	0.06	0.00	0.07	0.11
	95% Queue	1.3	0.0	1.6	2.7
Hwy 7 & 1st St. E	LOS	A	A	B	NA
	v/c	0.27	0.00	0.13	NA
	95% Queue	0.0	0.0	3.3	NA
Hwy 7 & Hwy 22	LOS	F	F	F	C
	v/c	1.21	1.08	0.96	0.31
	95% Queue	NA	NA	NA	NA
Hwy 22 & 1st St. W	LOS	A	A	C	C
	v/c	0.02	0.02	0.10	0.02
	95% Queue	0.3	0.5	2.6	0.5
Hwy 22 & 3rd St. W	LOS	A	A	C	C
	v/c	0.03	0.03	0.40	0.11
	95% Queue	0.8	0.7	14.1	2.7
Hwy 22 & 1st Ave. S	LOS	A	NA	NA	A
	v/c	0.02	NA	NA	0.14
	95% Queue	0.6	NA	NA	0.0
Hwy 22 & 2nd Ave. S	LOS	B	B	A	A
	v/c	0.03	0.09	0.00	0.00
	95% Queue	0.8	2.2	0.0	0.0
Hwy 22 & 4th Ave. S	LOS	B	B	NA	A
	v/c	0.07	0.21	NA	0.03
	95% Queue	1.6	5.8	NA	0.6
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA	A	A
	v/c	0.15	NA	0.02	0.11
	95% Queue	3.9	NA	0.6	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 9: Traffic Capacity Analysis – 2014 100th Highest Hour AM Background Traffic Conditions

2014 100th Highest Hour – Background PM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	NA	A	A
	v/c	NA	NA	0.11	0.00
	95% Queue (m)	NA	NA	0.0	0.0
Hwy 7 & 6th St. E	LOS	A	A	B	NA
	v/c	0.00	0.00	0.02	NA
	95% Queue (m)	0.0	0.1	0.5	NA
Hwy 7 & 3rd St. E	LOS	A	A	B	B
	v/c	0.03	0.00	0.01	0.17
	95% Queue (m)	0.6	0.0	0.2	4.6
Hwy 7 & 1st St. E	LOS	A	A	B	NA
	v/c	0.19	0.04	0.08	NA
	95% Queue (m)	0.0	0.8	1.9	NA
Hwy 7 & Hwy 22	LOS	C	E	C	B
	v/c	0.61	0.88	0.49	0.14
	95% Queue (m)	NA	NA	NA	NA
Hwy 22 & 1st St. W	LOS	A	A	B	B
	v/c	0.01	0.02	0.06	0.02
	95% Queue (m)	0.2	0.5	1.5	0.5
Hwy 22 & 3rd St. W	LOS	A	A	C	C
	v/c	0.01	0.02	0.19	0.17
	95% Queue (m)	0.3	0.5	5.3	4.6
Hwy 22 & 1st Ave. S	LOS	B	A	A	NA
	v/c	0.04	0.01	0.11	NA
	95% Queue (m)	1.0	0.2	0.0	NA
Hwy 22 & 2nd Ave. S	LOS	B	B	A	A
	v/c	0.02	0.08	0.00	0.01
	95% Queue (m)	0.5	2.0	0.1	0.2
Hwy 22 & 4th Ave. S	LOS	C	B	A	A
	v/c	0.03	0.09	0.00	0.04
	95% Queue (m)	0.7	2.3	0.0	1.1
Hwy 22 & Willow Ridge Blvd.	LOS	NA	NA	A	A
	v/c	NA	NA	0.02	0.13
	95% Queue (m)	NA	NA	0.4	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 10: Traffic Capacity Analysis – 2014 100th Highest Hour PM Background Traffic Conditions

2014 100th Highest Hour – Background AM Traffic Conditions – Signalized					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & Hwy 22	LOS	C	C	C	A
	v/c	0.75	0.84	0.80	0.19
	95% Queue (m)	44.0	44.7	34.2	4.6

Table 11: Traffic Capacity Analysis – Highway 7 and Highway 22 Signalized – Background AM Traffic Conditions

2014 100th Highest Hour – Background PM Traffic Conditions – Signalized					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & Hwy 22	LOS	A	C	B	B
	v/c	0.48	0.81	0.67	0.17
	95% Queue (m)	34.4	92.0	34.2	10.0

Table 12: Traffic Capacity Analysis – Highway 7 and Highway 22 Signalized – Background PM Traffic Conditions

7.1.2 10 Year Horizon Background Traffic Conditions – 2024

Most of the intersections are operating at a LOS D or greater. The intersection of Highway 7 and 3rd Street East required a Type IVc intersection treatment in order to increase the through movement capacity of the westbound and eastbound traffic so that the minor street would have acceptable gap opportunities to make their turn movements. The results from the Traffic Capacity Analysis for the 10 Year Horizon Background Traffic Conditions are found in Tables 13 and 14.

Since the intersection of Hwy 7 and Hwy 22 warranted a signalization of the intersection in the existing conditions, this warrant was carried through to the 10 year horizon.

2024 – Background AM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.00	0.28	0.00
	95% Queue (m)	NA	0.1	0.0	0.0
Hwy 7 & 6th St. E	LOS	A	A	C	C
	v/c	0.00	0.01	0.01	0.07
	95% Queue (m)	0.0	0.2	0.2	1.6
Hwy 7 & 3rd St. E	LOS	A	A	D	B
	v/c	0.31	0.00	0.13	0.12
	95% Queue (m)	2.9	0.0	3.3	3.1
Hwy 7 & 1st St. E	LOS	A	A	B	NA
	v/c	0.34	0.00	0.19	NA
	95% Queue (m)	0.0	0.1	5.1	NA
Hwy 7 & Hwy 22	LOS	D	C	D	A
	v/c	0.95	0.80	0.96	0.23
	95% Queue (m)	69.1	55.9	58.6	10.3
Hwy 22 & 1st St. W	LOS	A	A	C	C
	v/c	0.02	0.03	0.18	0.03
	95% Queue (m)	0.5	0.7	4.8	0.8
Hwy 22 & 3rd St. W	LOS	A	A	D	D
	v/c	0.05	0.02	0.54	0.18
	95% Queue (m)	1.2	0.6	23.2	4.9
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.04	NA	0.01	0.17
	95% Queue (m)	1.0	NA	0.3	0.0
Hwy 22 & 2nd Ave. S	LOS	B	B	A	A
	v/c	0.06	0.08	0.00	0.00
	95% Queue (m)	0.6	1.9	0.0	0.0
Hwy 22 & 4th Ave. S	LOS	C	C	A	A
	v/c	0.12	0.33	0.00	0.03
	95% Queue (m)	3.0	10.8	0.1	0.8
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA	A	A
	v/c	0.22	NA	0.03	0.14
	95% Queue (m)	6.2	NA	0.7	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 13: Traffic Capacity Analysis – 2024 100th Highest Hour AM Background Traffic Conditions

2024 100th Highest Hour – PM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.00	0.14	0.00
	95% Queue (m)	NA	0.1	0.0	0.1
Hwy 7 & 6th St. E	LOS	A	A	C	NA
	v/c	0.00	0.00	0.03	NA
	95% Queue (m)	0.0	0.1	0.7	NA
Hwy 7 & 3rd St. E	LOS	A	A	C	C
	v/c	0.03	0.00	0.04	0.23
	95% Queue (m)	0.8	0.0	0.8	6.5
Hwy 7 & 1st St. E	LOS	A	A	B	NA
	v/c	0.27	0.05	0.13	NA
	95% Queue (m)	0.0	1.2	3.1	NA
Hwy 7 & Hwy 22	LOS	B	C	C	B
	v/c	0.56	0.86	0.77	0.19
	95% Queue (m)	51.2	116.4	60.3	13.3
Hwy 22 & 1st St. W	LOS	A	A	C	B
	v/c	0.01	0.03	0.09	0.03
	95% Queue (m)	0.3	0.6	2.4	0.7
Hwy 22 & 3rd St. W	LOS	A	A	C	C
	v/c	0.02	0.03	0.30	0.27
	95% Queue (m)	0.4	0.7	9.4	8.0
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.05	NA	0.01	0.13
	95% Queue (m)	1.2	NA	0.3	0.0
Hwy 22 & 2nd Ave. S	LOS	B	B	A	A
	v/c	0.03	0.10	0.01	0.01
	95% Queue (m)	0.8	2.5	0.2	0.2
Hwy 22 & 4th Ave. S	LOS	C	B	A	A
	v/c	0.05	0.12	0.01	0.06
	95% Queue (m)	1.2	3.0	0.2	1.4
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA	A	A
	v/c	0.09	NA	0.02	0.16
	95% Queue (m)	2.3	NA	0.5	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 14: Traffic Capacity Analysis – 2024 100th Highest Hour PM Background Traffic Conditions

7.1.3 20 Year Horizon Background Traffic Conditions – 2034

A majority of the intersections were operating at an acceptable LOS. There were some movements which did not meet acceptable LOS, these movements prompted the following upgrades in order to meet acceptable LOS as shown in Table 15 below.

The results from the Traffic Capacity Analysis for the 20 Year Horizon Background Traffic Conditions are found in Tables 16 and 17. Highway 7 and 4th Ave South has a LOS F due to the minor street left turn movements. Geometric upgrades were applied but it did not improve the LOS to an acceptable LOS. A Traffic Signal Warrant was conducted and it was found that the intersection did not warrant Traffic Signals. Traffic signals would be implemented when it is warranted.

Intersection	Upgrades Required – 2034 Background Traffic
Hwy 7 & 3rd St. East	• Traffic Signal
Hwy 22 & 3rd St. West	• Traffic Signal
Hwy 7 & Hwy 22	• All Directions – Right Turn Bays
Hwy 22 & 4th Ave South	• Type IVc intersection treatment

Table 15: Intersection Upgrades Required to Meet Acceptable LOS in the 2034 Background Traffic Conditions

2034 100th Highest Hour – AM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.01	0.33	0.00
	95% Queue (m)	NA	0.1	0.0	0.1
Hwy 7 & 6th St. E	LOS	A	A	C	C
	v/c	0.00	0.01	0.13	0.01
	95% Queue (m)	0.0	0.3	3.3	0.3
Hwy 7 & 3rd St. E	LOS	C	B	B	A
	v/c	0.92	0.53	0.06	0.20
	95% Queue (m)	133.2	49.5	6.6	9.0
Hwy 7 & 1st St. E	LOS	A	A	C	NA
	v/c	0.42	0.00	0.27	NA
	95% Queue (m)	0.0	0.1	8.2	NA
Hwy 7 & Hwy 22	LOS	C	D	D	A
	v/c	0.80	0.94	0.92	0.22
	95% Queue (m)	114.5	120.7	104.3	15.9
Hwy 22 & 1st St. W	LOS	A	A	D	D
	v/c	0.03	0.04	0.29	0.07
	95% Queue (m)	0.6	0.9	8.7	1.8
Hwy 22 & 3rd St. W	LOS	B	B	B	B
	v/c	0.62	0.80	0.55	0.12
	95% Queue (m)	59.1	114.1	29.6	8.3
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.05	NA	0.02	0.20
	95% Queue (m)	1.2	NA	0.4	0.0
Hwy 22 & 2nd Ave. S	LOS	C	C	A	A
	v/c	0.07	0.19	0.00	0.00
	95% Queue (m)	1.8	5.3	0.1	0.1
Hwy 22 & 4th Ave. S	LOS	F	D	A	A
	v/c	0.35	0.59	0.01	0.06
	95% Queue (m)	10.2	27.6	0.2	1.4
Hwy 22 & Willow Ridge Blvd.	LOS	C	NA	A	A
	v/c	0.30	NA	0.04	0.17
	95% Queue (m)	9.3	NA	0.9	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 16: Traffic Capacity Analysis – 2034 100th Highest Hour AM Background Traffic Conditions

2034 100th Highest Hour – PM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.00	0.17	0.00
	95% Queue (m)	NA	0.1	0.0	0.1
Hwy 7 & 6th St. E	LOS	A	A	C	C
	v/c	0.00	0.00	0.05	0.01
	95% Queue (m)	0.0	0.0	1.3	0.2
Hwy 7 & 3rd St. E	LOS	A	A	D	C
	v/c	0.05	0.00	0.06	0.33
	95% Queue (m)	1.1	0.0	1.4	10.6
Hwy 7 & 1st St. E	LOS	A	A	C	NA
	v/c	0.28	0.06	0.17	NA
	95% Queue (m)	0.0	1.4	4.6	NA
Hwy 7 & Hwy 22	LOS	A	D	C	B
	v/c	0.48	1.00	0.80	0.22
	95% Queue (m)	53.6	173.1	58	17.5
Hwy 22 & 1st St. W	LOS	A	A	C	C
	v/c	0.01	0.03	0.13	0.05
	95% Queue (m)	0.3	0.8	3.3	1.1
Hwy 22 & 3rd St. W	LOS	A	B	B	B
	v/c	0.53	0.69	0.30	0.25
	95% Queue (m)	31.8	46.1	14.8	13.7
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.07	NA	0.01	0.16
	95% Queue (m)	1.7	NA	0.3	0.0
Hwy 22 & 2nd Ave. S	LOS	B	B	A	A
	v/c	0.04	0.16	0.01	0.01
	95% Queue (m)	0.9	4.3	0.2	0.3
Hwy 22 & 4th Ave. S	LOS	C	B	A	A
	v/c	0.04	0.08	0.01	0.24
	95% Queue (m)	0.9	2.0	0.0	1.7
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA	A	A
	v/c	0.12	NA	0.03	0.19
	95% Queue (m)	3.2	NA	0.7	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 17: Traffic Capacity Analysis – 2034 100th Highest Hour PM Background Traffic Conditions

7.1.4 30 Year Horizon Background Traffic Conditions – 2044

With the increased traffic volume, a few intersection required intersection treatments in order to meet acceptable LOS. The following Table 18 summarizes the required upgrades for acceptable LOS.

Intersection	Upgrades Required – 2044 Background Traffic
Hwy 7 and Hwy 22	• Removing on-street parking between Hwy 22 and 1st St. West to Hwy 7 and 1st St. East
Hwy 22 and 4 Ave. South	• Traffic Signal

Table 18: Intersection Upgrades Required to Meet Acceptable LOS for the 2044 Background Conditions

Geometric upgrades were applied to the intersection of Hwy 7 and 6th East but improvements to the LOS did not change. Traffic signals were not warranted and would be implemented once it is warranted. The results from the Traffic Capacity Analysis for the 30 Year Horizon Background Traffic Conditions are found in Tables 19 and 20.

2044 100th Highest Hour – AM Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	C	A	A
	v/c	NA	0.01	0.43	0.00
	95% Queue (m)	NA	0.3	0.0	0.1
Hwy 7 & 6th St. E	LOS	A	A	E	C
	v/c	0.00	0.02	0.32	0.05
	95% Queue (m)	0.0	0.4	9.7	1.1
Hwy 7 & 3rd St. E	LOS	B	A	C	B
	v/c	0.86	0.59	0.22	0.46
	95% Queue (m)	116.8	48.8	9.8	12.3
Hwy 7 & 1st St. E	LOS	A	A	C	NA
	v/c	0.49	0.00	0.39	NA
	95% Queue (m)	0.0	0.1	13.4	NA
Hwy 7 & Hwy 22	LOS	A	C	C	B
	v/c	0.55	0.92	0.85	0.20
	95% Queue (m)	64.2	140.2	82.5	19.7
Hwy 22 & 1st St. W	LOS	A	A	D	D
	v/c	0.04	0.05	0.33	0.07
	95% Queue (m)	0.8	1.2	10.3	1.6
Hwy 22 & 3rd St. W	LOS	B	C	C	B
	v/c	0.66	0.88	0.70	0.15
	95% Queue (m)	77.0	168.6	45.0	11.2
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.07	NA	0.02	0.23
	95% Queue (m)	1.6	NA	0.5	0.0
Hwy 22 & 2nd Ave. S	LOS	D	C	A	A
	v/c	0.10	0.28	0.00	0.00
	95% Queue (m)	2.6	8.3	0.1	0.1

Hwy 22 & 4th Ave. S	LOS	B	B	A	A
	v/c	0.12	0.33	0.54	0.47
	95% Queue (m)	5.5	14.9	34.8	29.1
Hwy 22 & Willow Ridge Blvd.	LOS	C	NA	A	A
	v/c	0.42	NA	0.05	0.19
	95% Queue (m)	15.4	NA	1.1	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.				

Table 19: Traffic Capacity Analysis – 2044 100th Highest Hour AM Background Traffic Conditions

2044 100th Highest Hour – PM Background Traffic Conditions					
Intersection		Approach Movement			
		Eastbound	Westbound	Northbound	Southbound
Hwy 7 & RR23	LOS	NA	B	A	A
	v/c	NA	0.00	0.20	0.00
	95% Queue (m)	NA	0.1	0.0	0.1
Hwy 7 & 6th St. E	LOS	A	A	C	NA
	v/c	0.00	0.01	0.07	NA
	95% Queue (m)	0.0	0.1	1.7	NA
Hwy 7 & 3rd St. E	LOS	A	B	B	B
	v/c	0.50	0.72	0.04	0.38
	95% Queue (m)	32.0	58.7	4.2	15.2
Hwy 7 & 1st St. E	LOS	A	A	D	NA
	v/c	0.44	0.09	0.33	NA
	95% Queue (m)	0.0	2.2	10.6	NA
Hwy 7 & Hwy 22	LOS	A	C	C	B
	v/c	0.53	0.88	0.78	0.22
	95% Queue (m)	33.0	79.4	56.4	16.1
Hwy 22 & 1st St. W	LOS	A	A	D	C
	v/c	0.02	0.05	0.25	0.08
	95% Queue (m)	0.4	1.1	7.4	2.0
Hwy 22 & 3rd St. W	LOS	B	B	B	B
	v/c	0.74	0.77	0.39	0.32
	95% Queue (m)	70.6	74.2	18.9	17.6
Hwy 22 & 1st Ave. S	LOS	B	NA	A	A
	v/c	0.09	NA	0.02	0.19
	95% Queue (m)	2.2	NA	0.4	0.0
Hwy 22 & 2nd Ave. S	LOS	C	C	A	A
	v/c	0.07	0.23	0.01	0.01
	95% Queue (m)	1.6	6.6	0.2	0.3
Hwy 22 & 4th Ave. S	LOS	D	C	A	A
	v/c	0.10	0.22	0.00	0.09
	95% Queue (m)	2.5	6.1	0.0	2.1
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA	A	A
	v/c	0.16	NA	0.04	0.23
	95% Queue (m)	4.4	NA	0.8	0.0

Table 20: Traffic Capacity Analysis – 2044 100th Highest Hour PM Background Traffic Conditions

7.1.5 Summary of Background Traffic Conditions

A linear growth model with a 2.5% growth rate to project traffic volumes to 10, 20, 30 year horizons was used to project traffic volumes on the highway network. As the traffic volume increased with each 10 year horizons, intersection upgrades were required throughout the network in order to maintain an acceptable LOS.

Hwy 7 and Hwy 22 are heavily used as primary routes to get in and out of town. As you move towards the Town core, traffic volume becomes congested especially at the intersection of Hwy 7 and Hwy 22. Significant upgrades are required over the projected 10 year horizons in order to meet acceptable LOS in this particular intersection. In the current existing 2014 background conditions this Hwy 7 and 22 warrants signalization. However the lack of space restricts the installation of congenital traffic signals. An innovate method of “stringing up” the traffic signals should be reviewed and considered. As mentioned earlier in the study this method is beyond the scope of the study and requires further investigation by a Consultant if things were to proceed with the implementation of signalization.

The Town core will eventually require more capacity for through movement as 10 year horizons are reached. Four-laning the Town core by removing on street parking would resolve this capacity issue and improve traffic flow especially in the 30 Year horizon.

7.2 Traffic Capacity Analysis – Development Impact

7.2.1 2024 Development Impact – 10 Year Horizon

The 10 year development area is forecasted to occur just between 3rd St. East and 6th St. East as shown in Figure 3. The intersections directly impacted are the 3rd St. and 6th St. East along Hwy 7. It was assumed that the 6th St East road would be built and maintained by the Town.

Upgrades to the intersections were implemented in the traffic model as required to obtain an acceptable LOS as shown in Table 21. Based on the existing roadway infrastructure and the needs of the Town, the author implemented upgrades that would have the least impact to the Town's existing infrastructure.

The upgrades required are the signalization of Hwy 7 and 3rd St. East and Hwy 22 and 3rd St. West. It was found that Hwy 7 and Hwy 22 warranted signalization in the existing 2014 Background Traffic conditions, hence this upgrade was carried through. Roadway infrastructure upgrades were directed to the intersection of Hwy 7 and Hwy 22. In order to obtain acceptable LOS, the westbound approach requires a Left Turn Bay and the northbound approach requires Right Turn Bay. These could be accomplished by limiting on street parking and revising pavement markings. The turn bays would serve a majority of the traffic movements in and out of the Town's downtown core. The results from the Traffic Capacity Analysis for the 10 Year Horizon Development Impact are found in Tables 22 and 23.

Intersection	Upgrades Required – 2024 Development Impact
Hwy 7 & 6th St. East	• Traffic Signal
Hwy 7 & 3rd St. E	• Traffic Signal
Hwy 7 & Hwy 22	• Westbound – Left Turn Bay by limiting on street parking and revised pavement makings • Northbound – Right Turn Bay by limiting on street parking and revised pavement makings
Hwy 7 & 3rd St. W	• Traffic Signals

Table 21: Upgrades Required to Meet Acceptable LOS in the 2024 Development Impact

2024 Development Impact – AM Traffic Conditions							
Intersection		Approach Movement					
		Eastbound	Westbound		Northbound		Southbound
Hwy 7 & RR23	LOS	NA	C		A		A
	v/c	NA	0.01		0.44		0.00
	95% Queue (m)	NA	0.3		0.0		0.1
Hwy 7 & 6th St. E	LOS	B	B		B		B
	v/c	0.69	0.66		0.14		0.18
	95% Queue (m)	44.7	39.7		8.0		9.6
Hwy 7 & 3rd St. E	LOS	C	A		B		B
	v/c	0.94	0.55		0.32		0.36
	95% Queue (m)	145.9	48.2		15.0		16.6
Hwy 7 & 1st St. E	LOS	A	A		C		NA
	v/c	0.43	0.00		0.23		NA
	95% Queue (m)	0.0	0.1		17.4		NA
Hwy 7 & Hwy 22			WBL	WBT/R	NBT/L	NBR	
	LOS	C	B	B	C	A	B
	v/c	0.88	0.57	0.55	0.75	0.39	0.27
	95% Queue (m)	64.9	18.7	36.5	37.2	4.6	11.8
Hwy 22 & 1st St. W	LOS	A	A		D		D
	v/c	0.02	0.03		00.23		0.19
	95% Queue (m)	0.5	0.7		6.5		5.0
Hwy 22 & 3rd St. W	LOS	B	B		B		B
	v/c	0.62	0.75		0.47		0.16
	95% Queue (m)	51.2	69.7		24.1		11.1
Hwy 22 & 1st Ave. S	LOS	B	NA		A		A
	v/c	0.04	NA		0.01		0.19
	95% Queue (m)	1.0	NA		0.3		0.0
Hwy 22 & 2nd Ave. S	LOS	C	C		A		A
	v/c	0.05	0.14		0.00		0.00
	95% Queue (m)	1.1	3.6		0.0		0.0
Hwy 22 & 4th Ave. S	LOS	D	D		A		A
	v/c	0.23	0.50		0.01		0.05
	95% Queue (m)	6.5	20.6		0.1		1.2
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA		A		A
	v/c	0.23	NA		0.03		0.16
	95% Queue (m)	6.5	NA		0.8		0.0
*Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.						

Table 22: Traffic Capacity Analysis – 2024 Development Impact AM Traffic Conditions

2024 Development Impact – PM Traffic Conditions							
Intersection		Approach Movement					
		Eastbound	Westbound		Northbound		Southbound
Hwy 7 & RR23	LOS	NA	B		A		A
	v/c	NA	0.00		0.29		0.00
	95% Queue (m)	NA	0.0		0.0		0.1
Hwy 7 & 6th St. E	LOS	B	C		B		A
	v/c	0.48	0.82		0.02		0.25
	95% Queue (m)	38.4	76.9		3.9		17.8
Hwy 7 & 3rd St. E	LOS	B	C		B		C
	v/c	0.60	0.92		0.03		0.75
	95% Queue (m)	45.2	118.9		3.8		62.8
Hwy 7 & 1st St. E	LOS	A	A		C		NA
	v/c	0.30	0.05		0.13		NA
	95% Queue (m)	0.0	1.1		3.3		NA
Hwy 7 & Hwy 22			WBL	WBT/R	NBT/L	NBR	
	LOS	C	D	B	C	A	B
	v/c	0.95	0.91	0.76	0.64	0.37	0.26
	95% Queue (m)	69.3	36.9	56.1	34.8	5.1	13.7
Hwy 22 & 1st St. W	LOS	A	A		C		C
	v/c	0.01	0.03		0.12		0.04
	95% Queue (m)	0.3	0.7		3.1		1.0
Hwy 22 & 3rd St. W	LOS	B	C		A		B
	v/c	0.68	0.79		0.14		0.11
	95% Queue (m)	50.9	63.5		10.5		9.8
Hwy 22 & 1st Ave. S	LOS	B	NA		A		A
	v/c	0.06	NA		0.01		0.15
	95% Queue (m)	1.4	NA		0.3		0.0
Hwy 22 & 2nd Ave. S	LOS	B	B		A		A
	v/c	0.03	0.10		0.01		0.01
	95% Queue (m)	0.8	2.4		0.1		0.2
Hwy 22 & 4th Ave. S	LOS	C	C		A		A
	v/c	0.09	0.16		0.01		0.08
	95% Queue (m)	2.3	4.3		0.2		2.0
Hwy 22 & Willow Ridge Blvd.	LOS	B	NA		A		A
	v/c	0.10	NA		0.02		0.18
	95% Queue (m)	2.6	NA		0.6		0.0

Table 23: Traffic Capacity Analysis – 2024 Development Impact PM Traffic Conditions

7.2.2 2034 Development Impact – 20 Year Horizon

The 20 year development horizon is planned to be developed on the lands east of 6th St. East to the gravel road RR 23 as shown in Figure 3. The Town also expects that the core downtown of the Town to redevelop and intensify as the Town continues to grow as shown in Figure 4. The intersection significantly affected by this development is 6th St. East as it is the only entrance to the development coming from the East. It was assumed that RR 23 would be taken over and maintained by the Town, thus providing an alternate route to the proposed development.

Upgrades to the intersections were implemented in the traffic model as required to obtain an acceptable LOS. Based on the existing roadway infrastructure and the needs of the Town, the upgrades implemented would have the least impact to the Town's existing infrastructure. The upgrades are summarized in Table 24. Upgrades from the 10 Year Development Impact horizon were carried to the 20 Year horizon.

The upgrades required include the twinning of Hwy 7 inside the Town and outside the Town. The author recommends that by getting rid of on street parking and revising pavement markings, Hwy 7 within the Town limits would be able to transition into a 4-lane highway increasing capacity and providing a better LOS. Hwy 7 and 6th St. East and Hwy 22 and 4th Ave South intersections would need to be signalized as well. Hwy 7 and 6th St. East would also require a free channelized right turn in the Northbound approach.

It was found that the minor streets of the intersection of Highway 22 and 1st Street West were operating at a LOS F. Geometric upgrades were applied to the intersection but had little to no improvement on the LOS. Signalizing the intersection was not feasible as the nearest signalized intersection is approximately 128m away. Unfortunately there isn't much that can be done to improve the LOS. It is expected that motorist will either wait for an acceptable gap to make their turn or revise their route to meet their needs.

The intersection of Hwy 7 and Hwy 22 experiences a LOS E in the northbound direction. Further geometric upgrades cannot be applied without significantly impacting the surrounding existing infrastructure, It is assumed that motorist will likely take an alternate route or wait to make their turn movement.

With the forecasted development, it is imperative that the intersection of Hwy 7 and RR 23 be utilized in order to divert traffic from Hwy 7 and 6th St. East as well as divert traffic away from the Town's downtown core. By developing RR 23 into a collector standard, it would provide a majority of the access for the 20 Year development and by connecting it to 4th Ave. South it would also provide an alternate route to the Town. With the utilization of Hwy 7 and RR23, a channelized free right turn would be required in the westbound approach to accommodate the diverted traffic using this route to exit the Town specifically in the morning traffic commute. RR23 would also need to be realigned due to its close proximity to the intersection at Hwy 7.The results from the traffic capacity analysis can be found in Table 25 and 26.

Intersection	Upgrades Required – 2034 Development Impact
Hwy 7 & RR23	• Westbound – Channelized Free Right Turn • Northbound / Southbound – Twinning
Hwy 7 & 6th St. East	• Eastbound / Westbound – Twinning • Northbound – Channelized Free Right Turn
Hwy 22 & 3rd St. W	• Eastbound / Westbound – Twinning
Hwy 7 & Hwy 22	• All Directions – Twinning
Hwy 22 & 1st St. West	• Eastbound / Westbound – Twinning
Hwy 22 & 3rd St. West	• Eastbound / Westbound – Twinning
Hwy 22 & 4th Ave South	• Traffic Signals

Table 24: Upgrades Required to Meet Acceptable LOS in the 20 Year Horizon

2034 Development Impact – AM Traffic Conditions													
Intersection		Approach Movement											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Hwy 7 & RR23	LOS	NA	NA	NA	NA	NA	D	NA	A	A	C	A	NA
	v/c	NA	NA	NA	NA	NA	0.75	NA	0.44	0.22	0.72	0.72	NA
	95% Queue	NA	NA	NA	NA	NA	47.7	NA	0.0	0.0	45.1	45.1	NA
Hwy 7 & 6th St. E	LOS	B	B	B	C	C	C	D	D	C	C	C	C
	v/c	0.62	0.62	0.62	1.36	1.36	1.36	0.60	0.60	0.73	0.21	0.21	0.21
	95% Queue	68.3	68.3	68.3	139.6	139.6	139.6	44.2	44.2	59.7	15.4	15.4	15.4
Hwy 7 & 3rd St. E	LOS	C	C	C	A	A	A	B	B	B	B	B	B
	v/c	0.94	0.94	0.94	0.38	0.38	0.38	0.35	0.35	0.35	0.41	0.41	0.41
	95% Queue	112.0	112.0	112.0	31.1	31.1	31.1	17.4	17.4	17.4	19.3	19.3	19.3
Hwy 7 & 1st St. E	LOS	NA	A	A	A	A	NA	C	C	C	NA	NA	NA
	v/c	NA	0.48	0.28	0.11	0.19	NA	0.26	0.26	0.26	NA	NA	NA
	95% Queue	NA	0.0	0.0	2.7	2.7	NA	7.8	7.8	7.8	NA	NA	NA
Hwy 7 & Hwy 22	LOS	C	C	C	C	C	C	D	D	D	A	A	A
	v/c	0.97	0.97	0.97	1.80	1.80	1.80	0.94	0.94	0.94	0.35	0.35	0.35
	95% Queue	60.4	60.4	60.4	41.4	41.4	41.4	35.7	35.7	35.7	6.9	6.9	6.9
Hwy 22 & 1st St. W	LOS	A	A	A	A	A	A	E	E	E	F	F	F
	v/c	0.03	0.34	0.34	0.05	0.21	0.21	0.49	0.49	0.49	0.57	0.57	0.57
	95% Queue	0.7	0.7	0.0	1.3	1.3	0	18.5	18.5	18.5	19.9	19.9	19.9
Hwy 22 & 3rd St. W	LOS	B	B	B	B	B	B	A	A	A	A	A	A
	v/c	0.80	0.80	0.80	0.64	0.64	0.64	0.36	0.36	0.36	0.08	0.08	0.08
	95% Queue	60.6	60.6	60.6	33.0	33.0	33.0	18.8	18.8	18.8	6.2	6.2	6.2
Hwy 22 & 1st	LOS	B	NA	B	NA	NA	NA	A	A	NA	NA	A	A

Ave. S	v/c	0.06	NA	0.06	NA	NA	NA	0.02	0.02	NA	NA	0.14	0.07
	95% Queue	1.4	NA	1.4	NA	NA	NA	0.4	0.4	NA	NA	0.0	0.0
Hwy 22 & 2nd Ave. S	LOS	C	C	C	C	C	C	A	A	A	A	A	NA
	v/c	0.08	0.08	0.08	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	NA
	95% Queue	2.0	2.0	2.0	7.0	7.0	7.0	0.1	0.1	0.1	0.1	0.1	NA
Hwy 22 & 4th Ave. S	LOS	B	B	B	B	B	B	B	B	B	B	B	B
	v/c	0.11	0.11	0.11	0.57	0.57	0.57	0.66	0.66	0.66	0.59	0.59	0.59
	95% Queue	7.0	7.0	7.0	28.0	28.0	28.0	45.7	45.7	45.7	38.1	38.1	38.1
Hwy 22 & Willow Ridge Blvd.	LOS	D	D	D	NA	NA	NA	A	A	A	A	A	A
	v/c	0.47	0.47	0.47	NA	NA	NA	0.04	0.04	0.04	0.00	0.00	0.00
	95% Queue	17.8	17.8	17.8	NA	NA	NA	1.0	1.0	1.0	0.0	0.0	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.												

Table 25: Traffic Capacity Analysis – 2034 Development Impact AM Traffic Conditions

2034 Development Impact – PM Traffic Conditions													
Intersection		Approach Movement											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Hwy 7 & RR23	LOS	NA	NA	NA	NA	NA	B	NA	A	NA	C	A	NA
	v/c	NA	NA	NA	NA	NA	0.00	NA	0.27	NA	0.69	0.69	NA
	95% Queue	NA	NA	NA	NA	NA	0.0	NA	0.0	NA	41.4	42.4	NA
Hwy 7 & 6th St. E	LOS	A	A	A	C	C	C	D	D	A	C	C	C
	v/c	0.40	0.40	0.40	1.40	1.40	1.40	0.62	0.62	0.50	0.42	0.42	0.42
	95% Queue	27.8	27.8	27.8	108.8	108.8	108.8	49.9	49.9	17.5	27.3	27.3	27.3
Hwy 7 & 3rd St. E	LOS	C	C	C	D	D	D	A	A	A	A	A	A
	v/c	0.81	0.81	0.81	0.93	0.93	0.93	0.14	0.14	0.14	0.46	0.46	0.46
	95% Queue	56.5	56.5	56.5	62.7	62.7	62.7	6.0	6.0	6.0	24.8	24.8	24.8
Hwy 7 & 1st St. E	LOS	NA	A	A	A	A	NA	C	NA	C	NA	NA	NA
	v/c	NA	0.31	0.19	0.08	0.24	NA	0.21	NA	0.21	NA	NA	NA
	95% Queue	NA	0.0	0.0	2.0	2.0	NA	5.8	NA	5.8	NA	NA	NA
Hwy 7 & Hwy 22	LOS	B	B	B	D	D	D	E	E	E	B	B	B
	v/c	0.86	0.86	0.86	1.38	1.38	1.38	1.00	1.00	1.00	0.29	0.29	0.29
	95% Queue	67.8	67.8	67.8	68.4	68.4	68.4	46.8	46.8	46.8	10.6	10.6	10.6
Hwy 22 & 1st St. W	LOS	A	A	A	A	A	A	D	D	D	D	D	D
	v/c	0.02	0.27	0.27	0.05	0.20	0.20	0.25	0.25	0.25	0.10	0.10	0.10
	95% Queue	0.4	0.4	0.0	1.2	1.2	0.0	7.0	7.0	7.0	2.4	2.4	2.4
Hwy 22 & 3rd St. W	LOS	B	B	B	B	B	B	A	A	A	A	A	A
	v/c	0.73	0.73	0.73	0.57	0.57	0.57	0.17	0.17	0.17	0.14	0.14	0.14
	95% Queue	45.9	45.9	45.9	29.5	29.5	29.5	10.5	10.5	10.5	9.8	9.8	9.8
Hwy 22 & 1st Ave. S	LOS	B	NA	B	NA	NA	NA	A	A	NA	NA	A	A
	v/c	0.10	NA	0.10	NA	NA	NA	0.02	0.02	NA	NA	0.15	0.15
	95% Queue	2.6	NA	2.6	NA	NA	NA	0.4	0.4	NA	NA	0.0	0.0
Hwy 22 & 2nd Ave. S	LOS	B	B	B	C	C	C	A	A	A	A	A	A
	v/c	0.04	0.04	0.04	0.19	0.19	0.19	0.01	0.01	0.01	0.01	0.01	0.01
	95% Queue	1.0	1.0	1.0	5.1	5.1	5.1	0.2	0.2	0.2	0.3	0.3	0.3
Hwy 22 & 4th Ave. S	LOS	B	B	B	C	C	C	A	A	A	B	B	B
	v/c	0.08	0.08	0.08	0.62	0.62	0.62	0.46	0.46	0.46	0.69	0.69	0.69
	95% Queue	4.5	4.5	4.5	17.7	17.7	17.7	31.7	31.7	31.7	54.2	54.2	54.2
Hwy 22 & Willow Ridge Blvd.	LOS	C	NA	C	NA	NA	NA	A	A	A	A	A	A
	v/c	0.20	NA	0.20	NA	NA	NA	0.03	0.03	0.03	0.00	0.00	0.00
	95% Queue	5.5	NA	5.5	NA	NA	NA	0.8	0.8	0.8	0.0	0.0	0.0
Note	For traffic circles and all-way stops, the method does not define a queue, so none is shown.												

Table 26: Traffic Capacity Analysis – 2034 Development Impact PM Traffic Conditions

7.2.3 2044 Development Impact – 30 Year Horizon

The 30 year development horizon is planned to be developed on the lands south of 5th Ave. South as shown in Figure 3. Intersections along Hwy 7 East and Hwy 2 South would be greatly impacted as the key entrances to the development are the 6th St. East intersection along Hwy 7 and Willow Ridge Blvd intersection along Hwy 22.

The traffic growth due to the 30 Year horizon, brought about upgrades to the roadway infrastructure that was deemed not feasible, due to the land space necessary to implement these upgrades. The Town's existing building infrastructure along Hwy 7 and Hwy 22 would be significantly affected.

Nevertheless the 30 Year Horizon Development impact traffic analysis was conducted and upgrades to the intersections were implemented in the traffic model as required to obtain an acceptable LOS as shown in Table 27. Based on the existing roadway infrastructure and the needs of the Town, the author implemented upgrades that would have the least impact to the Town's existing infrastructure. Overall most intersections operated at an acceptable LOS. There were movements that did not meet the minimum LOS but these movements had significantly less traffic than their counterparts and upgrading the infrastructure for these movements were significantly not feasible. It is expected that motorists will adapt and revise their route to which allows them to reach their destination in the shortest amount of time.

It was identified that a local bypass route at RR23 connecting to the intersection of Hwy 22 and Willow Ridge Blvd. was necessary in making the transportation network operate at an acceptable LOS. This route was critical in diverting traffic away from the Town's downtown area as much as possible. If built properly to accommodate commercial trucks, it would relieve Hwy 7 and Hwy 22's eastbound heavy vehicle traffic within the Town and resolve the issue with turning movements of eastbound commercial trucks at the intersection of Hwy 7 and Hwy 22. Diverting traffic to this route would require further upgrades to the intersection of Hwy 7 and RR23. The intersection would have to be signalized and dual left turns would be needed to accommodate the traffic diverted to this route as shown in Figure 19.



Figure 19: Highway 7 and Range Road 23 Required Upgrades

Intersection	Upgrades Required – 2044 Development Impact
Hwy 7 & RR23	• Traffic Signals • Southbound – Dual Left Turns
Hwy 7 & 6th St. East	• Westbound – Dual Left Turns • Eastbound – Left Turn Bay • Northbound / Southbound – Twinning
Hwy 7 & Hwy 22	• Westbound – Left Turn Bay • Eastbound / Northbound – Dual Left Turns • Eastbound – Channelized Free Right Turn
Hwy 22 & 1st St. West	• Eastbound – Left Turn Bay
Hwy 22 & 1st Ave. South	• Southbound / Northbound - Twinning
Hwy 22 & 2nd Ave. South	• Southbound / Northbound – Twinning
Hwy 22 & 4th Ave. South	• Eastbound / Westbound – Twinning • Northbound / Southbound – Twinning • Southbound – Left Turn Bay
Hwy 22 & Willow Ridge Blvd.	• All Directions - Twinning

Table 27: Upgrades Required to Meet Acceptable LOS in the 2044 Development Impact

2044 Development Impact – AM Traffic Conditions													
Intersection		Approach Movement											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Hwy 7 & RR23	LOS	NA	NA	NA	NA	NA	A	NA	B	NA	D	A	NA
	v/c	NA	NA	NA	NA	NA	0.43	NA	0.84	NA	0.84	0.49	NA
	95% Queue	NA	NA	NA	NA	NA	0.0	NA	218.2	NA	83.3	0.0	NA
Hwy 7 & 6th St. E	LOS	C	B	B	C	D	A	C	C	A	D	C	C
	v/c	0.49	0.73	0.73	0.80	1.00	0.06	0.31	0.31	0.35	0.18	0.01	0.01
	95% Queue	13.8	105.3	105.3	38.6	273.0	2.7	25.6	25.6	0.0	16.7	0.0	0.0
Hwy 7 & 3rd St. E	LOS	D	D	D	A	A	A	D	D	D	B	B	B
	v/c	1.02	1.02	1.02	0.55	0.55	0.55	0.63	0.63	0.63	0.43	0.43	0.43
	95% Queue	81.1	81.1	81.1	78.2	78.2	78.2	18.3	18.3	18.3	16.5	16.5	16.5
Hwy 7 & 1st St. E	LOS	NA	A	A	A	A	NA	C	NA	C	NA	NA	NA
	v/c	NA	0.50	0.30	0.11	0.29	NA	0.39	NA	0.39	NA	NA	NA
	95% Queue	NA	0.0	0.0	2.9	2.9	NA	13.8	NA	13.8	NA	NA	NA
Hwy 7 & Hwy 22	LOS	C	D	B	E	B	B	E	A	A	C	C	C
	v/c	0.32	0.98	0.72	0.99	0.40	0.40	0.97	0.30	0.30	0.61	0.61	0.61
	95% Queue	16.3	100.0	11.7	44.3	36.8	36.8	47.7	4.5	4.5	21.4	21.4	21.4
Hwy 22 & 1st St. W	LOS	B	A	A	A	A	A	F	F	F	F	F	F
	v/c	0.05	0.51	0.31	0.08	0.35	0.35	0.64	0.64	0.64	0.65	0.65	0.65
	95% Queue	1.1	0.0	0.0	2.0	2.0	2.0	24.2	24.2	24.2	22.8	22.8	22.8
Hwy 22 & 3rd St. W	LOS	B	B	B	B	B	B	B	B	B	B	B	B
	v/c	0.84	0.84	0.84	0.75	0.75	0.75	0.55	0.55	0.55	0.13	0.13	0.13
	95% Queue	87.4	87.4	87.4	63.6	63.6	63.6	16.8	16.8	16.8	10.4	10.4	10.4
Hwy 22 & 1st Ave. S	LOS	C	NA	C	NA	NA	NA	A	A	NA	NA	A	A
	v/c	0.10	NA	0.10	NA	NA	NA	0.04	0.28	NA	NA	0.41	0.21
	95% Queue	2.6	NA	2.6	NA	NA	NA	0.9	0.9	NA	NA	0.0	0.0
Hwy 22 & 2nd Ave. S	LOS	E	E	E	E	E	E	A	A	A	A	A	A
	v/c	0.20	0.20	0.20	0.43	0.43	0.43	0.01	0.22	0.22	0.00	0.27	0.27
	95% Queue	5.4	5.4	5.4	15.0	15.0	15.0	0.1	0.1	0.0	0.1	0.1	0.1
Hwy 22 & 4th Ave. S	LOS	D	D	D	D	D	D	D	D	D	F	A	A
	v/c	0.20	0.20	0.20	0.76	0.76	0.76	0.86	0.86	0.86	1.10	0.41	0.41
	95% Queue	8.6	8.6	8.6	29.4	29.4	29.4	106.3	106.3	106.3	169.1	32.7	32.7
Hwy 22 & Willow Ridge Blvd.	LOS	B	B	B	A	A	A	B	B	B	A	A	A
	v/c	0.29	0.29	0.29	0.44	0.44	0.44	0.47	0.47	0.47	0.34	0.34	0.34
	95% Queue	8.5	8.5	8.5	10.7	10.7	10.7	33.3	33.3	33.3	22.3	22.3	22.3

Table 28: Traffic Capacity Analysis – 2044 Development Impact AM Traffic Conditions

2044 Development Impact – PM Traffic Conditions													
Intersection		Approach Movement											
		Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Hwy 7 & RR23	LOS	NA	NA	NA	NA	NA	A	NA	B	NA	B	B	NA
	v/c	NA	NA	NA	NA	NA	0.11	NA	0.73	NA	0.73	0.73	NA
	95% Queue	NA	NA	NA	NA	NA	0.0	NA	73.6	NA	73.6	73.6	NA
Hwy 7 & 6th St. E	LOS	A	E	E	E	A	A	D	NA	NA	C	A	A
	v/c	0.04	1.02	1.02	1.01	0.51	0.51	0.71	NA	NA	0.29	0.09	0.09
	95% Queue	1.9	172.2	172.2	107.4	77.0	77.0	60.1	NA	NA	24.4	0.0	0.0
Hwy 7 & 3rd St. E	LOS	C	C	C	D	D	D	C	C	C	F	F	F
	v/c	0.89	0.89	0.89	1.00	1.00	1.00	0.31	0.31	0.31	1.14	1.14	1.14
	95% Queue	151.5	151.5	151.5	185.6	185.6	185.6	22.7	22.7	22.7	121.6	121.6	121.6
Hwy 7 & 1st St. E	LOS	NA	A	A	A	A	NA	D	NA	D	NA	NA	NA
	v/c	NA	0.62	0.35	0.16	0.47	NA	0.29	NA	0.29	NA	NA	NA
	95% Queue	NA	0.0	0.0	4.3	4.3	NA	8.9	NA	8.9	NA	NA	NA
Hwy 7 & Hwy 22	LOS	C	F	C	F	B	B	D	E	E	D	D	D
	v/c	0.25	1.08	0.84	1.11	0.43	0.43	0.85	1.64	1.64	0.55	0.55	0.55
	95% Queue	15.7	163.8	51.5	94.0	54.2	54.2	69.0	102.0	102.0	20.6	20.6	20.6
Hwy 22 & 1st St. W	LOS	A	A	A	A	A	A	F	F	F	F	F	F
	v/c	0.02	0.56	0.30	0.08	0.23	0.23	0.75	0.75	0.75	0.28	0.28	0.28
	95% Queue	0.6	0.0	0.0	1.9	1.9	0.0	26.8	26.8	26.8	7.5	7.5	7.5
Hwy 22 & 3rd St. W	LOS	C	C	C	A	A	A	B	B	B	B	B	B
	v/c	0.92	0.92	0.92	0.58	0.58	0.58	0.30	0.30	0.30	0.24	0.24	0.24
	95% Queue	140.7	140.7	140.7	38.7	38.7	38.7	21.0	21.0	21.0	18.9	18.9	18.9
Hwy 22 & 1st Ave. S	LOS	D	NA	D	NA	NA	NA	A	A	NA	NA	A	A
	v/c	0.24	NA	0.24	NA	NA	NA	0.05	0.50	NA	NA	0.51	0.26
	95% Queue	6.9	NA	6.9	NA	NA	NA	1.1	1.1	NA	NA	0.0	0.0
Hwy 22 & 2nd Ave. S	LOS	F	F	F	F	F	F	A	A	A	A	A	A
	v/c	0.28	0.28	0.28	0.65	0.65	0.65	0.02	0.38	0.38	0.02	0.38	0.38
	95% Queue	7.9	7.9	7.9	25.9	25.9	25.9	0.5	0.5	0.0	0.6	0.6	0.0
Hwy 22 & 4th Ave. S	LOS	C	C	C	B	B	B	B	B	B	B	A	A
	v/c	0.07	0.07	0.07	0.51	0.51	0.51	0.73	0.73	0.73	0.54	0.69	0.69
	95% Queue	3.3	3.3	3.3	10.4	10.4	10.4	66.3	66.3	66.3	9.3	48.1	48.1
Hwy 22 & Willow Ridge Blvd.	LOS	C	C	C	E	E	E	B	B	B	E	E	E
	v/c	0.21	0.21	0.21	1.27	1.27	1.27	0.36	0.36	0.36	1.76	1.76	1.76
	95% Queue	13.8	13.8	13.8	139.5	139.5	139.5	46.2	46.2	46.2	232.9	232.9	232.9

Table 29: Traffic Capacity Analysis – 2044 Development Impact PM Traffic Conditions

8.0 Conclusions and Recommendations

8.1 Background Traffic Volumes

A majority of the traffic volume primarily relies on Hwy 7 and Hwy 22. Analyzing the Town's existing traffic volume, it was found that the intersection not meeting the minimum LOS is the intersection of Hwy 7 and Hwy 22 with the eastbound, westbound and northbound approaches having a LOS F. Signalizing this intersection would improve LOS to LOS C for the three approaches. As mentioned earlier in the study, the lack of space due to existing Town infrastructure restricts the installation of conventional traffic signals. It was suggested that an innovated method of "stringing up" the traffic signals should be looked at in further detail.

Using a linear growth model with a 2.5% growth rate to project traffic volumes to 10, 20, 30 year horizons, it was found that most intersections are operating at an acceptable LOS. A majority of the approaches that do not meet acceptable LOS are approaches from a minor road turning into a major road. It is expected that these motorist will either wait for an acceptable gap to make their turn or revise their route to meet their needs.

With increasing traffic volume over the 10, 20 and 30 year horizons, it was found that eastbound and westbound traffic capacity as you enter the Town core would need to be increased to meet through entering and exiting the Town.

8.2 Traffic Volumes Impacted by Development

Development within the Town is to progress on the east side of Town as shown in Figure 3 and re-densification of the downtown core as shown in Figure 4. At the 10 Year Horizon the intersections greatly impacted are, 3rd St. East and 6th St. East along Highway 7, both warranting signalization. Hwy 7 and Hwy 22 will also require an eastbound left turn bay and a northbound right turn bay to meet the increased traffic volume in the Town's downtown core. It is recommended that the 6 St. East road be built and maintained by the Town. It would be ideal if 6th St. East extends all the way south to connect to 4th Ave South, as this will help alleviate traffic from the Town's downtown core and improve traffic flow by providing an alternate route as shown in Figure 18.

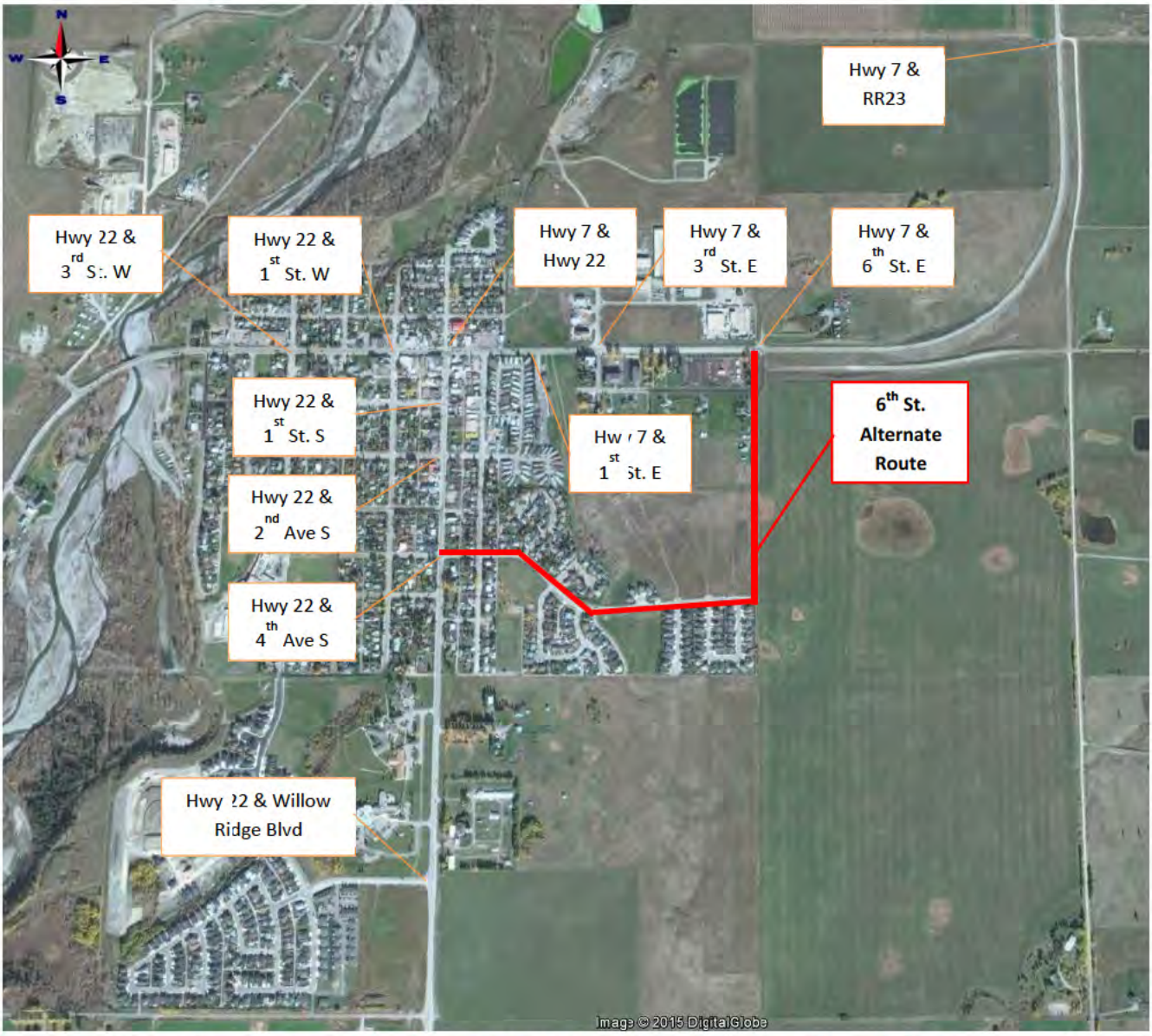


Figure 20: 20 Year Horizon Development Impact - 6 Street East Recommended Alternate Route

At the 20 Year Horizon, development is expected to more than double the 10 Year Horizon development. 6th St. East along Highway 7 will be significantly impacted as it is the only gateway to the development. It is recommended that RR 23 be built into a collector standard and maintained by the Town to provide an alternate access to and from the development. It would be ideal if this road extended all the way south to the Willow Ridge Blvd intersection on Hwy 22, to provide an alternate route as shown in Figure 19. If built properly to accommodate commercial trucks, it could serve as an alternate route for commercial heavy vehicles commuting east, which would relieve the movement of eastbound commercial heavy vehicle traffic within the Town. This route would be more ideal for commercial heavy vehicles because it would impact less residential development compared to using the 6th St. East route for commercial heavy vehicles.

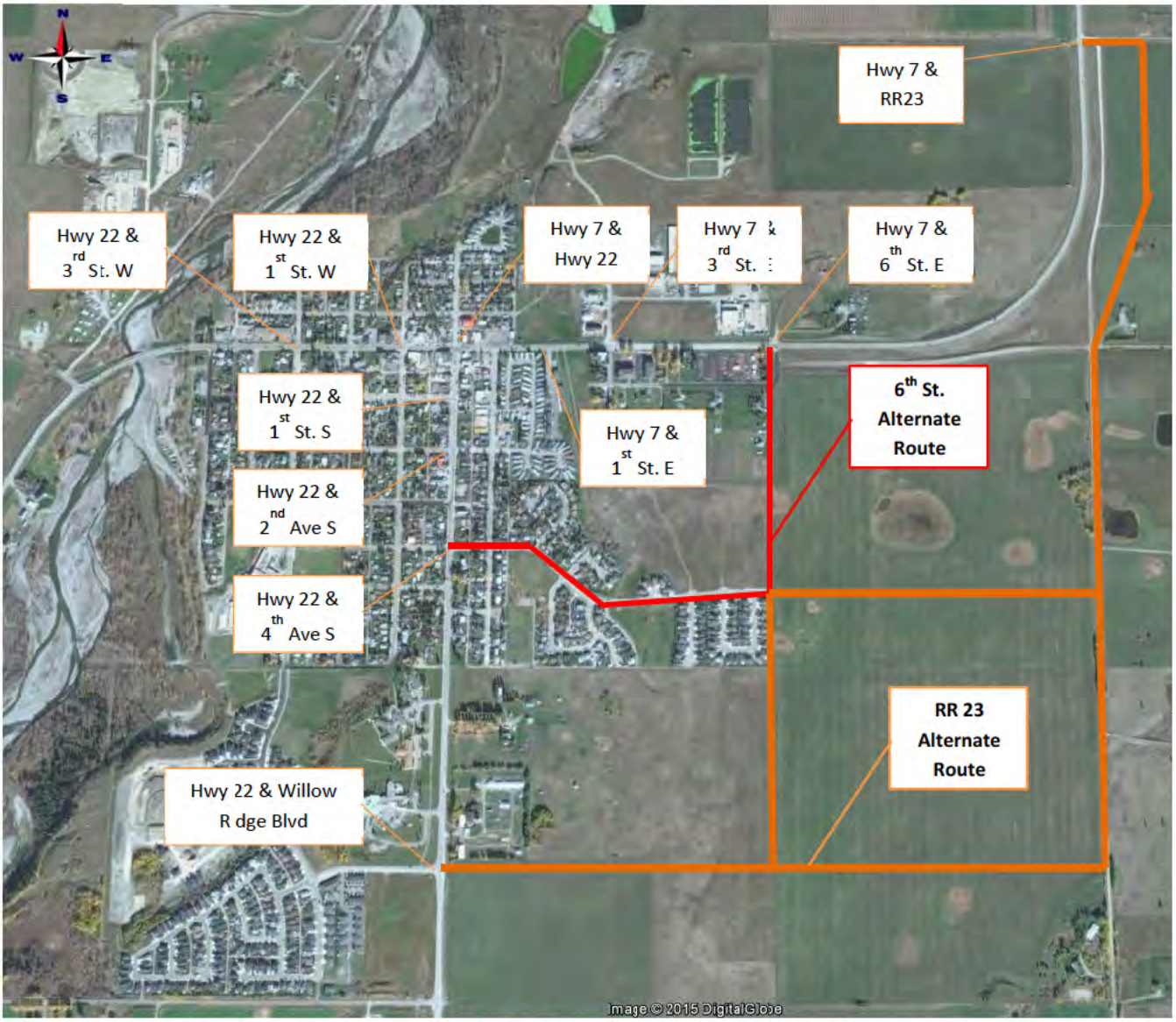


Figure 21: 2 Year Horizon Development Impact – Range Road 23 Recommended Alternate Route

It was determined that at the 30 Year Horizon development phase, the upgrades required to the roadway infrastructure was deemed not feasible as it requires significant land space which would adversely impact the Town's existing building infrastructure. A possible bypass of the Town would have to be implemented to maintain a high level of service on they highway. This horizon may be longer if development does not proceed as expected.

8.3 Proposed Cross Sections to Accommodate Future Volumes

With the increased traffic volume from the developments and re-densification of the Town core, Highway 7 and Highway 22 in the east/west direction would need to be four-laned in order to meet the forecasted traffic demands. Fortunately Alberta Transportation owns adequate Highway Right of Way to implement this twinning. Figure 22 shows a map of the roadway right of way through Town. Four laning of the paved roadway can be achieved by removing on-street parking and revising pavement markings. Proposed cross-sections as shown in Figures 23-37 make a comparison between the existing cross-section and what is proposed. A boulevard is implemented where necessary to provide a physical barrier between the pedestrians and the motorists. The proposed ultimate configurations are conceptual and further design detail would be required during the design stage if these upgrades are to be implemented.



Figure 22: Roadway Right of Way

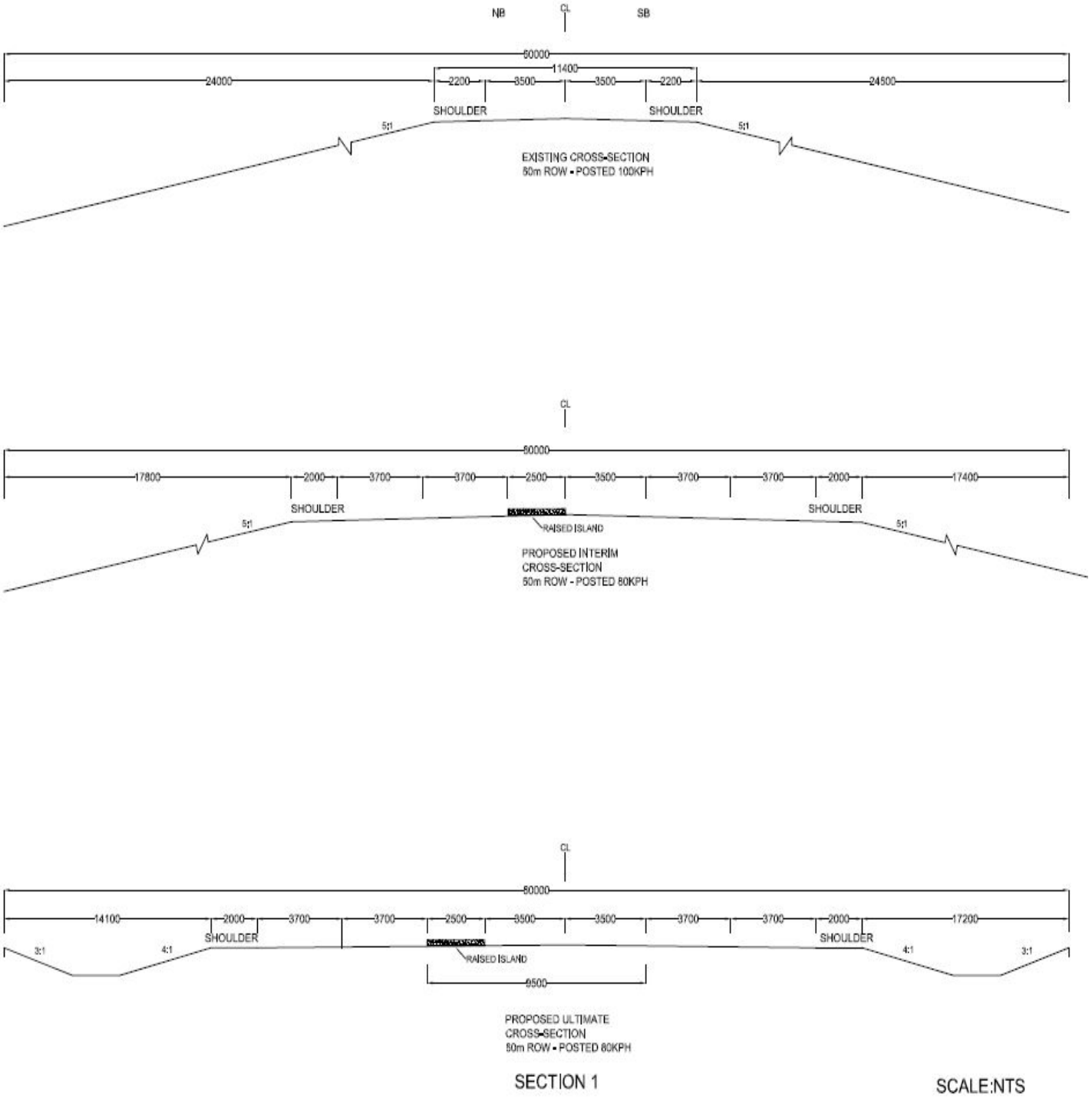


Figure 23: Proposed Cross Section 1 – Hwy 7 at RR 23

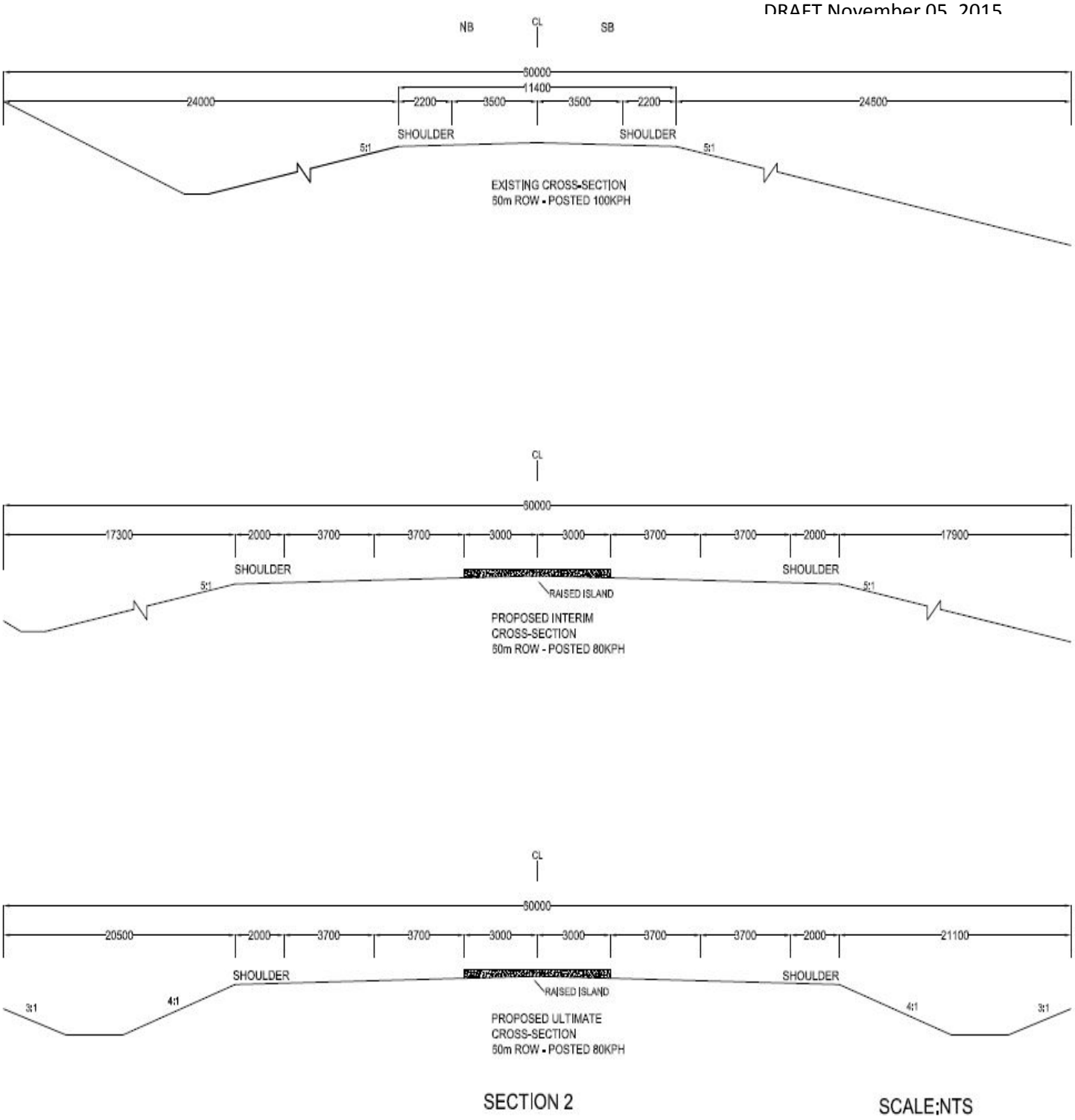


Figure 24: Proposed Section 2 – Hwy 7 South of RR 23

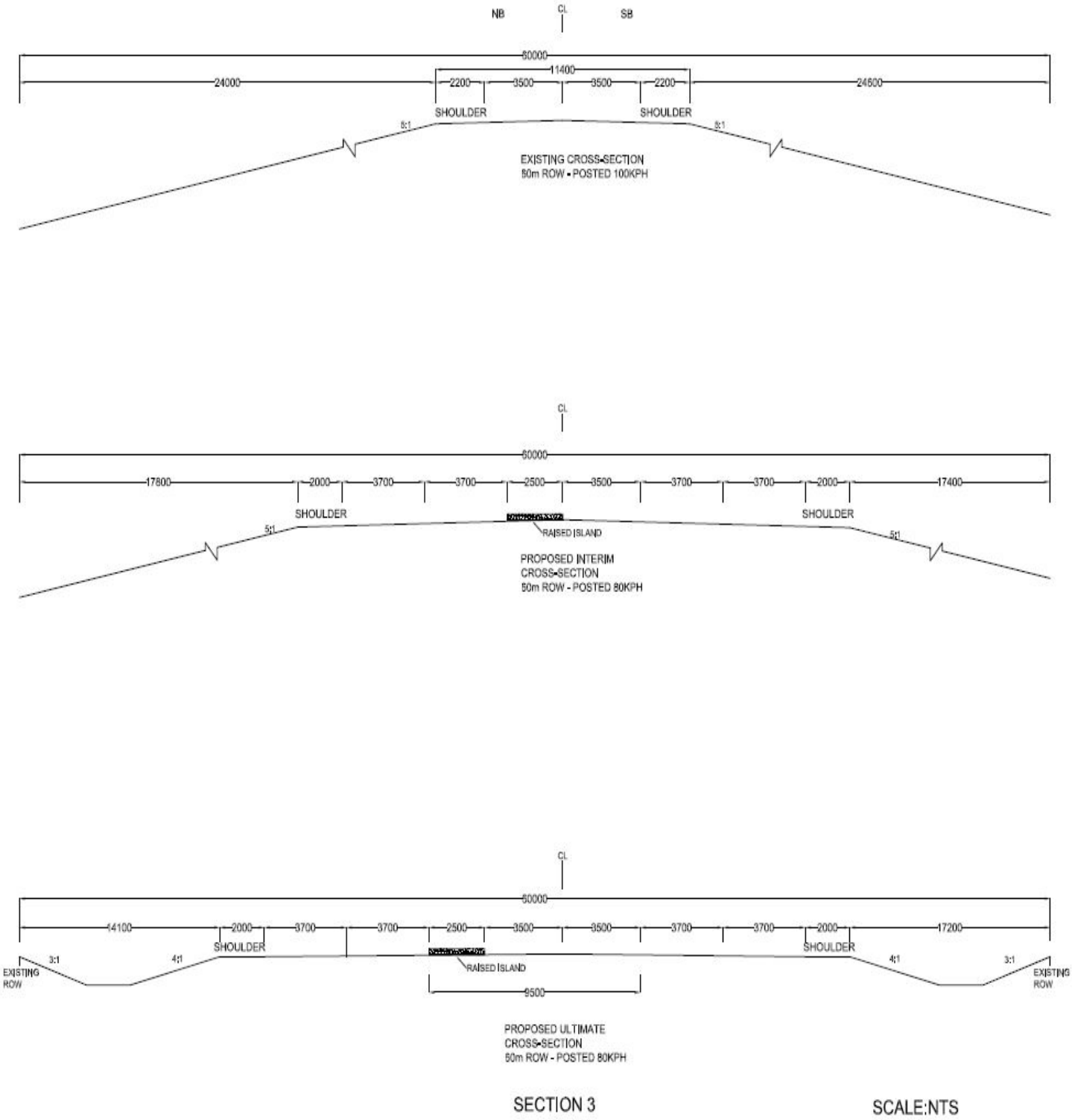


Figure 25: Proposed Section 3 – Hwy 7 at 6th St East

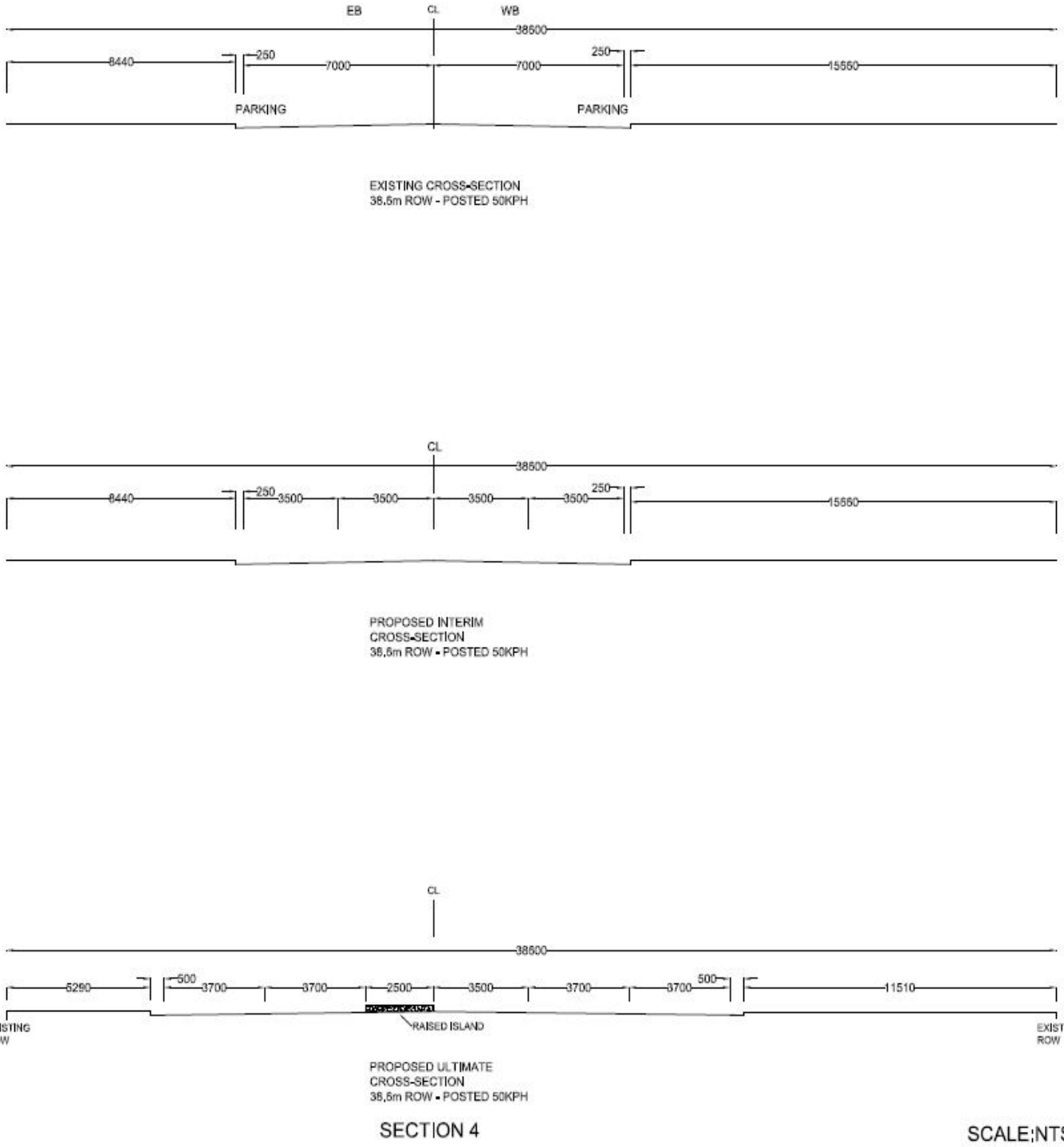


Figure 26: Proposed Section 4 – Hwy 7 West of 6th St. East

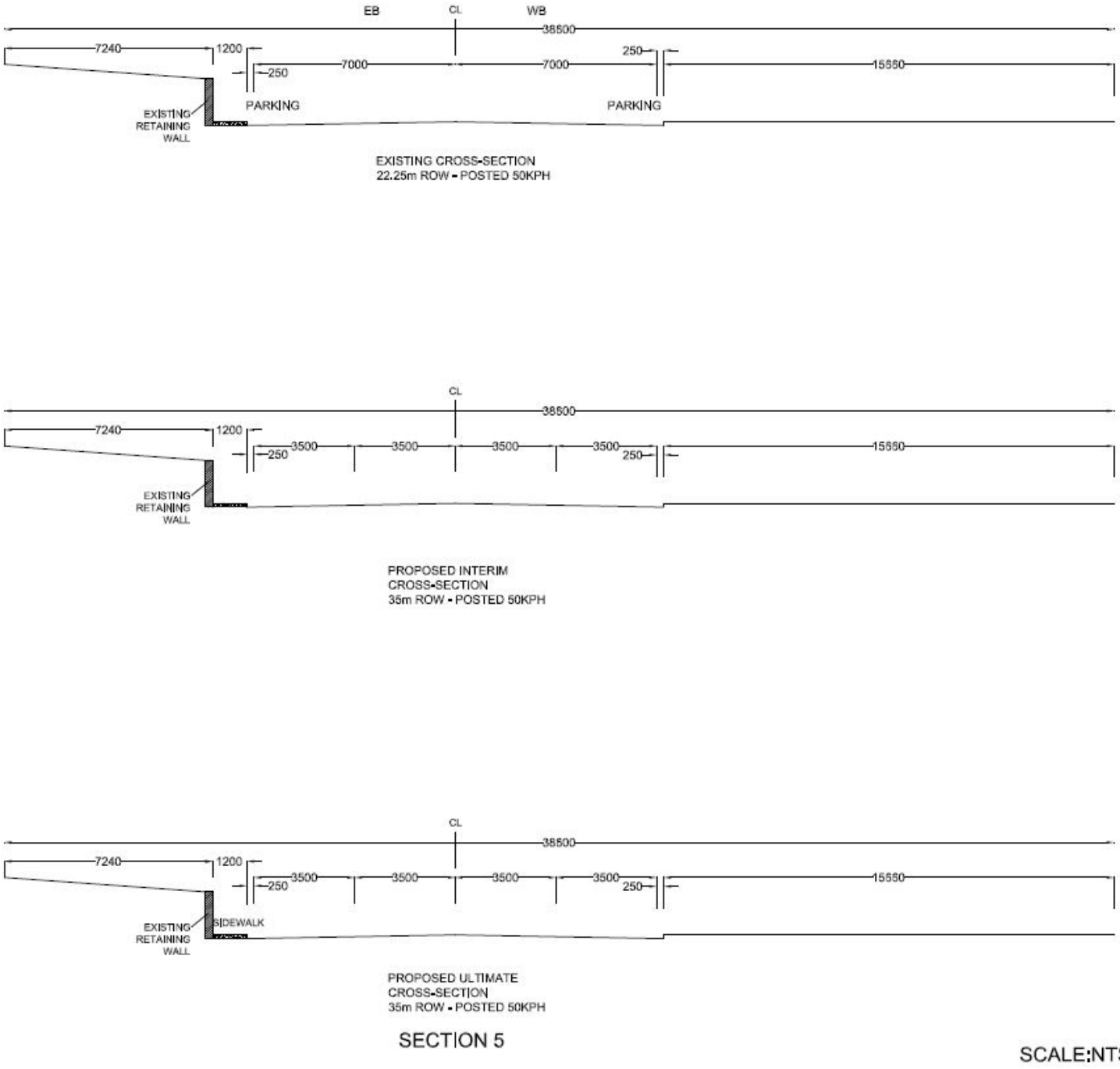
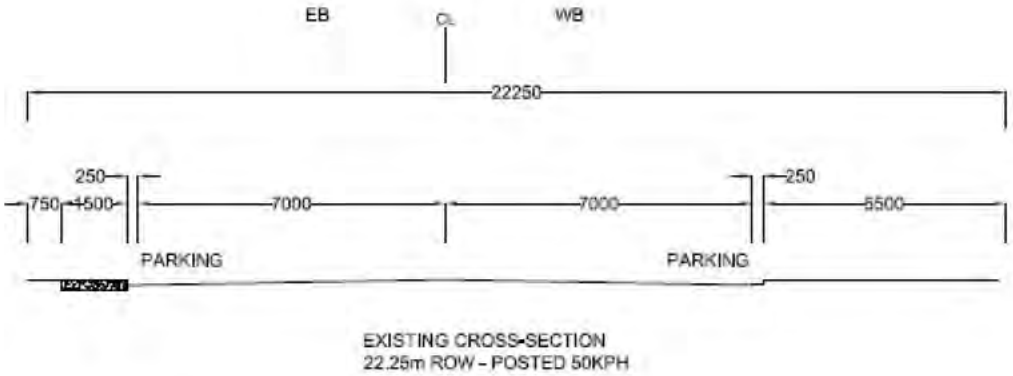
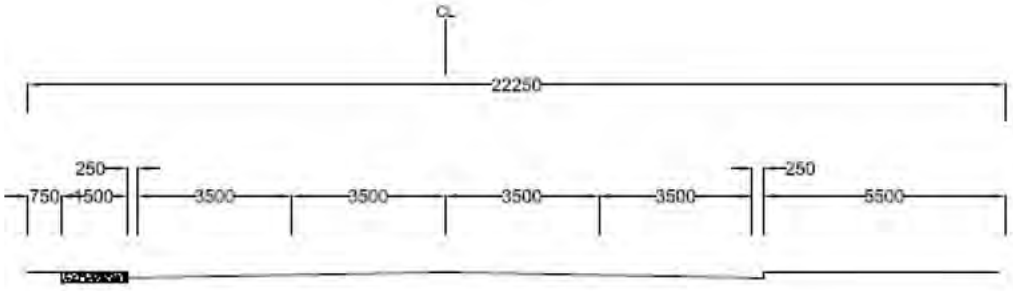


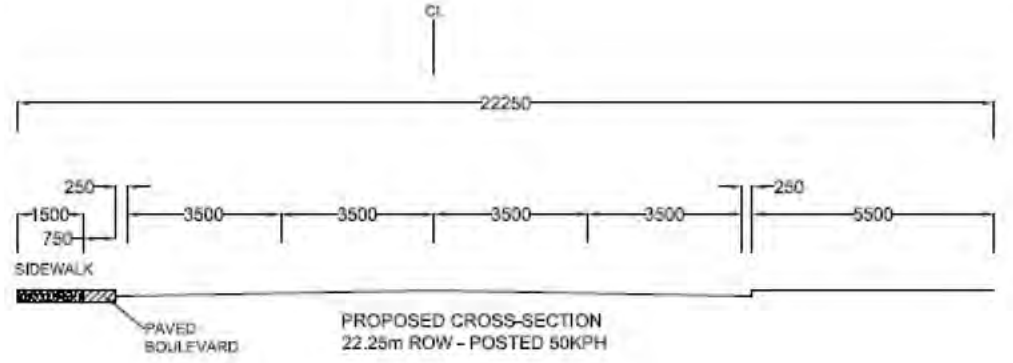
Figure 27: Proposed Section 5 – Hwy 7 East of 3rd Street East



EXISTING CROSS-SECTION
22.25m ROW – POSTED 50KPH



PROPOSED INTERIM
CROSS-SECTION
22.25m ROW – POSTED 50KPH



PROPOSED CROSS-SECTION
22.25m ROW – POSTED 50KPH

SECTION 6

SCALE:NTS

Figure 28: Proposed Section 6 – Hwy 7 at 1st Street East

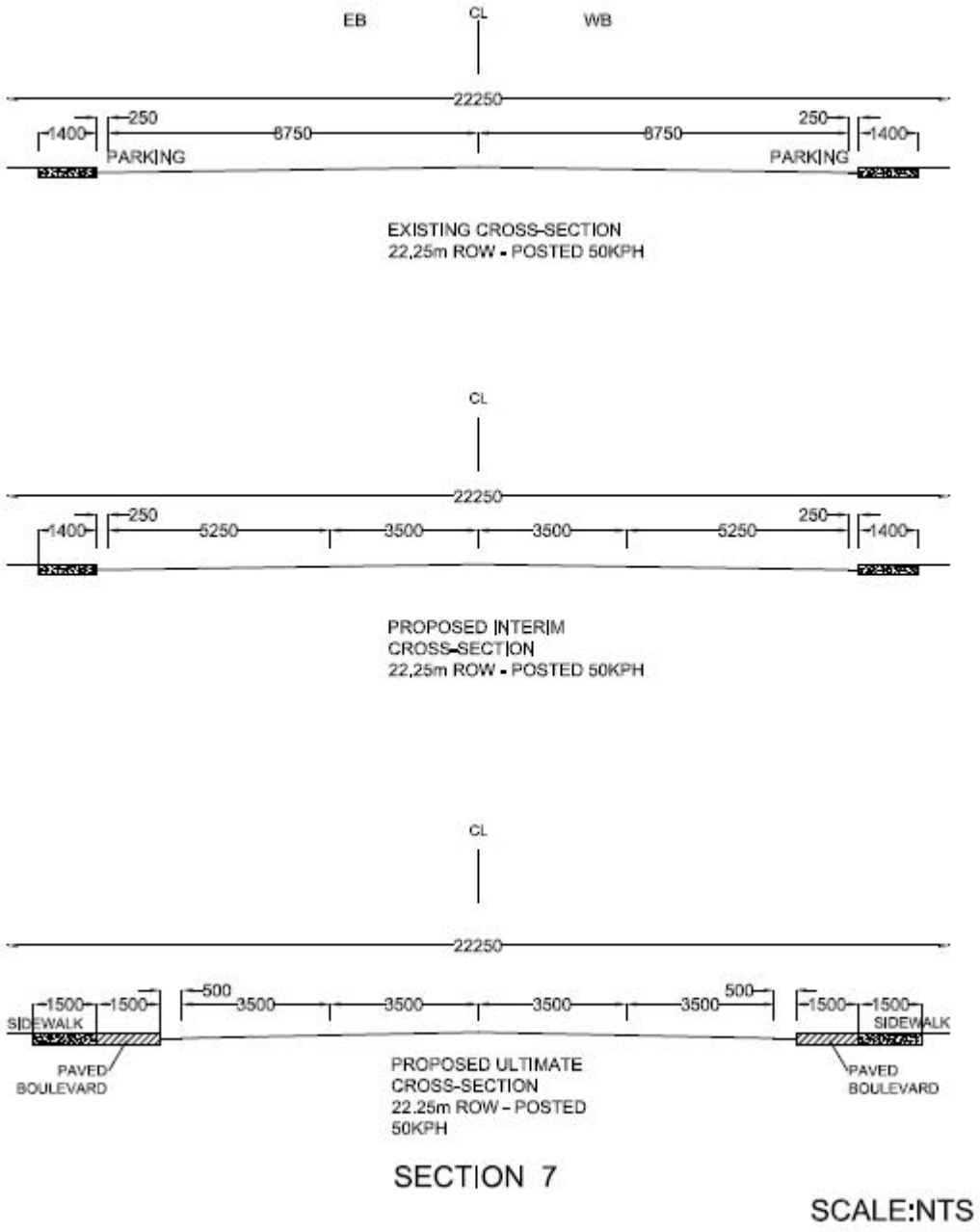


Figure 29: Proposed Section 7 – Hwy 22 at 1st Street West

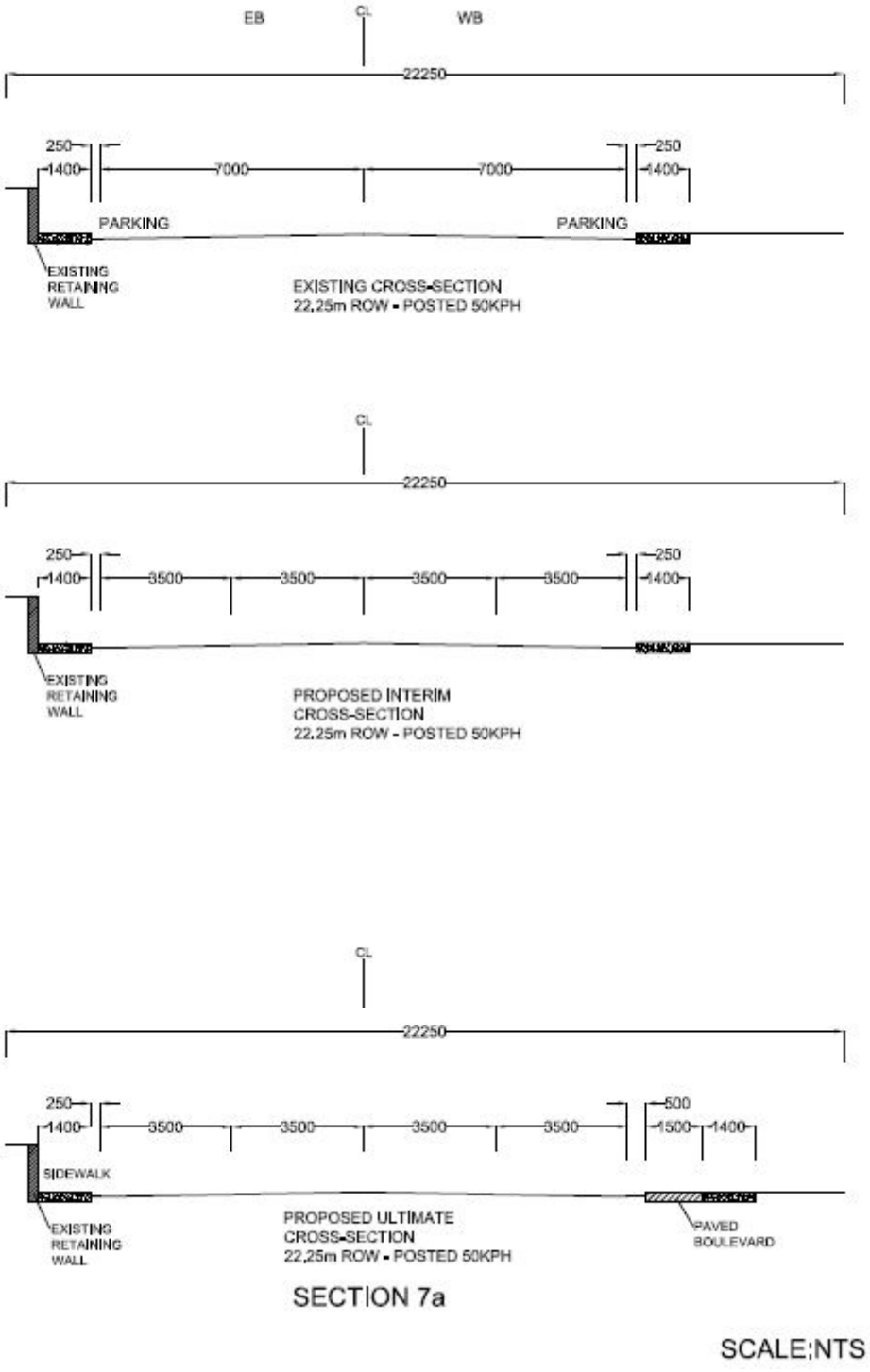


Figure 30: Proposed Section 7a - Hwy 22 West of 1st Street West

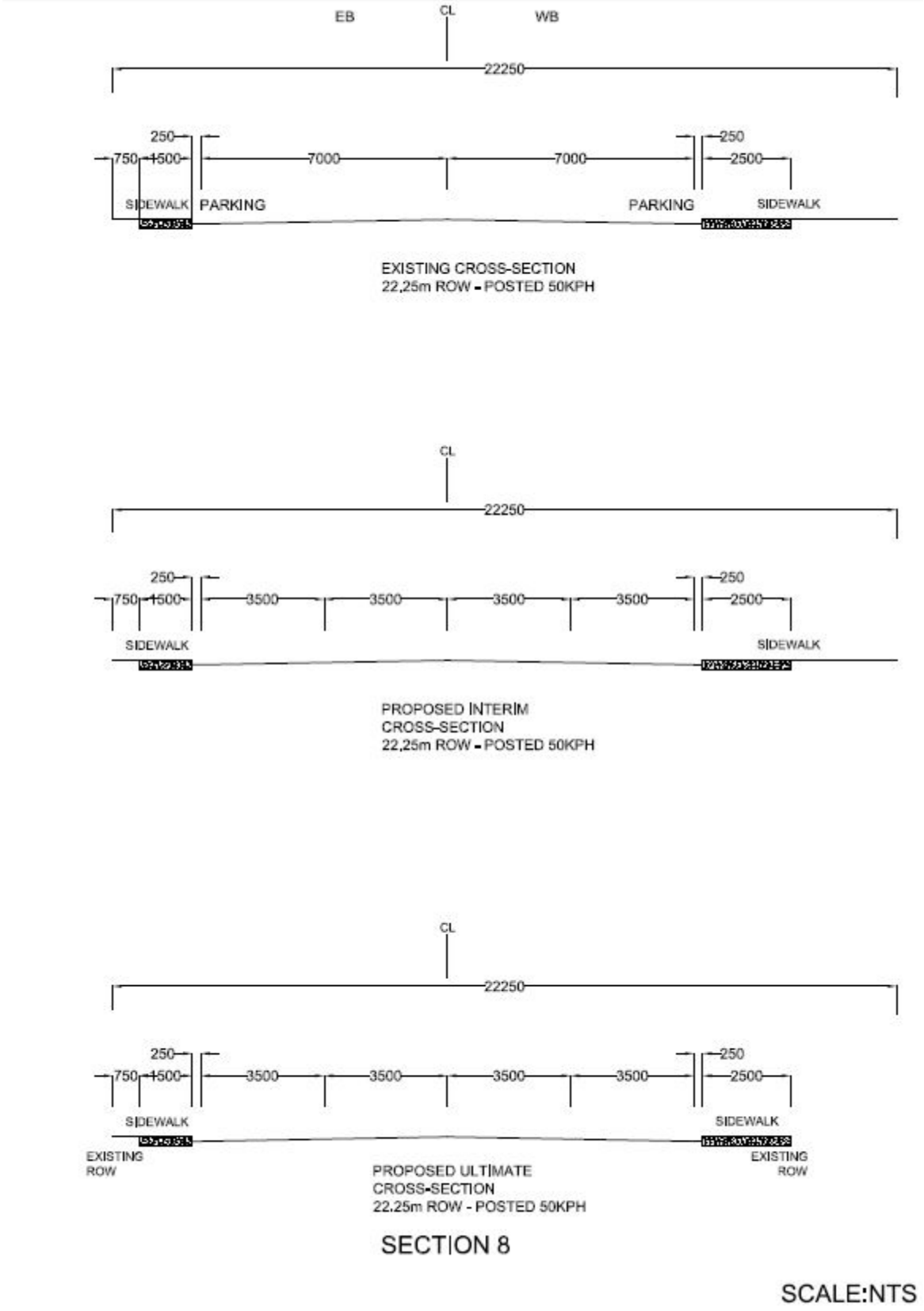


Figure 31: Proposed Section 8 – Hwy 22 West of 3rd Street West

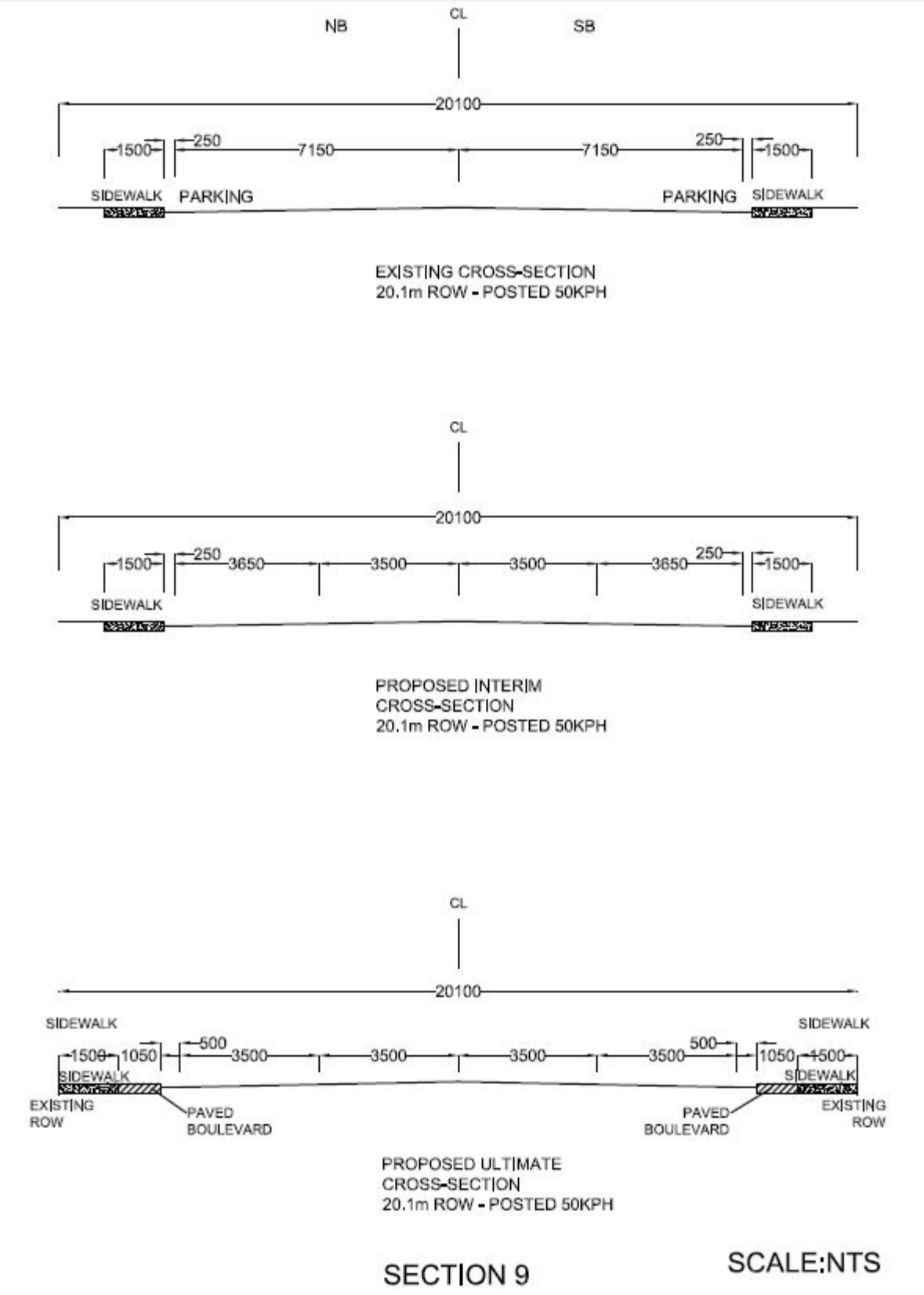


Figure 32: Proposed Section 9 – Hwy 22 South of the Hwy 7 and Hwy 22 Intersection

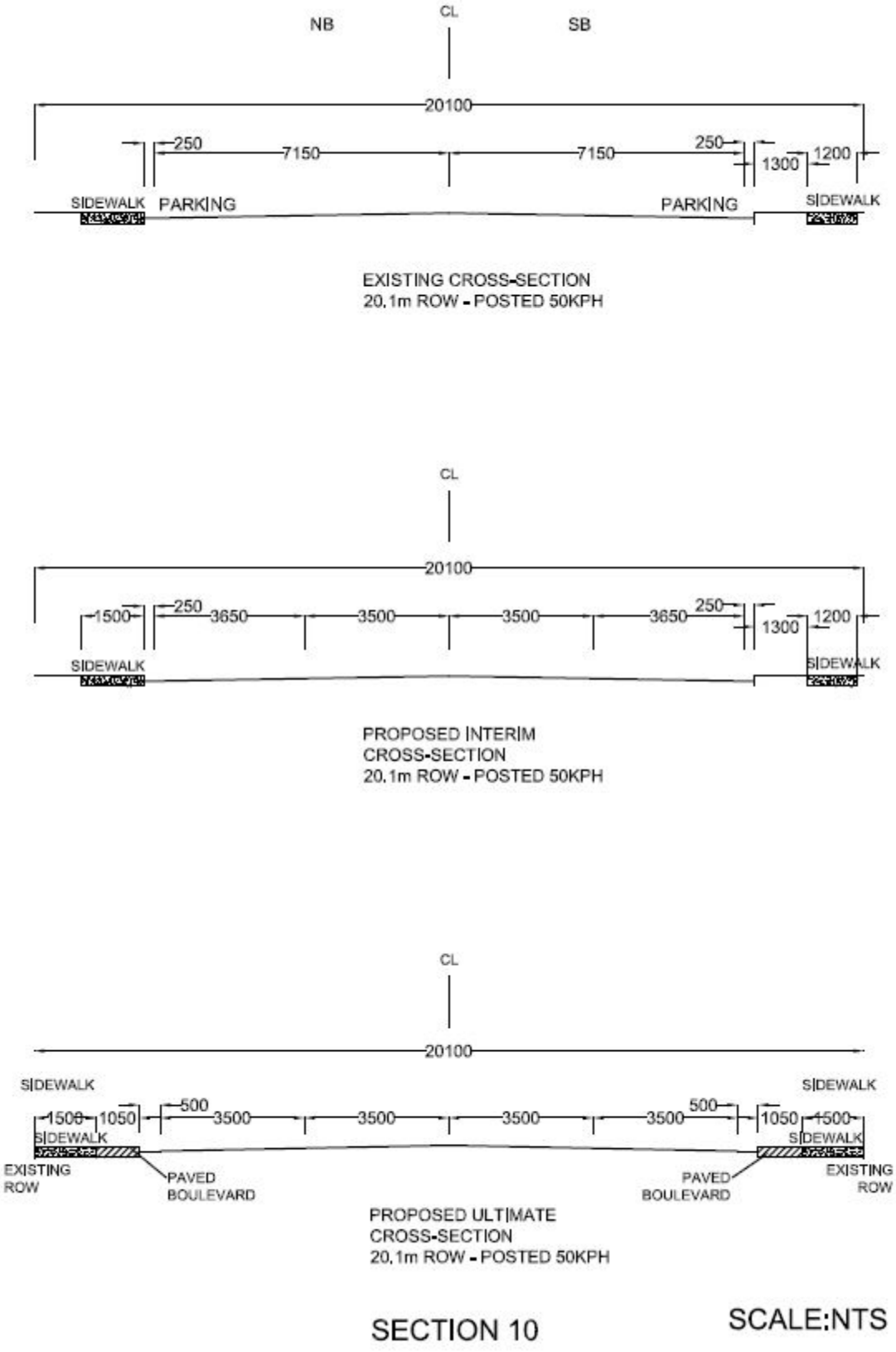


Figure 33: Proposed Section 10 – Hwy 22 South of 1st Ave

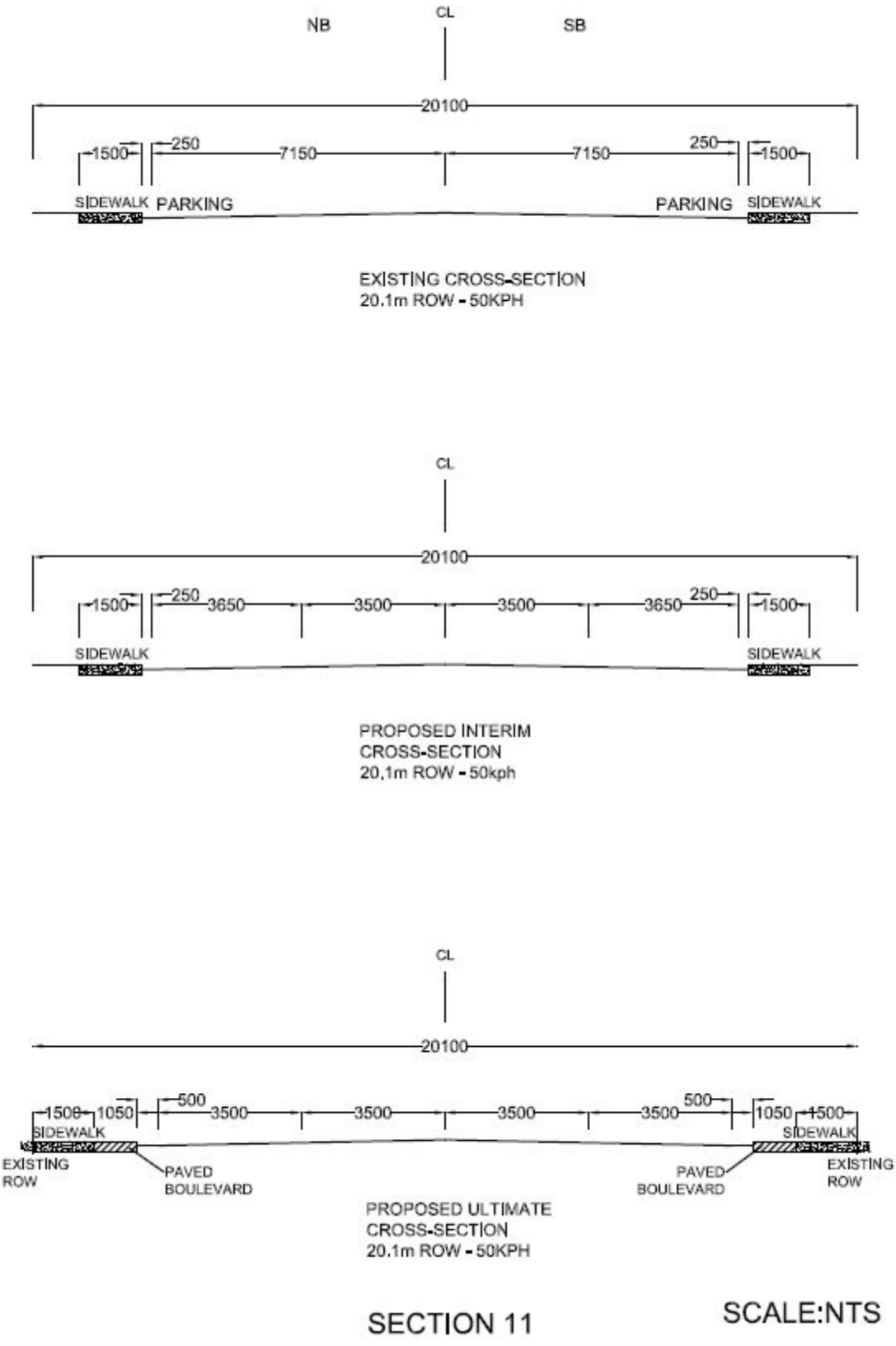


Figure 34: Proposed Section 11 – Hwy 22 South of 2nd Ave

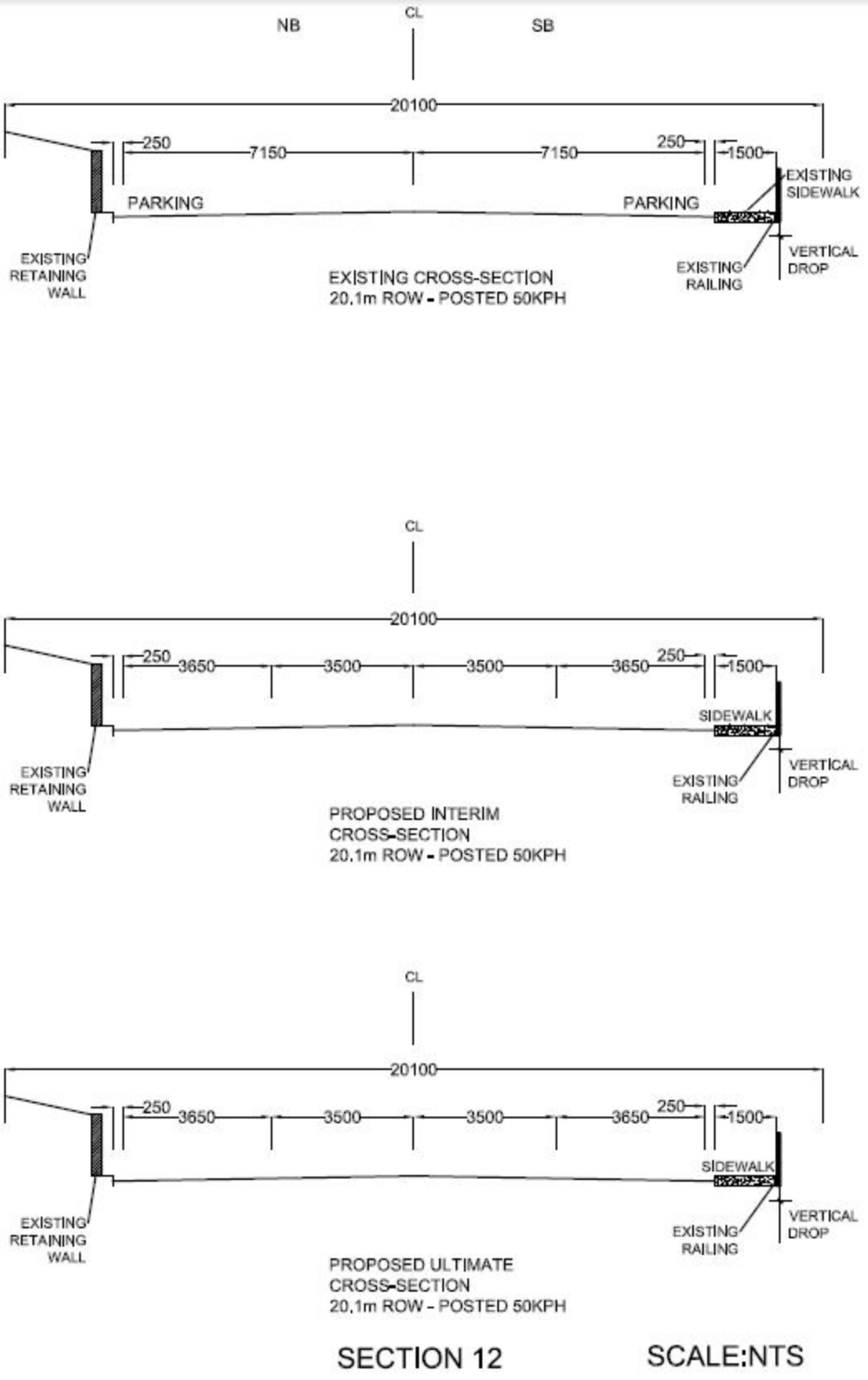


Figure 35: Proposed Section 12 – Hwy 22 South of 4th Ave

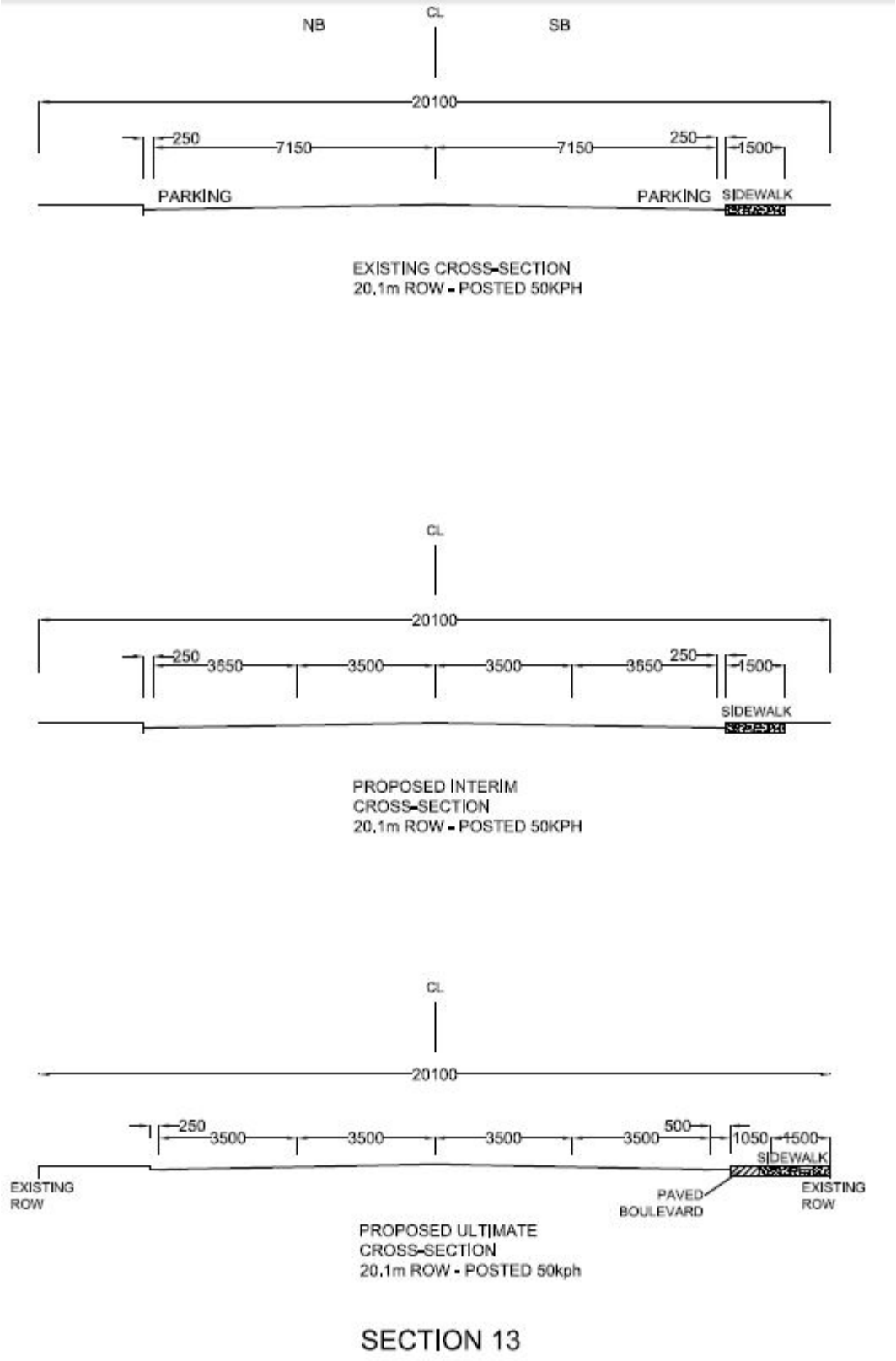


Figure 36: Proposed Section 13 – Hwy 22 South of 5th Ave

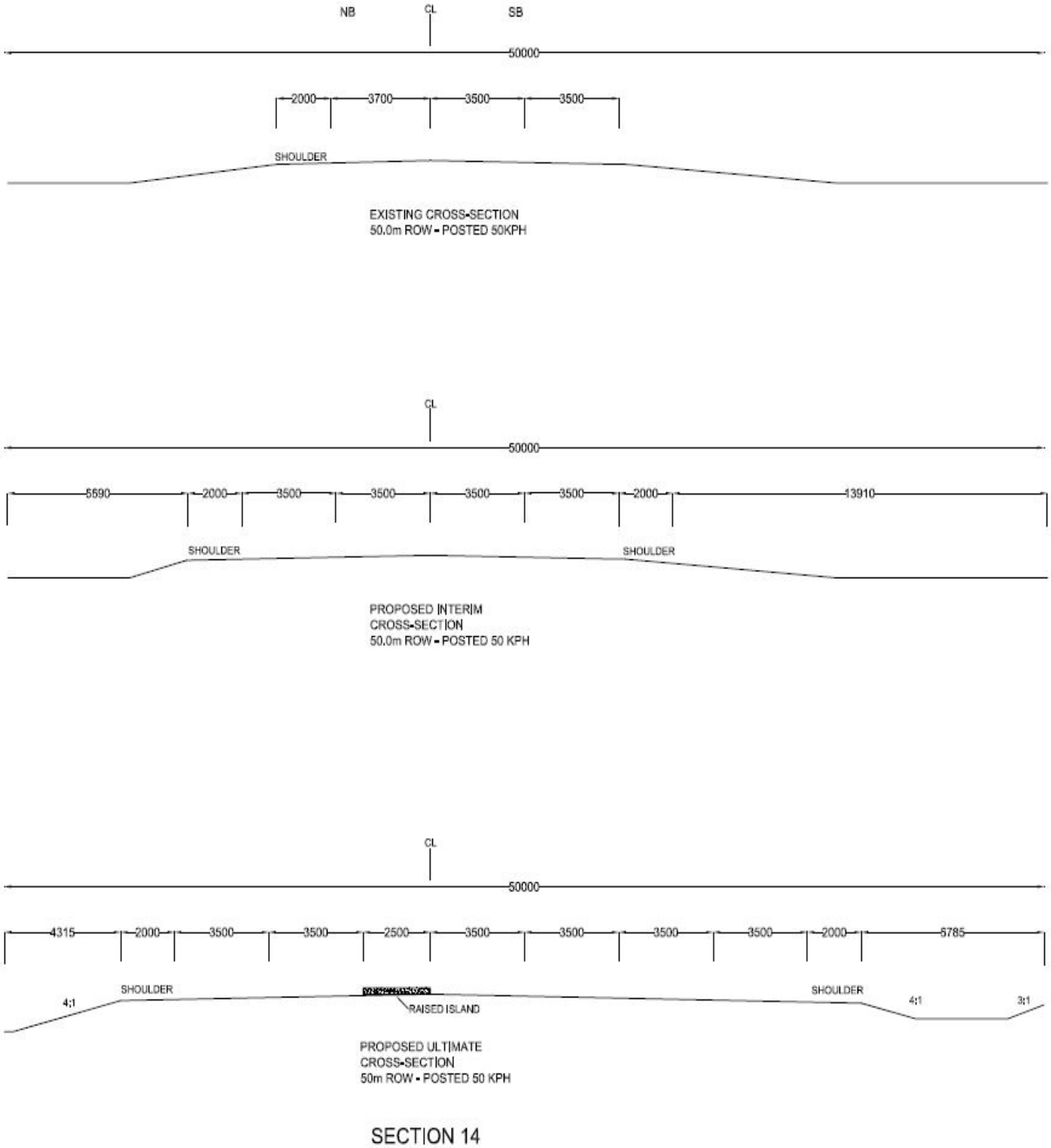


Figure 37: Proposed Cross Section 14 – Hwy 22 at Willow Ridge Blvd

An example of AT's guideline for a 4-Laned Urban Highway can be seen in Figure 37. This would be modified to meet the Town's needs and AT standards. As for replacing the on-street parking, the Town should look into designated parking lots strategically placed along the Town.

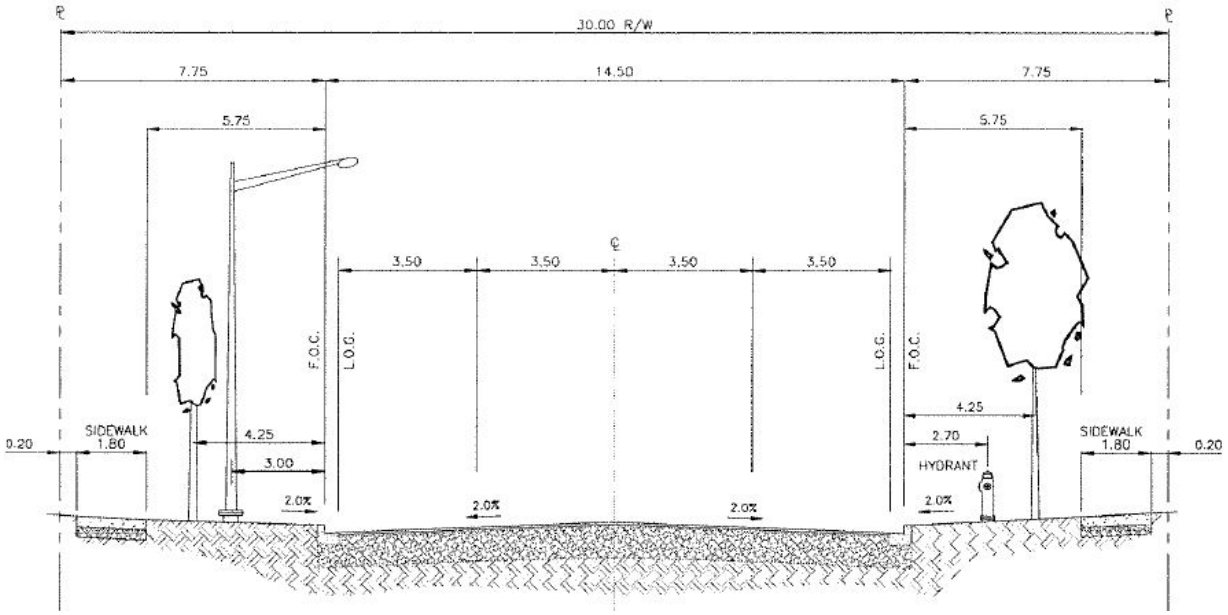


Figure 38: Alberta Transportation Urban 4 Laned Highway Typical Cross Section

8.3 Other Recommendations to Improve the Town's Transportation Network

As the Town continues to grow and develop, traffic volumes are increasing relative to the growth and development of the Town. Highway 7 and 22 are heavily relied on to meet the traffic demands of the Town, resulting in a decreased LOS. Other alternatives were reviewed and recommended in order to alleviate some of the traffic demand from Highway 7 and 22.

8.3.1 Improving the Town's Local Network

The Town should consider investing in improving their local network to alleviate some of the traffic volumes off of Highway 7 and 22. By improving roads such as paving or simply maintaining gravel roads so these roads attract motorist away from Highway 7 and 22.

8.3.2 Active Modes of Transportation

Active transportation is human powered travel such as walking and cycling. There are many benefits to active transportation such as:

- Offers independent mobility to those who can be left out when cars are required to get around such as children, youth, seniors, persons with disabilities and low income people.
- Brings economic benefits by reducing the social cost of transportation, supporting local stores and services, and attracting tourist who wish to get around without a car.
- Enhances street life by increasing citizen interaction and improving personal security.

As the Town continues to grow and develop, increasing pathways throughout the town to promote active modes of transportation will reduce traffic volumes on the transportation network and help improve the LOS on many intersections.

8.3.3 Community Shuttle Bus

A community shuttle bus could be implemented in partnership with the Town of Turner Valley to bring commuters to Okotoks and Calgary. Strategic drop offs in Airdrie and Calgary to serve the working population could be utilized and reduce the number of vehicles on Hwy 22 and Hwy 7. A study would be required in order to determine the most efficient way this system will run to meet the needs of both towns.

This type of public transit could be funded by the Green TRansit Incentive Program (GreenTRIP). GreenTRIP is one of the many programs municipalities can take advantage of to provide sustainable public transit alternatives. It allows municipalities to apply for capital funding to help purchase transit vehicles and technologies. More information with regards to the program can be found on the Alberta Transportation website.

8.3.4 Strategic Parking Lots

Placing strategic parking lots behind the highway would resolve parking capacity issues as the on-street parking would be taken out in order to accommodate 4-laning Hwy 7 and Hwy 22 in the eastbound and westbound direction. It would also reduce congestion within the Town core and encourage walking.

Appendices

DRAFT

Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

Appendix F

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Appendix M
Public Engagement Information and Feedback

Public Consultation Program Overview

Date	Type of engagement	Target audience	Message/Intent
November 2017 March 2018	**Notice of Intent** mailed to government, agencies, local authorities, utilities	Provincial Ministries, Local Authorities, Agencies, Utilities	Town intends to commence annexation proceedings; annexation map
March 2017 - ongoing	**Face-to-face meetings** with affected landowners	Landowners in the annexation area	Town intends to annex; thorough discussion of implications, including taxation, municipal servicing, planning & development regulation; etc.
September 2018	**Letters** mailed to Annexed Landowners and IDP Landowners (not proposed for annexation)	Landowners in annexation area; IDP area	Annexation Map, Annexation FAQs, Invitation to Public Open House, Invitation to contact Town staff; link to annexation webpage.
September 2018 - ongoing	**Annexation Webpage** provided on Town website	Landowners, Agencies, Stakeholders, General Public	Summary of annexation proposal (briefly describe population projections, land requirements, servicing considerations). Annexation FAQs. Links to plans (IDP, MDPs), Links to studies (JGS, Annexation Servicing Study, BD Trans Study, BD Ec. Dev. Strategy). Link to MD Foothills Annexation Webpage Link to MGB Annexation resources Open House information. Online Survey.
September 2018	**Announcement on Social Media**	General Public, Town Residents, Landowners	Announce annexation; direct public to website for further info; announce Public Open House; invitation to complete online survey.

Sept 24 (release) Oct 3 (story in Western Wheel)	**Joint Press Release**	General Public, Town Residents, Landowners	Announce annexation proposal; explain process; status of negotiations; opportunities for public engagement; where to get more info; announce Public Open House
October 2018	**Joint Public Open House** **4-8 pm, Town Council Chambers**	Landowners, Town Residents, General Public	Provide info boards regarding annexation proposal (population growth, land requirements, servicing considerations). Provide info boards regarding Annexation FAQs Comment Boards ***30 attendees**
October 2018	Annexation Opinion Survey	Landowners, Town Residents, General Public	Online opinion survey open to general public regarding annexation. *18 responses
March 2019	**Letters** mailed to Landowners in annexation area and IDP area; to stakeholders, agencies, utility companies	Landowners in annexation area; IDP area; stakeholders; agencies; utility companies	*Revised* Annexation Map, Annexation FAQs, Invitation to Public Open House, Invitation to contact Town staff; link to annexation webpage.
March 5 2019 (release) March 27, 2019 (story in Western Wheel)	**Joint Press Release**	General Public, Town Residents, Landowners	Announce revision of annexation proposal; explain process; status of negotiations; opportunities for public engagement; where to get more info; announce Public Open House
April 2019	**Joint Public Open House** **4-8 pm, Town Council Chambers**	Landowners, Town Residents, General Public	Provide info boards regarding *revised* annexation proposal (population growth, land requirements, servicing considerations). Provide info boards regarding Annexation FAQs Comment Boards ***20 attendees**

March 22, 2018

Rick Duncan, Case Manager
Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

Dear Sir:

RE: Proposed Annexation of Territory from the Municipal District of Foothills No. 31
Your File: AN17/BLAC/T-V01

In response to your letter dated March 5, 2018, requesting further information regarding the Town's proposal for consulting with the public and identifying how affected landowners will be kept informed of the progress of negotiations between the municipalities, as required by Section 116(2)(c) of the Municipal Government Act, I would like to provide the following summary of the Town's proposal for public consultation:

1. Written notification of the Town's annexation proposal to the following recipients, by way of copy of this letter and copy of the Town's Notice of Intent to Annex dated October 2, 2017:

    - Municipal District of Foothills No. 31
    - Town of Turner Valley
    - Alberta Health Services, Calgary Zone
    - Alberta Transportation, South Region
    - Foothills School Division No. 31
    - Christ the Redeemer Catholic Schools
    - Sheep River Regional Utility Corporation
    - Westend Regional Sewage Service Commission
    - Fortis Alberta Inc.
    - ATCO Pipelines Head Office
    - ATCO Gas

2. Creation of an annexation webpage on the Town of Black Diamond website, and ongoing updates as negotiations proceed; use of social media to inform the public, linking to the annexation webpage; online opinion survey of the general public on issues pertaining to annexation;

3. Information mailed to directly affected landowners, to landowners within the 'Black Diamond referral area' as defined in the Intermunicipal Development Plan, and to landowners adjacent to lands proposed for annexation but outside of the IDP referral area;

4. Information brochures mailed to residents as part of bi-monthly utility bill mailing;

5. Joint Press Releases prepared in conjunction with the MD of Foothills, to be issued quarterly;

6. Meeting(s) with individual landowners as required or requested;

7. A minimum of 1 Public Open House.

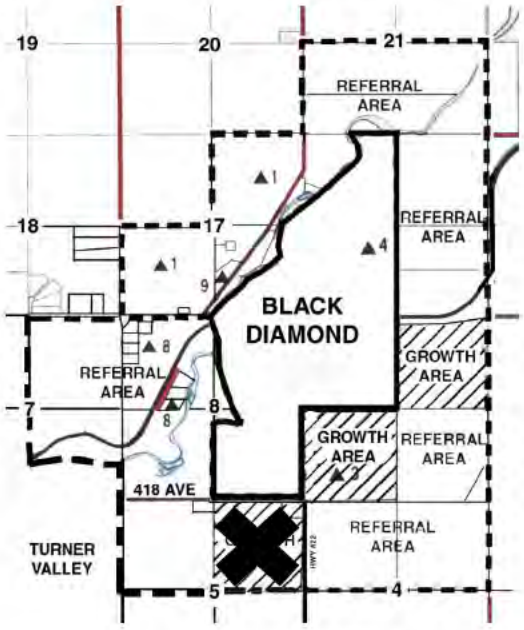
Furthermore, I would like to inform you that the Town of Black Diamond Council passed the following motion at it's February 14, 2018 meeting:

Res. 2018-89 *Moved by Councillor Sharon Hart that Council agree to amend the Intent to Annex by removing the quarter known as NE-5-20-2-W5M*

UNANIMOUSLY CARRIED

With the removal of the above-mentioned quarter section, the remaining lands proposed for annexation include the following:

Legal Description					
Quarter	**Plan**	**Title #**	**Ha**	**Ac**	**Owner**
~~Ptn NE 5-20-2-W5M~~		~~001110623003~~	~~60.749~~	~~150.23~~	~~David Hocking & Diana Hocking~~
~~Ptn NE 5-20-2-W5M~~	~~LK465, OT~~	~~121275486004~~	~~2.323~~	~~5.74~~	~~Volker Stevin Highways Ltd.~~
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	Jaygee Farms Ltd.
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	Lilyfer Poultry Farms (Black Diamond) Ltd.
NE 9-20-2-W5M		101236396001	61.04	150.98	386809 A berta Ltd.
Total			**124.586**	**308.13**	



The rationale for annexation remains as outlined in the October 2, 2017 Notice of Intent to Annex. The Town looks forward to working collaboratively with all parties to proceed with the annexation.

Sincerely,

Sharlene Brown
Chief Administrative Officer
Town of Black Diamond

Attachments: October 2, 2017 Notice of Intent to Annex
cc:

Shayne Anderson, Minister of Municipal Affairs
Pat Stier, MLA for Livingstone-Macleod
John Barlow, MP for Foothills
Larry Spilak, Reeve, Municipal District of Foothills No. 31
Heather Thomson, Interim CAO, Town of Turner Valley
Deb Rhodes, Vice President Corporate Services, Alberta Health Services
Darren Davidson, Regional Director, Alberta Transportation, South Region
John Bailey, Superintendent of Schools Foothills, School Division No. 31
Scott Morrison, Superintendent, Christ the Redeemer Catholic Schools
Harry Riva Cambrin, CAO, Sheep River Regional Utility Corporation
Laurie McCreary-Burke, Secretary Treasurer, Westend Regional Sewage Service Commission
Merlin MacNaughton, Stakeholder Relations Manager, Fortis Alberta Inc.
Jason Sharpe, Sr. Vice President and General Manager, ATCO Pipelines Head Office
Mike Shaw, Vice President, Calgary Region Operations, ATCO Gas

October 2, 2017

Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

MD of Foothills 31
Heather Hemingway
Director of Planning
Box 5605
High River, Alberta
T1V 1M7

Dear Sir/Madam;

RE: Formal Initiation of the Town of Black Diamond Annexation Application

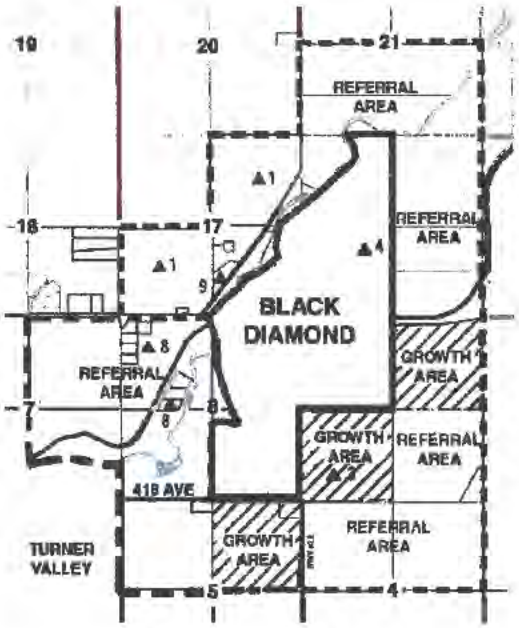
In accordance with Section 116 of the Municipal Government Act and pursuant to a motion of the Town of Black Diamond Council dated September 20, 2017, the Town of Black Diamond is giving written notice to the Municipal District of Foothills and the Municipal Government Board of the initiation of the proposed annexation of lands into the Town of Black Diamond.

Within the Town's current boundaries there are approximately 65 lots available for residential development and at the current rate of development it is estimated that the inventory will be exhausted within 3 years. There is a 29 acre parcel of undeveloped lands within the NW of 9-20-2-W5M forming part of the Kaiser Area Structure Plan however cost of servicing has been an economic barrier for developers. The annexation of lands as proposed with facilitate the efficient and cost effective growth of the community and is in alignment with statutory plans, alternate transportation routes and satisfy the Town's growth projections.

The lands intended for annexation are those as listed in the table below and includes the three quarter sections that are identified in the MD of Foothills, Town of Turner Valley, Town of Black Diamond Intermunicipal Development Plan, adopted by Town of Black Diamond Council as Bylaw 02-05 on June 5, 2002. Excerpt from the Intermunicipal Development Plan (Black Diamond Urban Future Growth) has been inserted below.

Legal Description					
Quarter	Plan	Title #	Ha	Ac	Owner
Ptn NE 5-20-2-W5M		001110623003	60.749	150.23	[redacted]
Ptn NE 5-20-2-W5M	LK465, OT	121275486004	2.323	5.74	
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	
NE 9-20-2-W5M		101236396001	61.04	150.98	
Total			**187.658**	**464.10**	

The annexation proposes to include approximately 464 acres of land encompassing three quarter sections which are contiguous to the shared boundary with the Town of Black Diamond. The proposed annexation lands do not contain established residential subdivisions. There is one residence and cultivation farmland located on the NE of 5 and another four residences on the SW of 9 with the balance lands under cultivation. The NE of 9-20-2-5 is a bare quarter under cultivation. None of the lands contemplated for annexation are within the designated Flood Risk Area.



The strategy proposed for the annexation procedure is to facilitate meetings of an Annexation Committee consisting of Council members of the Town of Black Diamond and the MD of Foothills with respective staff assistance. A concurrent referral circulation and public consultation process will be undertaken in order to determine what concerns or objections may exist with respect to the annexation proposal.

In conclusion, we look forward to working collaboratively with all parties to proceed with the annexation.

Sincerely

Denice Stewart
PLANNING & DEVELOPMENT OFFICER
Town of Black Diamond

Attachments: Copy of Council Resolution

REGULAR COUNCIL
September 20, 2017

Core Strategy: Provide Safe and Effective Service
Annexation - Letter of Intent

Mayor Glen Fagan requested a recorded vote on this matter.

Moved by Deputy Mayor Mike Ross that Council agree to send a letter of intent to the Municipal government Board and the MD of Foothills for the annexation of lands as identified in the Intermunicipal Development Plan (2002). **Res. 2017-411**

IN FAVOUR:	**AGAINST:**
Mayor Glen Fagan	
Deputy Mayor Mike Ross	
Councillor Jim Deacon	
Councillor Ruth Goodwin	
Councillor Jackie Stickel	
Councillor Judy Thomson	
Councillor Brian Marconi	

UNANIMOUSLY CARRIED

October 2, 2017

Municipal Government Board
15th Floor, Commerce Place
10155 – 102 Street
Edmonton, Alberta
T5J 4L4

MD of Foothills 31
Heather Hemingway
Director of Planning
Box 5605
High River, Alberta
T1V 1M7

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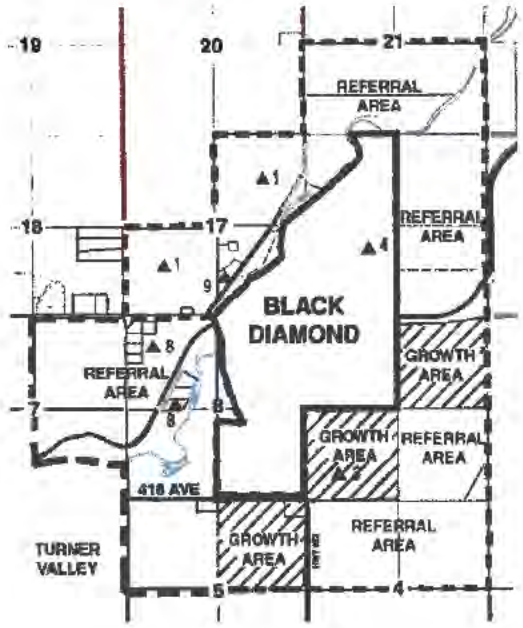
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In conclusion, we look forward to working collaboratively with all parties to proceed with the annexation.

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Denice Stewart
PLANNING & DEVELOPMENT OFFICER
Town of Black Diamond

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September 20, 2017

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IN FAVOUR:
Mayor Glen Fagan
Deputy Mayor Mike Ross
Councillor Jim Deacon
Councillor Ruth Goodwin
Councillor Jackie Stickel
Councillor Judy Thomson
Councillor Brian Marconi

AGAINST:

UNANIMOUSLY CARRIED

September X, 2018

Landowner

Dear Landowner:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary to provide opportunities for residential, commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town has identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth. **Lands owned by you are located within the proposed annexation area.**

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. **Annexation does not change ownership rights, and owners are not required to develop or sell their property.** Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. The town is proposing annexation, NOT expropriation.

A Public Open House will be held from 4 – 8 p.m. Monday, October 15 at the Town of Black Diamond Council Chambers where information concerning annexation will be presented. Elected officials and administration from the Town of Black Diamond and the Municipal District of Foothills will be in attendance to answer questions and receive comments.

Enclosed with this letter is a *Frequently Asked Questions* document brochure containing additional information about annexation, and a map illustrating the location of the annexation area. Further information is available online at http://town.blackdiamond.ab.ca/433/Annexation. Should you have any questions or concerns, please contact Rod Ross, Planning Manager, at 403-933-4348, or via email at rodr@town.blackdiamond.ab.ca.

Sincerely,

Ruth Goodwin, Mayor
Town of Black Diamond

August 8, 2018

Lorne and Linda Buck

[redacted]

Dear Lorne and Linda:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future development, transportation routes, and infrastructure for water, sewer, and storm water that is necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary not only to allow the Town to plan for its growing population, but also to provide opportunities for commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town has identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth. Lands owned by you are located within this annexation area.

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Enclosed with this letter is a brochure containing additional information about annexation, and a map illustrating the location of the annexation area. Mayor Ruth Goodwin and I would like to meet with you to discuss this matter and any questions and concerns you may have. Please contact me at 403-933-4348, or via email at rodr@town.blackdiamond.ab.ca to arrange a meeting

Sincerely

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

Annexation FAQs

1. **Q: What is annexation?**

   A: Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. Annexation does not change ownership rights, and owners are not required to develop or sell their property. Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. Black Diamond is proposing annexation, NOT expropriation.

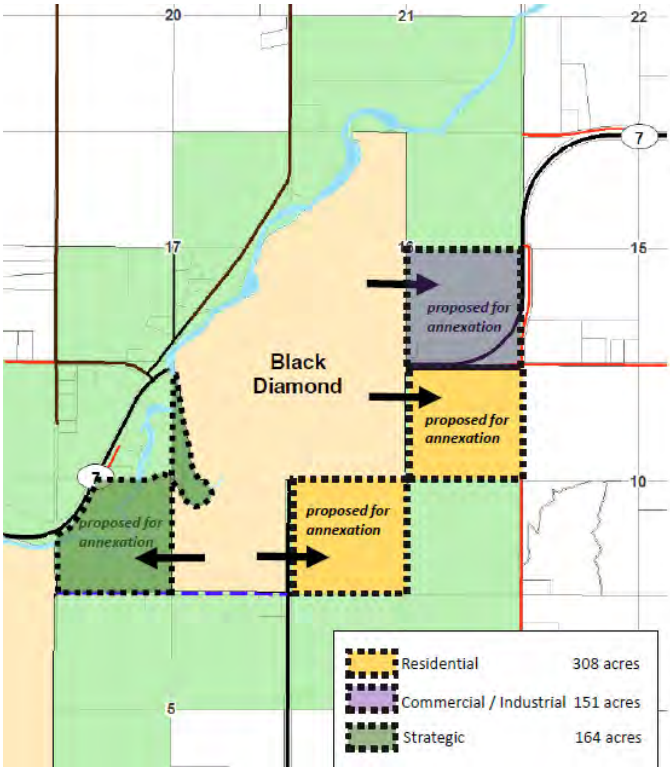
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3. **Q: How much land is Black Diamond proposing to annex, and why?**

   A: Black Diamond is proposing to annex 614 acres (approximately 4 quarter sections), as shown on the map below.



Parcels within SE 16-20-2 W4	*Certificate of Title*	*Area (acres)*
SE 16-20-2 W5 N1/2	941 259 859	78.47
SE 16-20-2 W5 S1/2	111 072 568	53.39
Lot 1, Block 1, Plan 0513035	071 036 979	9.6
Parcels within NE 9-20-2 W4	**Certificate of Title**	***Area (acres)***
NE 9-20-2 W5	101 236 396 +1	150.98
Parcels within SW 9-20-2 W4	***Certificate of Title***	***Area (acres)***
SW 9-20-2 W5	101 216 209	146.85
SW 9-20-2 W5	001 110 623 +2	10.3
Parcels within NE 8-20-2 W4	***Certificate of Title***	***Area (acres)***
NE 8-20-2 W5	891 104 921	15.8
NE 8-20-2 W5	161 260 885	15.8
Parcels within SE 8-20-2 W4	***Certificate of Title***	***Area (acres)***
SE 8-20-2 W5	161 260 885 +1	5.8
Parcels within NW 8-20-2 W4	***Certificate of Title***	***Area (acres)***
NW 8-20-2 W5	971 378 878	1.2
Parcels within SW 8-20-2 W4	***Certificate of Title***	***Area (acres)***
Block 1, Plan 8010142	801 015 653	24.41
Lot 1, Block 2, Plan 1113505	111 311 965	14.16
SW 8-20-2 W5	111 311 965 +1	87.24
	Total Area (acres)	**614**

	Total Area	*Years of Supply*
Residential	308	30 - 40
Commercial / Industrial	151	50+
Strategic	164	n/a

4. Q: Why is Black Diamond annexing these particular lands?

A: In March 2018 the Towns of Black Diamond and Turner Valley each adopted the *Turner Valley & Black Diamond Joint Growth Strategy,* which forecasted the future population growth and corresponding land requirements of the two towns over the next 60 years. A number of growth scenarios were developed, with both Councils supporting a scenario whereby the Towns eventually grow together. The lands identified for annexation are consistent with the preferred growth scenario outlined in this strategy.

The quarter section north of Hwy 7 (SE 16-20-2 W5), shown in grey, is intended for a business park, to provide opportunities for goods, services, and employment. This location was chosen for its access and visibility to Hwy 7, and it allows for the extension of the existing business park within Black Diamond.

The quarter section south of Hwy 7 (NE 9-20-2 W5), and the quarter section east of Hwy 22 (SW 9-20-2 W5), show in yellow, are intended primarily for residential development, and were selected to allow for the extension of roads and services from existing residential communities within Black Diamond.

The lands to the west of Town, shown in dark green, are included largely for the strategic purpose of achieving a contiguous border between Black Diamond and Turner Valley, as this will help facilitate the amalgamation of the two towns, should they choose to do so in the future. The proposed annexation area also includes the former site of Black Diamond's water treatment plant, which is currently being developed for a ball diamond, thereby allowing Black Diamond's Peace Officers to provide bylaw enforcement at this facility.

5. **Q: Is annexation addressed in the Intermunicipal Development Plan?**
   A: In June 2002, the *Town of Black Diamond, Town of Turner Valley, and MD of Foothills No. 31 Intermunicipal Development Plan* (IDP) was adopted by each municipality. Both the NE 9-20-2 W5 and SW 9-20-2 W5 are identified for future urban growth in the current IDP. The IDP also identifies that Black Diamond's desired industrial growth direction will be to the east of the sewage treatment lagoons. The IDP can be viewed at the Black Diamond Town Office, the Foothills Joint Administration Building in High River, and is available on both municipalities' websites.

6. **Q: Is there capacity in the water and sewer systems to serve the area proposed for annexation?**
   A: There is existing capacity in Black Diamond's water and sewer systems to support some growth, but they will both require eventual expansion and upgrading in order to serve the entire annexation area. Black Diamond will coordinate these upgrades with our municipal neighbours. Black Diamond is undertaking a study to determine the extent, timing, and cost of the necessary improvements.

7. **Q: What stage is the process at now?**
   A: Black Diamond and Foothills have been in discussions for several months, and Black Diamond has consulted with directly affected landowners. Now Black Diamond and Foothills are seeking input from residents, and the general public.

- ✓ STEP 1: Notice of Intent to Annex submitted to Municipal Government Board
- ✓ STEP 2: Black Diamond/Foothills discussions
- ✓ STEP 2a: Black Diamond engagement with directly affected landowners
- → STEP 3: Public engagement (public open house, information mailed to residents, press release, website updates, online survey, etc.)
- STEP 4: Black Diamond and Foothills finalize Annexation Agreement
- STEP 5: Foothills Council and Black Diamond Council hold public hearing prior to approving the Annexation Agreement
- STEP 6: Annexation Application is submitted by Black Diamond to MGB
- STEP 7: MGB advertises the application to the public
- STEP 8: MGB holds public hearing (if objections are received)
- STEP 9: MGB makes recommendation to provincial government
- STEP 10: Provincial government makes decision on application

8. **Q: How long will the annexation process take?**
   A: The annexation process can occur quickly when all parties are in agreement but can take longer (up to 2+ years).

9. **Q: What opportunities will landowners and the public have to participate in the annexation process?**
   A: Black Diamond's public consultation process includes press releases, website updates, brochure mail-outs, a public open house, and direct meetings with landowners. Both Black Diamond Council and Foothills Council will hold public hearings prior to endorsing the annexation agreement. In addition, if an objection is raised to the proposed annexation, the Municipal Government Board will hold a public hearing as part of its decision-making process. This will allow the opportunity for any landowner, resident, business, or agency to make representations either verbally or in writing to the board.

10. **Q: What are the next steps?**
    A: In addition to landowners, Black Diamond has formally notified Foothills, provincial agencies, school boards, the health authority, and utility operators of Black Diamond's annexation proposal. Each of these agencies have the opportunity to comment and/or participate in the annexation process. Landowners are welcome to contact Black Diamond directly to ask questions and discuss concerns.

11. **Q: Who makes the final decision?**
    Black Diamond and Foothills will negotiate an annexation agreement. Once an agreement is reached, or negotiations and, if required, mediation has concluded, Black Diamond will submit an official 'Application to Annex Lands' to the Alberta Municipal Government Board (MGB), which will assess the application and will hold a public hearing if there is disagreement amongst the parties or if an objection is raised by a landowner, a member of the public, or other affected party. The Municipal Government Board will make a recommendation on the application to the Provincial Government, which makes the final decision.

12. **Q: Will services Foothills currently provides me be affected?**
    A: Black Diamond will work with Foothills to provide the same level of service to the annexed lands as Foothills is currently providing.

13. **Q: Will my taxes be affected?**
    A: Common practice regarding the taxation of annexed lands is to provide landowners a period of time (a number of years) where they would continue to be taxed at Foothills rate, unless a 'triggering event' is undertaken by the landowner. An example of a triggering event used in other annexations is a landowner subdividing or rezoning their land or connecting to Town water or sewer systems. The duration of time that annexed landowners will be taxed at Foothills rate, and what will constitute a 'triggering event' will be negotiated by Black Diamond and Foothills, in consultation with landowners, and will ultimately be decided on by the province.

    While annexed properties may be taxed at Foothills rate, Black Diamond's discounts and penalties will be in effect. Foothills' discount for early tax payment will not apply once lands are annexed into the Town.

14. **Q: If I'm annexed will I be able to use my land as I currently do now?**
    A: Black Diamond will ensure existing legal uses can be continued once the lands are annexed into Black Diamond.

15. **Q: How will the annexation affect my land use district?**
    A: Black Diamond will acknowledge existing land use districts and maintain the development rights currently available under the current district in Foothills Land Use Bylaw until an application is made to redistrict or subdivide your property.

16. **Q: Will I be able to continue to keep pets and livestock if annexed into Black Diamond?**
    A: Any legal or permitted livestock would be allowed to continue to be kept and reared on your property, as your existing land use would be maintained. If you chose to develop or subdivide your property, this may affect your ability to continue keeping livestock on your property as the number of animals allowed is often determined by the property size and zoning.

    Black Diamond requires that all dogs be licensed. Cats and other pets do not require licensing.

17. **Q: I have an existing Home-Based Business on my property, how will being annexed into Black Diamond impact my business?**
    A: Any legal and approved uses would be permitted to continue as approved but would require an updated approval if any changes occur. You will not be required to obtain a new approval from Black Diamond until such time that you wish to expand your business or further develop your property. Black Diamond will accept a valid Foothills business license until it expires. Upon expiration, a Black Diamond business license will be required.

18. **Q: Will I receive Town services once annexed? (ie. water, sewer, garbage pick-up)**
    A: Existing dwelling will not be required to connect to municipal water or sewer services. Most services are installed or constructed at the time of development of property. When a landowner chooses to subdivide and/or develop their property, they are responsible for constructing necessary roadways, and installing necessary utility services such as water and wastewater, gas, electrical, and telecommunications. Black Diamond is undertaking a servicing study to address the servicing requirements for the annexed lands if you chose to develop.

    Black Diamond will not provide garbage pick-up service to annexed properties. Black Diamond is a member of Foothills Regional Services Commission which operates Foothills Regional & Resource Recovery Centre, and residents of the annexation area may continue to haul their garbage there. Once annexed lands have been developed to town density, the new neighbourhood would be added to the garbage pick-up routes; however, garbage trucks are not able to attend individual acreages or home sites.

    The Oilfields Recycling Centre in Turner Valley, and the Black Diamond Waste Transfer Station remain available for use by all residents.

19. **Q: How would the annexation impact fire, emergency and protective services for me and my property?**

A: Black Diamond will provide fire services to all properties in Town, including the annexation area, and will continue to provide and receive fire services from neighbouring municipalities under the terms of the current Mutual Aid Agreement. Bylaw enforcement will be by Black Diamond Officers rather than Foothills Officers.

20. Q: Who is negotiating on behalf of each municipality?

A: Three elected officials from each municipality sit on the Annexation Negotiation Committee. These individuals include the Mayor and Reeve, as well as two Councilors from each of the respective municipalities. Staff from both municipalities support the work of the committee.

21. Q: How will being annexed into Black Diamond change or impact my property value?

A: Determining property value is a very complex process with many factors. It is often assumed that being within a town will increase your property value as there is greater potential to access town services, it may also make your property more desirable to developers as there may be more potential to develop at a higher density. The local and regional economy has a significant impact on property values.

More Information

Updates will be posted to Black Diamond's and Foothills websites.

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond
phone: 403.933.4348
Email: rodr@town.blackdiamond.ab.ca
www.town.blackdiamond.ab.ca

Drew Granson, B.Sc. Geog., GIS
Planning and Development Officer
Municipal District of Foothills No. 31
phone: 403-603-6218
Email: Drew.Granson@mdfoothills.com
www.mdfoothills.com

September 24, 2018

[redacted]

Dear [redacted]

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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The Town has identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth. **Your lands are not included in the proposed annexation area.**

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Sincerely,

Ruth Goodwin, Mayor
Town of Black Diamond

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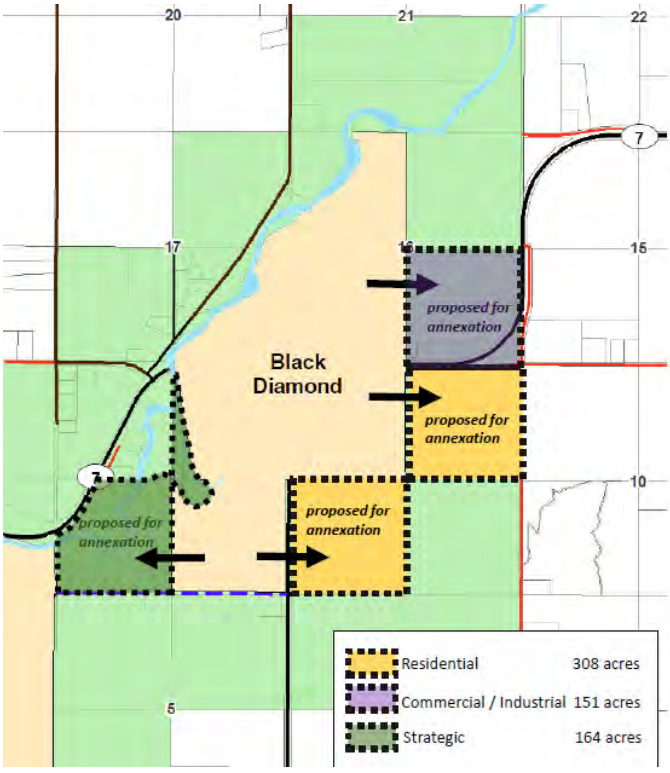
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SW 9-20-2 W5	101 216 209	146.85
SW 9-20-2 W5	001 110 623 +2	10.3
Parcels within NE 8-20-2 W4	***Certificate of Title***	***Area (acres)***
NE 8-20-2 W5	891 104 921	15.8
NE 8-20-2 W5	161 260 885	15.8
Parcels within SE 8-20-2 W4	***Certificate of Title***	***Area (acres)***
SE 8-20-2 W5	161 260 885 +1	5.8
Parcels within NW 8-20-2 W4	***Certificate of Title***	***Area (acres)***
NW 8-20-2 W5	971 378 878	1.2
Parcels within SW 8-20-2 W4	***Certificate of Title***	***Area (acres)***
Block 1, Plan 8010142	801 015 653	24.41
Lot 1, Block 2, Plan 1113505	111 311 965	14.16
SW 8-20-2 W5	111 311 965 +1	87.24
	Total Area (acres)	**614**

	Total Area	*Years of Supply*
Residential	308	30 - 40
Commercial / Industrial	151	50+
Strategic	164	n/a

4. Q: Why is Black Diamond annexing these particular lands?

A: In March 2018 the Towns of Black Diamond and Turner Valley each adopted the *Turner Valley & Black Diamond Joint Growth Strategy,* which forecasted the future population growth and corresponding land requirements of the two towns over the next 60 years. A number of growth scenarios were developed, with both Councils supporting a scenario whereby the Towns eventually grow together. The lands identified for annexation are consistent with the preferred growth scenario outlined in this strategy.

The quarter section north of Hwy 7 (SE 16-20-2 W5), shown in grey, is intended for a business park, to provide opportunities for goods, services, and employment. This location was chosen for its access and visibility to Hwy 7, and it allows for the extension of the existing business park within Black Diamond.

The quarter section south of Hwy 7 (NE 9-20-2 W5), and the quarter section east of Hwy 22 (SW 9-20-2 W5), show in yellow, are intended primarily for residential development, and were selected to allow for the extension of roads and services from existing residential communities within Black Diamond.

The lands to the west of Town, shown in dark green, are included largely for the strategic purpose of achieving a contiguous border between Black Diamond and Turner Valley, as this will help facilitate the amalgamation of the two towns, should they choose to do so in the future. The proposed annexation area also includes the former site of Black Diamond's water treatment plant, which is currently being developed for a ball diamond, thereby allowing Black Diamond's Peace Officers to provide bylaw enforcement at this facility.

5. **Q: Is annexation addressed in the Intermunicipal Development Plan?**
   A: In June 2002, the *Town of Black Diamond, Town of Turner Valley, and MD of Foothills No. 31 Intermunicipal Development Plan* (IDP) was adopted by each municipality. Both the NE 9-20-2 W5 and SW 9-20-2 W5 are identified for future urban growth in the current IDP. The IDP also identifies that Black Diamond's desired industrial growth direction will be to the east of the sewage treatment lagoons. The IDP can be viewed at the Black Diamond Town Office, the Foothills Joint Administration Building in High River, and is available on both municipalities' websites.

6. **Q: Is there capacity in the water and sewer systems to serve the area proposed for annexation?**
   A: There is existing capacity in Black Diamond's water and sewer systems to support some growth, but they will both require eventual expansion and upgrading in order to serve the entire annexation area. Black Diamond will coordinate these upgrades with our municipal neighbours. Black Diamond is undertaking a study to determine the extent, timing, and cost of the necessary improvements.

7. **Q: What stage is the process at now?**
   A: Black Diamond and Foothills have been in discussions for several months, and Black Diamond has consulted with directly affected landowners. Now Black Diamond and Foothills are seeking input from residents, and the general public.

- ✓ STEP 1: Notice of Intent to Annex submitted to Municipal Government Board
- ✓ STEP 2: Black Diamond/Foothills discussions
- ✓ STEP 2a: Black Diamond engagement with directly affected landowners
- → STEP 3: Public engagement (public open house, information mailed to residents, press release, website updates, online survey, etc.)
- STEP 4: Black Diamond and Foothills finalize Annexation Agreement
- STEP 5: Foothills Council and Black Diamond Council hold public hearing prior to approving the Annexation Agreement
- STEP 6: Annexation Application is submitted by Black Diamond to MGB
- STEP 7: MGB advertises the application to the public
- STEP 8: MGB holds public hearing (if objections are received)
- STEP 9: MGB makes recommendation to provincial government
- STEP 10: Provincial government makes decision on application

8. **Q: How long will the annexation process take?**
   A: The annexation process can occur quickly when all parties are in agreement but can take longer (up to 2+ years).

9. **Q: What opportunities will landowners and the public have to participate in the annexation process?**
   A: Black Diamond's public consultation process includes press releases, website updates, brochure mail-outs, a public open house, and direct meetings with landowners. Both Black Diamond Council and Foothills Council will hold public hearings prior to endorsing the annexation agreement. In addition, if an objection is raised to the proposed annexation, the Municipal Government Board will hold a public hearing as part of its decision-making process. This will allow the opportunity for any landowner, resident, business, or agency to make representations either verbally or in writing to the board.

10. **Q: What are the next steps?**
    A: In addition to landowners, Black Diamond has formally notified Foothills, provincial agencies, school boards, the health authority, and utility operators of Black Diamond's annexation proposal. Each of these agencies have the opportunity to comment and/or participate in the annexation process. Landowners are welcome to contact Black Diamond directly to ask questions and discuss concerns.

11. **Q: Who makes the final decision?**
    Black Diamond and Foothills will negotiate an annexation agreement. Once an agreement is reached, or negotiations and, if required, mediation has concluded, Black Diamond will submit an official 'Application to Annex Lands' to the Alberta Municipal Government Board (MGB), which will assess the application and will hold a public hearing if there is disagreement amongst the parties or if an objection is raised by a landowner, a member of the public, or other affected party. The Municipal Government Board will make a recommendation on the application to the Provincial Government, which makes the final decision.

12. **Q: Will services Foothills currently provides me be affected?**
    A: Black Diamond will work with Foothills to provide the same level of service to the annexed lands as Foothills is currently providing.

13. **Q: Will my taxes be affected?**
    A: Common practice regarding the taxation of annexed lands is to provide landowners a period of time (a number of years) where they would continue to be taxed at Foothills rate, unless a 'triggering event' is undertaken by the landowner. An example of a triggering event used in other annexations is a landowner subdividing or rezoning their land or connecting to Town water or sewer systems. The duration of time that annexed landowners will be taxed at Foothills rate, and what will constitute a 'triggering event' will be negotiated by Black Diamond and Foothills, in consultation with landowners, and will ultimately be decided on by the province.

    While annexed properties may be taxed at Foothills rate, Black Diamond's discounts and penalties will be in effect. Foothills' discount for early tax payment will not apply once lands are annexed into the Town.

14. **Q: If I'm annexed will I be able to use my land as I currently do now?**
    A: Black Diamond will ensure existing legal uses can be continued once the lands are annexed into Black Diamond.

15. **Q: How will the annexation affect my land use district?**
    A: Black Diamond will acknowledge existing land use districts and maintain the development rights currently available under the current district in Foothills Land Use Bylaw until an application is made to redistrict or subdivide your property.

16. **Q: Will I be able to continue to keep pets and livestock if annexed into Black Diamond?**
    A: Any legal or permitted livestock would be allowed to continue to be kept and reared on your property, as your existing land use would be maintained. If you chose to develop or subdivide your property, this may affect your ability to continue keeping livestock on your property as the number of animals allowed is often determined by the property size and zoning.

    Black Diamond requires that all dogs be licensed. Cats and other pets do not require licensing.

17. **Q: I have an existing Home-Based Business on my property, how will being annexed into Black Diamond impact my business?**
    A: Any legal and approved uses would be permitted to continue as approved but would require an updated approval if any changes occur. You will not be required to obtain a new approval from Black Diamond until such time that you wish to expand your business or further develop your property. Black Diamond will accept a valid Foothills business license until it expires. Upon expiration, a Black Diamond business license will be required.

18. **Q: Will I receive Town services once annexed? (ie. water, sewer, garbage pick-up)**
    A: Existing dwelling will not be required to connect to municipal water or sewer services. Most services are installed or constructed at the time of development of property. When a landowner chooses to subdivide and/or develop their property, they are responsible for constructing necessary roadways, and installing necessary utility services such as water and wastewater, gas, electrical, and telecommunications. Black Diamond is undertaking a servicing study to address the servicing requirements for the annexed lands if you chose to develop.

    Black Diamond will not provide garbage pick-up service to annexed properties. Black Diamond is a member of Foothills Regional Services Commission which operates Foothills Regional & Resource Recovery Centre, and residents of the annexation area may continue to haul their garbage there. Once annexed lands have been developed to town density, the new neighbourhood would be added to the garbage pick-up routes; however, garbage trucks are not able to attend individual acreages or home sites.

    The Oilfields Recycling Centre in Turner Valley, and the Black Diamond Waste Transfer Station remain available for use by all residents.

19. **Q: How would the annexation impact fire, emergency and protective services for me and my property?**

A: Black Diamond will provide fire services to all properties in Town, including the annexation area, and will continue to provide and receive fire services from neighbouring municipalities under the terms of the current Mutual Aid Agreement. Bylaw enforcement will be by Black Diamond Officers rather than Foothills Officers.

20. Q: Who is negotiating on behalf of each municipality?

A: Three elected officials from each municipality sit on the Annexation Negotiation Committee. These individuals include the Mayor and Reeve, as well as two Councilors from each of the respective municipalities. Staff from both municipalities support the work of the committee.

21. Q: How will being annexed into Black Diamond change or impact my property value?

A: Determining property value is a very complex process with many factors. It is often assumed that being within a town will increase your property value as there is greater potential to access town services, it may also make your property more desirable to developers as there may be more potential to develop at a higher density. The local and regional economy has a significant impact on property values.

More Information

Updates will be posted to Black Diamond's and Foothills websites.

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond
phone: 403.933.4348
Email: rodr@town.blackdiamond.ab.ca
www.town.blackdiamond.ab.ca

Drew Granson, B.Sc. Geog., GIS
Planning and Development Officer
Municipal District of Foothills No. 31
phone: 403-603-6218
Email: Drew.Granson@mdfoothills.com
www.mdfoothills.com

September 24, 2018

Municipal District of Foothills No. 31
Larry Spilak, Reeve
Box 5605
High River, AB T1V 1M7

Dear Larry Spilak:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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The Town has identified an annexation area of approximately 3 quarter sections east of the existing town that will provide enough land for 30 – 40 years of growth, and a quarter section west of town that is included for strategic purposes.

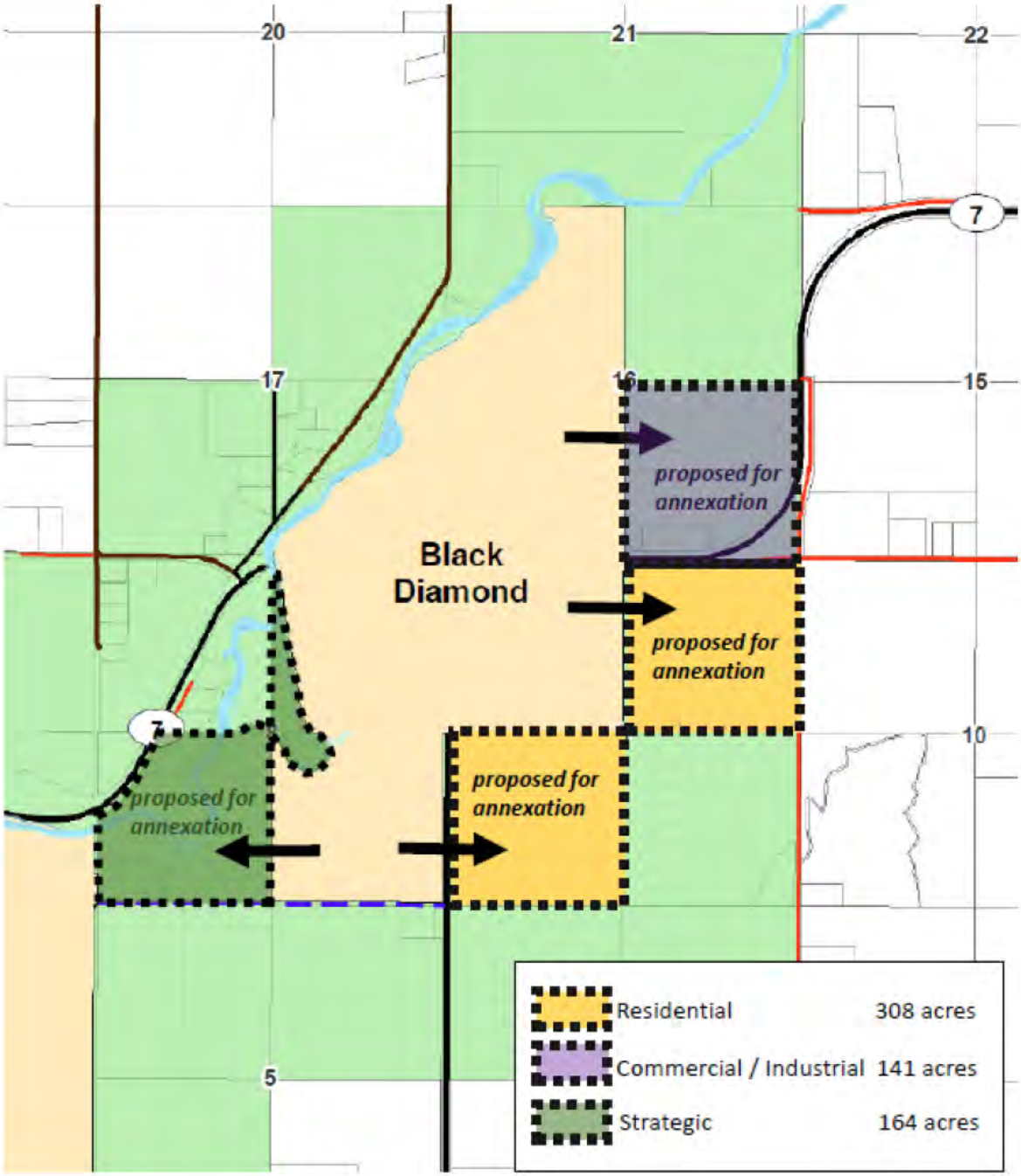
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A Public Open House will be held from 4 – 8 p.m. Monday, October 15 at the Town of Black Diamond Council Chambers where information concerning annexation will be presented. Elected Officials and Administration from the Town of Black Diamond and the Municipal District of Foothills will be in attendance to answer questions and receive comments.

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Sincerely,

Ruth Goodwin
Mayor
Town of Black Diamond


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September 24, 2018

Municipal Government Board
Rick Duncan, Case Manager
15th Floor, Commerce Place
10155 102 Street
Edmonton, AB T5J 4L4

Dear Rick Duncan:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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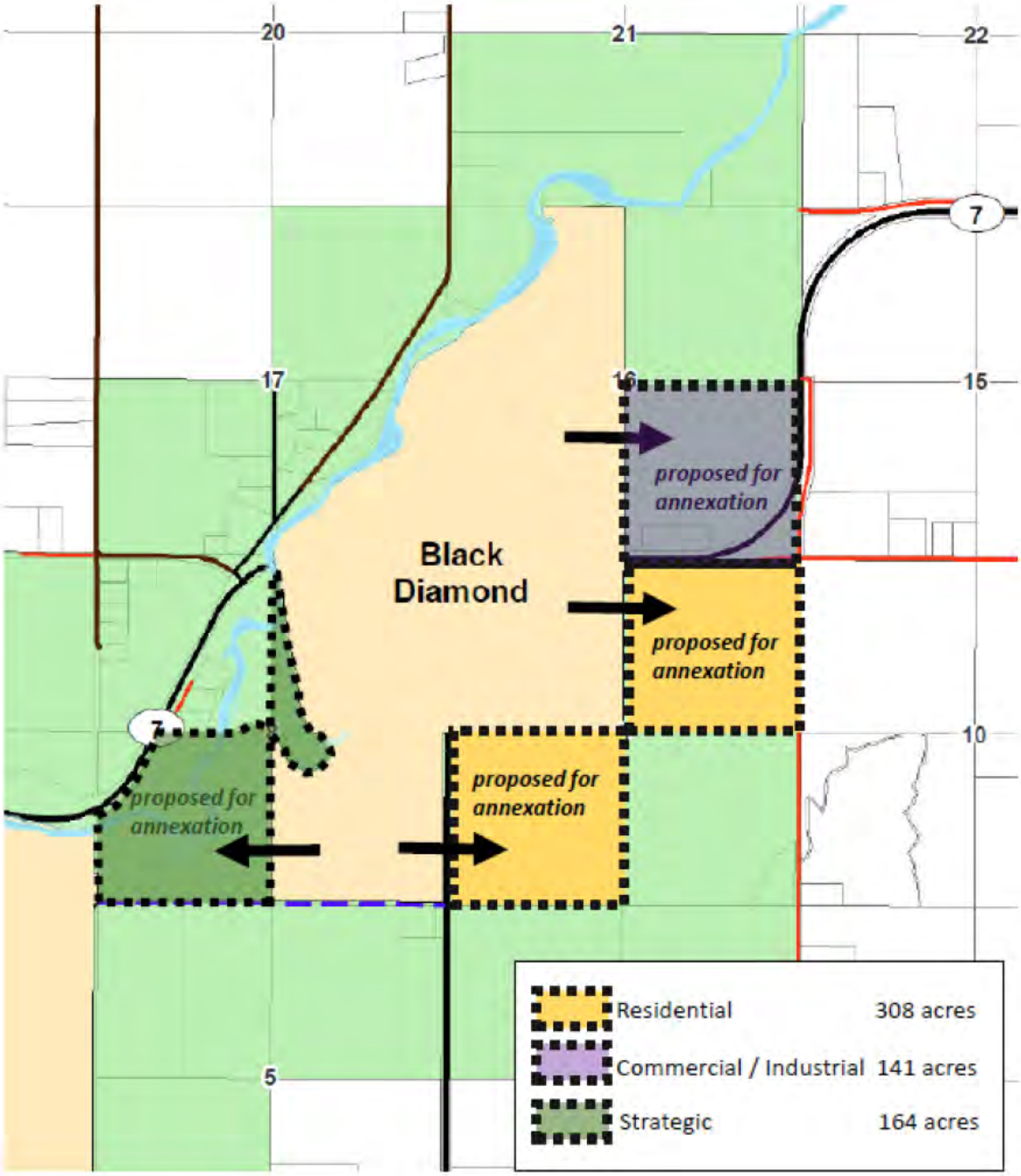
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September 24, 2018

Alberta Health Services, Calgary Zone
Deb Rhodes, Vice President, Corporate Services & Chief Financial Officer
14th Floor, North Tower
10030 – 107 Street NW
Edmonton, AB T5J 3E4

Dear Deb Rhodes:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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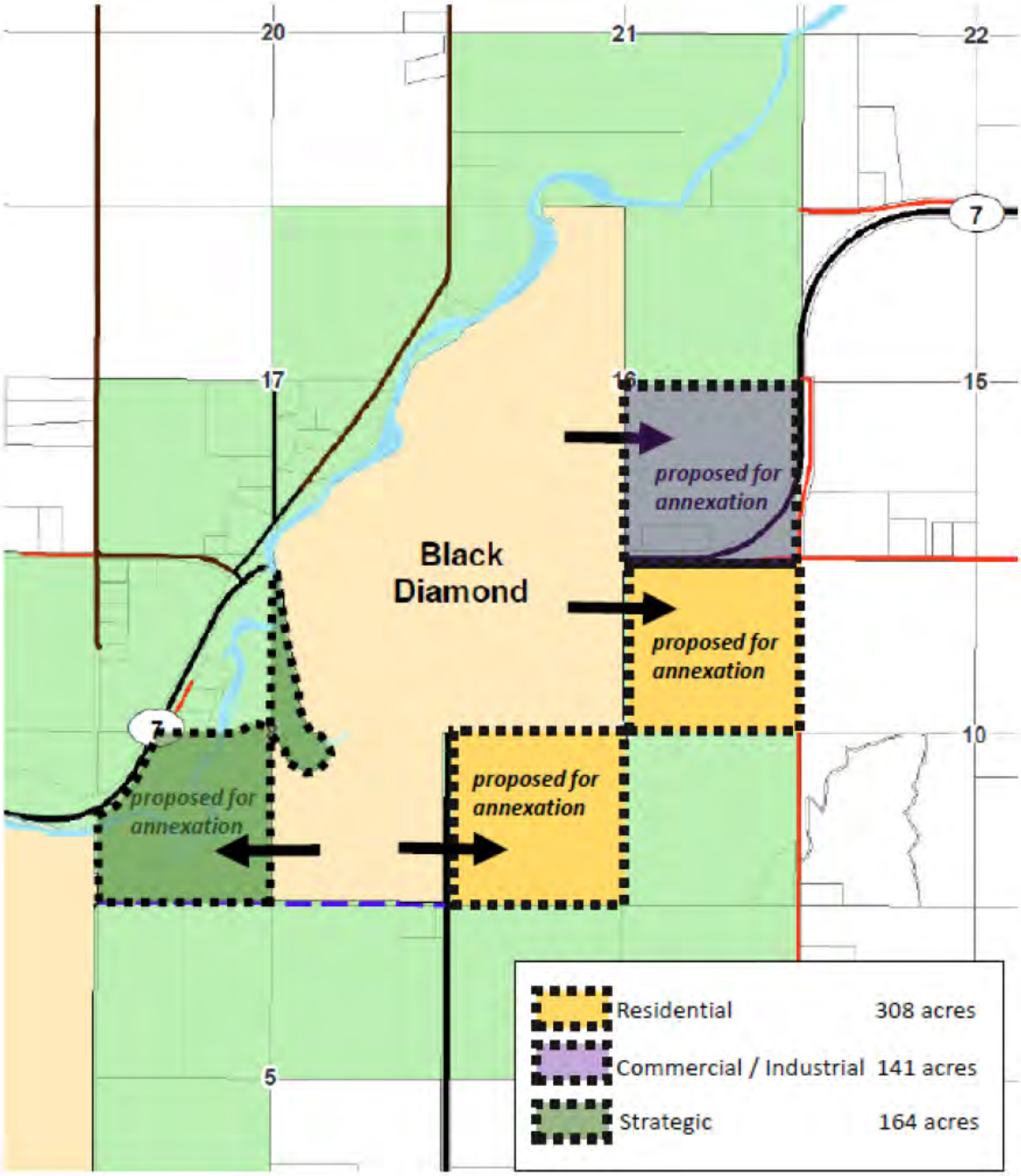
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September 24, 2018

Alberta Transportation, South Region
Darren Davidson, Regional Director
3rd Floor, Administration Building
909-3 Ave North
Lethbridge, AB T1H 0H5

Dear Darren Davidson:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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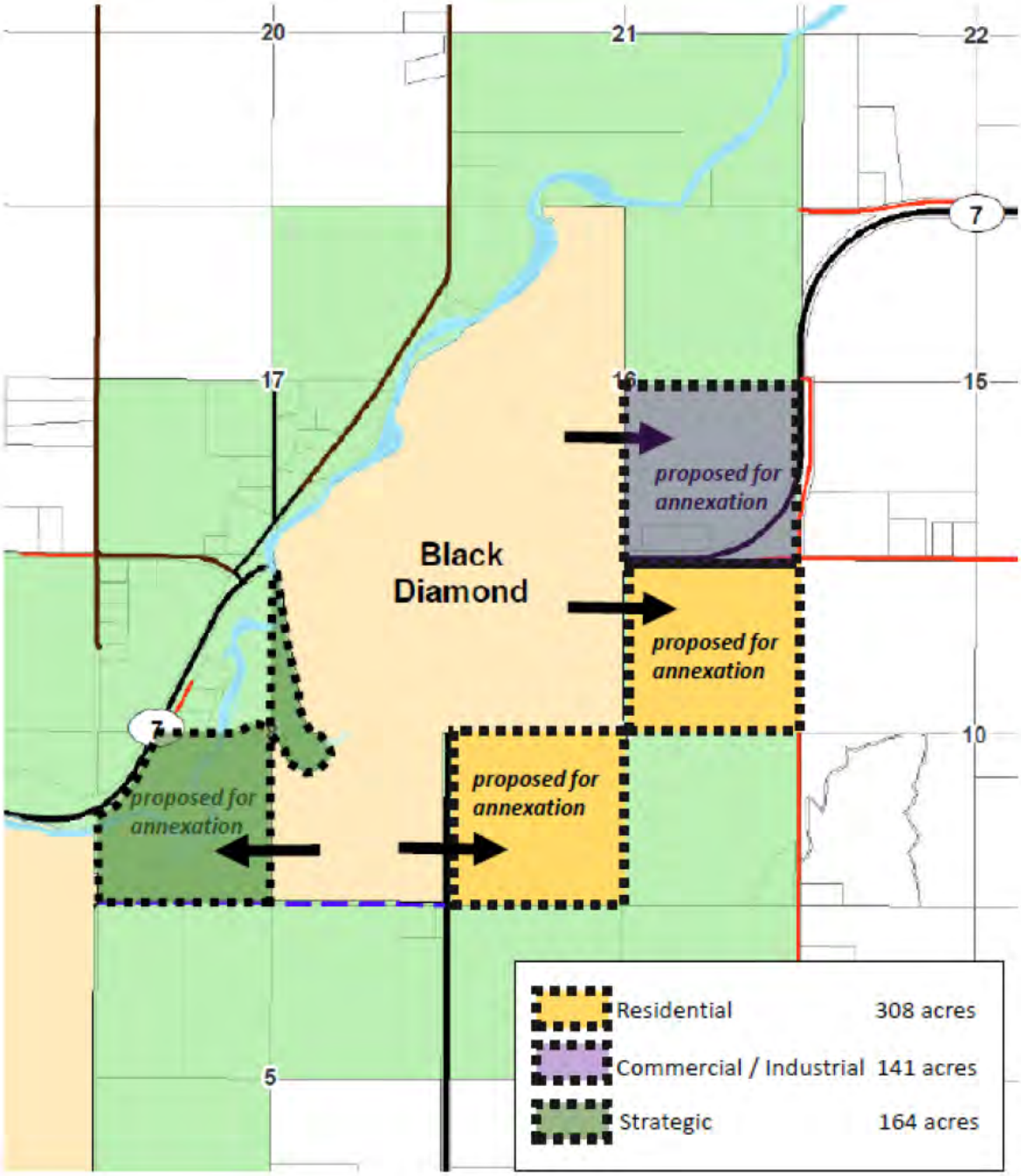
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September 24, 2018

Foothills School Division No. 31
Pam Rannelli, Acting Superintendent
PO Box 5700
High River, AB T1V 1M7

Dear John Bailey:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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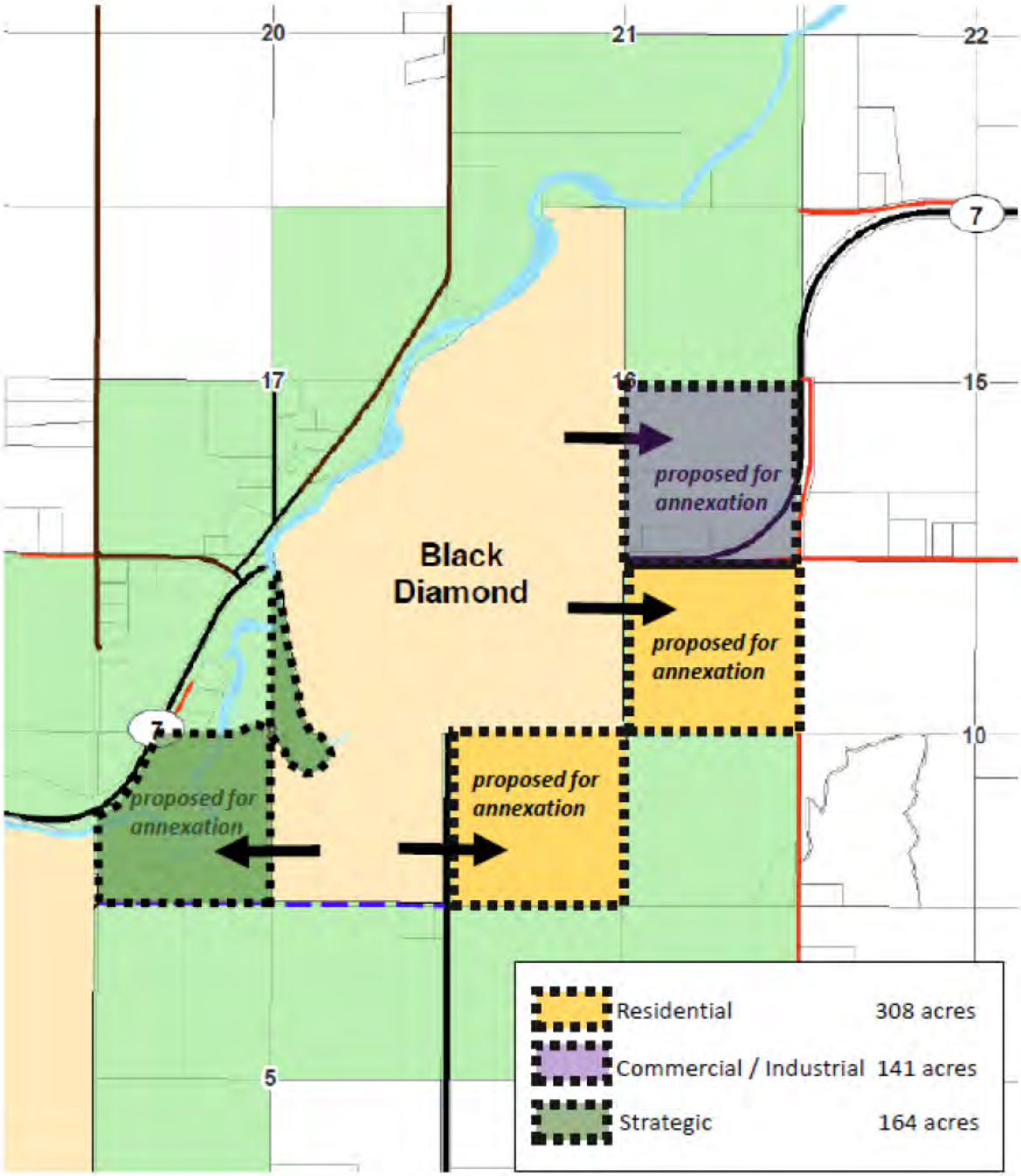
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September 24, 2018

Christ the Redeemer Catholic Schools
Scott Morrison, Superintendent
Box 1318
Okotoks, AB T1S 1B3

Dear Scott Morrison:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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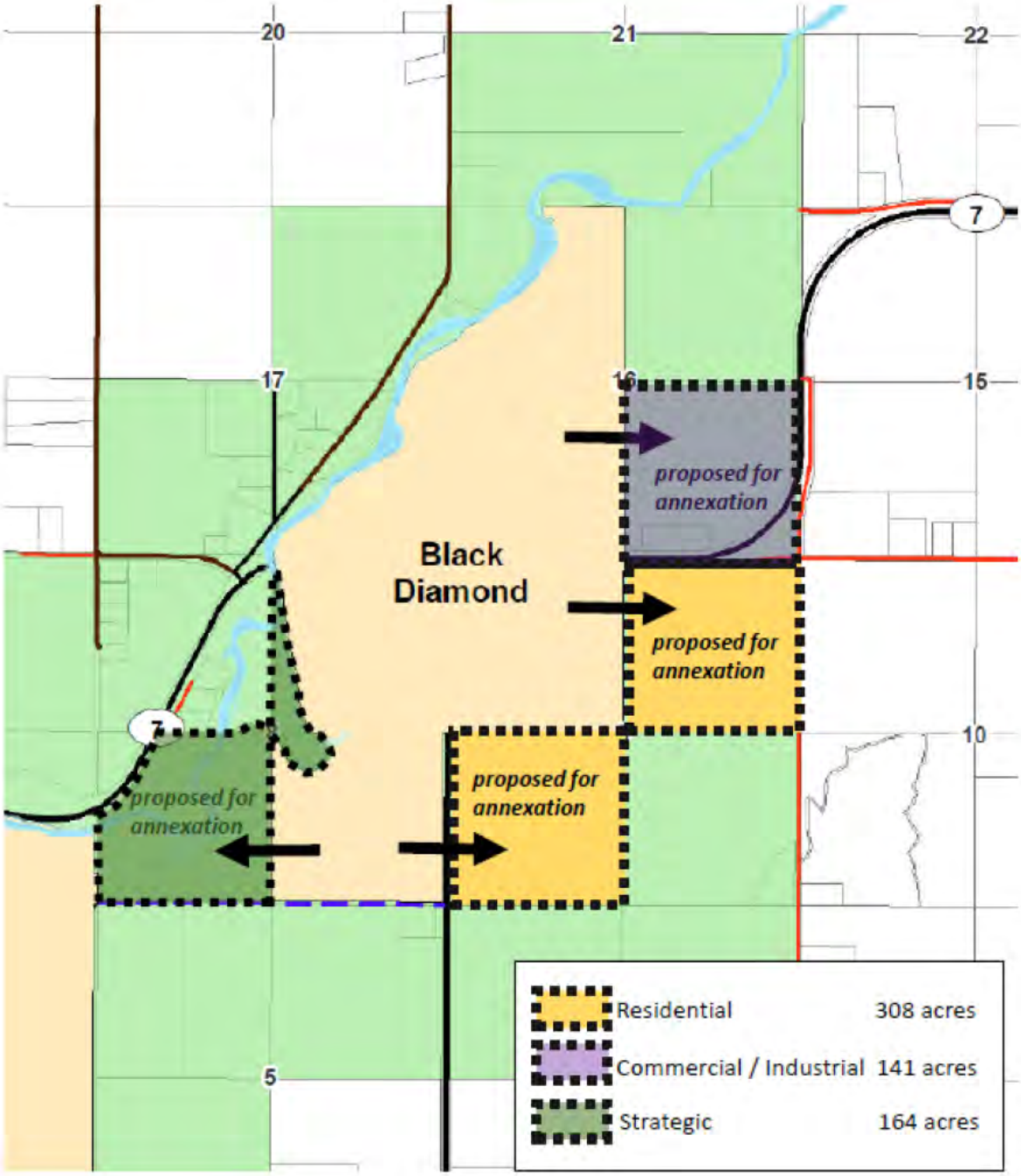
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September 24, 2018

Sheep River Regional Utility Corporation
Harry Riva Cambrin, CAO
Box 5605
High River, AB TIV 1M7

Dear Harry Riva Cambrin:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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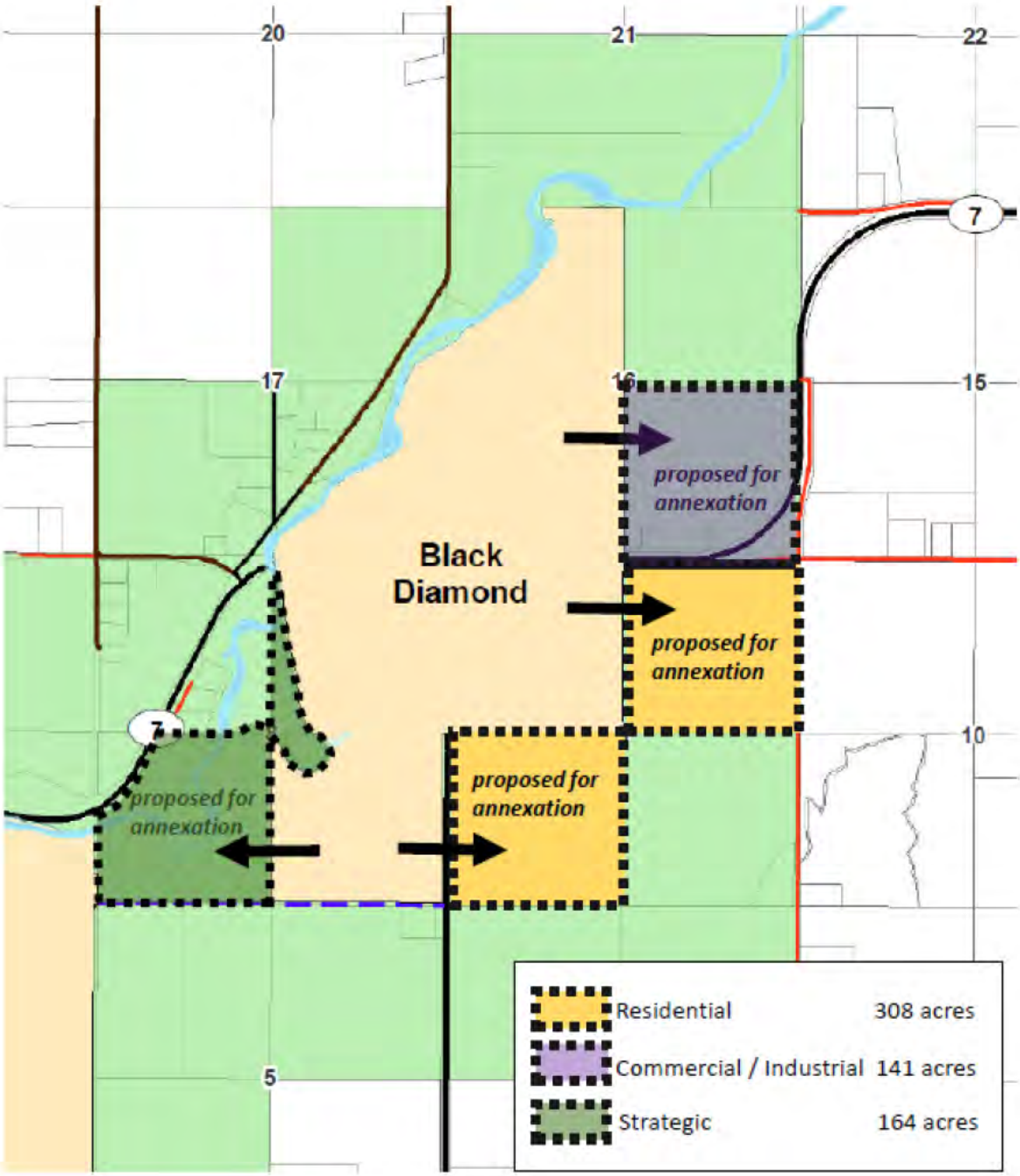
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September 24, 2018

Westend Regional Sewage Service Commission
Laurie McCreary-Burke, Secretary Treasurer
Box 330
Turner Valley, AB T0L 2A0

Dear Laurie McCreary-Burke:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary to provide opportunities for residential, commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town has identified an annexation area of approximately 3 quarter sections east of the existing town that will provide enough land for 30 – 40 years of growth, and a quarter section west of town that is included for strategic purposes.

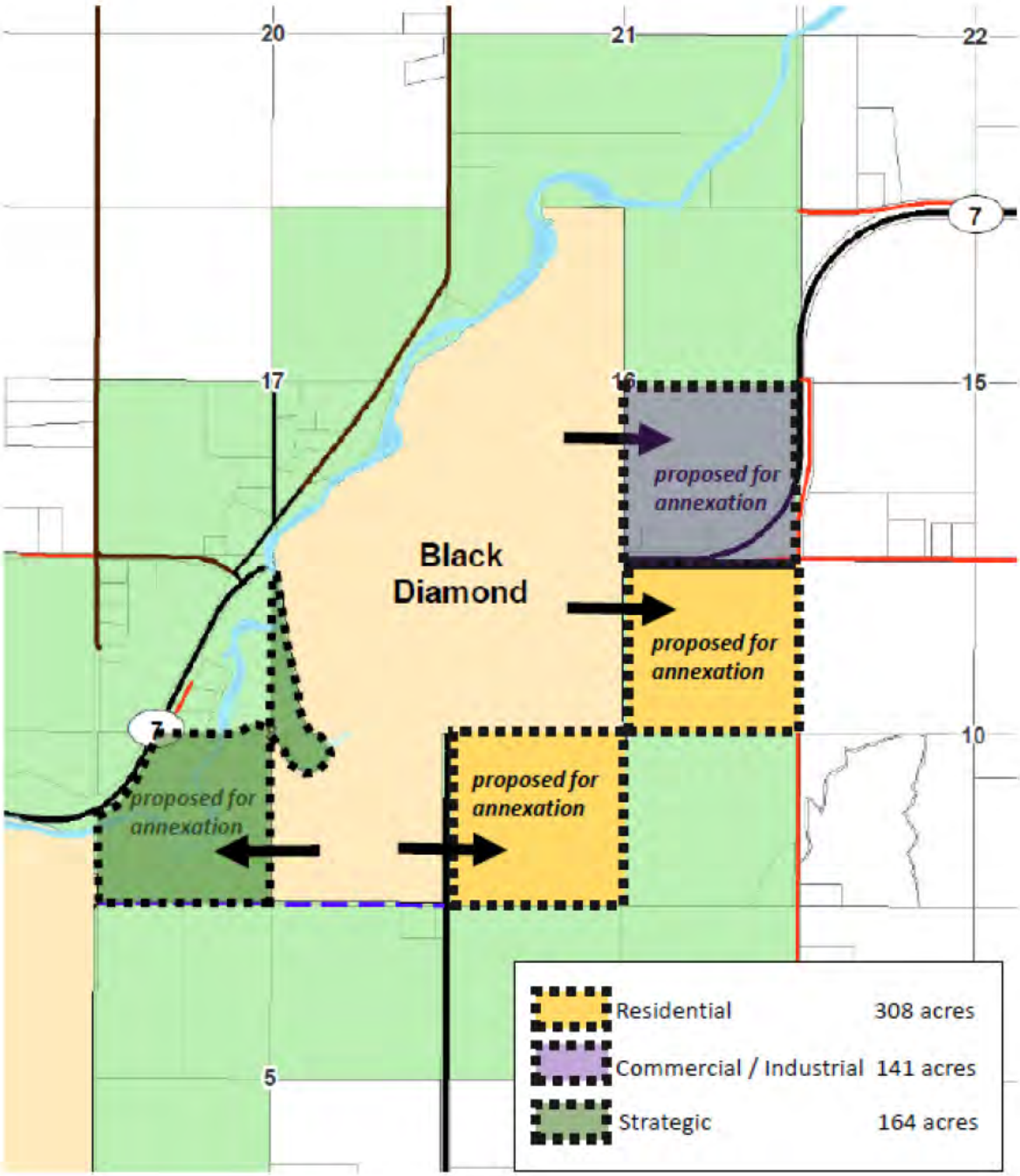
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Sincerely,

Ruth Goodwin
Mayor
Town of Black Diamond


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proposed for annexation
Black Diamond
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Residential 308 acres
Commercial / Industrial 141 acres
Strategic 164 acres

September 24, 2018

Fortis Alberta Inc.
Merlin MacNaughton, Stakeholder Relations Manager
320 17 Avenue SW
Calgary, AB T2S 2V1

Dear Merlin MacNaughton:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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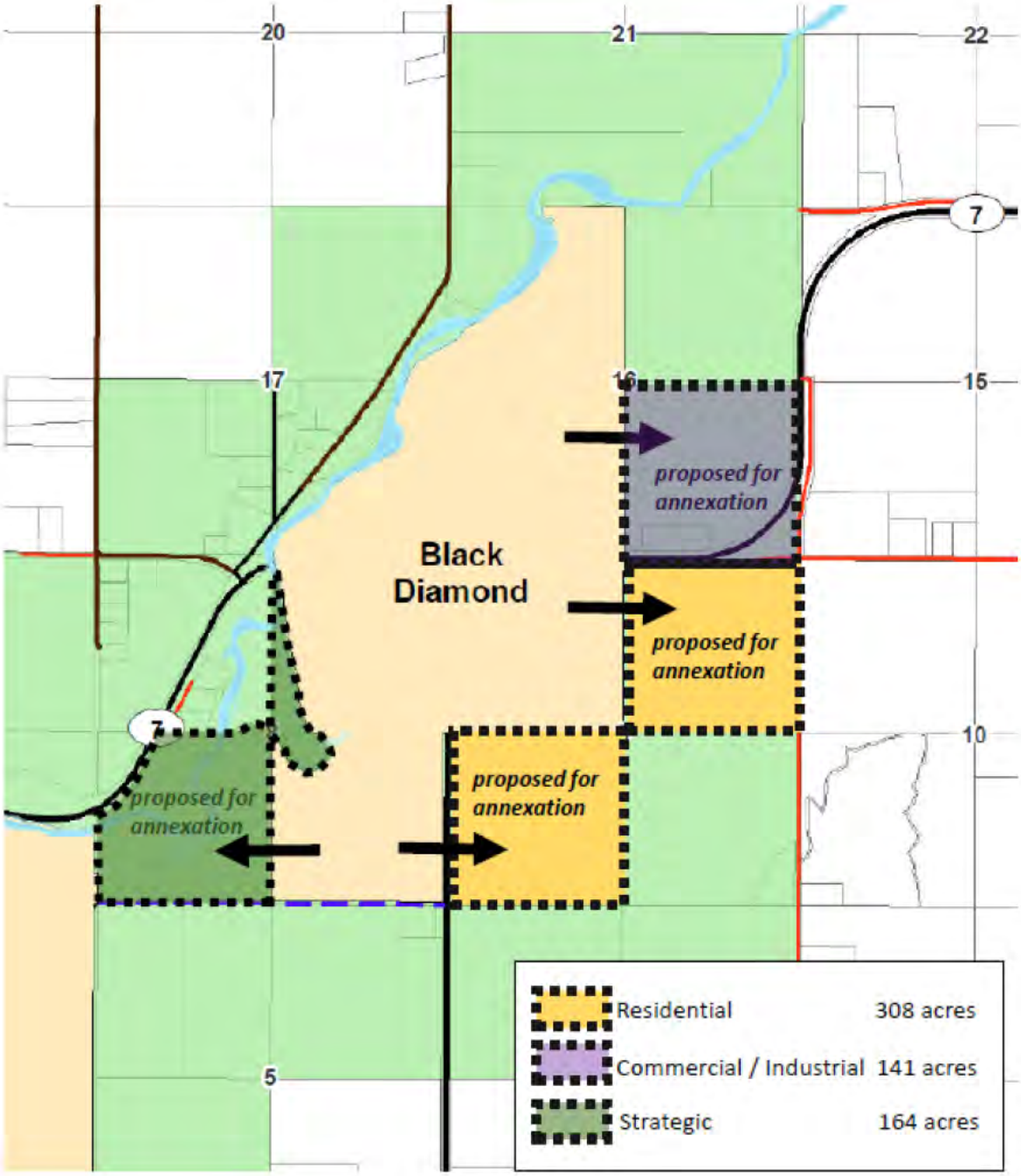
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September 24, 2018

ATCO Pipelines Head Office
Jason Sharpe, Sr. Vice President & General Manager
1200, 909 11 Ave SW
Calgary, AB T2R 1L8

Dear Jason Sharpe:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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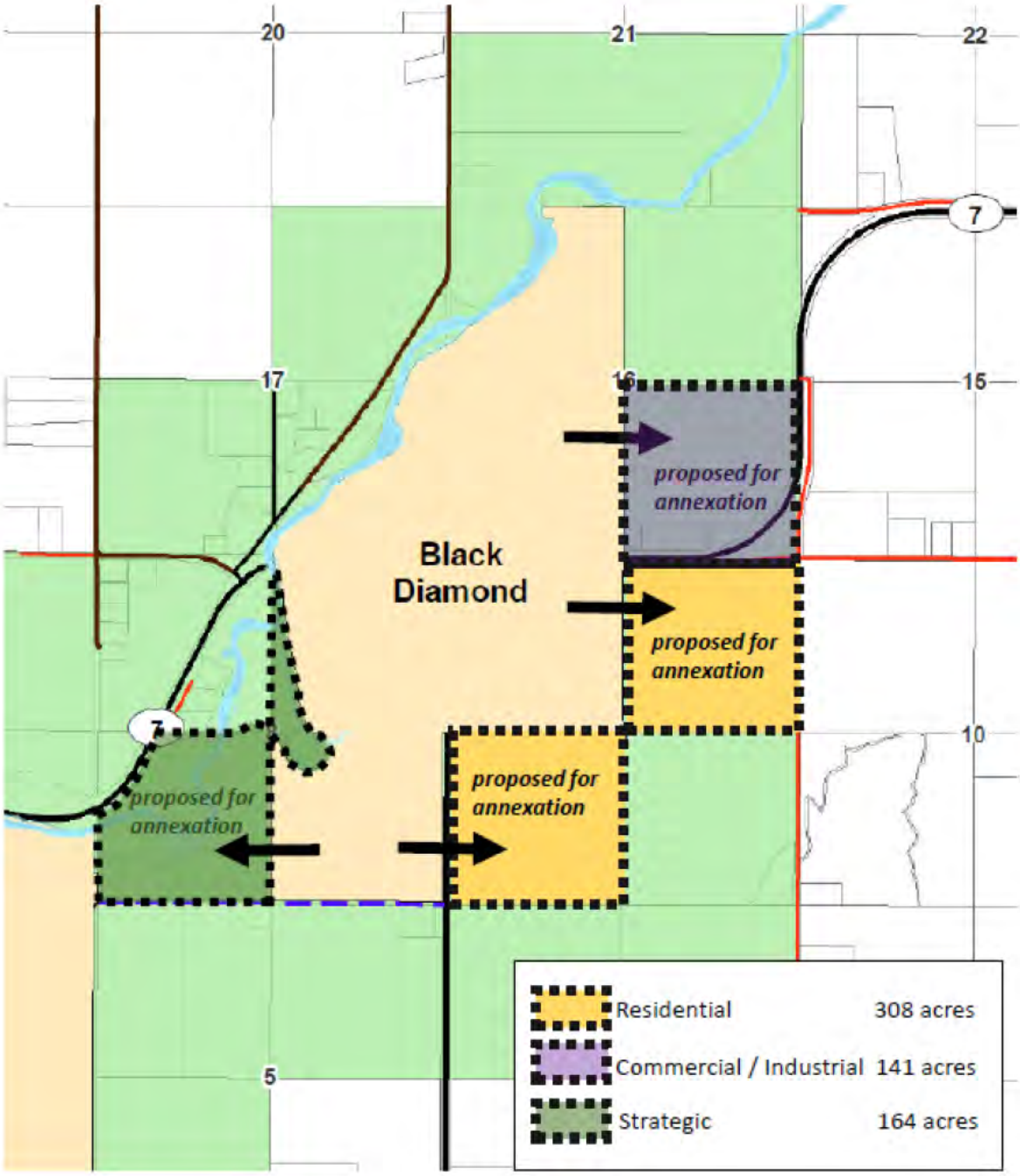
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September 24, 2018

ATCO Gas
Mike Shaw, Vice President,
Calgary Region Operations
909 - 11 Avenue SW
Calgary, AB T2R 1L8

Dear Mike Shaw:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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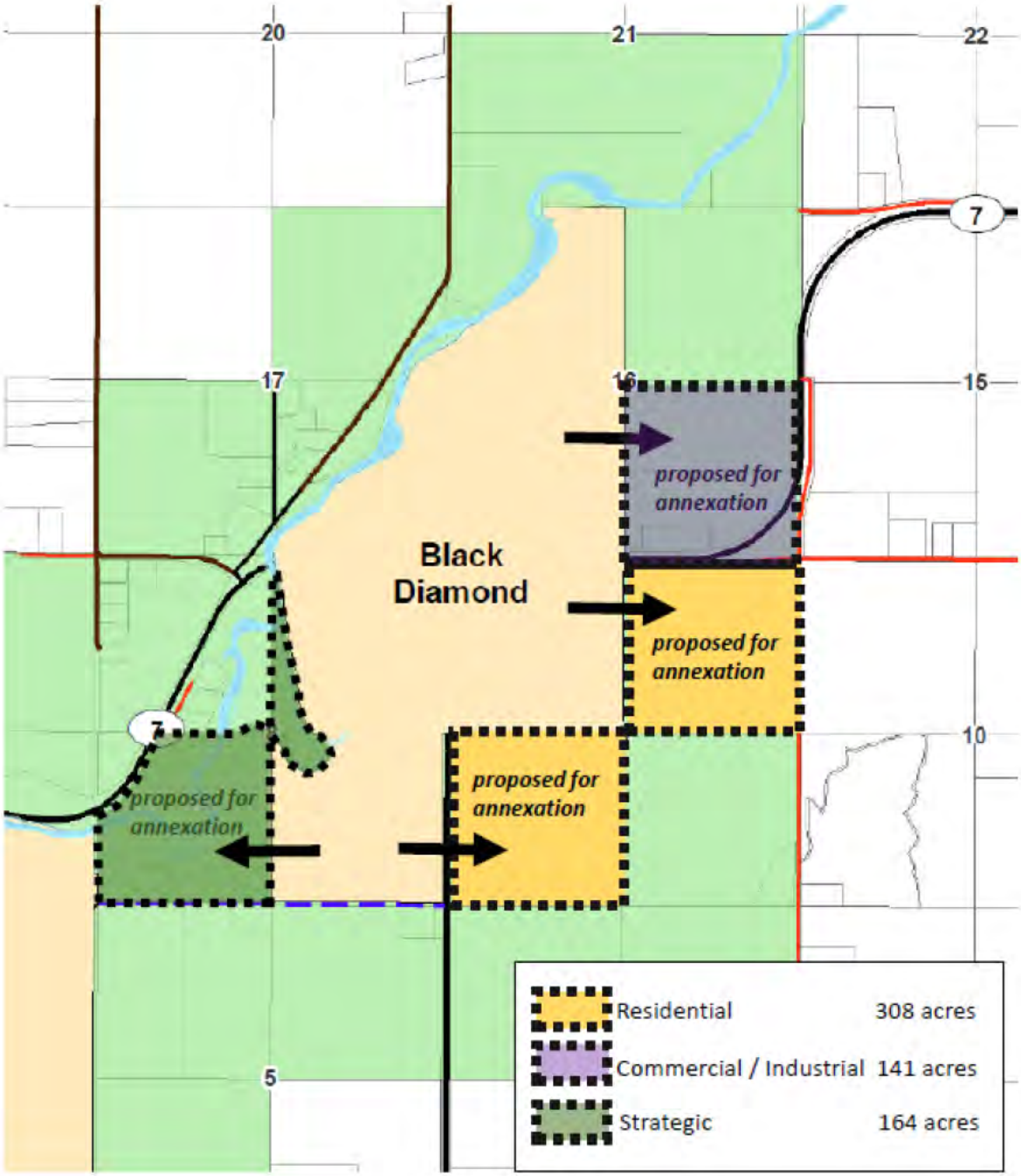
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September 24, 2018

The Honorable Pat Stier, MLA for Livingstone-Macleod
2019 - 20 Avenue
Nanton, AB T0L 1R0

Dear Mr. Stier:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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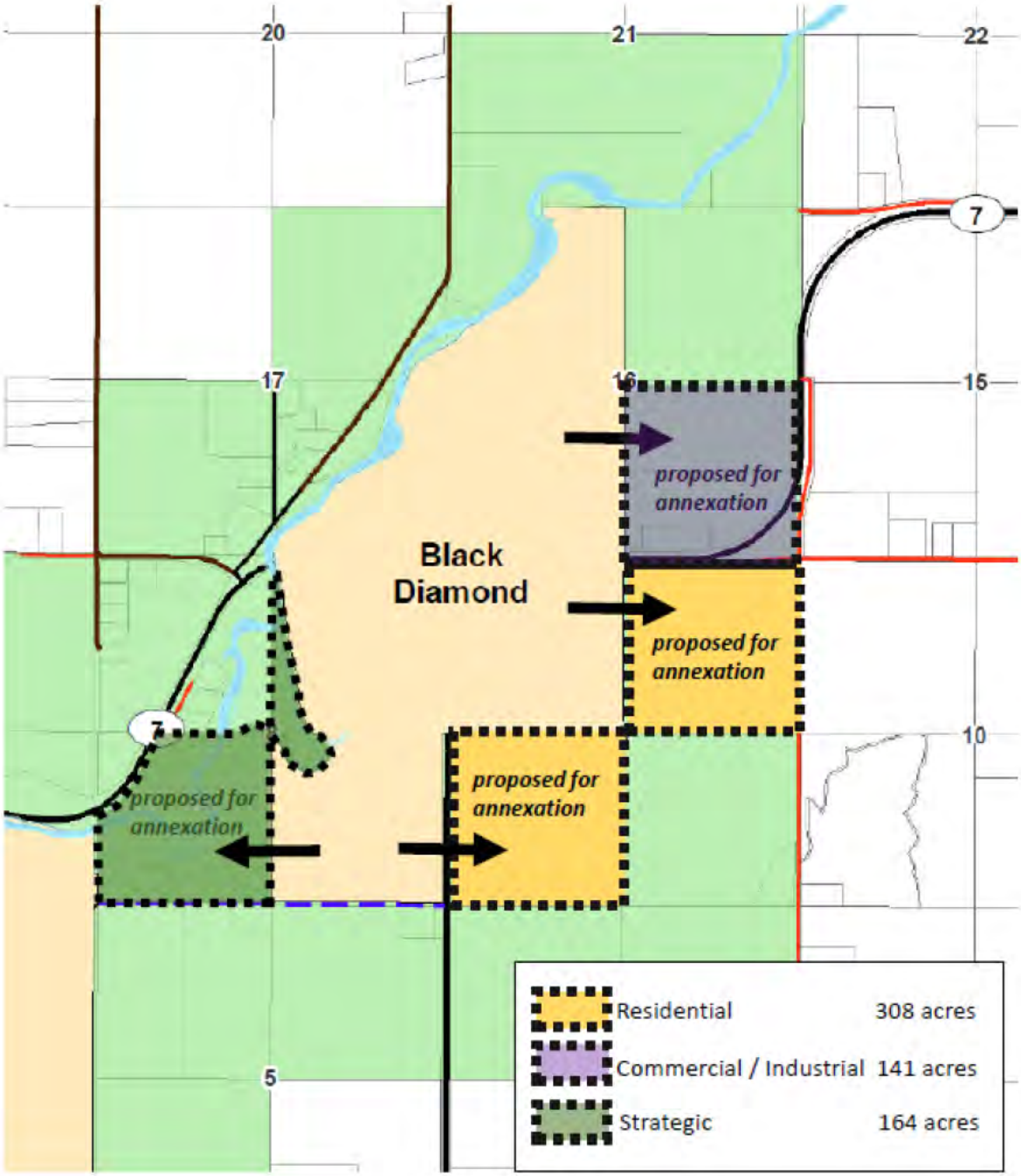
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September 24, 2018

The Honourable Shaye Anderson, Minister of Municipal Affairs
Room 204, Legislature Building
10080 - 97 Avenue NW
Edmonton, AB T5K 2B6

Dear Mr. Anderson:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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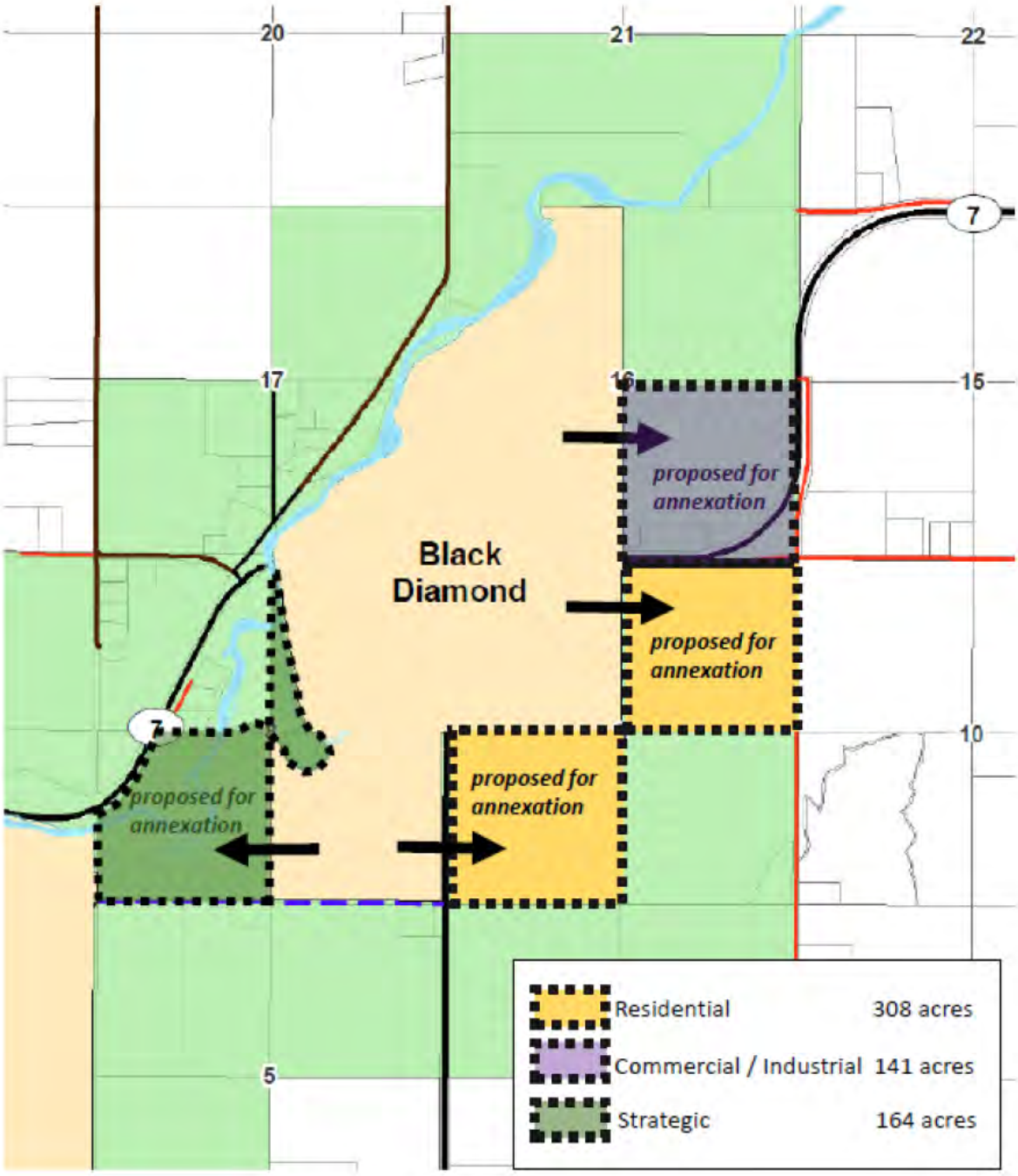
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September 24, 2018

Town of Turner Valley
Todd Sharpe, CAO
Box 330
Turner Valley, AB T0L 2A0

Dear Todd Sharpe:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

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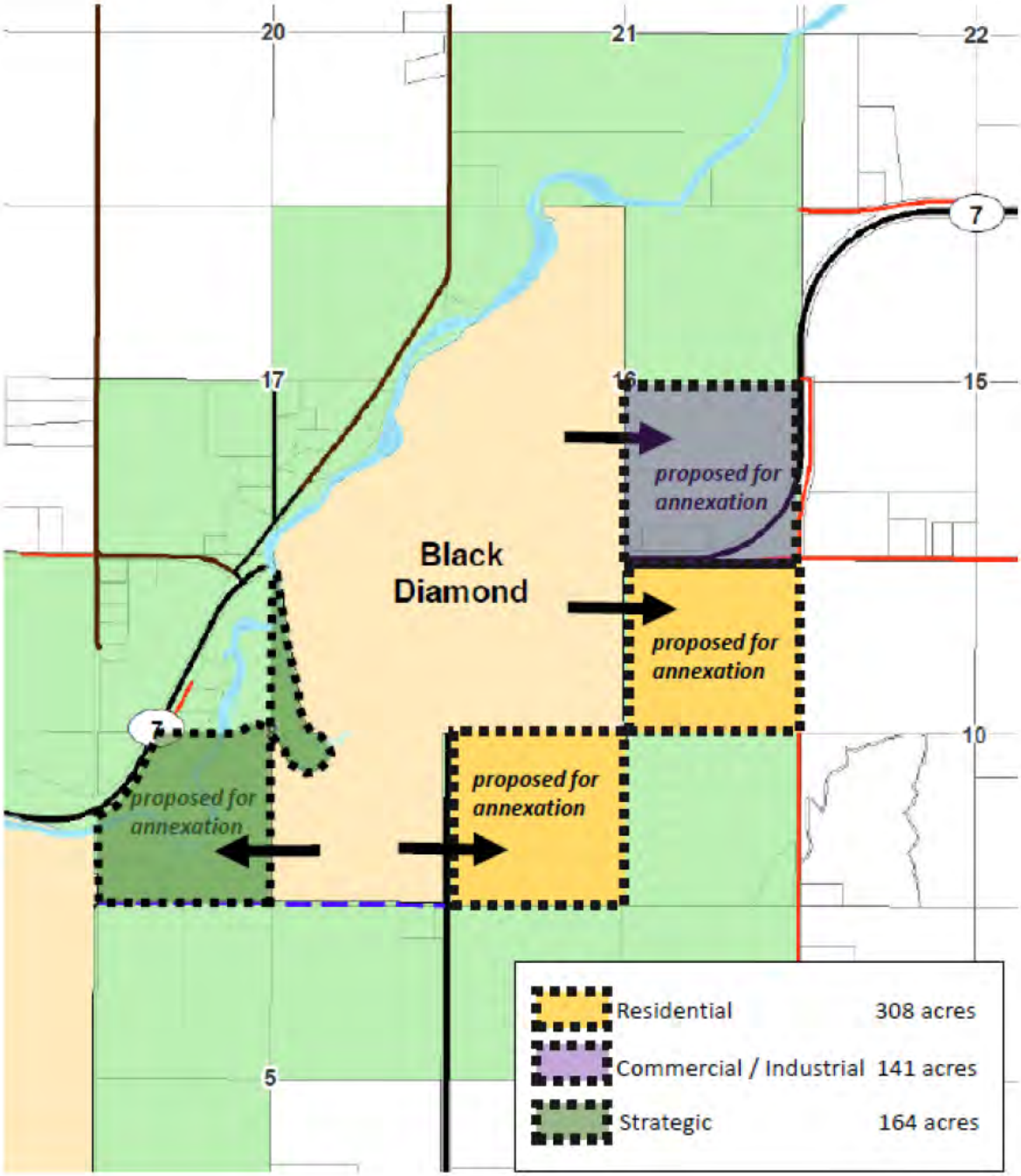
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September 24, 2018

The Honorable John Barlow, MP for Foothills
P.O. Box 5448
High River, AB T1V 1M5

Dear Mr. Barlow:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water area necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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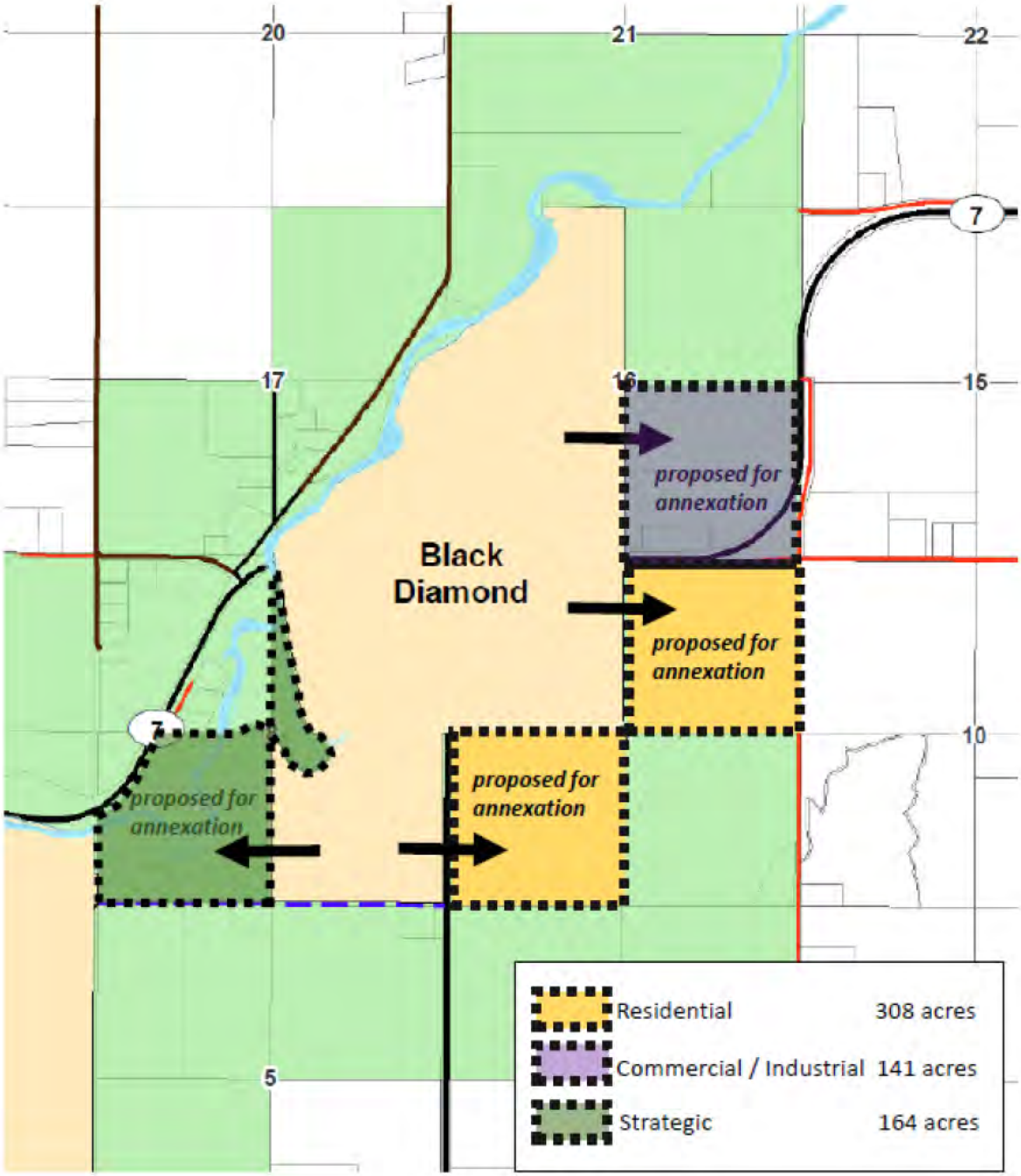
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Joint Press Release

September 20, 2018

Councilors from the MD of Foothills and the Town of Black Diamond have been engaged in annexation discussions for the past 6 months. Black Diamond has been growing steadily in recent years and is running short of land for future growth. Annexation is necessary to provide opportunities for residential, commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base for the Town into the future.

In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to plan for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long term growth of the Town. Annexation will allow the Town to invest in planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. Annexation does not change ownership rights, and owners are not required to develop or sell their property. Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. Black Diamond is proposing annexation, NOT expropriation. The Black Diamond and Foothills have been consulting with affected landowners to with the goal of minimizing any impact on owners of annexed lands.

The MD of Foothills and the Town of Black Diamond have identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth of residential, commercial and industrial uses. The annexation area also includes lands located between the Towns of Black Diamond and Turner Valley. Annexation of this land will result in a contiguous border between the towns, which will facilitate their future amalgamation, should they choose to do so.

A Public Open House will be held from 4 – 8 p.m. Monday, October 15 at the Town of Black Diamond Council Chambers where information concerning annexation will be presented. Elected officials and administration from the Town of Black Diamond and the Municipal District of Foothills will be in attendance to answer questions and receive comments.

For more information please contact:

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond
phone: 403.933.4348
Email: rodr@town.blackdiamond.ab.ca
www.town.blackdiamond.ab.ca

Drew Granson, B.Sc. Geog., GIS
Planning and Development Officer
Municipal District of Foothills No. 31
phone: 403-603-6218
Email: Drew.Granson@mdfoothills.com
www.mdfoothills.com

Wheel's West

« Millarville ◊ Priddis ◊ Black Diamond ◊ Turner Valley ◊ Longview ◊ Eden Valley »

Town bringing proposed growth plan to citizens

Black Diamond: *Annexation discussions suggest absorbing 614 acres of MD land*

y Tammy Rollie

taff Reporter

The Town of Black iamond anticipates sorbing 614 acres of MD Foothills land as it pre- ires for future develop- ent.

Black Diamond town uncil has been in annexa- on discussions with the MD of Foothills for six months to secure opportunities for residential, commercial and industrial development in the next 30 to 40 years in the community of more than 2,500 people.

The public is invited to provide comments and ask questions of elected officials and administration from both municipalities at an open house in the Black Diamond council chambers Oct. 15 from 4 p.m. to 8 p.m.

"I expect there's going to be a lot of interest in town," said Rod Ross, Black Diamond planning manager. "I think we will have a good showing of interested public and landowners. We have a very engaged public and I think there will be a lot of people coming with questions."

Ross said the town's last annexation took place in 1981.

"We felt it was time," he said. "We do have some vacant land remaining in town but we felt it was important to be able to plan for the future. Securing land for future growth is necessary for us to be able to plan for land use and infrastructure with confidence that the town will be able to grow."

The proposal includes approximately four quarter-sections.

A quarter-section north of Highway 7 is intended for a business park and the sections south of the highway and east of Highway 22 are intended primarily for residential development. Land west of town is to achieve a contiguous border between Black Diamond and Turner Valley to help facilitate possibly amalgamating the two towns, if they choose.

"The land is mostly undeveloped," said Ross, adding six residences are in the proposed area.

Ross said the Town and MD met with the property owners and, while most are receptive to the proposed changes, some have concerns about the impact on their taxes and the impact development could have on their lifestyles.

"We're trying to do everything we can to minimize any impact that the annexation will have," he said. "We're still trying to meet with all the owners and address any concerns they might have."

Provincial agencies, school boards, the health authority and utility operators have also been informed of the proposal.

Property owners aren't required to develop or sell their property. Annexation only changes the jurisdiction from one municipality to another.

See Annexation on page 17

The Diamond Valley Chamber of Commerce

Growing Your Rural Business

MONDAY, OCT. 15 • 7-9 PM

Guest Speakers • Cash Bar • Appies

EAU CLAIRE DISTILLERY

113 Sunset Boulevard SW, Turner Valley

Town of Turner Valley

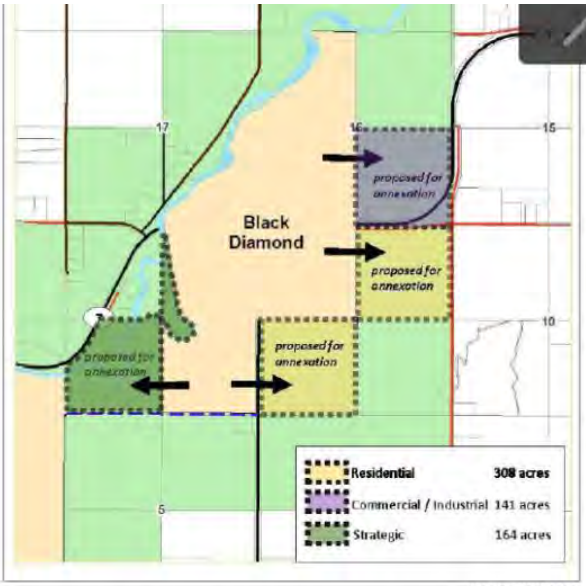


IMAGE SUBMITTED

This map shows the proposed annexation agreement between the Town of Black Diamond and MD of Foothills.

ANNEXATION PUBLIC OPEN HOUSE

4 – 8 pm, Monday, October 15, 2018
Town of Black Diamond Municipal Office
301 Centre Ave. W., Black Diamond

The Town of Black Diamond and the MD of Foothills are hosting a Public Open House to present information and receive public input regarding the Town's proposal to annex land into the Town to accommodate future growth.

In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to plan for future growth. Plans for residential, commercial, and industrial areas; transportation routes; and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term development of the Town. Annexation will allow the Town to invest in planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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phone: 403-603-6218
Email: Drew.Granson@mdfoothills.com
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Annexation, from page 16

To support the proposed growth, Ross said the Town's water and sewer systems will require expansion and upgrades. He added that the Town is undertaking a study to determine the extent, timing and cost of improvements.

"We don't have enough water licences to service the full build out of the entire annexation area, but we do have a lot of licences for a considerable amount of it," he said. "It's a long period of time and the Town, in conjunction with its partners in the Sheep River Regional Utility Corporation, will be working to address water issues in the future."



Full Service Law Practice
#4, 402 Centre Ave, Black Diamond (Sheep River Crossing)
JAMES C. LOZINSKY
Wills * Estates
LAW OFFICE
Corporate * Family
Real Estate
LAWYER • MEDIATOR • ARBITRATOR
www.JCL-LAW.ca

Joint Press Release

March 5, 2019

A committee of Councilors and Administrative Staff from Foothills County and the Town of Black Diamond have been engaged in annexation discussions for the past year. Black Diamond has been growing steadily in recent years and is running short of land for future growth. Annexation is necessary to provide opportunities for a mix of land uses including residential, commercial and industrial development that will provide a diverse and sustainable tax base for the Town into the future.

An Open House was held on October 15, 2018, showing a proposed annexation area of 4 quarter sections. After taking into consideration feedback from landowners and completing servicing studies for future water, sewer, and transportation networks the proposed annexation area has since been revised.

In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to plan for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long term growth of the Town. Annexation will allow the Town to invest in planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. Annexation does not change ownership rights, and owners are not required to develop or sell their property. Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. Black Diamond is proposing annexation, NOT expropriation. Black Diamond and Foothills have been consulting with affected landowners to with the goal of minimizing any impact on owners of annexed lands.

Foothills County and the Town of Black Diamond have identified a proposed annexation area of 779 acres. This includes 4 quarter sections east and south of town that will provide land for 50 years of growth for residential, commercial and industrial uses. The annexation area also includes land located between the Towns of Black Diamond and Turner Valley, which will result in a contiguous border between the towns, facilitating future amalgamation, should the Towns choose to do so.

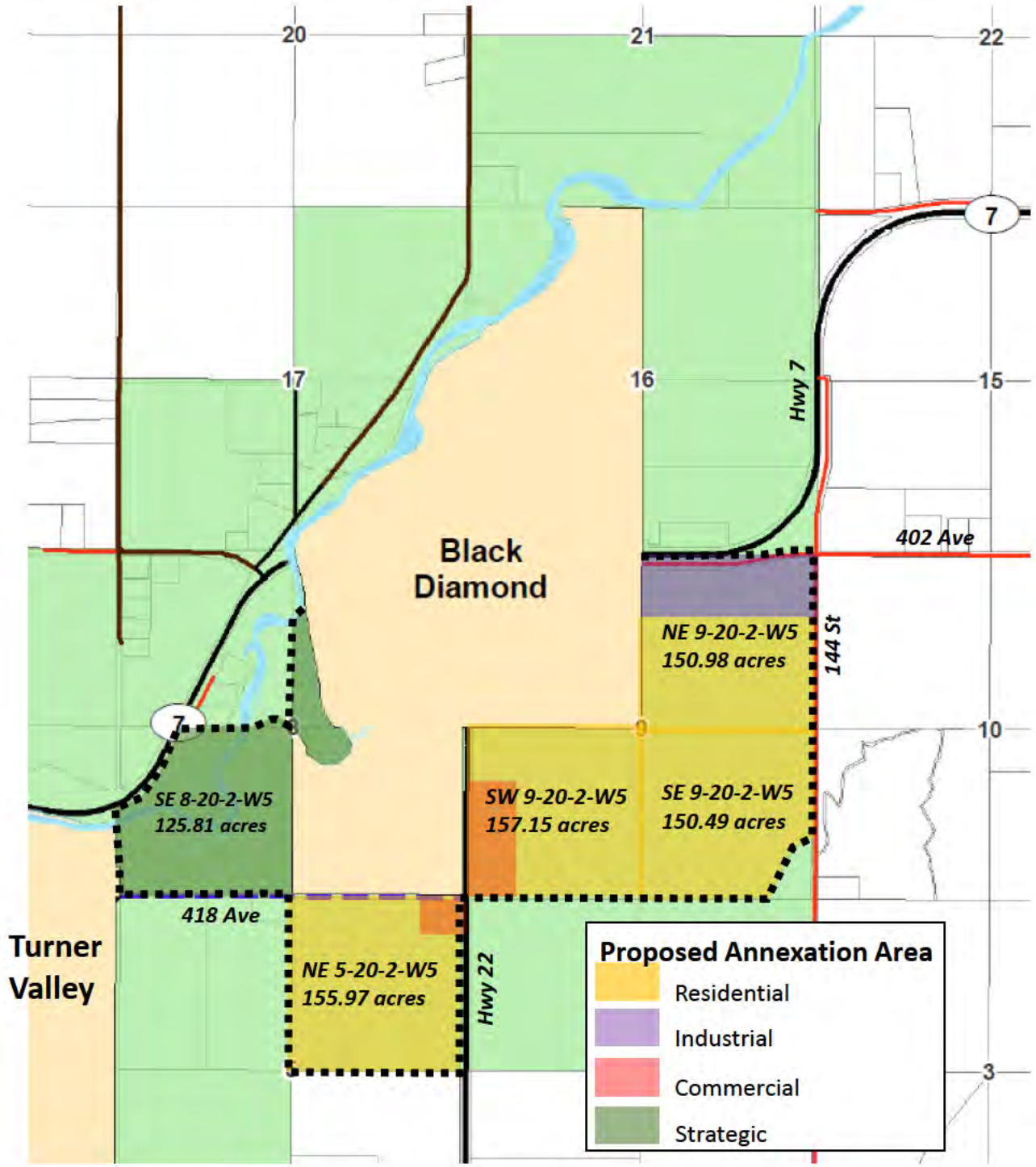
A Public Open House will be held from 4 – 8 p.m. on Tuesday April 2 in the Town of Black Diamond Council Chambers where information concerning annexation will be presented. Elected officials and administration from the Town of Black Diamond and Foothills County will be in attendance to answer questions and receive comments.

For more information please contact:

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Town of Black Diamond
Proposed Annexation Area



Town revealing growth plans to public

Black Diamond: Annexation revisions to be presented to citizens at April 2 event

By Tammy Rollie

Staff Reporter

Adjustments to proposed boundary expansions to accommodate future growth in Black Diamond will be available for public viewing next week.

The Town of Black Diamond and Foothills County revised the proposed annexation of four quarter-sections, which was presented to the public last fall, after considering feedback from landowners and completing servicing studies for future water, sewer and transportation networks.

The new proposal calls for annexing 779 acres, or four quarter-sections, of land east and south of Black Diamond to provide land for 50 years of growth.

It includes County land between Black Diamond and Turner Valley south of Highway 7 that would create a continuous border between the towns in the event of amalgamation.

The public can view the changes at an open house in Black Diamond's council chambers April 2 from 4 p.m. to 8 p.m.

"The areas have changed a little bit due to what we heard from some of the landowners," said town planner Rod Ross. "One landowner wanted to be annexed and a couple of landowners in another area didn't want to be annexed so we looked at the merits of making some changes."

Ross said a quarter-section removed in the revision north of Highway 7, slated for business development, turned out to have some servicing challenges.

"The land couldn't be serviced in a way that allowed for the small incremental phases that the town needs in order to grow," he said. "We don't grow really fast so we need for the land to be developed in small phases."

Ross said installing the infrastructure at once would be too costly.

"Now our land-use concept shows business development south of Highway 7," he said. "That land can be phased in a little bit more easily."

A committee of Foothills County and Town of Black Diamond councillors and administration have engaged in annexation discussions the past year to allow Black Diamond to invest in planning, engineering and financing strategies as it secures land for future residential, commercial and industrial development growth.

The most recent proposal reveals a quarter-section of land south of the Willow Ridge subdivision near Oilfields General Hospital, as was requested by those landowners, Ross said.

"We had services going there anyway," he said. "It made sense to bring that to the Town.

"It squared off the growth area. The landowners supported it."

Most of the proposed annexed land is for residential development, with industrial development south of Highway 7 at Black Diamond's east end and some commercial development on both sides of Highway 22 at the town's south end, said Ross.

"It's consistent with the joint growth strategy," he said. "We've already got a vacant 11-acre parcel south of the hospital in the Willow Ridge subdivision. We're looking at marrying that on the east side of the highway when we annex that quarter and also south."

Next week's public information session is an opportunity for area landowners and interested citizens to view the proposal and provide input, said Ross.

"We're doing this to inform the public and to receive their comments," he said. "We are well into the negotiation and we're hoping to make an application shortly. If we hear something that causes us to reconsider what we're proposing we would have to consider it."

Ross said the Town is looking at annexing land to provide itself with a 50 year supply to anticipated growth.

"It's a good long period of time to be able to plan comprehensively for land use infrastructure," he said.

He added that while the Town is not purchasing the land or taking ownership of it, affected property owners will be regulated by the Town and pay Town taxes once an agreement has been signed and approved by the government.

"It's a negotiation between two municipalities and the Town and County would then submit an agreement to the Municipal Government Board," he said, adding that any financial arrangements have not been finalized between the two municipalities.

"Annexation does not change ownership rights and owners aren't required to develop or sell their property. It's changing from one municipality to another," he said. "Both municipalities consulted with affected landowners to minimize impact on owners of annexed lands."



IMAGE SUBMITTED

This image shows the proposed annexation areas that would be absorbed into the Town of Black Diamond if approved, incorporating residential, industrial, commercial and strategic areas for 50 years of future growth.



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Black Diamond Annexation Proposal



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Black Diamond Annexation Proposal

Welcome

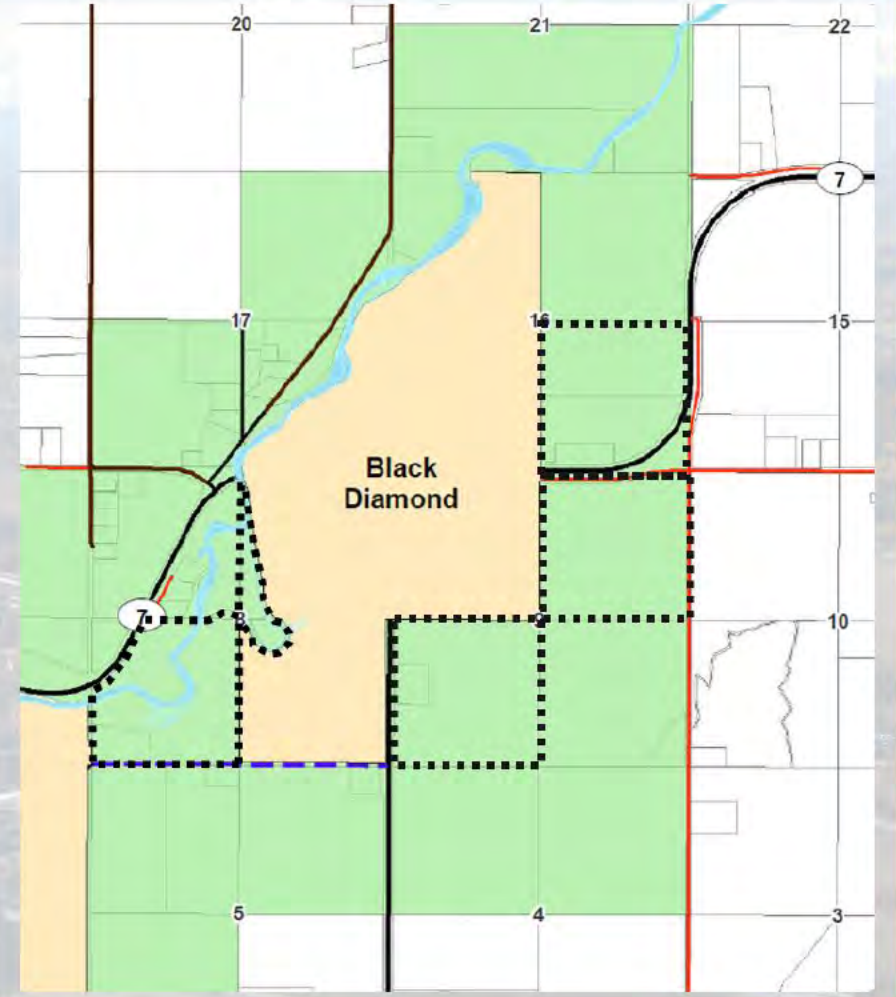
Welcome to the Black Diamond Annexation Open House

The Town recognizes the importance in sharing information with residents and values the contribution of their thoughts and knowledge.

Please take the time to read the information provided. Councilors and Staff from both the Town and the MD of Foothills are in attendance to hear your comments and answer questions.

There is a board provided for questions and comments – all questions will be answered on the Town's annexation webpage.

Let us know where you're from by placing a sticker on the map!



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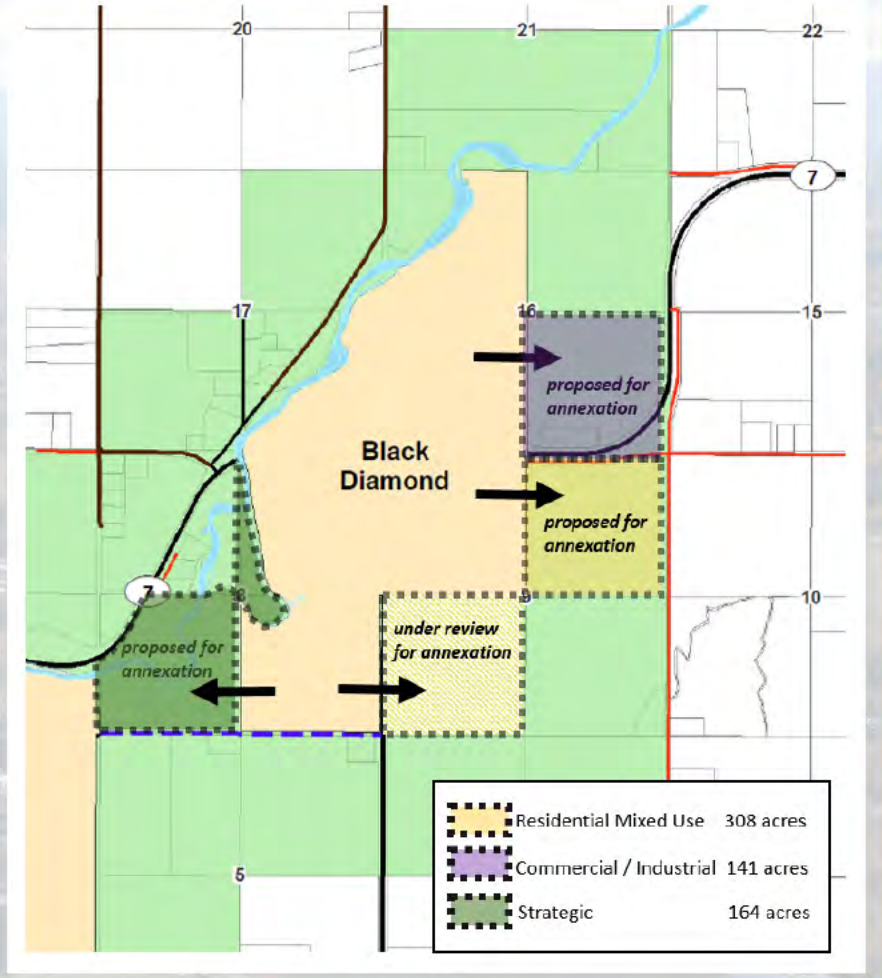
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Black Diamond Annexation Proposal

Overview

The Town is proposing to annex 614 acres of land (approximately 4 quarter sections):

- 308 acres for **residential communities** and associated uses such as parks, natural areas, schools, commercial areas, etc.
- 141 acres for **business development** such as light industry, retail, and highway commercial uses.
- 164 acres for **strategic purposes**:
  - bringing Town-owned lands into the Town boundary (site of future ball diamond)
  - creating a contiguous border with Turner Valley to facilitate a future amalgamation opportunity.



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Black Diamond Annexation Proposal

Rationale

Growth: The population of the Town and surrounding area has increased at an annual rate of 2.7% for the past decade. This growth is expected to continue as part of the overall growth of the Calgary Region. Continued improvements in the regional transportation network, increased employment opportunities locally and in the region, and the amenities of a small, thriving, vibrant community will continue to drive the growth of the Town. The 2016 population of the Town was 2700. It is estimated that the remaining vacant land in Town has capacity for an additional 730 people. It is necessary to secure additional land now so that the Town can continue to welcome new residents and businesses.

Sustainability: The Town's reliance on the residential tax base represents an ongoing need to focus on expanding and diversifying non-residential development and associated assessment. Local employment and business opportunities are dependent on the Town having sufficient land. Securing additional lands in a location attractive to business development is necessary to the Town's economic sustainability.

Planning: In order to grow in an efficient, orderly, and sustainable manner, it is necessary to plan the land uses, transportation routes, water, sewer, and stormwater infrastructure. Annexation will allow Black Diamond to invest in long term planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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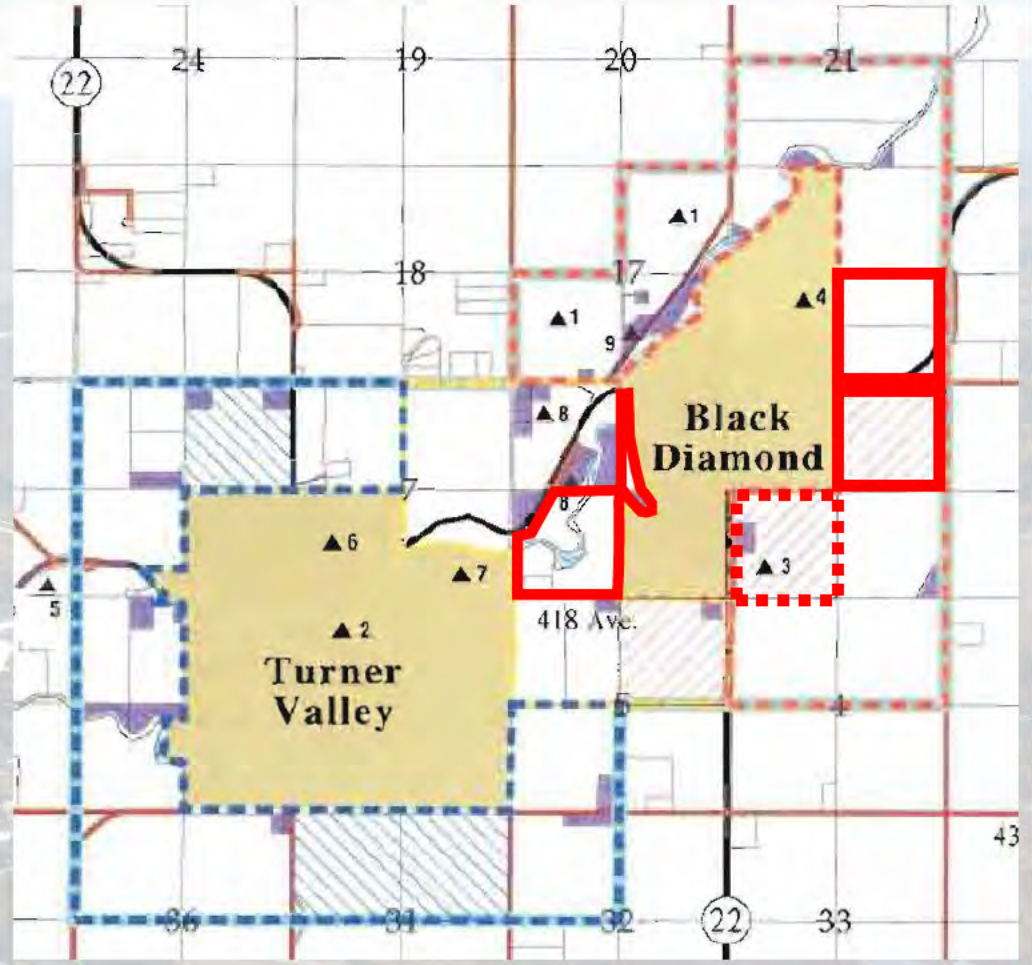
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Black Diamond Annexation Proposal

Intermunicipal Development Plan

The Intermunicipal Development Plan (IDP) addresses land use and development in proximity to the Towns of Black Diamond and Turner Valley.

- The MD of Foothills and the Towns share an interest in ensuring urban development proceeds in an orderly, economical and beneficial manner.
- IDP identifies expected growth corridors for each town (indicated by cross hatching on map).
- IDP states that Black Diamond's industrial growth area is east of the lagoons.



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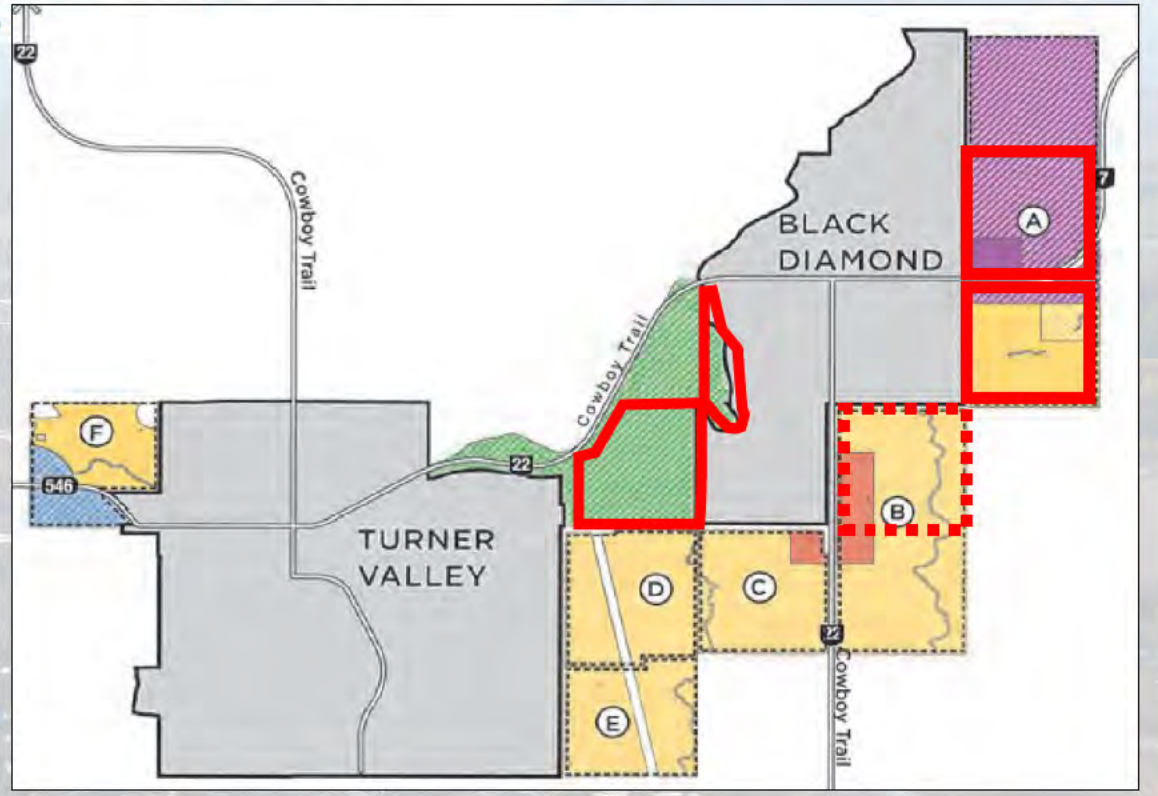
Black Diamond Annexation Proposal

Joint Growth Strategy

The *Joint Growth Strategy* outlines a series of 60-year land use, transportation, and infrastructure scenarios for the growth of the Towns of Black Diamond and Turner Valley.

Key features of the preferred scenario include:

- a business park east of the lagoons;
- a commercial node south of Black Diamond on Hwy 22
- the Towns eventually connected by residential communities and the open space of the Sheep River valley.



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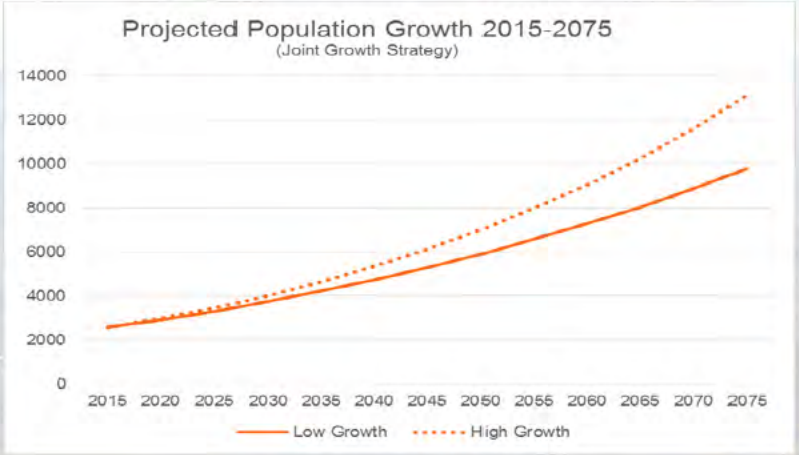
Accommodating Residential Growth

The Joint Growth Strategy considered 2 population forecasts – low growth and high growth.

Projected growth is modest in comparison to what is anticipated for other communities in the Calgary region.

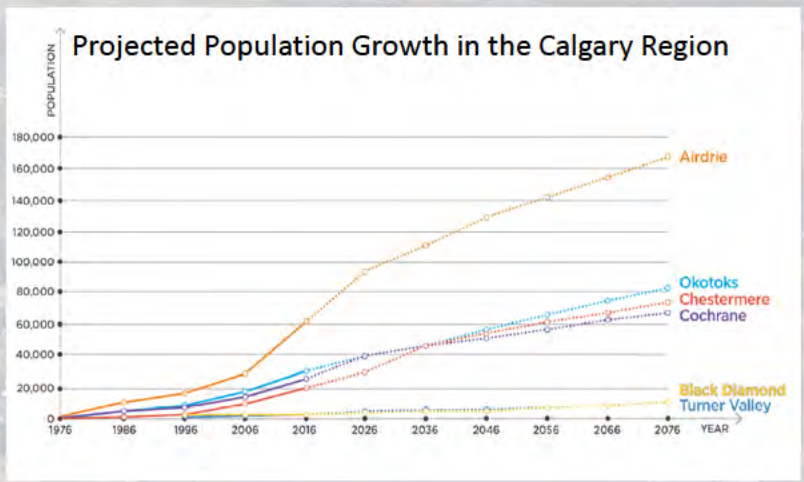
The amount of land to accommodate residential growth is a function of the expected increase in population.

The Joint Growth Strategy projects the Town requiring an additional 132 – 191 acres by 2045, and 367 and 556 acres by 2075



Forecasted Land Requirements Developable Acres*		2015-2045 acres	2045-2075 acres	Total acres
Low Growth	Residential	132	235	367
	Commercial	1	30	31
	Industrial	3	20	23
	Total	136	285	421
High Growth	Residential	191	365	556
	Commercial	6	45	51
	Industrial	3	20	23
	Total	200	430	630

*Developable Acres exclude all undevelopable lands (steep slopes, swamps, ravines, flood plains, etc.)



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Black Diamond Annexation Proposal

Attracting Business Growth

Based on historic growth rates, the land area required to accommodate the projected increase in industrial and commercial development is modest:

- 4 – 9 additional acres required by 2045
- 50 – 65 additional acres required by 2075

Forecasted Land Requirements Developable Acres*		2015-2045 acres	2045-2075 acres	Total acres
Low Growth	Residential	132	235	367
	Commercial	1	30	31
	Industrial	3	20	23
	Total	136	285	421
High Growth	Residential	191	365	556
	Commercial	6	45	51
	Industrial	3	20	23
	Total	200	430	630

*Developable Acres exclude all undevelopable lands (steep slopes, swamps, ravines, flood plains, etc.)

The Town intends to grow its non-residential assessment base to 15%, beyond the current level of 10.3%

A larger non-residential assessment base:

- creates the ability to pay for services and amenities residents and businesses desire.
- allows the Town to consider providing enhancements that will attract further investment.
- means more local jobs and businesses, allowing residents to work and shop without leaving the Town.

The *2017 Community Economic Development Plan* identifies the Town requires an additional 105 acres to achieve a non-residential assessment base of 15%.

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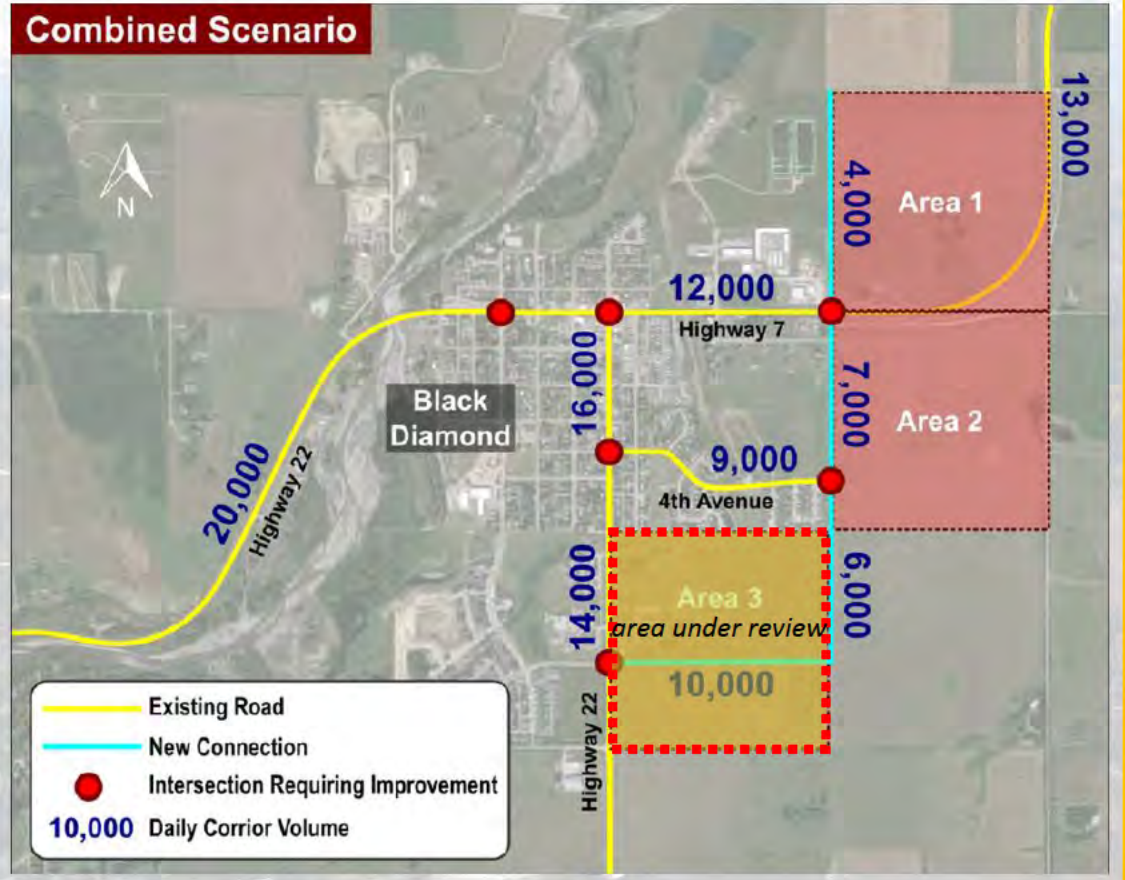
Black Diamond Annexation Proposal

Transportation

Future development of the proposed annexation area will necessitate the construction of a new collector street (shown in blue) that will provide connectivity between the annexation areas, the highways, and to the existing local network within Town.

The collector street will follow the same 6th St E. (north-south) alignment of the water and sewer mains, and will swing west to intersect with Highway 22 and Willow Ridge Blvd south of the Oilfields Regional Hospital

The eventual buildout of the annexation area will necessitate the improvement (signalization or traffic circle) of 6 intersections within Town. The full buildout of the annexation area will significantly increase traffic volumes on the highways within town, and on 4th Ave SE.



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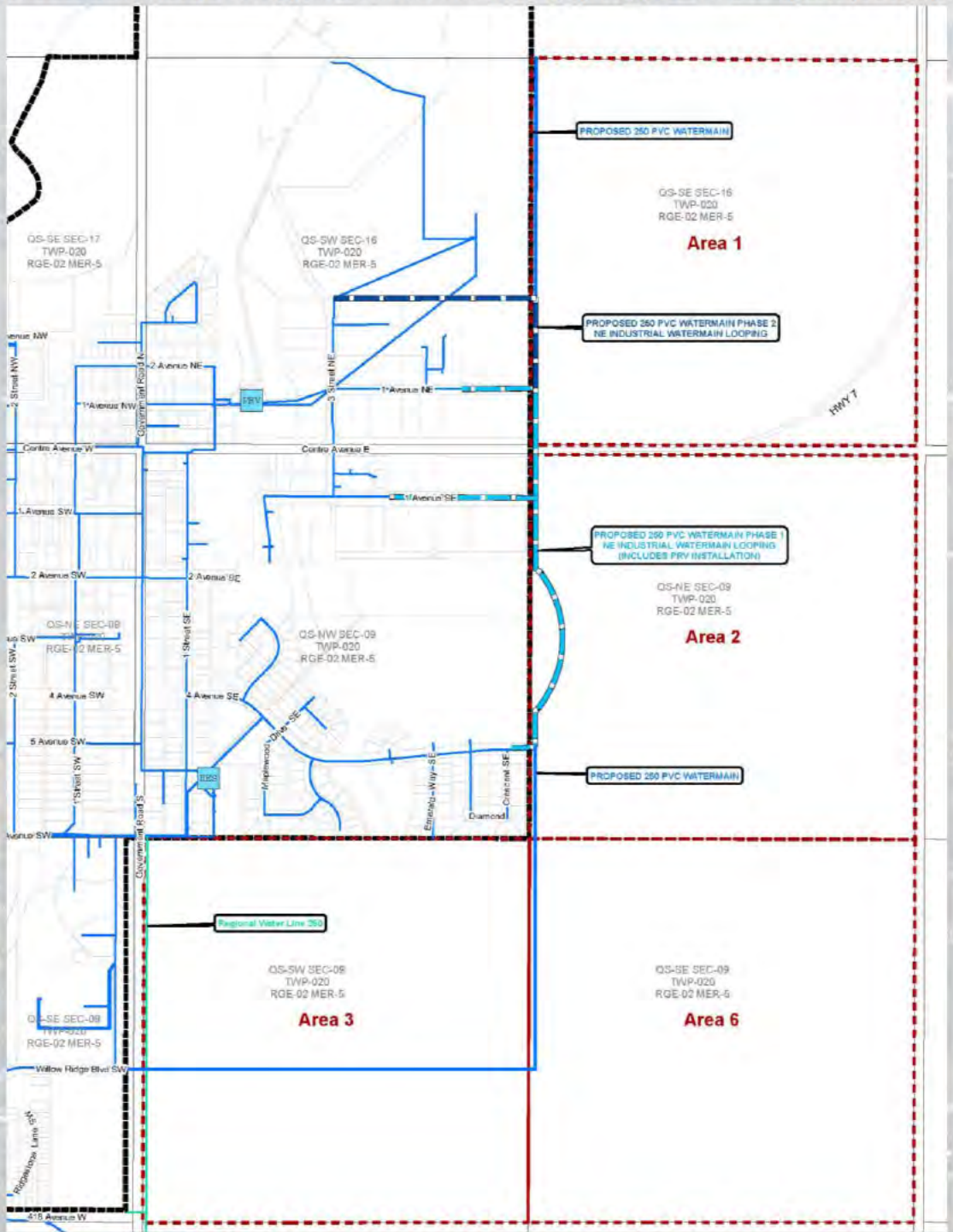
Water Servicing

WATER – *Supply & Treatment*

- The Town has 3 water licenses with a combined total volume of 954,660 m3.
- Full buildout of remaining vacant land within Town and the entire annexation area is estimated to require 1,186,080 m3.
- The Town will eventually require additional water license of 231,420 m3.
- Existing license will be sufficient until approximately 2056 – 2066, depending on growth rate.
- The Sheep River Regional Utility Corporation operates a water treatment plant in Turner Valley that provides treated water to Black Diamond, Turner Valley, and the MD of Foothills. It has capacity to service a population of 9,160.
- It is estimated that the combined population of the service area will reach the capacity of the treatment plan between 2034 and 2039, depending on population growth.

WATER – *Distribution*

- Treated water is transmitted from the treatment plant in Turner Valley to a storage reservoir in Black Diamond
- The existing storage reservoir has capacity to serve the entire annexation area. No expansion required.
- A new water main is necessary to provide water to the annexation area – this main will eventually run from Willow Ridge Blvd (south of the Oilfields Hospital), east, and then north, connecting to the business park (see map). The developer will be responsible to construct the local water distribution system that will fed by the water main.
- The water main and related upgrades will be funded in large part by off-site levies paid by developers.



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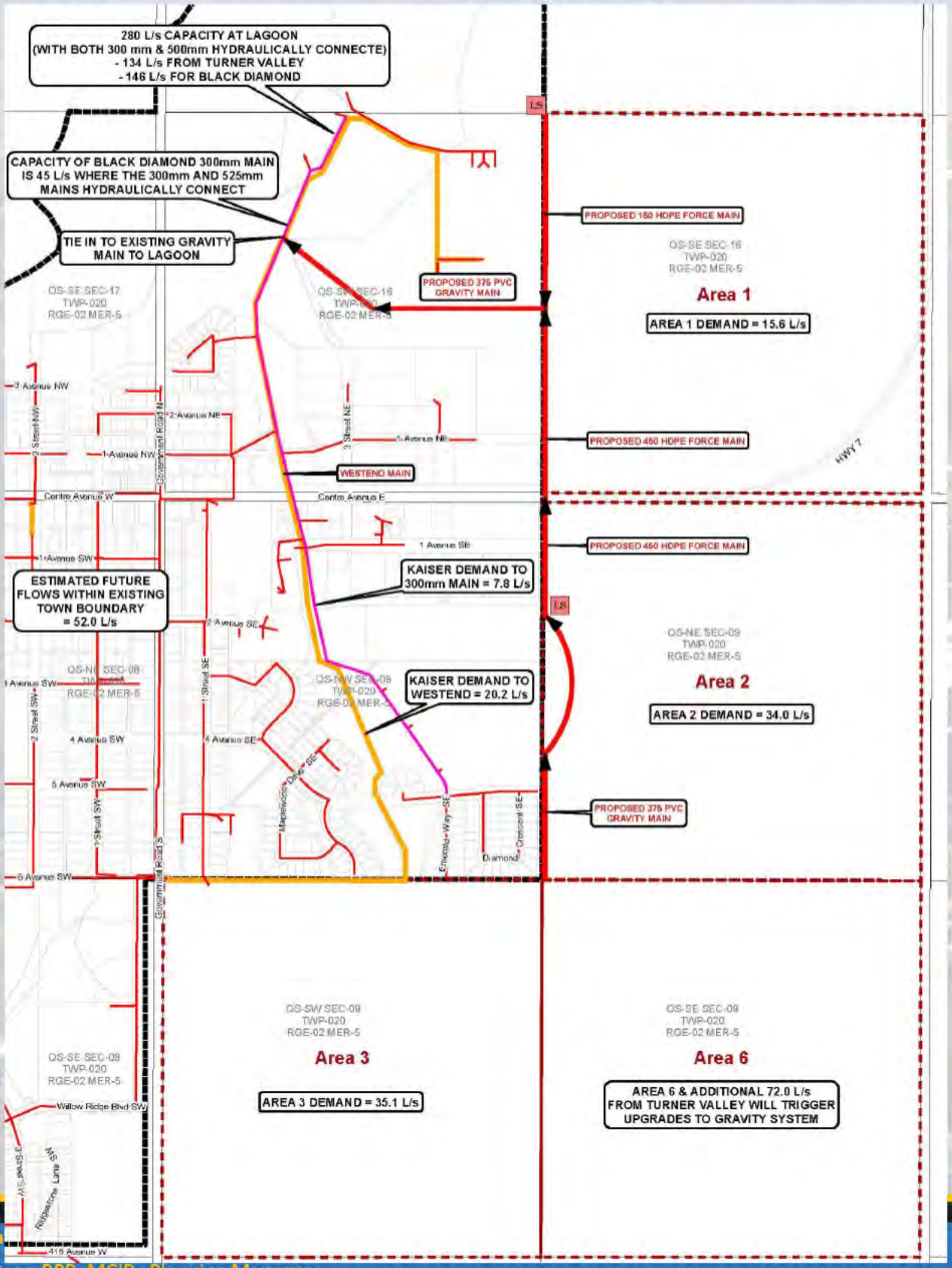
Sanitary Sewage Servicing

SEWAGE – *Treatment*

- The Westend Regional Sewage Services Commission (WRRSC) operates sewage treatment lagoons in Black Diamond for Black Diamond, and Turner Valley. It currently has capacity to service a combined population of approximately 5300. The Towns are near the capacity of the lagoons.
- WRRSC plans to upgrade the existing facility to improve treatment quality and increase treatment capacity. The expanded facility is sized for a combined population of approximately 8,000. The Towns are expected to reach this population by 2030 – 2035.

SEWAGE – *Collection*

- A new sewage main and lift station are necessary on the east side of Town to convey sewage from SE16-20-2 W5 and NE9-20-2 W5 in the annexation area to the sewage treatment plant. There is capacity within the existing collection system to accommodate up to 40 acres of development in SE16-20-2 W5, and up to 25 acres in the NE9-20-2 W5.
- There is capacity in the WRSSC main to accommodate all the sewage from the development of SW9-20-2 W5.
- The developer will be responsible to construct the local collection system that will feed into the sewage main.
- The sewage main and lift station will be funded in large part by off-site levies paid by developers.



Conta

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Black Diamond Annexation Proposal

Annexation Process

- ✓ STEP 1: Notice of Intent to Annex submitted to Municipal Government Board
- ✓ STEP 2: Black Diamond/Foothills discussions
- ✓ STEP 2a: Black Diamond engagement with directly affected landowners
- → STEP 3: Public engagement (public open house, information mailed to residents, press release, website updates, online survey, etc.)
- STEP 4: Black Diamond and Foothills finalize Annexation Agreement
- STEP 5: Foothills Council and Black Diamond Council hold public hearing prior to approving the Annexation Agreement
- STEP 6: Annexation Application is submitted by Black Diamond to MGB
- STEP 7: MGB advertises the application to the public
- STEP 8: MGB holds public hearing (if objections are received)
- STEP 9: MGB makes recommendation to Provincial Government
- STEP 10: Provincial Government makes decision on application

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Black Diamond Annexation Proposal

Comments & Questions

Please write down your comments and questions on the Post-It notes provided. Responses to all comments and questions will be posted on the Town's Annexation webpage.

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Black Diamond Annexation Open House

Monday October 15, 4 - 8 pm

Name	Signature	Municipality
Thulasy Lethnel		[redacted]
GP JAMES - DAVIES		
DARLENE PARANAQUE		
Diana + David Hocking		
Barr Hocking		
DAWNA JOHNSON		
Kristin Hemmany		
Drew Gronsen		
Pete Fordham		
GLENN COSTELLO		
GRETTA Costello		
Ryan McKay		
Matt Wagstaff		
MAUREEN NELSON		
Delilah Mellon		
Lynne Brockway		
Dennis Whittaker		
Amy Wonde		
Tammy Rollin		
Shailine Brown		
Cindy Holladay		
JAN RASPICKA		
Audrey Carkuenas		
Lorne & Linda Buck		

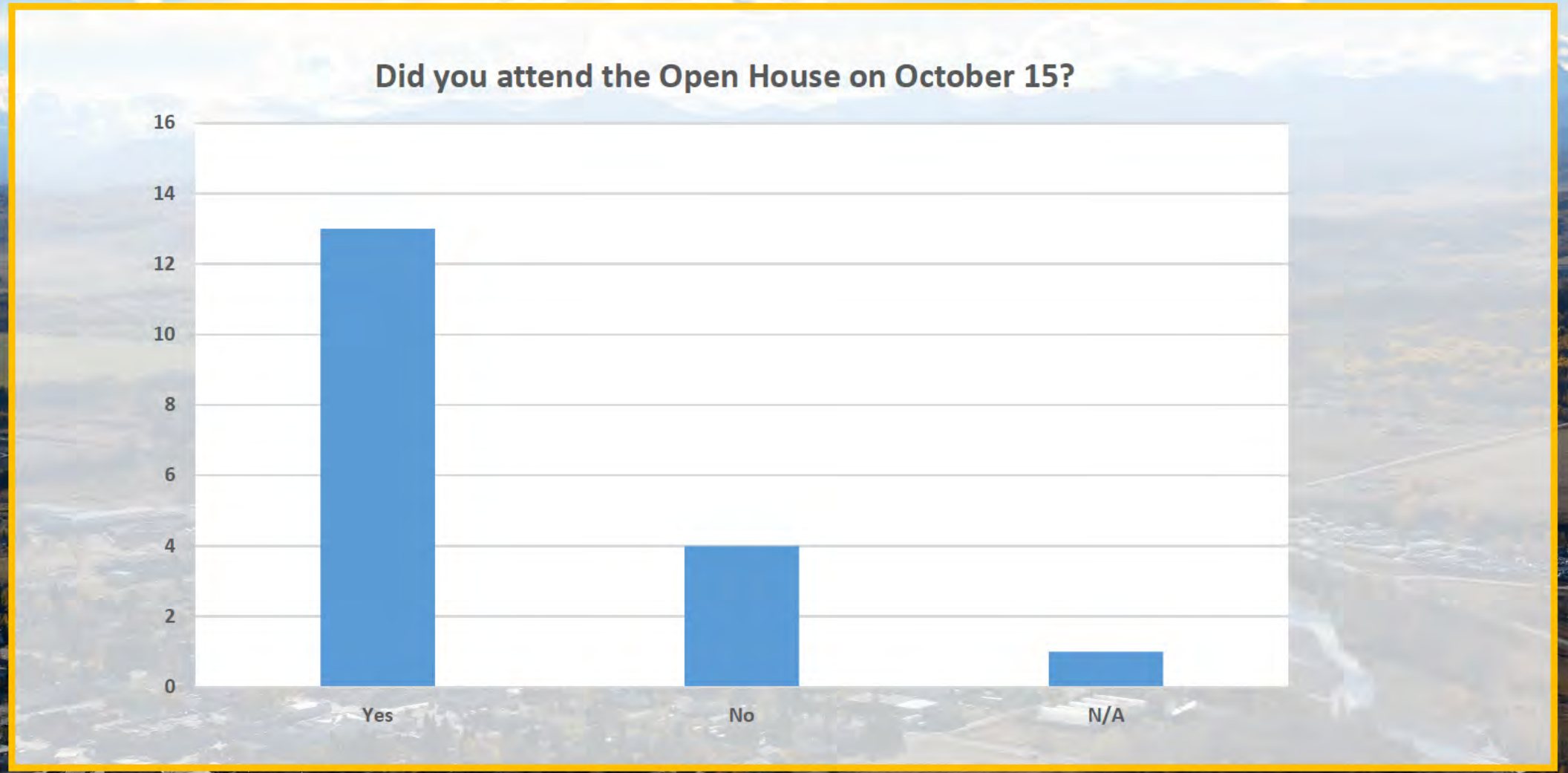
Black Diamond Annexation Open House

Monday October 15, 4 - 8 pm

Name	Signature	Municipality
Amber Jim Brown		[redacted]
Will & Elaine York		
CARI FRITH		
DUSTY WILLIAMS		
Jackie Stickel		
Duncan Nagel		
C. Langlois		
R. McIntyre		

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Black Diamond Annexation Survey Results



Contact

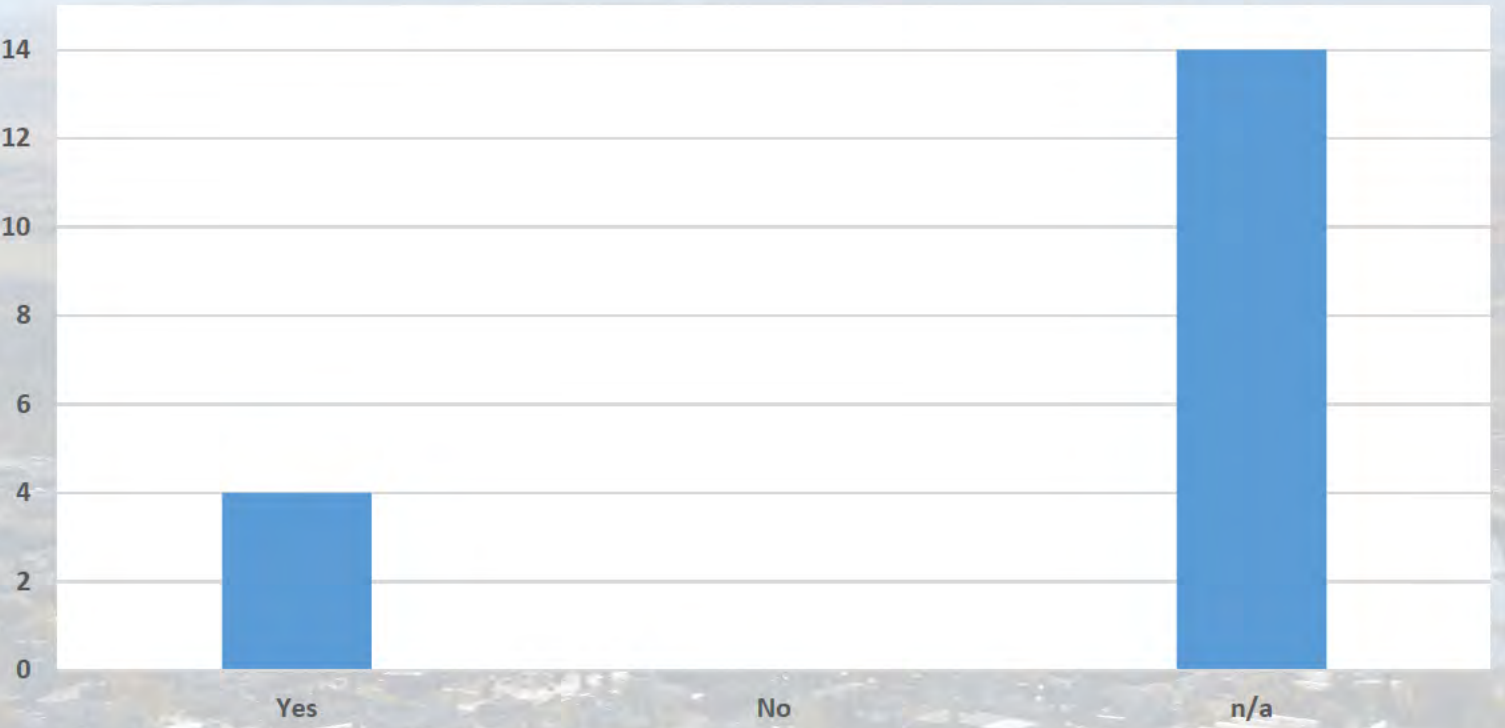
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TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results



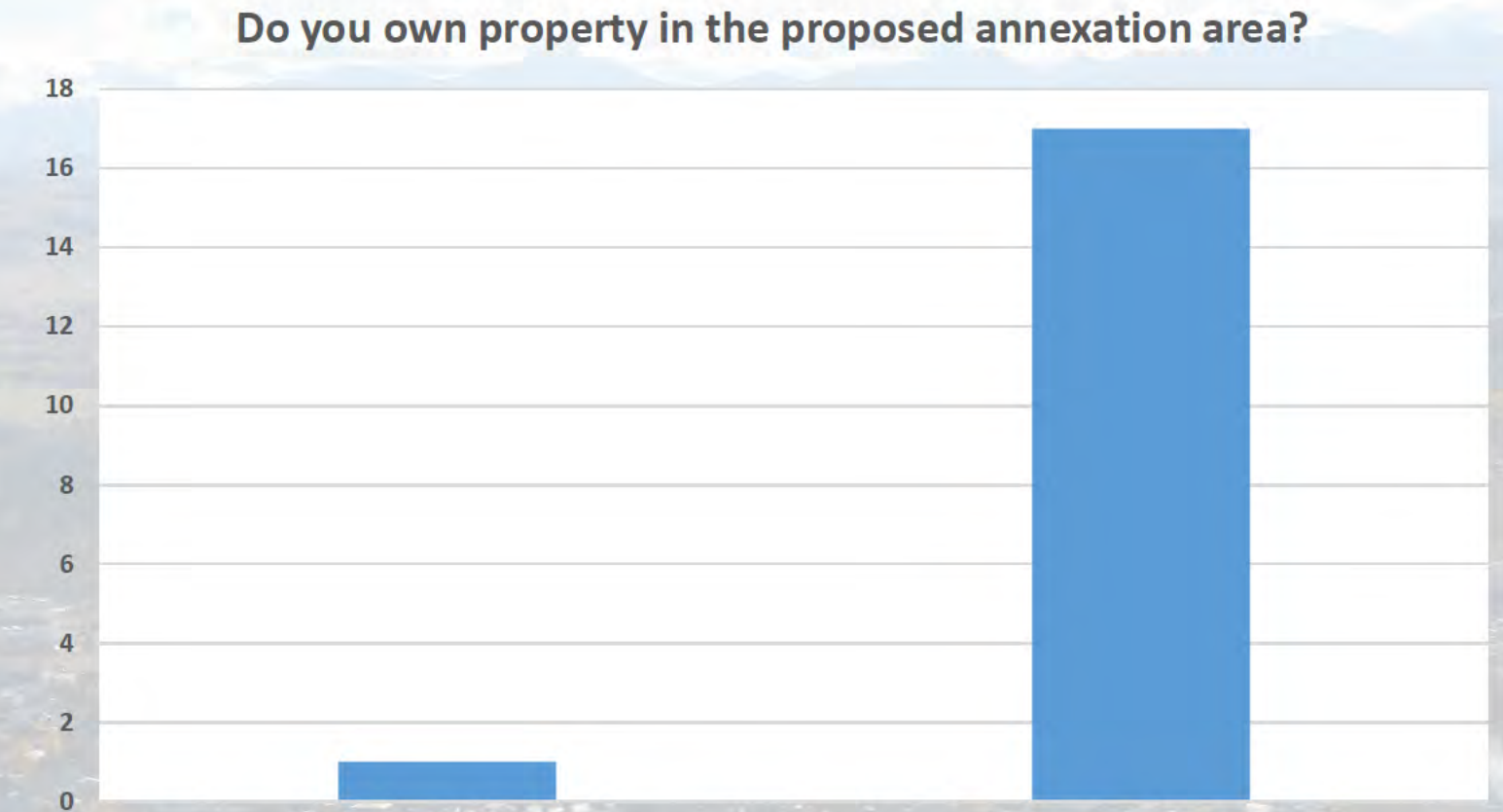
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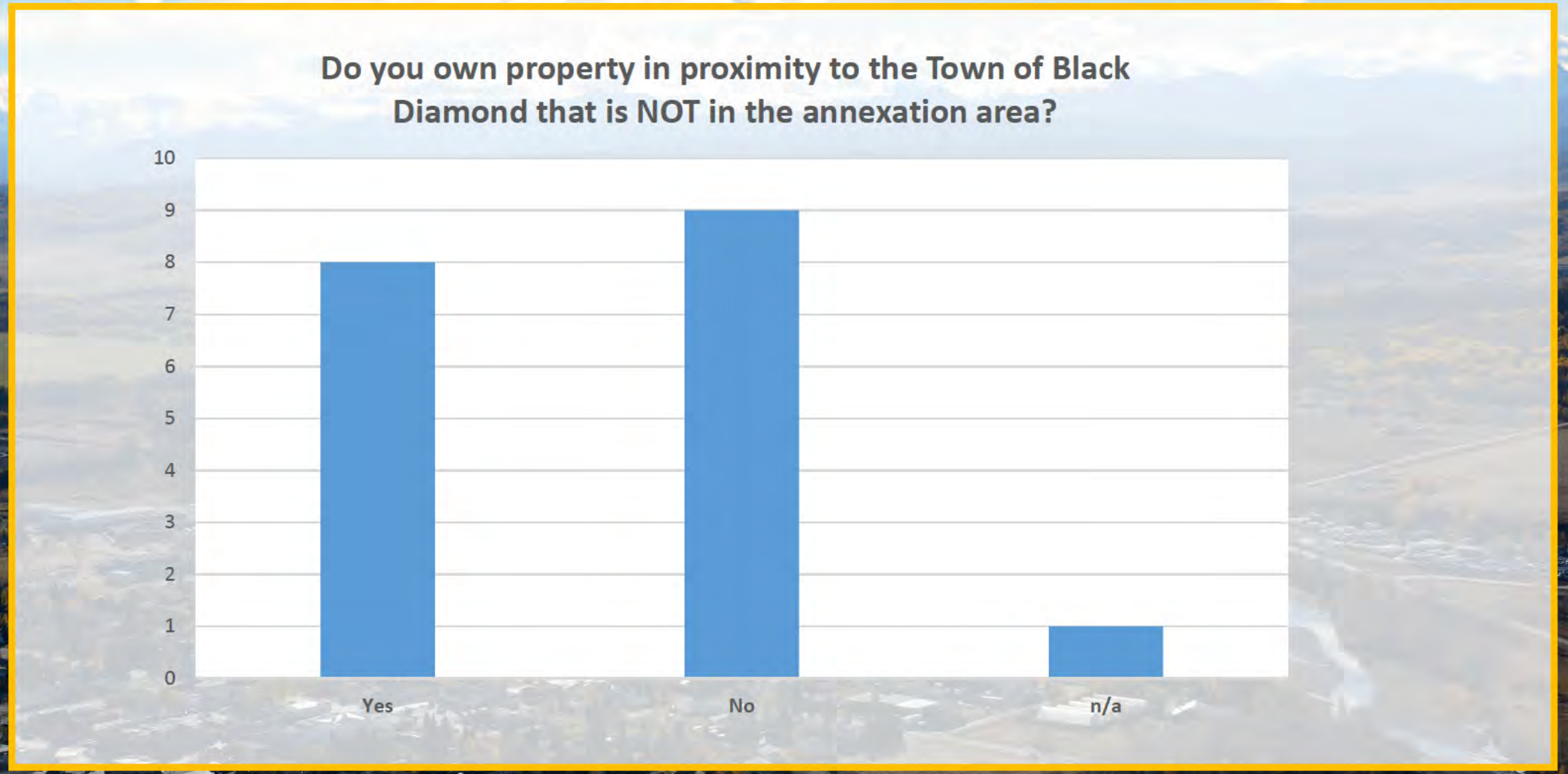


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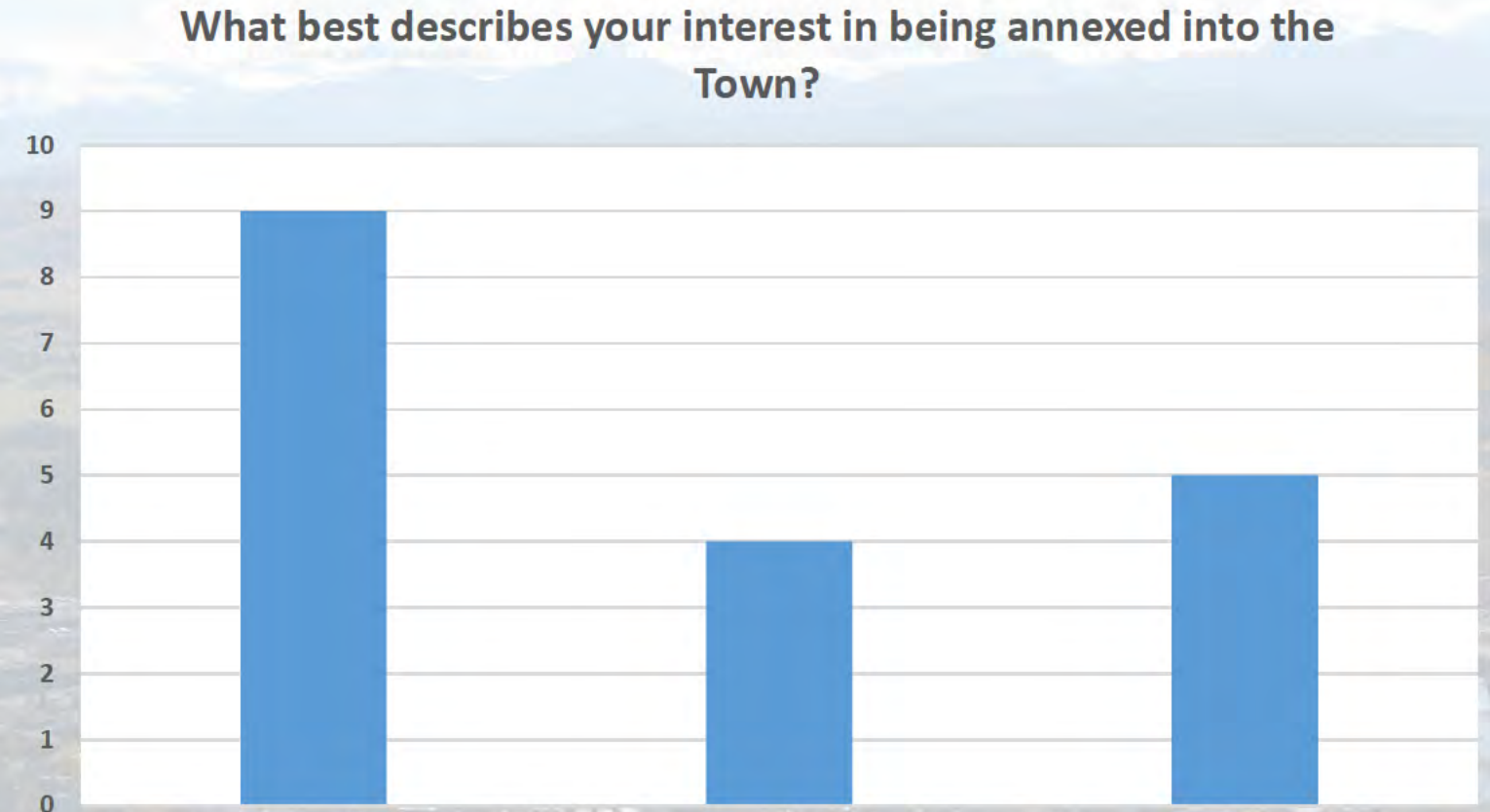
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TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Comments

What best describes your interest in being annexed into the Town?

I am curious why the town isn't annexing more land. The projection is that the proposed lands will accommodate 3700 people yet it looks like only 2 quarter sections of land as set for future residential. Looking at the map of the town now which has 2700 people plus room for +/- 700 more it looks like there is considerably more than 2 quarter sections. Is the town expecting to develop the future lands at a much high density to make 3700 people fit in only two quarter sections? In the one map it looks like there is considerably more land to annex to the south

Bought land to live rural but with annexation Black Diamond will literally be right across the road. Concerned about noise, increased traffic, and loss of the quiet acreage life that we have.

With vacant development land for an additional 730 citizens already in town, I do not want the town to grow beyond that. In fact, I'd be happy to put the brakes on right now, as is.

I don't feel that we have the water capacity for the growth. Once we figure out the water issues, then would be more favourable.

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Black Diamond Annexation Survey Results

Comments (cont'd)

What best describes your interest in being annexed into the Town?

The IDP adopted in 2002 identified the Subject Property as 'Future Urban Growth' and effectively froze development on the Subject Lands within the MD of Foothills jurisdiction. In 2016, the Joint Growth Strategy was completed and the Subject Property was identified as a Future Urban Growth area under Scenario 3 which was recommended by the Joint Advisory Committee. While the proposed annexation originally included the Subject Property, an amendment to the Intent to Annex was brought forward in a letter to the MGB (March 22, 2018) removing the Subject Property from the proposal. This amendment took place after the completion of the Joint Growth Strategy and after the adoption of the Strategy by the Turner Valley Council (March 5, 2018). While it currently remains unclear why the lands were removed from the initial annexation vision, as far as we understand, one of the concerns is the cost associated with the upkeep of 418 Avenue. Since municipal roads to the west and south of a municipality are in the care and control of said municipality, 418 Avenue as it stands already falls under the jurisdiction of the Town of Black Diamond.

We understand that the Town of Black Diamond has brought a 10" water and 8" sewer line to the southeast corner of the Town which is adjacent to the Subject Property. These lines have been connected to Volker Stevin's parcel which is adjoining the northeast corner of the Subject Property.

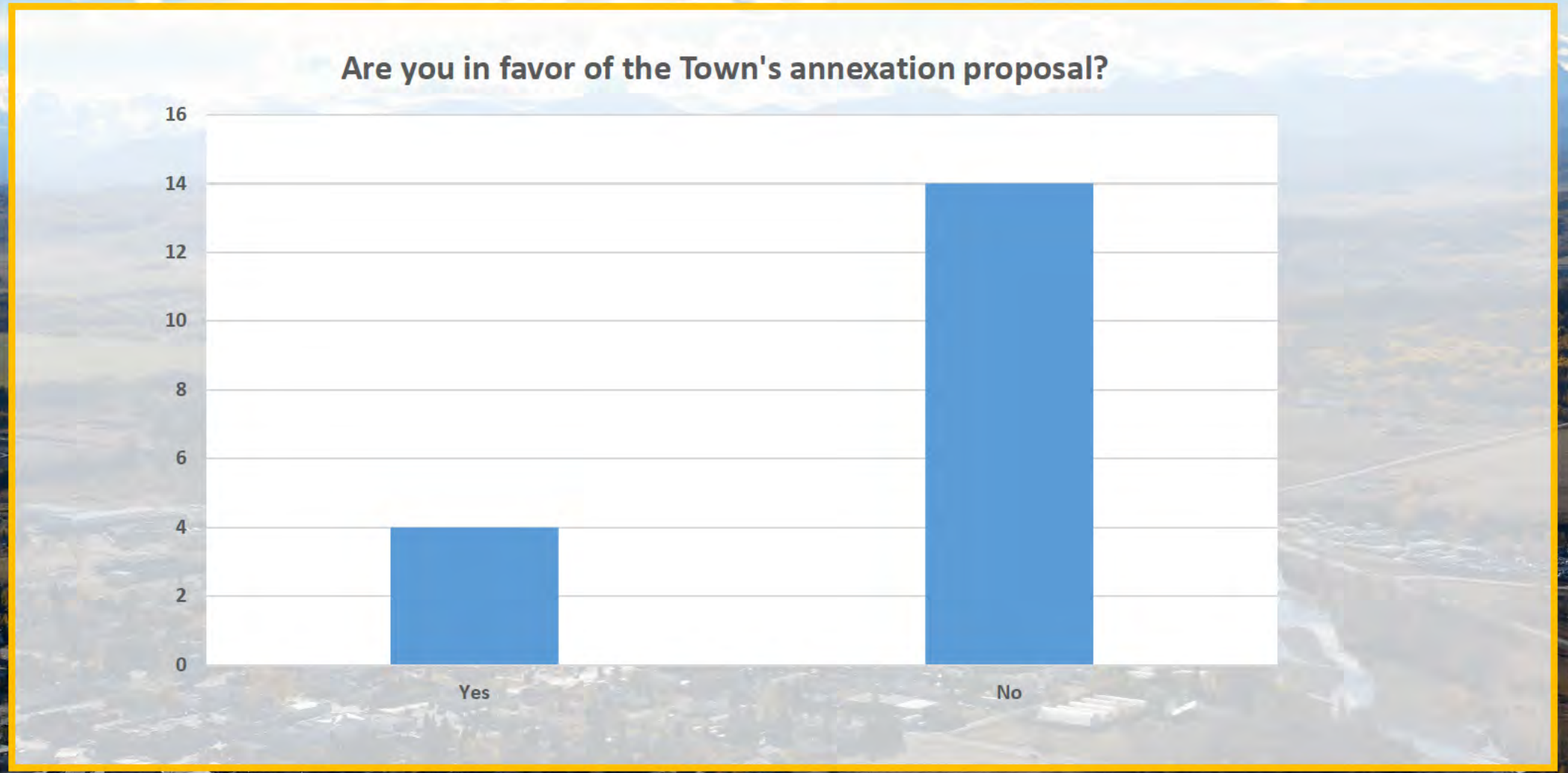
Contact

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403.933.4348 rodr@town.blackdiamond.ab.ca

TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results



Contact

Rod Ross, RPP, MCIP Planning Manager

403.933.4348 rodr@town.blackdiamond.ab.ca

www.town.blackdiamond.ab.ca

TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Comments

Are you in favor of the Town's annexation proposal?

Growth = change Change=loss of character, loss of natural spaces, loss of small town feeling Basically, growth takes away every reason we moved here. See Airdrie, Okotoks as examples of communites that gave up their heritage, wild spaces and peacefulness for fast food venues, used car lots and over sized homes.

See above. I also like being in a small town.

As per #4 above, it would seem that the needs more land, but all the info on your website doesn't suggest how much land supply these three quarter sections will last. I.e. 20 years, 30 years, 40 years, 50 years?

There is absolutely no need to annex land now for future development, especially with the water situation being what it is. Why take good agricultural land to use for urban sprawl???

I'm not in favour of annexation for purposes of residential areas, but I am in favour of any annexation for the purposes of conserving natural areas, green spaces and viewscapes.

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Black Diamond Annexation Survey Results

Comments (cont'd)

Are you in favor of the Town's annexation proposal?

This town still has streets that aren't paved and infrastructure that needs replacing. Annexation and subsequent servicing requirements cost a lot of money. The Town shouldn't even consider wasting money on annexation studies and annexation and servicing costs UNTIL all existing infrastructure is in good condition and every last road in Town has been paved!! Also, a much better water supply must be obtained as the current system is clearly inadequate now, much less with future growth.

Planning ahead is important

Keep the town small. That is why we all live here.

What about our water problems, this will make it worse. As for new busuness our town is know for driving it away not bringing it in. So annexation is pointless.

Until a sustainable and reduced carbon footprint is considered, including the embeded energy and life cycle.

Contact

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TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Comments (cont'd)

Are you in favor of the Town's annexation proposal?

Mr. & Mrs. Hocking were first informed of their removal from the annexation in August 2018 though the amendment was decided by the Town of Black Diamond Council back in March 2018. Mr. & Mrs. Hocking were not provided with the opportunity to participate in the discussions and as such, we are formally objecting to this proposed annexation. At the Open House, the display board indicated that the "Stakeholder Consultation" portion of the process had been checked off / completed, however there has been minimal communication with the landowner respecting the annexation process. When speaking with the Town Administration, it was communicated that the process would continue to move forward to approvals as consultations (aside from the opinion survey) were now complete. We have suggested a meeting with Administration in order to be better involved in the annexation process prior to approvals.

We are further objecting to the proposal as the Subject Lands were frozen and land banked under the policies of the 2002 Intermunicipal Development Plan. Now that annexation is occurring, the lands should be included under the direction of both policy and the recent Joint Growth Strategy.

Contact

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Black Diamond Annexation Survey Results

Comments

Do you see any benefits and/or opportunities associated with annexation and growth?

Is Black Diamond and Turner Valley not still considering amalgamation? The proposed annexation seems to suggest that Black Diamond is growing away from Turner Valley as opposed to growing toward each other. Why is that?	Increased population and tax base.
Not at present	Planning, development, policing will be easier
No....none whatsoever	Growth is good as long as we follow our long term growth plan, and continue to sti k to it rather than every new council changing it.
Not really...	
No. (3)	
No. Absolutely none.	Not really, although a few new businesses would be nice to help with the tax burden on property owners. However, with Okotoks just a short drive away, it would be much nicer to stay small and maintain a small-town feel that is far more desirable to people than more housing and urban sprawl.
Emphatically Not.	

Contact

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Black Diamond Annexation Survey Results

Comments

Do you see any drawbacks and challenges associated with annexation and growth?

WATER - we don't have enough as it is with the current population. Higher crime rates, we lose that small town feel.

Controlled growth, to make sure we always have enough water, space for students at our local schools, enough community activities and recreational opportunities for all.

developing on both sides of a provincial highway doesn't seem logical. would it not be better to growth on one side as opposed to both sides. Have to think that servicing and transportation would be more logical and less costly if Town could avoid having to cross the highway multiple times.

Yes, I view the increased vehicle traffic, light pollution and noise pollution that accompanies growth as detrimental to the small town lifestyle that brought most of us here in the first place. Further drawbacks will include the demand for more services such as provided by big box stores and shopping stations, which will inevitably degrade our viewscapes and put additional pressure on our landscape and water resources.

See my comments above.

Yes....numerous drawbacks including inadequate water supply and irresponsibly adding to urban sprawl and changing the small town feel.

Contact

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Black Diamond Annexation Survey Results

Comments (cont'd)

Do you see any drawbacks and challenges associated with annexation and growth?

What about our water problems, this will make it worse. As for new busuness our town is know for driving it away not bringing it in. So annexation is pointless.

Losing the small-town feel and becoming just another larger and undesirable bedroom community with increased crime.

Water

Right at this present time - yes

No

Yes. Quality of life, noise and light pollution, building on farm land, destroying animal habitat ,sewer and water difficulties. As it is, we are still rationing our water. We didn't move here for it to become another Okotoks!

Yes, water issues and this towns inability to welcome and foster new business.

Already have town water issues. Added population will only make that worse. Large increases in population will mean the loss of that small town environment that most people living in the community want.

Contact

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TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Comments

Do you have any other comments, questions, or concerns?

Keep Black Diamond Sweet.

Until such time that SRRUC has drilled more wells and has an adequate enough water supply that Level 1 is the "norm" in Black Diamond and Turner Valley, neither town should even be considering future growth and development. Clearly there is not enough water now because we are always on Level 2 restrictions, so it is irresponsible of both Towns to keep allowing further development until the water issue is addressed to the satisfaction of the residents and taxpayers of the town(s)!!!!! We don't need any more residential developments in this town!!

As a taxpayer in Town it is important that if the Town decides on which lands we want to grow out into that it be done with financial implications in mind, but also be logical in the lands chosen.

There are several undeveloped lots and parcels within our current limits that should be developed before any more "communities" are allowed to be built on the edge. To maintain our small town atmosphere, it it imperative that Black Diamond is walkable (for all abilities), and that green spaces and natural areas are conserved and created throughout town, along the river and in the uplands.

Contact

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TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Comments (cont'd)

Do you have any other comments, questions, or concerns?

Interesting that this annexation came out of the blue with not much warning for residents in the area and it is being presented as a done deal. Not overly impressed.

Black Diamond has already become so busy. The highways are impassable with the traffic and businesses can't keep up with so many extra people in town. We already don't have enough water. Why would the town council want to ruin what we have? For more money? Once this ball starts rolling, it won't stop.

What about our water problems, this will make it worse. As for new busuness our town is know for driving it away not bringing it in. So annexation is pointless.

We are definately not in favour of annexation for future growth. However we are in favour of using any money that would be spent on annexation and servicing on improving our existing roads and infrastructure instead.

CivicWorks has been engaged by the landowners, Diana and David Hocking to represent their interests during the annexation process between the Town of Black Diamond and the MD of Foothills No. 31. The comments submitted in this letter pertain to the Subject Lands legally described as NE 5-20-2-W5M (150.23 ac) within the MD of Foothills No. 31 and directly south of the Town of Black Diamond.

Contact

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Black Diamond Annexation Survey Results

Comments (cont'd)

Do you have any other comments, questions, or concerns?

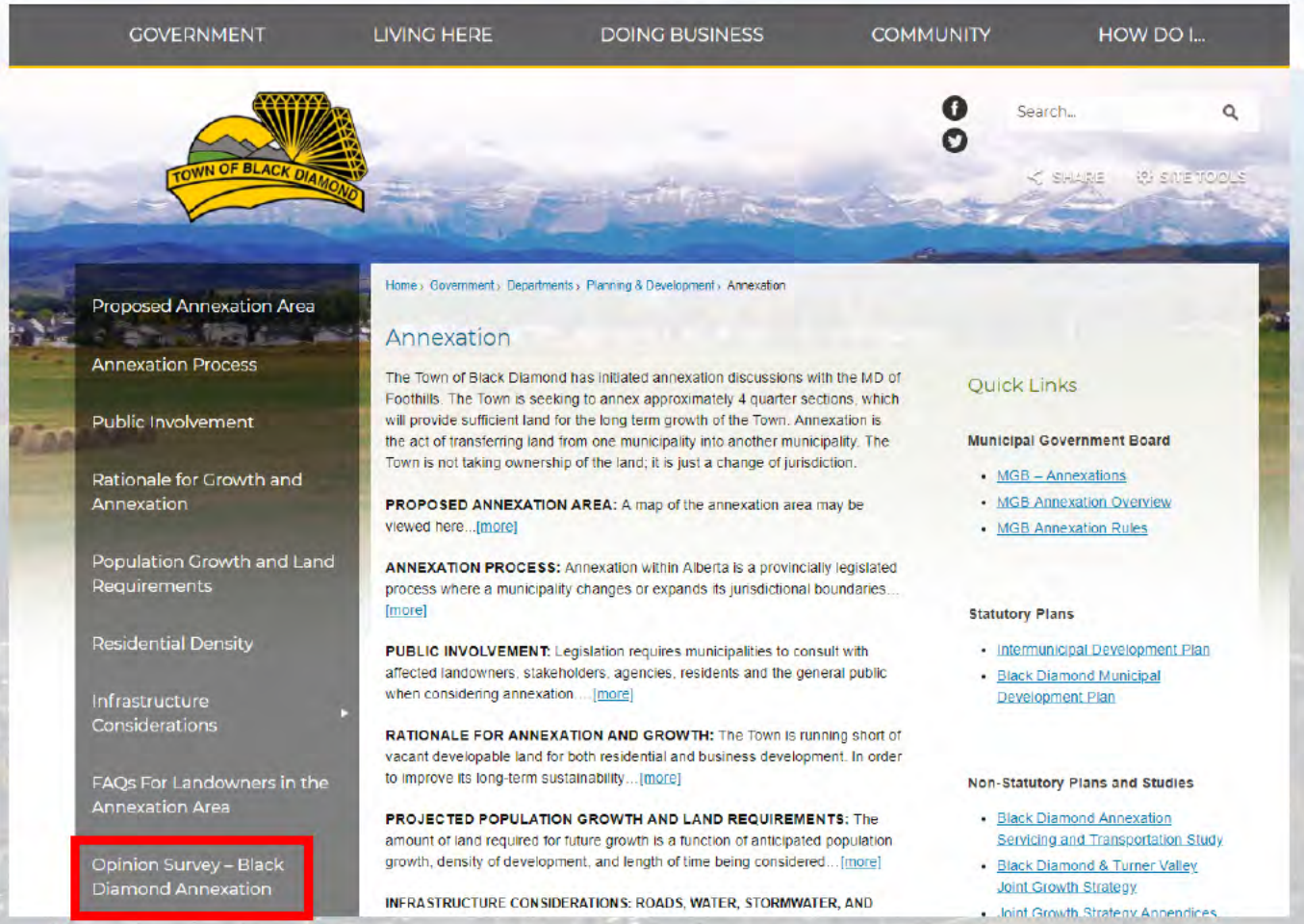
Reasons for objection:

*Changes to Assessment Values (Rural>>Urban) will increase property taxes
*Changes to Mill Rates (2018 ResMD.006104>>ResBD .010141 will increase taxes
*Changes to Zoning & Land Uses (Residential/Farm>>Industrial) will increase taxes & devalue residential development
*That a proposed 25yr MD Mill rate (dependent on Provincial apporval) will do little to alleviate immediate increase to taxes (subject to Blk Dmd Urban Assessment Values)
*That Black Diamond has other options to facilitate immediate needs
*That the town is aware of the unsustainable position annexation will place us in yet has provided no additional options or mitigation other than the standard mill rate adjustment.

Contact
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Black Diamond Annexation Survey Results

Public Engagement



Contact

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www.town.blackdiamond.ab.ca

TOWN OF BLACK DIAMOND

Black Diamond Annexation Survey Results

Public Engagement

Let's Do Something This Weekend!

Find it weekly in the

OKOTOKS
Western Wheel



ANNEXATION
PUBLIC OPEN HOUSE

4 – 8 pm, Monday, October 15, 2018
Town of Black Diamond Municipal Office
301 Centre Ave. W., Black Diamond

The Town of Black Diamond and the MD of Foothills are hosting a Public Open House to present information and receive public input regarding the Town's proposal to annex land into the Town to accommodate future growth.

In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to plan for future growth. Plans for residential, commercial, and industrial areas; transportation routes; and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term development of the Town. Annexation will allow the Town to invest in planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

The MD of Foothills and the Town of Black Diamond have identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth of residential, commercial and industrial uses. The annexation area also includes lands located between the Towns of Black Diamond and Turner Valley. Annexation of this land will result in a contiguous border between the towns, which will facilitate their future amalgamation, should they choose to do so.

Elected Officials and Administration from the Town of Black Diamond and the Municipal District of Foothills will be in attendance to answer questions and receive feedback.

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For more information please contact:

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond
phone: 403.933.4348
Email: rodr@town.blackdiamond.ab.ca
www.town.blackdiamond.ab.ca

Drew Granson, B.Sc. Geog., GIS
Planning and Development Officer
Municipal District of Foothills No. 31
phone: 403-603-6218
Email: Drew.Granson@mdfoothills.com
www.mdfoothills.com

Contact

Rod Ross, RPP, MCIP Planning Manager

403.933.4348 rodr@town.blackdiamond.ab.ca

Black Diamond Annexation Survey Results

Public Engagement

Okotoks Western Wheel, Wednesday, September 26, 2018

COUNCIL CONNECTIONS

ANNEXATION PUBLIC OPEN HOUSE

The Town of Black Diamond and the MD of Foothills are hosting a Public Open House on October 15 from 4-8pm at the Town of Black Diamond municipal office. We will present information and receive public input regarding the Town's proposal to annex land into the Town to accommodate future growth.

The MD of Foothills and the Town of Black Diamond have identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth of residential, commercial and industrial uses. The annexation area also includes lands located between the Towns of Black Diamond and Turner Valley. Annexation of this land will result in a contiguous border between the towns, which will facilitate their future amalgamation, should they choose to do so.

For more information contact Rod Ross, Planning Manager at 403.933.4348 or email rodr@town.blackdiamond.ab.ca

PUBLIC SKATING – Oilfields Regional Arena

Public Skating at the Oilfields Regional Arena through September and October from 1:15 pm – 2:15 pm Monday, Thursday & Friday No Public skate October 8th). Adults $2.00, 17 & under $1.00.

Free Public Skating at the Oilfields Regional Arena Sundays starting October 7th and ending March 3rd from 2:45 pm – 3:45 pm. Sandul's Pharmacy has sponsored the Sunday Public Skating again this season. A big thank you to them!

CONSTRUCTION PROJECTS

Construction is still underway on 3rd Avenue SW between Government Road and 2nd Street SW. The project is nearing completion. This portion of 3rd Avenue SW will be closed to all traffic.

In the northwest corner of town, 3rd Avenue NW is undergoing some underground infrastructure upgrading. Construction in this area has affected the entrance to the dog park. Please obey the No Parking signs and walk your dog on leash through the construction zone to the off-leash dog park.

Please use caution while travelling in these areas of work. Thank you for your patience and cooperation

TOWN OF BLACK DIAMOND SPECIAL EVENT – ADULT ONLY

Join us at our newest signature event. It's a two-day event including: beer sampling, education classes (learn how craft beer is made), meeting new people, sampling delicious foods. Come, enjoy the atmosphere and entertainment, and most importantly have a great time!

Upon entry, each guest will purchase an official Black Diamond September Fest sample mug to use throughout the event and take home with them afterwards! Sample beer from Hard Knox Brewery, Good Mood Brewery, Six Corners Brew Works, Fahr and more. Spirits from Eau Claire Distillery and Spirit Hills Winery. The full event schedule is available on the Town website.

Next regular Council is October 3 at 7:00 pm.

A link to the agenda will be available on the website on Friday prior to the meeting.

Find us on our website www.town.blackdiamond.ab.ca. Sign up for notifications and get all your news by email or text. Like us on Facebook or follow us on Twitter.

Contact

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403.933.4348 rodr@town.blackdiamond.ab.ca

Black Diamond Annexation Survey Results

Public Engagement

Okotoks Western Wheel, Wednesday, October 10, 2018

COUNCIL CONNECTIONS

ANNEXATION PUBLIC OPEN HOUSE

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The MD of Foothills and the Town of Black Diamond have identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth of residential, commercial and industrial uses. The annexation area also includes lands located between the Towns of Black Diamond and Turner Valley. Annexation of this land will result in a contiguous border between the towns, which will facilitate their future amalgamation, should they choose to do so.

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SNOW ANGELS NEEDED

Volunteers are needed to shovel walks for seniors and those needing a hand. If you are interested in becoming a volunteer Snow Angel, please contact Suzan at 403.933.4348 for the address of someone in your area who could really use your help.

COMMITTEE BOARD POSITION AVAILABLE - Youth Representative Position on Black Diamond FCSS Board

A youth representative position is currently available on the Family and Community Support Services (FCSS) board for the Town of Black Diamond. All board members are volunteers, meeting the 2nd Monday evening of each month (except summer) to make decisions regarding preventative social programming in the Town of Black Diamond. The intent behind FCSS programs and services is to build a strong, cohesive and supportive community.

If you are a student of Oilfields High School and would like to bring the voice of your generation to the table, please submit a completed application to Suzan Nagel at SuzanN@town.blackdiamond.ab.ca Applications are available at http://town.blackdiamond.ab.ca/DocumentCenter/View/93 or at the front desk of the Town office. Feel free to contact Suzan for more information on FCSS at 403-933-4348 or search it on the town website.

LIGHT UP BLACK DIAMOND – SPONSORSHIP OPPORTUNITIES

The Town of Black Diamond is looking for local businesses to not only sponsor, but also participate in our annual Light Up Black Diamond Festival.

A number of different sponsorship opportunities are available to fit businesses of all sizes, with plenty of opportunities to get your business name in front of hundreds of people! Find a full list of opportunities at www.town.blackdiamond.ab.ca

CONSTRUCTION PROJECTS

Construction is still underway on 3rd Avenue SW between Government Road and 2nd Street SW. The project is nearing completion. This portion of 3rd Avenue SW will be closed to all traffic.

In the northwest corner of town, 3rd Avenue NW is undergoing some underground infrastructure upgrading. Construction in this area has affected the entrance to the dog park. Please obey the No Parking signs and walk your dog on leash through the construction zone to the off-leash dog park.

Please use caution while travelling in these areas of work. Thank you for your patience and cooperation.

Next regular Council meetings are October 17 at 7:00 pm and October 23 at 9:00 am.
A link to the agenda will be available on the website on Friday prior to the meeting.
Find us on our website www.town.blackdiamond.ab.ca. Sign up for notifications and get all your news by email or text. Like us on Facebook or follow us on Twitter.

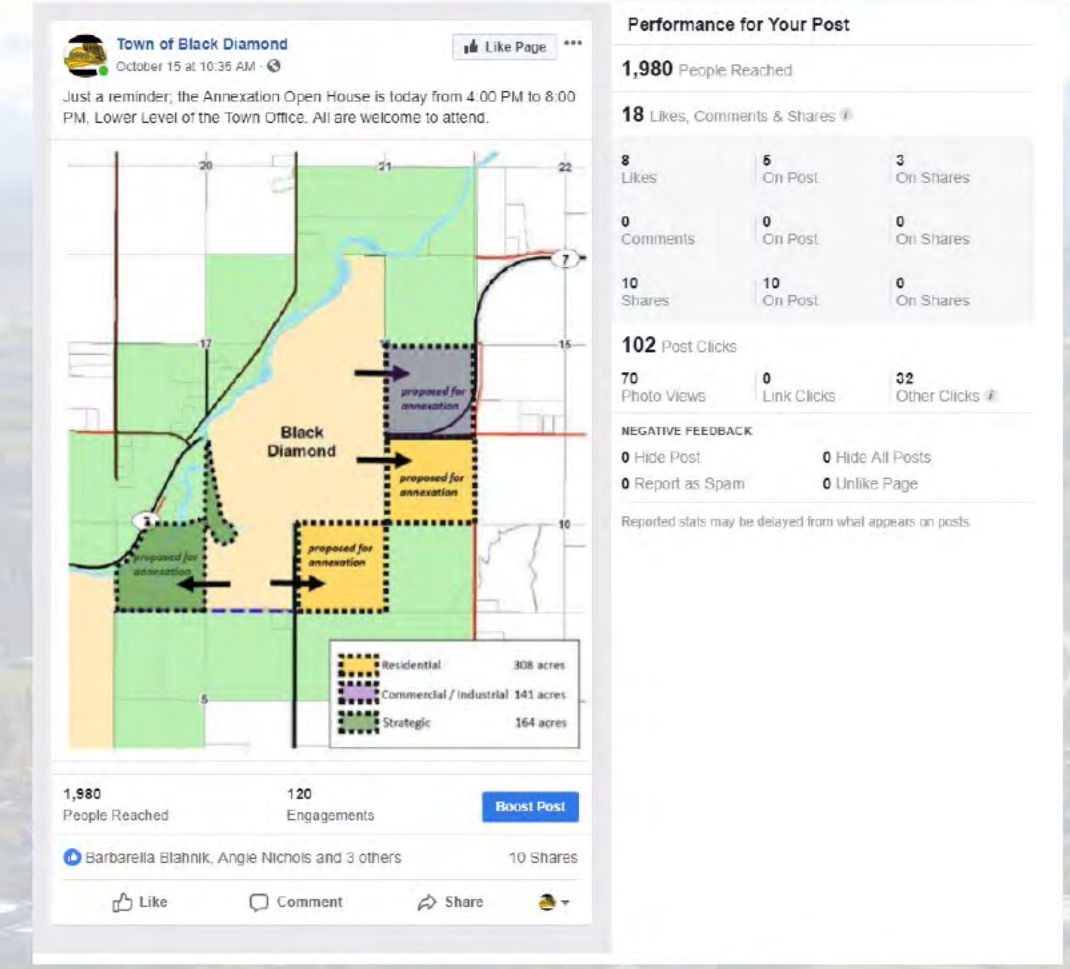
Contact

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Black Diamond Annexation Survey Results

Public Engagement



Performance for Your Post

1,980 People Reached

18 Likes, Comments & Shares

8 Likes	5 On Post	3 On Shares
0 Comments	0 On Post	0 On Shares
10 Shares	10 On Post	0 On Shares

102 Post Clicks

70 Photo Views	0 Link Clicks	32 Other Clicks

NEGATIVE FEEDBACK

0 Hide Post	0 Hide All Posts
0 Report as Spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

Contact

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Black Diamond Annexation Survey Results

Public Engagement

Town of Black Diamond
October 16 at 1:00 PM · Like Page

Did you miss the Annexation Open House last night? Here's your chance to be heard. Fill out this survey and let us know what you think!

http://town.blackdiamond.ab.ca/.../Black-Diamond-Annexation-O...

Do you want more info on Annexation? Read here!... See More



468 People Reached | 42 Engagements | Boost Post

2 Shares

Like | Comment | Share

Performance for Your Post

468 People Reached

7 Likes, Comments & Shares

2 Likes	0 On Post	2 On Shares
2 Comments	0 On Post	2 On Shares
3 Shares	2 On Post	1 On Shares

35 Post Clicks

4 Photo Views	21 Link Clicks	10 Other Clicks

NEGATIVE FEEDBACK

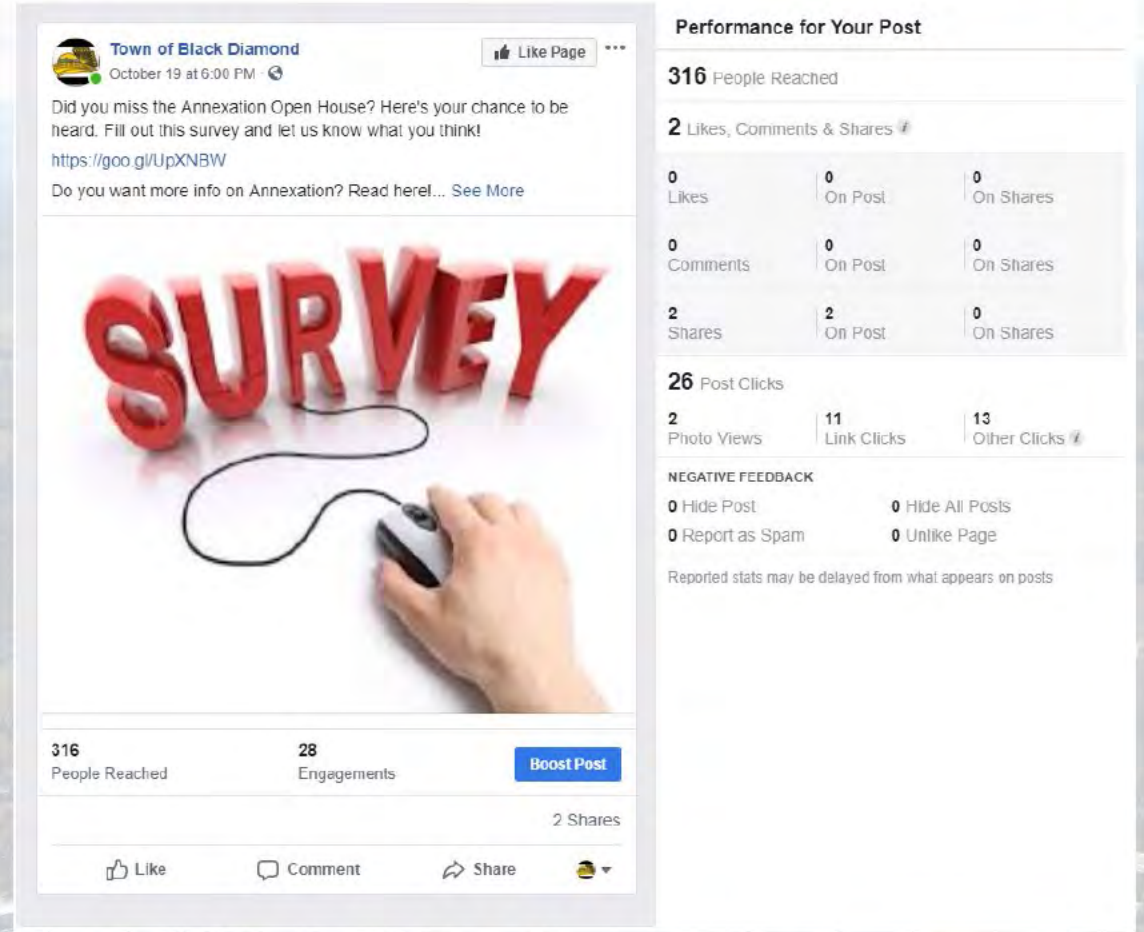
0 Hide Post | 0 Hide All Posts
0 Report as Spam | 0 Unlike Page

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Black Diamond Annexation Survey Results

Public Engagement



Contact

Rod Ross, RPP, MCIP Planning Manager

403.933.4348 rodr@town.blackdiamond.ab.ca

www.town.blackdiamond.ab.ca

March 1, 2019

[redacted]

Dear [redacted]

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

For the past year the Town of Black Diamond and Foothills County have been discussing annexation of land into the Town to provide land for the long term growth of the Town.

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary to provide opportunities for residential, commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town and County have identified an annexation area of approximately 5 quarter sections that will provide enough land for 50 years of growth. **Lands owned by you are located within the proposed annexation area.**

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. **Annexation does not change ownership rights, and owners are not required to develop or sell their property.** Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. The town is proposing annexation, NOT expropriation.

A Public Open House will be held from 4 – 8 p.m. Tuesday, April 2, 2019 at the Town of Black Diamond Council Chambers where information concerning annexation will be presented. Elected officials and administration from the Town of Black Diamond and Foothills County will be in attendance to answer questions and receive comments.

Enclosed with this letter is a *Frequently Asked Questions* document brochure containing additional information about annexation, and a map illustrating the location of the proposed annexation area. Further information is available online at http://town.blackdiamond.ab.ca/433/Annexation. Should you have any questions or concerns, please contact Rod Ross, Planning Manager, at 403-933-4348, or via email at rodr@town.blackdiamond.ab.ca.

Sincerely,

Ruth Goodwin, Mayor
Town of Black Diamond

March 1, 2019

[redacted]

Dear [redacted]

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

For the past year the Town of Black Diamond and Foothills County have been discussing annexation of land into the Town to provide land for the long term growth of the Town.

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary to provide opportunities for residential, commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town and County have identified an annexation area of approximately 5 quarter sections that will provide enough land for 50 years of growth. **Lands owned by you are NOT included in the proposed annexation area.**

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. **Annexation does not change ownership rights, and owners are not required to develop or sell their property.** Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. The town is proposing annexation, NOT expropriation.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager

March 5, 2019

Municipal District of Foothills No. 31
Larry Spilak, Reeve
Box 5605
High River, AB T1V 1M7

Dear Larry Spilak:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

The Town and the County have been discussing the proposed annexation for over a year, and have identified an annexation area of approximately 4 quarter sections east and south of the existing town boundary that will provide enough land for 50 years of growth, and a quarter section west of the town boundary that is included for strategic purposes, as shown on the map in the attached *Frequently Asked Questions* document.

A Public Open House will be held from 4 – 8 p.m. Tuesday, April 2, 2019 at the Town of Black Diamond Council Chambers, where information concerning the proposed annexation will be available. Elected Officials and Administration from the Town of Black Diamond and Foothills County will be in attendance to answer questions and receive comments.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Municipal Government Board
Rick Duncan, Case Manager
15th Floor, Commerce Place
10155 102 Street
Edmonton, AB T5J 4L4

Dear Rick Duncan:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Alberta Health Services, Calgary Zone
Deb Rhodes, Vice President,
Corporate Services & Chief Financial Officer
14th Floor, North Tower
10030 – 107 Street NW
Edmonton, AB T5J 3E4

Dear Deb Rhodes:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

The Town and the County have been discussing the proposed annexation for over a year, and have identified an annexation area of approximately 4 quarter sections east and south of the existing town boundary that will provide enough land for 50 years of growth, and a quarter section west of the town boundary that is included for strategic purposes, as shown on the map in the attached *Frequently Asked Questions* document.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Alberta Transportation, South Region
Darren Davidson, Regional Director
3rd Floor, Administration Building
909-3 Ave North
Lethbridge, AB T1H 0H5

Dear Darren Davidson:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Foothills School Division No. 31
John Bailey, Superintendent of Schools
PO Box 5700
High River, AB T1V 1M7

Dear John Bailey:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Christ the Redeemer Catholic Schools
Scott Morrison, Superintendent
Box 1318
Okotoks, AB T1S 1B3

Dear Scott Morrison:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Sheep River Regional Utility Corporation
Harry Riva Cambrin, CAO
Box 5605
High River, AB TIV 1M7

Dear Harry Riva Cambrin:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Westend Regional Sewage Service Commission
Laurie McCreary-Burke, Secretary Treasurer
Box 330
Turner Valley, AB T0L 2A0

Dear Laurie McCreary-Burke:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Fortis Alberta Inc.
Merlin MacNaughton,
Stakeholder Relations Manager
320 17 Avenue SW
Calgary, AB T2S 2V1

Dear Merlin MacNaughton:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

ATCO Pipelines Head Office
Jason Sharpe,
Sr. Vice President & General Manager
1200, 909 11 Ave SW
Calgary, AB T2R 1L8

Dear Jason Sharpe:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future growth. Plans for residential, commercial, and industrial areas, transportation routes, and infrastructure for water, sewer, and storm water are necessary to accommodate the long-term growth of the Town. Annexation brings opportunities for residential, commercial and industrial development, providing a diverse and sustainable municipal tax base into the future. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

ATCO Gas
Mike Shaw, Vice President,
Calgary Region Operations
909 - 11 Avenue SW
Calgary, AB T2R 1L8

Dear Mike Shaw:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Pat Stier
MLA
2019 - 20 Avenue
Nanton, AB T0L 1R0

Dear Pat Stier:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Honourable Shaye Anderson
Minister of Municipal Affairs
Room 204, Legislature Building
10080 - 97 Avenue NW
Edmonton, AB T5K 2B6

Dear Mr. Anderson:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Town of Turner Valley
Todd Sharpe, CAO
Box 330
Turner Valley, AB T0L 2A0

Dear Todd Sharpe:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

John Barlow
MP for Foothills
P.O. Box 5448
High River, AB T1V 1M5

Dear Mr. Barlow:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

March 5, 2019

Plains Midstream Canada
Head Office
Suite 1400, 607 8th Ave SW
Calgary, AB T2P 0A7

Dear Head Office:

RE: Proposed Annexation of Land from Foothills County into the Town of Black Diamond

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Sincerely,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

Black Diamond Annexation Proposal

Welcome

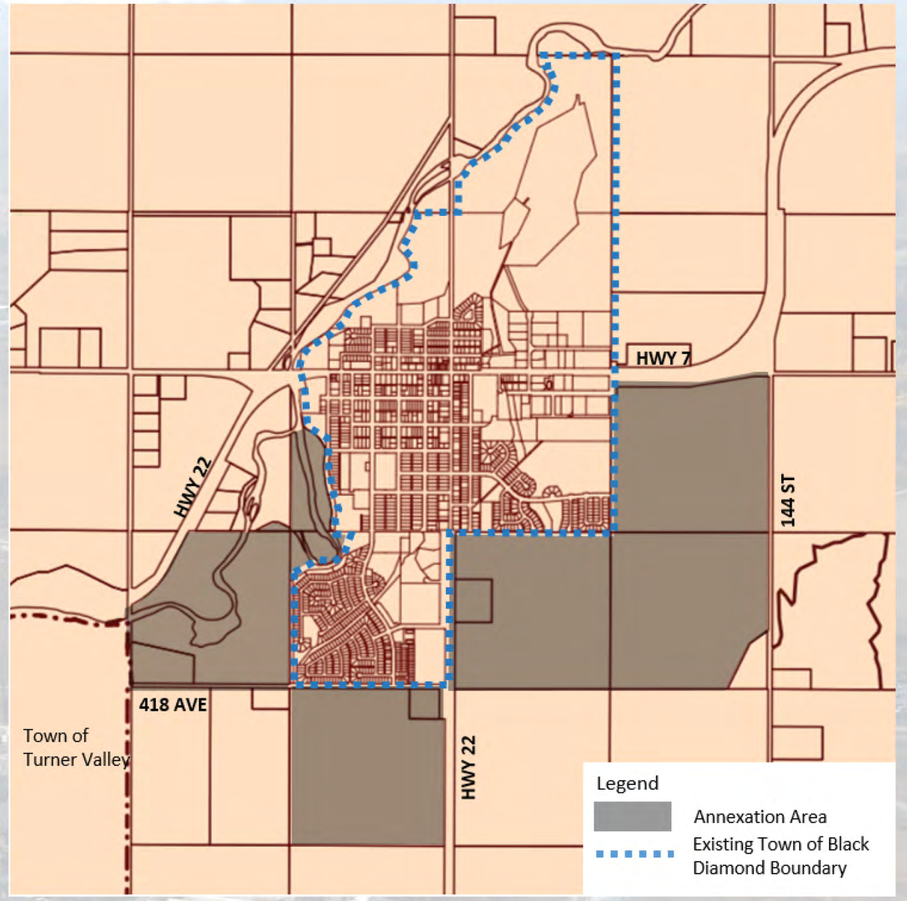
Welcome to the Black Diamond Annexation Open House

The Town recognizes the importance in sharing information with residents and values the contribution of their thoughts and knowledge.

Please take the time to read the information provided. Councilors and Staff from both the Town and the MD of Foothills are in attendance to hear your comments and answer questions.

There is a board provided for questions and comments – all questions will be answered on the Town's annexation webpage.

Let us know where you're from by placing a sticker on the map!



Contact
Rod Ross, RPP, MCIP, Planning Manager
403.933.4348 rodr@town.blackdiamond.ab.ca

town.blackdiamond.ab.ca

Black Diamond Annexation Proposal

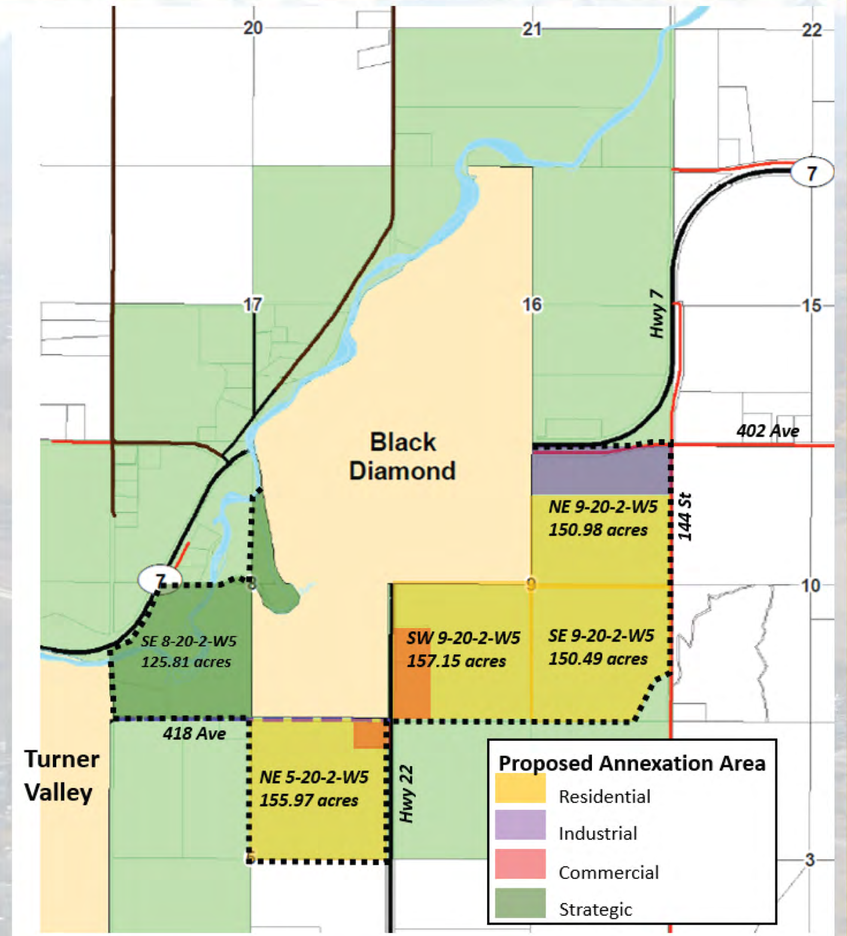
Overview

The Town is proposing to annex 779 acres of land (approximately 5 quarter sections):

- 460 acres for **residential communities** and associated uses such as parks, natural areas, schools, commercial areas, etc.

- 80 acres for **business development** such as light industry, retail, and highway commercial uses.

- 164 acres for **strategic purposes**:
  - bringing Town-owned lands into the Town boundary (site of future ball diamond)
  - creating a contiguous border with Turner Valley to facilitate a future amalgamation opportunity.



Contact
Rod Ross, RPP, MCIP, Planning Manager
403.933.4348 rodr@town.blackdiamond.ab.ca

town.blackdiamond.ab.ca

Black Diamond Annexation Proposal

Rationale

Growth: The population of the Town and surrounding area has increased at an annual rate of 2.7% for the past decade. This growth is expected to continue as part of the overall growth of the Calgary Region. Continued improvements in the regional transportation network, increased employment opportunities locally and in the region, and the amenities of a small, thriving, vibrant community will continue to drive the growth of the Town. The 2016 population of the Town was 2700. It is estimated that the remaining vacant land in Town has capacity for an additional 730 people. It is necessary to secure additional land now so that the Town can continue to welcome new residents and businesses.

Sustainability: The Town's reliance on the residential tax base represents an ongoing need to focus on expanding and diversifying non-residential development and associated assessment. Local employment and business opportunities are dependent on the Town having sufficient land. Securing additional lands in a location attractive to business development is necessary to the Town's economic sustainability.

Planning: In order to grow in an efficient, orderly, and sustainable manner, it is necessary to plan the land uses, transportation routes, water, sewer, and stormwater infrastructure. Annexation will allow Black Diamond to invest in long term planning, engineering, and financing strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Contact
Rod Ross, RPP, MCIP, Planning Manager
403.933.4348 rodr@town.blackdiamond.ab.ca

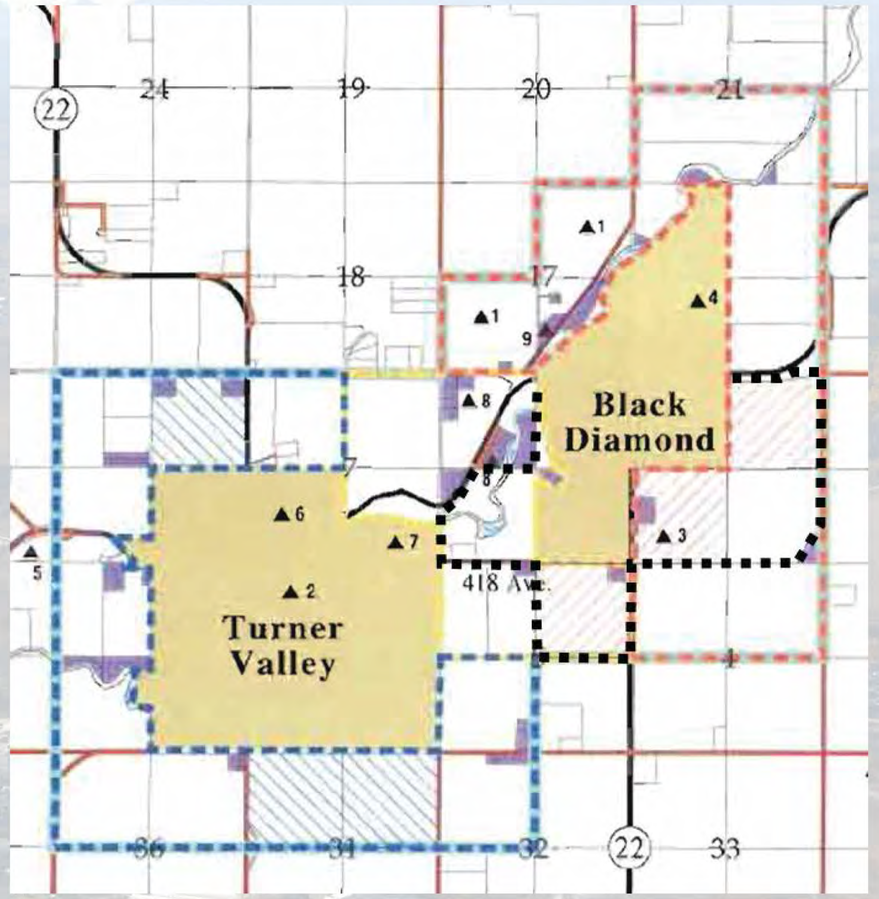
Black Diamond Annexation Proposal *Intermunicipal Development Plan*

The Intermunicipal Development Plan (IDP) addresses land use and development in proximity to the Towns of Black Diamond and Turner Valley.

- The MD of Foothills and the Towns share an interest in ensuring urban development proceeds in an orderly, economical and beneficial manner.

- IDP identifies expected growth corridors for each town (indicated by cross hatching on map).

- Annexation area includes Black Diamond's growth corridors.



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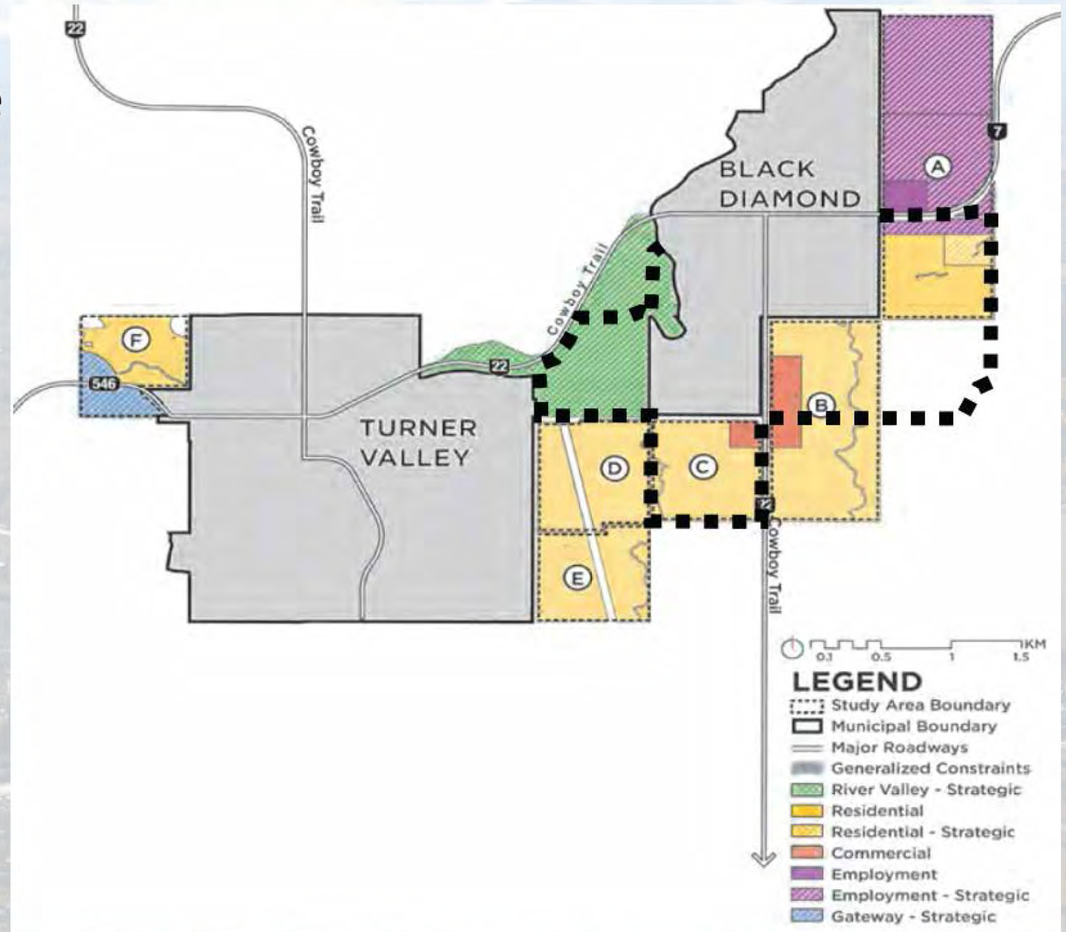
Black Diamond Annexation Proposal

Joint Growth Strategy

The Joint Growth Strategy outlines a series of 60-year land use, transportation, and infrastructure scenarios for the growth of the Towns of Black Diamond and Turner Valley.

Key features of the preferred scenario include:

- a business park east of the lagoons;
- a commercial node south of Black Diamond on Hwy 22
- the Towns eventually connected by residential communities and the open space of the Sheep River valley.



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Black Diamond Annexation Proposal

Accommodating Residential Growth

The Joint Growth Strategy considered 2 population forecasts – low growth and high growth.

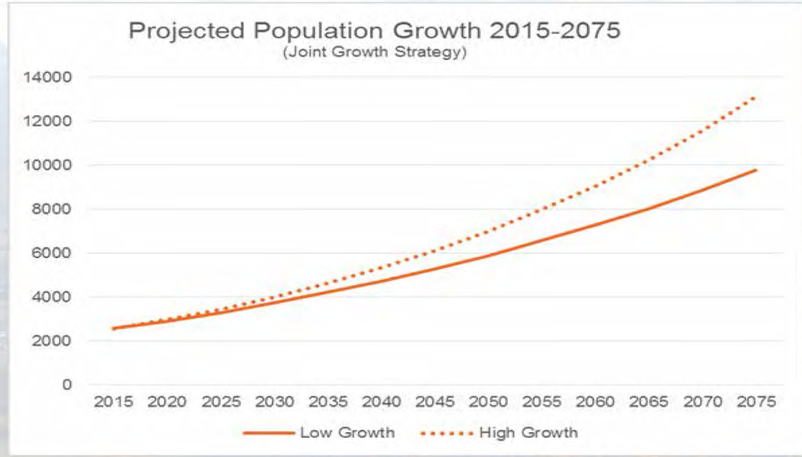
Projected growth is modest in comparison to what is anticipated for other communities in the Calgary region.

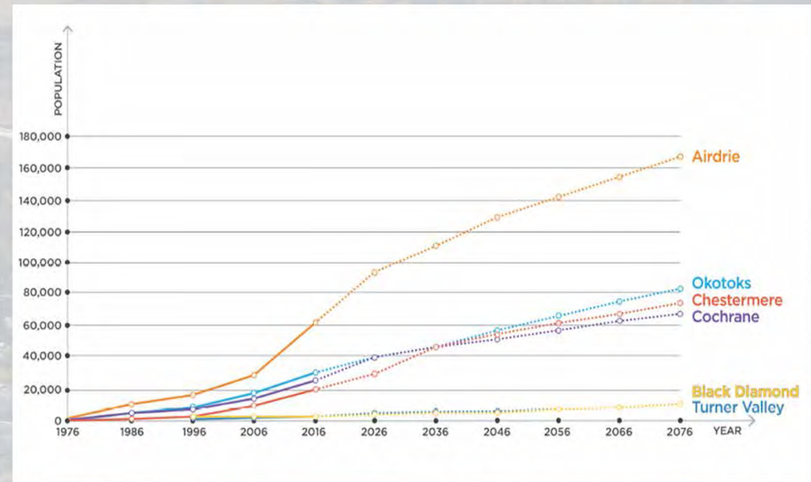
The amount of land to accommodate residential growth is a function of the expected increase in population.

The Joint Growth Strategy estimates that between 132 – 191 acres will be required by 2045, and between 367 - 556 acres required by 2075

Forecasted Land Requirements Developable Acres*		2015-2045 acres	2045-2075 acres	Total acres
Low Growth	Residential	132	235	367
	Commercial	1	30	31
	Industrial	3	20	23
	Total	136	285	421
High Growth	Residential	191	365	556
	Commercial	6	45	51
	Industrial	3	20	23
	Total	200	430	630

*Developable Acres exclude all undevelopable lands (steep slopes, swamps, ravines, flood plains, etc.)





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Black Diamond Annexation Proposal

Accommodating Commercial Growth

Based on historic growth rates, the land area required to accommodate the projected increase in industrial and commercial development is modest:

- 4 – 9 additional acres required by 2045
- 50 – 65 additional acres required by 2075

Forecasted Land Requirements Developable Acres*		2015-2045 acres	2045-2075 acres	Total acres
Low Growth	Residential	132	235	367
	Commercial	1	30	31
	Industrial	3	20	23
	Total	136	285	421
High Growth	Residential	191	365	556
	Commercial	6	45	51
	Industrial	3	20	23
	Total	200	430	630

*Developable Acres exclude all undevelopable lands (steep slopes, swamps, ravines, flood plains, etc.)

The Town intends to grow its non-residential assessment base to 15%, beyond the current level of 10.3%

A larger non-residential assessment base:

- creates the ability to pay for services and amenities residents and businesses desire.
- allows the Town to consider providing enhancements that will attract further investment.
- means more local jobs and businesses, allowing residents to work and shop without leaving the Town.

The *2017 Community Economic Development Plan* identifies the Town requires an additional 105 acres to achieve a non-residential assessment base of 15%.

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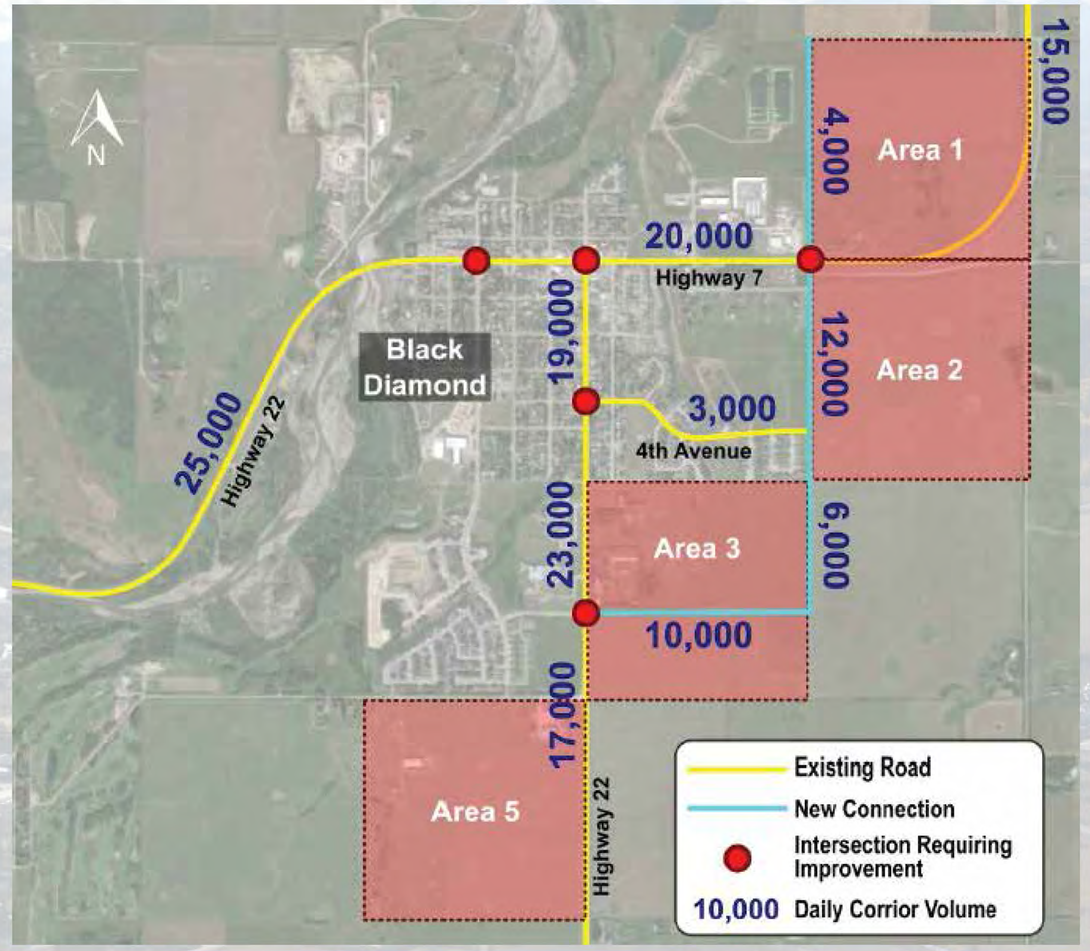
Black Diamond Annexation Proposal

Transportation

Future development of the proposed annexation area will necessitate the construction of a new collector street (shown in blue) that will provide connectivity between the annexation areas, the highways, and to the existing local network within Town.

The collector street will follow the same 6th St E. (north-south) alignment of the water and sewer mains, and will swing west to intersect with Highway 22 and Willow Ridge Blvd south of the Oilfields Regional Hospital.

The eventual buildout of the annexation area will necessitate the improvement (signalization or traffic circle) of 6 intersections within Town. The full buildout of the annexation area will significantly increase traffic volumes on the highways within town, and on 4th Ave SE.



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Black Diamond Annexation Proposal

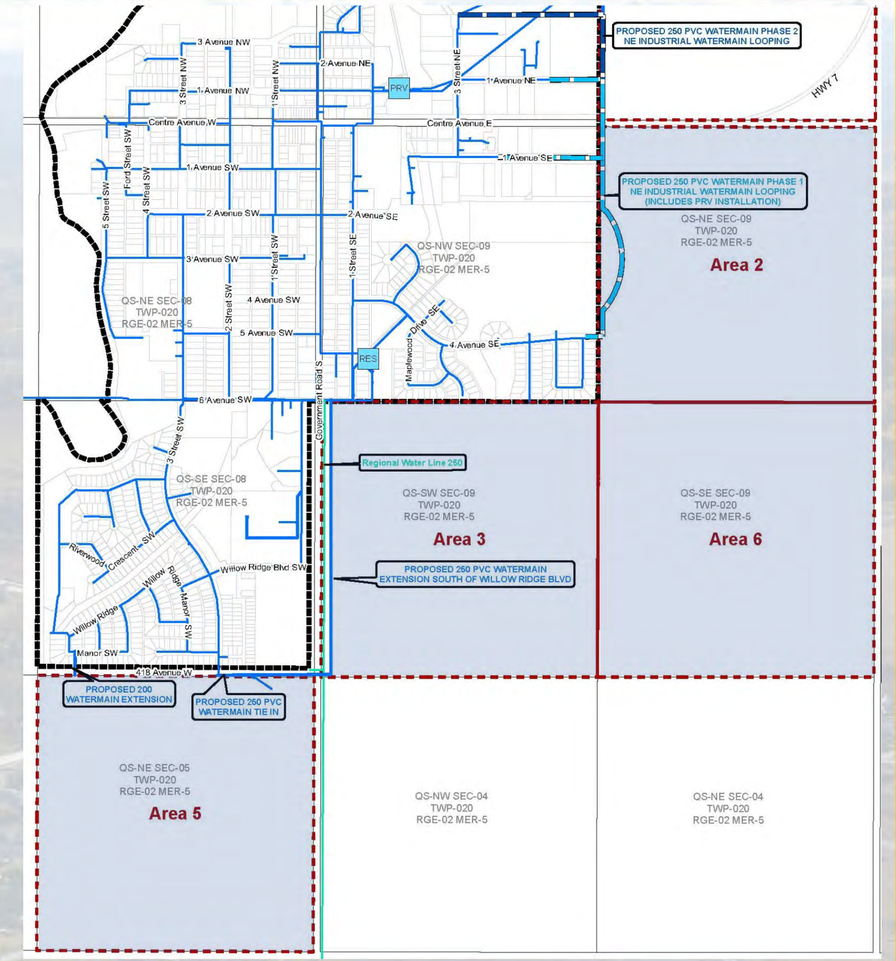
Water Servicing

WATER – ***Supply & Treatment***

- The Town has 3 water licenses with a combined total volume of 954,660 m3.
- Full buildout of remaining vacant land within Town and the entire annexation area is estimated to require 1,186,080 m3.
- The Town will eventually require additional water license of 231,420 m3.
- Existing license will be sufficient until approximately 2056 – 2066, depending on growth rate.
- The Sheep River Regional Utility Corporation operates a water treatment plant in Turner Valley that provides treated water to Black Diamond, Turner Valley, and the MD of Foothills. It has capacity to service a population of 9,160.
- It is estimated that the combined population of the service area will reach the capacity of the treatment plan between 2034 and 2039, depending on population growth.

WATER – ***Distribution***

- Treated water is transmitted from the treatment plant in Turner Valley to a storage reservoir in Black Diamond
- The existing storage reservoir has capacity to serve the entire annexation area. No expansion required.
- A new water main is necessary to provide water to the annexation area – this main will eventually run from Willow Ridge Blvd (south of the Oilfields Hospital), east, and then north, connecting to the business park (see map). The developer will be responsible to construct the local water distribution system that will fed by the water main.
- The water main and related upgrades will be funded in large part by off-site levies paid by developers.



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Black Diamond Annexation Proposal

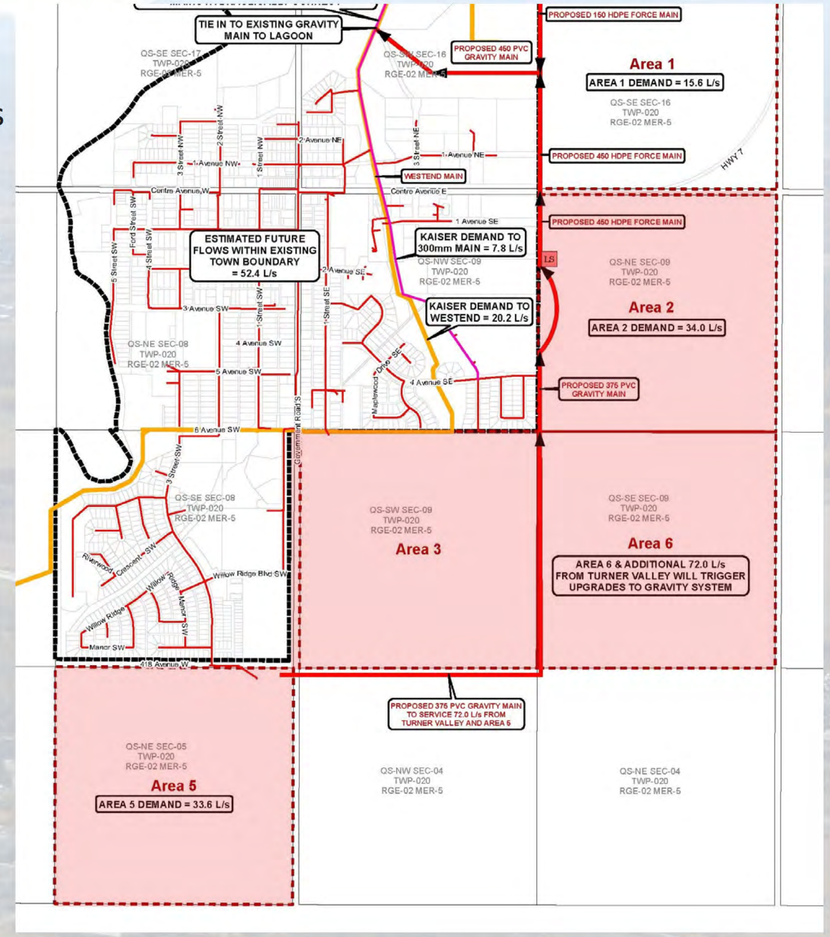
Sanitary Sewage Servicing

SEWAGE – ***Treatment***

- The Westend Regional Sewage Services Commission (WRRSC) operates sewage treatment lagoons in Black Diamond for Black Diamond, and Turner Valley. It currently has capacity to service a combined population of approximately 5300. The Towns are near the capacity of the lagoons.
- WRRSC plans to upgrade the existing facility to improve treatment quality and increase treatment capacity. The expanded facility is sized for a combined population of approximately 8,000.
- The Towns are expected to reach this population by 2030 – 2035.

SEWAGE – ***Collection***

- A new sewage main and lift station are necessary on the east side of Town to convey sewage from the annexation area to the sewage treatment plant.
- There is capacity within the existing collection system to accommodate up to 25 acres of development in annexation area.
- There is capacity in the WRSSC main to accommodate all the sewage from the development of SW9-20-2 W5.
- The developer will be responsible to construct the local collection system that will feed into the sewage main.
- The sewage main and lift station will be funded in large part by off-site levies paid by developers.



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Black Diamond Annexation Proposal

Annexation Process

✓ STEP 1: Notice of Intent to Annex submitted to Municipal Government Board

✓ STEP 2: Black Diamond/Foothills discussions

✓ STEP 2a: Black Diamond engagement with directly affected landowners

→ STEP 3: Public engagement (public open house, information mailed to residents, press release, website updates, online survey, etc.)

STEP 4: Black Diamond and Foothills finalize Annexation Agreement

STEP 5: Foothills Council and Black Diamond Council hold public hearing prior to approving the Annexation Agreement

STEP 6: Annexation Application is submitted by Black Diamond to MGB

STEP 7: MGB advertises the application to the public

STEP 8: MGB holds public hearing (if objections are received)

STEP 9: MGB makes recommendation to Provincial Government

STEP 10: Provincial Government makes decision on application

Contact
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Black Diamond Annexation Proposal

Please write down your comments and questions on the Post-It notes provided. Responses to all comments and questions will be posted on the Town's Annexation webpage.

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ANNEXATION OPEN HOUSE SIGN IN

Meeting Date:	April 2/19	Place/Room:	TOBD Council Chambers

Name	Resident of (Town/County)	Affected Landowner (Y/N)
Sarah Michel	[redacted]	Realtor.
PAM COWIE		Y
GARTH/CLOVER SLUSAR		N
DIXIE PRICE		N
MAUREEN NELSON		N
ART & CHANDRA HOWLETT		N
Audrey + Mirko C.		N
Ken + Nancy Dutto		N
Diana + David + Mallan		Y
Mary Lou Adams		N
Al & Doris Mehl		N
Jodi Ross		N
Monica Kohlhamm		N
Scott McGregor		N

RECEIVED
JUL 04 2018
TOWN OF BLACK DIAMOND

BLACK DIAMOND PROPERTIES DEVELOPMENTS I[redacted]

May 22, 2018

Mayor and Members of Council
Town of Black Diamond
P.O. Box 10
Black Diamond, AB.
T0L 0H0

Dear Mayor Goodwin and Members of Council

[redacted]

My company owns 53 acres of property adjoining your Town on the east and we understand that the Town of Black Diamond will soon be applying to the Alberta Government to annex additional land to accommodate anticipated growth.

We would like to have our property included in that application. As you are aware, we have undertaken planning and engineering work and are confident that our land, along with the adjacent property, can be compatibly integrated with your community. Over the course of your procedure we will refine our land use proposal, prepare additional engineering designs and generate further assurance that this addition will benefit the town.

We would respectfully request that you consider our property within the scope of your application and advise what we can provide to further your efforts.

Sincerely

Black Diamond Property Developments Inc.

TOWN OF BLACK DIAMOND
HIGHWAY 7 "LIVE/WORK" BUSINESS INCUBATOR
PROPOSED SUSTAINABLE DEVELOPMENT CONCEPT

Rationale

Black Diamond Property Development Inc., Majorville Farms Ltd. and Li'l Rock Enterprises Ltd. are the owners of [redacted] The area of the three properties is approximately 290 acres (117 ha.). The owners are interested in developing much of this property for light industry, including a business incubator and light industrial lots along with recreational and resources/agricultural uses and some special purpose residences.

The live/work business incubator will be designed to accommodate prospective new enterprises for which there are no suitable locations in or near Black Diamond. Businesses such as nurseries, landscaping services, small contractors and building trades often prefer to be located at or near their residences so that they can have the efficiency of proximity and economies of scale and the added security of on-site owner presence. Light industrial sites that could be considered for these activities most often do not allow combined residential and business uses and most lack the amenities needed for residents.

Urban residential areas are often unofficially appropriated for these combined activities with resulting problems because the properties are too small or due to conflicts with adjacent sites. Some owners will apply for a home occupation but, due to the wide range of business functions, the usual consequence is undue impact on neighbours. Or the activity occurs as a non-compliant use with inherent risks that cannot be insured – resulting in liability for the business and the public.

Gardens and other horticultural activities as well as small scale animal husbandry designed for family sustainability could exist in an area designed to accommodate combined residential and business uses that incorporated reasonable regulatory controls to promote communal harmony. Some minimum use of alternative energy sources could be encouraged, as well as grey-water collection systems that would be part of the irrigation system required by each business.

This rationale for this component of the proposed Highway 7 Business Park has been prepared in response to the expected demand for live/work types of enterprises that would operate in full compliance of zoning requirements in Black Diamond.

Examination of Live/Work Projects

In many small towns across the Prairies, businesses were originally established with the owners living on the site, often in the same structure. Black Diamond had that experience in past decades and several businesses in the downtown began with a residence at the business premises. With success, commercial expansion and greater affluence, many of the owners were ultimately able to separate family life from work.

Contributing to this evolution was the increasing complexity of urban activity, the need for enhanced fire protection – compounded by insurer resistance – and the desire for more amenities for the home and family. Municipal authorities have responded through land use controls by limiting activities for different uses in order to decrease the potential for conflict. Another response has been the number of approved "home occupations" or "home-based businesses" that provide land use legitimacy and the availability of insurance.

Recently, there has been a return to integrating urban land uses. The reasons for this evolution are varied but often are based on the enhanced security of eyes-on-the-street compared to dark business premises subject to vandalism and crime. This is seeing the growing resurgence of live/work projects in cities and towns. Often the integration has involved commercial and residential activities and often with standard sized commercial properties.

While not a new concept, live/work projects can evolve in various ways take many forms. Some are combine retail and residential uses; some involve the arts and housing; some integrate trades with residences; some are in dense developments; some in spacious locations; some evolved to solve a problem; and some evolved to meet a demand.

It is now quite common to see retail space, professional offices, arts studios and clerical services in association with residences, either as an approved live/work land use or as an approved home occupation. Less common in urban centres is for light industrial developments to be integrated with housing. The Highway 7 Live/Work Business Incubator is proposed to fill this void.

Rural areas have for some time attracted businesses that required larger properties or those that needed large storage spaces. In many cases, development controls and enforcement have been lacking, resulting in disruptions to neighbouring properties. If even available, insurance has been expensive for many of these properties because of slow response times and lack of adequate water supply. And these businesses have often been remote from their clientele resulting in a lack of viability.

USA Examples

In the United States, some integrated light industrial and residential projects arrived due to evolving business activities, others are to enhance surveillance, others to gain more vibrancy and urban aesthetics and some to transition between industrial and residential areas. The following are two examples.

Recognizing the evolution of urban areas, the City of Los Angeles recently established a "Hybrid Industrial Live/Work Zone" that provides for combined residential and light industrial uses to accommodate the arts, design, movie and production industries. Detailed development and streetscape standards are outlined. Re-use of existing structures is encouraged. (See Attachment)

The City of Sisters, near Bend, Oregon, has structured the North Sisters Business Park to transition between residential, commercial and light industrial land uses. Development controls and design standards are specified. Restrictions are placed on the proportion of buildings for residential and retail uses to prevent the project from gravitating away from employment generation. (See Attachment)

Canadian Experience

In recent years, Canada has had less experience with live/work projects apart from allowing home occupations. Current and accurate data regarding home-based businesses is not available due to the fact that many such enterprises do not apply for approvals or licenses.

The B.C. Home Business Report has estimated that ten percent of all households in the province operate businesses from these premises.

Alberta has many urban communities that allow residential and business integration but most of these are homes with retail, professional, clerical, arts or similar businesses. No urban centres have been identified allowing residences combined with light industrial components.

Rural municipalities often have light industrial activities but most do not have housing except for those that pre-dated the industry – such as at Aldersyde. Further residential development is discouraged because the areas do not have adequate protective services, do not have sufficient development controls and lack aesthetics and amenities.

The City of Surrey in B.C. has three areas designated for live/work approval complete with guidelines for how these are to be designed, developed and operated. Because of the demand for housing in the area, many have established residential uses but no employment. According to the municipal planners, that was not intended as jobs are important to the City. It was noted that they should have incorporated conditions similar to those for the City of Sisters to ensure the work component was included. (See Attachment)

The City of Abbotsford adopted a different approach to accommodate homes that were annexed in areas for which industrial zoning was intended. The residences were deemed non-conforming resulting in the owners not being able to replace their residence after a fire, not being able to renovate and these properties being un-insurable. Recognizing this dilemma, the City established a Residential Industrial Zone within which compliant live/work activity can continue. (See Attachment)

The City of Kamloops has dealt with home-based businesses by providing for these in several zoning districts. As a part of the zoning requirements, specific guidelines are outlined to control ownership, number of employees, space requirements, storage, deliveries and shipping, hours of operation and parking. (See Attachment)

Senior planners in Surrey and Abbotsford were asked whether integrating industry and housing is a good concept. Reflecting the means by which these projects evolved and the absence of development controls, their response was given proper design, good development standards and adequate enforcement, these projects provide opportunities that would otherwise not be available and in a fashion that is affordable and efficient for many families.

The Concept

This development concept for the Highway 7 Live/Work Business Incubator and for the remainder of the site has been prepared to facilitate:

- Assessment of the business incubator feasibility;
- Negotiations with the Town of Black Diamond;
- [redacted]
- Estimating infrastructure costs; and
- Pre-sales marketing to prospective buyers.

The proposed sustainable business park is intended to accommodate small-scale businesses having limited effect on adjacent properties and including live/work units. These may accommodate the building and trade contracting industry, craft workshops, nurseries, greenhouses, veterinary clinics, animal kennels and a variety of home based businesses.

While this concept can provide substantial long-term benefits, its economic limits are very narrow. Many of these small businesses do not have the ability to pay high up-front costs. Rather, they need to be able to launch through the efficiencies of a family-operation and then to grow into viable components to the community. Thus, this business park should be recognized by the Town of Black Diamond as a live/work business incubator.

Being in close proximity to the Town utility infrastructure systems, convenient road connections and being adjacent to the existing business park and Rona Building Centre, the proposed low-density development can be economically established. The Town of Black Diamond could encourage existing home occupations that are non-compliant to relocate to this area thereby gaining the advantage of this location's separation from pure residential communities.

Because of its prominent hillside location at the eastern entry to Black Diamond, the Highway 7 Business Park will be subject to critical scrutiny and must be designed and developed with special attention to its visual impact and appearance. Therefore, design and development guidelines will be established at the outset to ensure that the project becomes an economic generator along with being a pleasing entry to the Town.

A sketch plan for the live/work component has been prepared for discussion purposes. It separates residential access from business traffic thereby making the housing component much more livable. The residential area can be designed with amenities, made more attractive and traffic flows controlled. Park spaces and landscaping can be provided. This concept was discussed with the Surrey and Abbotsford planners. They commented that would greatly enhance the projects with which they are dealing.

Development Controls

As a part of the approval processes, specific land use guidelines will be prepared and registered against the titles to control site development, buildings, open space and landscaping including requirements for architectural design, open space and pathways, subdivision conditions, signage requirements and lighting controls.

The Highway 7 Business Park will provide opportunities for live/work and other light industrial developments that do not detract from the quality of the neighbourhood or the enjoyment of nearby properties. Larger construction enterprises, automotive sales and repair, mini-storage, communications facilities and recreational vehicle sales and repair would be directed to other portions of the business park.

It is proposed that the project have specific guidelines and the requirement for development permit approval for the following:

1. Development permit applications will be assessed as to their compatibility with adjacent properties for both residential and business components. Improvements shall be designed, constructed and maintained to reduce adverse off-site influences. Site coverage, setbacks, screening requirements and aesthetic conditions will be stipulated and will apply to all components.

2. Design and architectural guidelines will be administered with reason. Approval of location, form, exterior treatment, colour and relationship to adjacent developments will be required prior to building permits being issued. Roof design and construction will address drainage, freeze-thaw conditions and snow accumulation. Pedestrian and vehicle access points must be protected from snow and ice falls.

3. All improvements will be regulated through development permits that include details of the design of buildings, landscaping and the provision of amenity space for dwelling units.

4. A drainage and stormwater management plan will be prepared to protect watercourses, prevent flooding, retain runoff and enhance infiltration. Adequate setbacks will be established and the impacts of development mitigated.

5. Site disturbance and erosion caused by development of roads, utilities and buildings must be minimized through design and construction methods. Slope protection, retention or replacement of vegetation, capture of disturbed soils and site rehabilitation will be required.

6. In order to provide for protection of and access to site features and promote non-motorized access, a network of public trails will be developed on the site. The public trails will be linked into the Town's pathway network.

7. The site has one section of steep terrain which may be subject to erosion, instability or soil degradation. That area will be identified and require additional engineering and construction controls. If these cannot be achieved those sites will remain undeveloped.

8. Parking and loading provisions will be addressed.

9. No portion of a parcel will be used for the repair of vehicles or for the storage of derelict vehicles.

10. Light industrial uses shall have a minimum 3 m (10 ft) landscaped buffer with no parking, loading, storage, waste collection or outdoor service area in a required yard abutting a public roadway. All outdoor storage must be screened from view.

11. Light industrial uses shall not have more than 30% of the site frontage used for driveways and no driveway may be more than 6.0 metres in width.

12. All pens and runs associated with a veterinary clinic or kennel shall be enclosed.

13. Retaining walls must be constructed of rock, textured concrete or wood and not be more than one metre in height. Higher walls may be approved if terraced with landscaping between rises or if approved by the Town.

14. Fences will be permitted to contain the area immediately around the residence and business, in keeping designs outlined in the architectural controls. Landscaping, site furnishings and signage must be compatible with local climate.

15. Landscaped areas must be irrigated to a standard acceptable to the Town. Building design and construction must reflect the site character and conditions. When practical, buildings and roads shall be aligned parallel to the contours.

16. All lighting will be designed and installed to meet dark sky conditions.

17. All surface parking areas shall be adequately screened. Adequate drainage and snow storage must be incorporated. Parking areas of more than fifteen stalls must be provided with landscaped islands, each having an area equal to one stall.

Proposed Infrastructure

The business park requires public road connections. The construction of a connection to Highway 7 across from the Wood King site and another at the boundary of the SE and NE quarters of Section 16 will facilitate this. It is proposed that the road be designed and constructed at an industrial service level with a rural cross-section having two driving lanes plus shoulders and with sufficient base for industrial loads.

A water supply feeder main extending from the nearby water system will be routed through the development with service connections to each lot. Each home and accessory shop or building will be required to have a fire suppression sprinkler system complete with on-site water storage, pumping, piping, sprinkler heads and controls designed the prevailing building and fire code standards. Encouragement will be offered to collect grey-water for irrigation thereby reducing the load on sewer system.

These parameters will produce a live/work business incubator that is creative, affordable, sustainable, environmentally sound, and quite unique compared to the existing inventory of land development products. It will make Black Diamond a leader in the green development industry and an innovator in live/work land uses.

Environmental Sensitivity & Protection

In keeping with the incubator model for business advancement, this project is to be developed by taking advantage of nearby municipal infrastructure so as to keep the costs low for the lot buyers thus achieving the intended goal of affordability. To further enhance its status, important factors relating to environmental integrity and project sustainability will be supported. Engineering and technical support and assistance with building design and permitting will be provided to each buyer.

Environmental integrity will be encouraged through:

- Local food sources – Much of the subject area has a good depth of loam soil that is suitable for gardens, thereby allowing the homeowners to grow much of their own produce. Each lot will be large enough to accommodate the work/live requirements and provide for a substantial garden. If the Town allows, owners could raise poultry under specific conditions.

- Grey-Water Collection – Water demand can be substantially reduced by collecting water discharge from clothes washing and dish washers and using this supply for watering vegetation and flushing toilets. The normal consumption for flushing toilets is often as high as 50% of household use. Pioneered in the Arctic where both water and sewage have to be hauled, the systems require a properly-sized collection tank, an aerator and a small circulation pump.

- Solar Electrical & Thermal Applications – The use of solar collectors for heating homes and piping apparatus for generating electricity can be explored.

- Electric and Heat Cogeneration – For some applications, it may be feasible for on-site electric generation with heat recovery directed to buildings. Various fuel sources could be examined.



KyAlta Project Consultants Inc.

Potter Consultants

No.	DATE	ISSUED	BY
1	2021.11.15	PRELIMINARY	AM

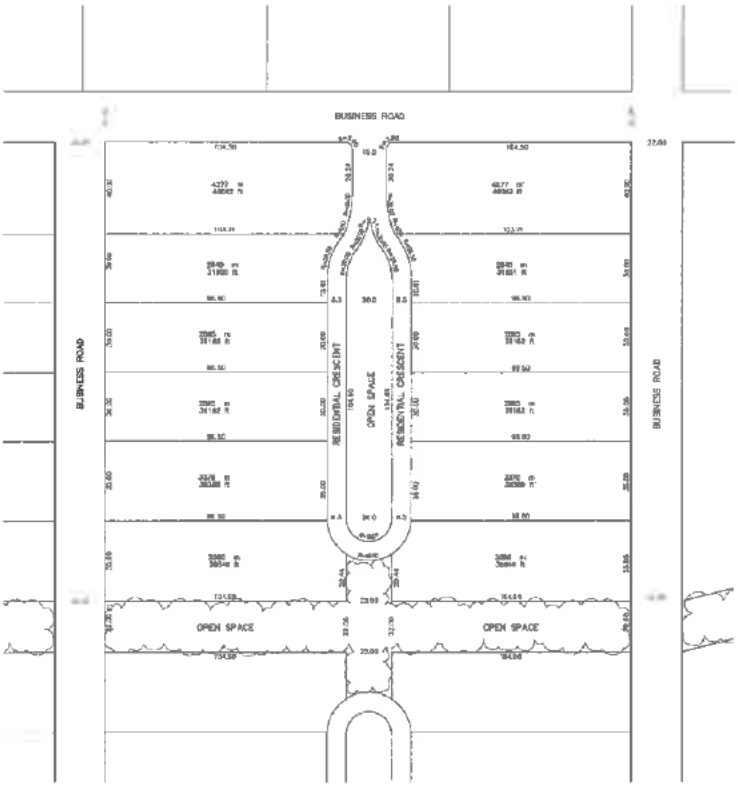
PROPOSED DEVELOPMENT CONCEPT

for

BLACK DIAMOND
PROPERTY DEVELOPMENT INC.

SITE PLAN

SP



KyAria Project Consultants Inc.

Potter Consultants

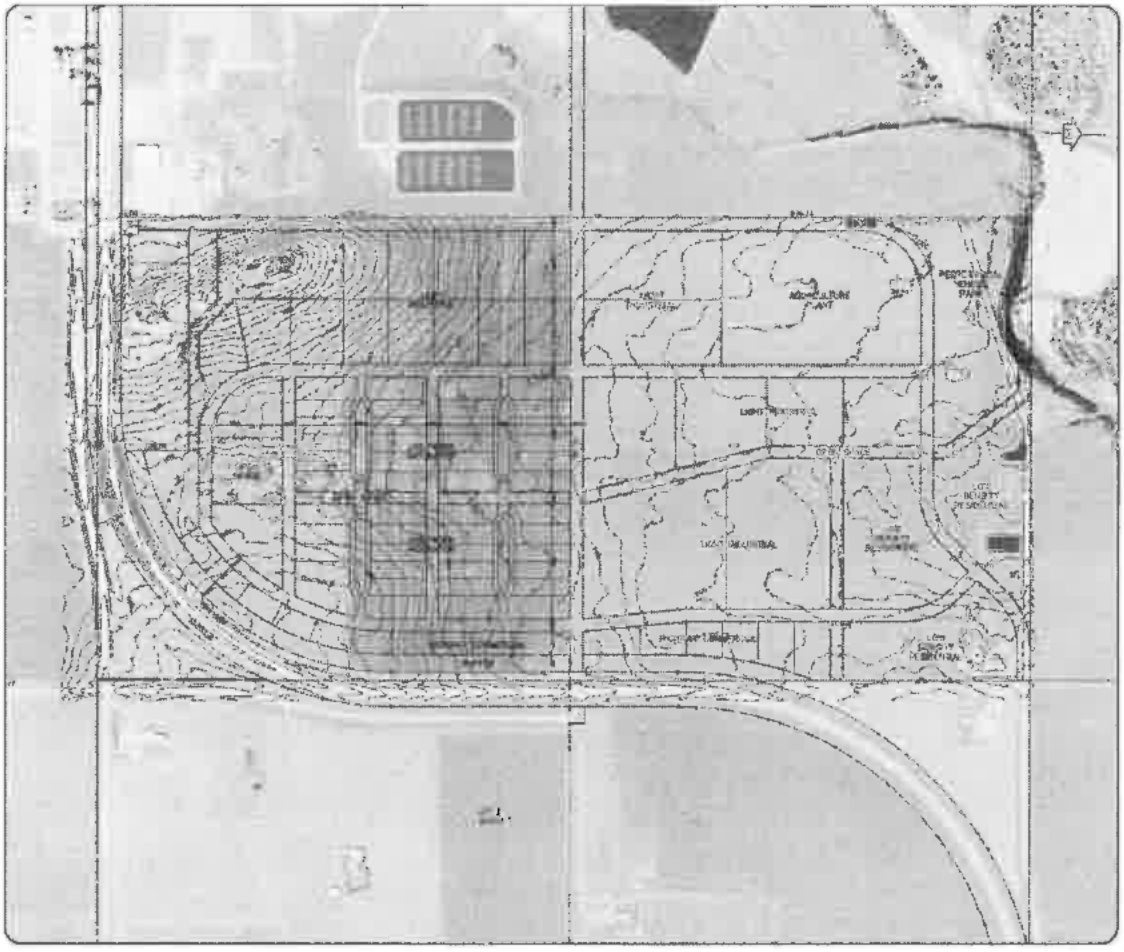
PROPOSED DEVELOPMENT

for

BLACK DIAMOND PROPERTY DEVELOPMENT INC.
MAJORVILLE FARMS LTD.

LIVE/WORK LAYOUT PLAN

LW



Kyalto Project Consultants Inc.

Potter Consultants

No.	DATE	REVISION	BY
3	03.28.18	RESPONDED	MH
2	03.05.18	DEVELOPMENT CONCEPT	MH
1	10.19.17	PRELIMINARY	MH

DRAWN	CK, RP, PL, RJ
PROJECT No.	DESIGNED
16.5-009	A. KAMELIA
SCALE	APPROVED
1:2000	L. STALTE

PROPOSED DEVELOPMENT

for

BLACK DIAMOND
PROPERTY DEVELOPMENT INC.
MAJORVILLE FARMS LTD.

BLACK DIAMOND ALBERTA

DEVELOPMENT CONCEPT PLAN

DRAWING NUMBER

DCP

August 8, 2018

Lorne and Linda Buck

[redacted]

Dear Lorne and Linda:

RE: Proposed Annexation of Land from the Municipal District of Foothills No. 31 Into the Town of Black Diamond

The Town of Black Diamond has been growing steadily in recent years and is running short of land for future growth. In order to grow in an efficient, orderly, and sustainable manner, it is necessary for the Town to create plans for future development, transportation routes, and infrastructure for water, sewer, and storm water that is necessary to accommodate the long-term growth of the Town. Annexation will allow the Town to invest in long term planning and engineering strategies with confidence by ensuring the lands required for future growth are within its jurisdiction.

Annexation is necessary not only to allow the Town to plan for its growing population, but also to provide opportunities for commercial and industrial development, and to accommodate a mix of land uses that will provide a diverse and sustainable municipal tax base into the future.

The Town has identified an annexation area of approximately 4 quarter sections that will provide enough land for 30 – 40 years of growth. Lands owned by you are located within this annexation area.

Annexation is the process for a municipality to expand its boundaries in order to accommodate future growth. Properties within an annexation area would change from being in one municipality to being in another. Annexation does not change ownership rights, and owners are not required to develop or sell their property. Whereas expropriation is a process for a municipality to take ownership of land against an owner's wishes, annexation is simply a change of jurisdiction from one municipality to another. The town is proposing annexation, NOT expropriation.

Enclosed with this letter is a brochure containing additional information about annexation, and a map illustrating the location of the annexation area. Mayor Ruth Goodwin and I would like to meet with you to discuss this matter and any questions and concerns you may have. Please contact me at 403-933-4348, or via email at rodr@town.blackdiamond.ab.ca to arrange a meeting

Sincerely

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

Lorne & Linda Buck

[redacted]

September 28, 2018

Town of Black Diamond

Box 10

Black Diamond, AB T0L 0H0

Attention: Mayor Ruth Goodwin & Planning Manager Rod Ross

Dear Ruth & Rod

Re: Proposed Annexation of [redacted]

This letter shall reiterate our meeting with yourselves & MD Councillor Delilah Miller on Mon Sept 24, 2018 to discuss annexation of the above noted parcel, particularly [redacted]

According to the letter we received August 8, 2018 along with an 'Annexation FAQs' sheet, you are intending to annex the above noted parcel of 141.5 acres for future Commercial/Industrial lands. Besides some aesthetic reasons, this is to accommodate projected future growth & provide a diverse/sustainable municipal tax base. These lands are identified in the "TV & BD Joint Growth Strategy (May 2016)" with Scenario #3 being the preferred strategy.

Our proposal to you was to delay/suspend annexation of this 141.5 acre parcel. Annexation at this time will adversely affect our imminent retirement and financial future. We did discuss some but not all of our reasons & justifications for this proposal, thus I will list all that I believe are most pertinent.

In reviewing the "Joint Growth Strategy" several things are being adopted:

*Land requirements are based on 30/60yr High Growth assumptions, forecasts & predictions.

It is predicted that by 2045 the combined population of the 2 towns will increase by 6,965 (more than dbl 2015 population of 5088) reflecting a 30yr growth rate of 1.37, approx. 4.5% a year. Historically 1954-1986, Pop 1749 to 2748 & 1986-2015, Pop 2748 to 5088 reflects a 30yr rate of .62 & .66, approx. 2.1%yr. *per Municipal Affairs Census*

[redacted]s identified for Industrial/Employment development & strategic lands.

It is predicted that 2.6 gross acres are required by 2045 & an additional 20.1 gross acres by 2075, totaling 23ac for development. The balance of the parcel 118.5 acres are strategic or 60yr+. An additional 189.5ac of strategic lands are located in NE16, NE9 & far SE corner of SE16 on the south side of Hwy#7,

The Buck property, [redacted] is part of the 2.6ac/30yr and totally encompassed in the 22.7ac/60yr plan.

Comparing this strategy with the proposed annexation area of 623 acres (614ac annex + 9.5ac portion of SE16) shows that in the 308ac Residential acquisition, there is a minimum of 21ac in [redacted] for commercial strategic and approximately 30-40ac for industrial strategic in NE9. Adjusted figures would reflect Residential@255 acres, Commercial/Industrial@204 acres.

Though we are not the majority owners of this parcel (9.6 acres of 141.5), we do have significant other justifications in our defense.

*We have 5 generations of history in & with the Town of Black Diamond

Lorne's grandparents lived in Blk Dmd, 1959-1967

Lorne & Linda's families move here in 1959/1963 respectively

Lorne & Linda grew up, went to school & graduated from Blk Dmd, 1971/1974 respectively

Our youngest son grew up, went to school & graduated from Blk Dmd 1998-2009

On the death of Linda's father in 2002, her oldest son purchased the home, He still lives there with his family and our granddaughters are now growing up & attending school in Blk Dmd

*Property in Question was purchased jointly by Lorne's parents (Floyd & Jean Buck) and Jack Sutherland/Majorville Farms approx. 1972. Bucks titled to South front ½ containing house & buildings.

1972-94 – Upgraded existing house, add large garage/shop, some landscaping

1994 - Development of 2nd Residence for elder Bucks (servicing, wells, mobile home, landscaping, corrals)

1998 – We sell home in Calgary & move here, Lorne put on title full 63.2ac, commence development on our piece

2006 - Subdivision of 9.6ac clear title to Lorne & Linda, 53.39ac clear title to F&J.

Elders sell to Ashfay Developments/Eastwood, services removed

*We are the only owner to develop, upgrade, improve & invest money; approx $750-800K in the property beyond the original purchase price.

1972 – 2018 [redacted] mpletely agricultural, leased to local farmer for crops

2006 – 201 [redacted] limited development **we** provided for Elder Bucks 95-06, remained vacant/abandoned till April 2018 when property leased by local family rancher for living & mixed livestock. By the efforts of this young family parcel was reserviced, refenced, repaired, reactivated well & made mobile home habitable again

1998-to date [redacted] 9.6 acres – Custom home, extra garage/shop, servicing, 2 wells, irrigation, landscaping, addit trees & scrubs, expanded yard, garden & flower beds, fencing in progress

*We are the only owner to live on the entire parcel

Sutherland/Majorville @ Milo, AB

Eastwood/Ashfay – Business address, Calgary, AB Principal Residence, Ireland

*We are the only owner to support Black Diamond & the local businesses.

*We likely pay a majority of the property taxes for the entire quarter .

*We are the only owner to be adversely affected, long term, by this proposed annexation.

Increase in Property Taxes will make it immediately unaffordable & forces us to sell

Limited time for MD mill rates on Property Tax, establishes a limited time line when we would have to sell

Devalues all residential development

Restricts potential sale to developers, only one interested currently is Eastwood offering $850,000

Potential to lose water resources, 2 wells with more then 10gal/min each on west edge of prop, No water on East side

Potential loss of 2.5 acres due to Service Road Agreement shared with Ashfay/Eastwood property

Dependant on assumptions in "JGS" to eventually get fair value

NE9 Industrial Strategic 30-40acres (S side Hwy7) availability of residential infrastructure & terrain make this area more appealing/easier to develop for future potential industrial developers

*The majority/all of our 9.6 acres is included in the 1st development phase 30/60yr, where as the majority of Majorville & Ashfay 118.5 acres is Strategic or 60yrs +.

*Finally, we are the only owner that developed & established a home here with the intent of living out our imminent retirement and eventually turning the property over to our youngest son to live on.

At our meeting we were told of the huge amount of work involved in the annexing process & and that it was a matter of ease & convenience to include [redacted] along with the residential lands and River Valley Strategic at this time. May I remind you that there is still more than 1000 acres to be annexed for your long-range plan thus there will be additional annexations in the future.

You have also mentioned your desire for a 2nd access road to the lagoon along the western fence line of the property. Notably, this is the same piece that Black Diamond attempted to expropriate from us in 1994 in addition to the 1000' lagoon setback that encroached within feet of the original residence. We had protested the original lagoon location & were all but ignored. With the MD's intervention, Blk Dmd finally agreed to move the site 500' to the north; however did add an additional 200' to the SW end of the system. The Town then appealed our Development Permit for a 2nd Residence. The MD denied them! It is thanks to us that Blk Dmd even has the industrial sector fronting the lagoon along Hwy#7.

If this is a required road, I see no reason why you could not make arrangements to acquire a 30 x 300m strip off the bottom edge of the Eastwood property to facilitate your wishes. This would not require annexation of the entire quarter section.

Once again, we propose that annexation [redacted] or *minimally the [redacted] be postponed/suspended *indefinitely due to the lack of need by Black Diamond and the adverse & unsustainable situation this places us in long term. (*Minimal [redacted] due to setup of subdivision, surrounded 3 sides by main parcel, shared Service Rd Agreement, all 3 wells, ea more that 10g/m @ W edge of our piece, we are vulnerable to what occurs on the main parcel)(*Indefinitely, Until we are ready to relocate and can get fair value for our property) We can not make our retirement, estate or financial plans based on optimistic assumptions, forecasts & predictions. Most importantly, our future should not be dictated by a 3yr term council and/or a recent owner/developer that doesn't even reside in this country.

We would like to thank you for initiating a meeting with us to discuss this annexation and our concerns around it before actions are taken. This is much better treatment than we have received from councillors with the Town of Black Diamond in the past.

Regards,

Linda Buck

Lorne & Linda Buck

CC MD Councillor Delilah Miller

CC Charles Dixon B.A. LL.P

From: Rod Ross
To: Lorne Buck
Cc: Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca)
Subject: RE: Annexation response
Date: October 3, 2018 2:46:00 PM

Lorne, thank you for taking the time to carefully outline your concerns with the proposed annexation. We will be in touch to discuss them and hopefully identify ways to mitigate the effect of annexation on your property.

Until then, the Town will be hosting an open house on Monday Oct 15 from 4-8pm at the Town office, where we will be presenting further information about providing roads, water and sewer services to the proposed annexation area. I hope to see you there.

Regards,

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
p. **403.933.4348** | f. **403.933.5865** | Box 10 Black Diamond, AB T0L 0H0
rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
Serving Our Community

From: Lorne Buck [mailto:lorne@bowriverelectric.ca]
Sent: Monday, October 01, 2018 12:40 PM
To: Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>; Rod Ross <RodR@town.blackdiamond.ab.ca>
Cc: delilah.miller@mdfoothills.com; charlesdixon@telus.net; 'Linda BUCK' [redacted]
Subject: Annexation response

Our response to the BD annexation.

Thank You

Lorne Buck

Lorne & Linda Buck

[redacted]

COPY

October 17, 2018

Town of Black Diamond

Box 10

Black Diamond, AB T0L 0H0

Attention: Black Diamond Council & Planning & Development Officers

Re: Proposed Annexation of [redacted] 141.5 acres

This letter shall serve as notice to The Town of Black Diamond of our intent to object/dispute proposed annexation of the above noted quarter located N&W sides of Hwy #7, at the east entry of town; particularly [redacted]

Our reasons to object are outlined in our Sept 28, 2018 proposal to the town.

Changes to Assessment Values *(Rural>>Urban)* will increase property taxes

Changes to Mill Rates *(2018 ResMD .006104>>ResBD .010141)* will increase taxes

Changes to Zoning & Land Uses *(Residential/Farm>>Industrial)* will increase taxes & devalue residential development 100% - Severely restricts potential sale opportunities *(subject to Blk Dmd timeline for approved style of development)*

That a proposed 25yr MD Mill rate *(dependent on Provincial approval)* will do little to alleviate immediate increase to taxes *(subject to Blk Dmd Urban Assessment Values)*

That Black Diamond has other options to facilitate immediate needs

That the town is aware of the unsustainable position annexation will place us in yet has provided no additional options or mitigation other than the standard mill rate adjustment.

A full detailed & documented letter outlining our justifications will be forwarded to the MD of Foothills along with a copy of this letter,

Please be advised that we will use all legal means at our disposal to stop/prevent annexation of [redacted] for as long as the Buck family owns and/or resides on the noted property,

Regards,

Lorne & Linda Buck

Cc MD Councilor Delilah Miller; Charles Dixon B.A. LL.P

ROD

Attention: Black Diamond Council – Public Hearing May 15, 2019

Re: Proposed 'Annexation Agreement' between Foothills County & Black Diamond

Submitted by Lorne & Linda Buck. Box 810, Black Diamond, AB T0L 0H0

We are long-time owners & residents on property legally described as [redacted]
Lands are located within Foothills County [redacted]

We have knowledge & understanding of the annexation proposals & proceedings; given the following:

- ✓ 60 years & 5 generations of ongoing personal history in &/or adjacent to Black Diamond
- ✓ 35+ years as owners/operators of a successful private business; in the construction industry, within the City of Calgary
- ✓ Have been in direct consultation & negotiations with the Town; as [redacted] originally intended for 'current' annexation
- ✓ Undertook a full review of studies, strategies, land-use bylaws, et.al.; as referred to in Blk Dmd's annexation proposals

We request approval to address 'Council' directly about serious concerns regarding &/or related to above noted 'Agreement' & future application and wish the 'Public Record' to exhibit these concerns as set forth in this letter.

That immediate annexation &/or acquisition of 780+ acres seems Unreasonable & Excessive; *effectively doubling the existing Town area of approx. 800+ acres* and is not supported by the alleged 'hi-level' studies, reports etc.; as prepared & provided by Black Diamond Planning & Development and being publicized & promoted by the Town.

Some concerns include, but are not limited to:

Within the JGS (Joint Growth Strategy 2016) *Primary document *collaboration of BD & TV to equally & eventually 'grow' together (30/60yr plans)*

- **'Higher Growth' population predictions appear Grossly Inflated;** ***more than 3X*** *the 1127 in previous 30yrs (1985 Pop 1450 to JGS est 2577) and more than double Calgary's projections of 1.4% growth in same time frame*
  - 3% cumulative growth 2015-2045 = 3500+ population increase (2015 Est Pop. 2577 to 6105) *(Pg 26, Fig 10)*
- **'Gross Land Requirements' are being exceeded & acquired prematurely**
  - 2015-2045 30yr Gross 199 acres (Hi-growth - 191ac Residential & Balance to Comm/Ind) or 135 acres (Lo-growth – 132ac Res)
  - 2015-2075 60yr Total Gross 977 acres (Hi-growth – 903ac Residential, Commercial 51ac, Industrial 23ac) *(Pg 33, Fig 15)*
    (Note: available publications do not include SE9 (ALSR Area 6) in the 'preferred' Scenario#3)

Within the ALSR (Annexation Lands Servicing Review)

- **Area 2 (NE9) appears sufficient for minimum 20-year needs & is the only 1/4 required in short term**
  - Developable Area 152.5 acres = 127.5ac Residential - Pop. Capacity of +1988 & 25ac Ind – +237 Jobs *(Pg 14 – 4.2 Service Population)*
  - Required: Adjacent NW9; completing 1992 Kaiser ASP & deficiencies in existing water/sewer infrastructure
- **Existing, long-standing & required infrastructure deficiencies & costs** *being included as part of expansion &/or development on newly annexed lands & to be recovered via off-site levies (Note: no distinction between Towns current &/or newly annexed lands or existing/future development)*
  Westend **Lagoon Upgrade** Project, 2018 ***Est $18.2M***; at capacity, does not meet AEP (Alberta Environment & Parks) requirements, continue to discharge over-strength effluent to the Sheep River *(Nov 7, 18 Council minutes)*
  - *Nov **2013** original Business Case for lagoon system upgrade presented to AB Transport, project placed on potential list; AB Municipal Water & Wastewater Partnership, Est 61% funding considered based on provincial priorities & budget availability. Any project costs not covered by provincial or federal funding will need to be covered by the municipalities. (Note: Est **$7.1M balance** split 50/50 between BD & TV)*

  Water **Looping Upgrade**, 2018 ***Est $1.6M***; east side (NW9/SW16) Inadequate Fire Flow, too many dead-end mains & redundancies in water distribution; initially to be paid by Town, significant portion to be recovered via off-site levies when lands benefiting from looping are developed
  - ***2013** 'Fire Underwriter Survey' recommends 2400 lgpm for commercial/industrial; Service Commercial area reported 1000 lgpm inadequate; (Note: Sept 25,18 Council minutes - Council has not budgeted for this & will not be increasing fire flow volume at this time)*

➢ *(Okotoks Western Wheel Jan-Feb 2019),* **Water reservoir levels continue down to 65%** *stating various pump issues & resolving with direct intake from Sheep River. Red Zone if hits 60% & will necessitate level 3 water restrictions. (Note: Suspect direct intake is limited to shared licensing agreements & must discontinue during Spring run-off; allegedly the main cause is 'undiscovered' leak within the Town of Black Diamond)*

Within other available Black Diamond documentation

- **Strategies to 'aggressively increase economic activity' appear Overly Optimistic & Untimely** having a "core economic development objective" to expand non-residential assessment ratio from 10.3% to 15%
  - Economic Development Plan, aptly titled 'Imagination at Work' concludes there is a 105ac deficiency of commercial/industrial lands; determined that JGS 60yr forecasts being too modest *(as above)*
  - 2017 Assessment Ratios: Okotoks 13.4%, Turner Valley 8.1%

An unbiased report issued by the CFIB (Canadian Federation of Independent Business) 2018 'AB Municipal Spending Watch Report', 2006-2016) ranks **Black Diamond in bottom 10 for demonstrating unsustainable municipal operating spending over past 10 years**

"In Alberta municipalities, operating spending growth exceeded sustainability benchmark of inflation and population growth, ultimately leading to a combination of lower infrastructure spending and/or increased taxation, both which dampen economic development & job creation. Analysis shows more than half of this spending (57%) was on public sector salaries, wages and benefits; distribution of revenue sources indicates the practice of raising taxes to fund unsustainable municipal spending. In 2016 AB businesses paid, on avg, two & a half times more in property taxes"

*Provincial ranking of 182 municipalities (*Pop over 1,000*) #1 Best to #182 Worst * **AB average; Pop Growth 24% * Real Operating Spending 62%***

- **Blk Dmd #175 – Population Growth 19%, Real Operating Spending Growth 257%, Per Capita Increase 199%**
- Tnr Vly #182 – Pop. Growth 41%, Real Operating Spending Growth 841%, Per Capita 569%
- Okotoks #2 – Pop. Growth 140%, Real Operating Spending Growth 104%, Per Capita -15% *(Reduced spending)*

The justifications, rationale & general propaganda being put forward in support of Black Diamonds current &/or future annexations and the current 'Agreement' presume that:

- Despite all evidence to the contrary; both current & historical
- Despite Alberta's devastated & crippled economy and the negative financial pressures; being felt by every citizen
- & Unlike any other town &/or municipality in this province
- This Town possesses the plans, the strategies, the knowledge or overall 'vision' that will alter &/or defy 'reality'.

Is this current annexation about promoting the Town 'Vision' of a "thriving sustainable community" or is this about "sustaining the vision" with an est. $5.1M in assessment value & approx. $39K in continually rising property taxes?

(per Foothills County - 2017 Assessments Farm/Res $1.6M, Com/Ind $2.7M, Municipal/Exempt $8K ** 2018 Tax Rates Farm/Res $10.8K, Com/Ind $28.2K)
(using County 2017 Assessments ** Blk Dmd 2018 Tax Rates Farm/Res $18.2K, Com/Ind $32.6K)

Additionally; in the absence of substantial population growth & the developers needed to promote any development whether residential, commercial &/or industrial & subsequently increase economic activity – Where are the tens of millions of dollars to be acquired from?? **Where is the sustainability to be derived from??**

As such, we believe there will be **considerable negative 'financial' impacts & long-term consequences** with this annexation and that the financial burden of these costs will fall primarily to a few newly annexed landowners & the citizens of Black Diamond. This, in addition to the weight of escalating taxes & costs already being felt by ranchers, farmers, landowners & citizens alike.

We thank you for your time & consideration in listening & reviewing our concerns and comments. We hope that Council will give 'careful thought & deliberation' about this annexation agreement & future application before submittal to the Municipal Government Board.

Lorne & Linda Buck

It should be noted that having not been able to view the actual 'executed' Agreement & it's associated schedules and given Black Diamond documentation still lists [redacted] & it's associated infrastructure; we are in no way assured that this quarter has been removed from the 'current' annexation area; despite Black Diamond's statements otherwise.

(Note – All information was derived from public documents, mainly from Town of Black Diamond website; any personal calculations are based on this data)

From:	Erna
To:	Rod Ross
Cc:	Reg Ference; Ruth Goodwin
Subject:	Re: Town of Black Diamond - Annexation
Date:	August 31, 2018 9:36:59 AM

Hi Rod,

All of your notes reflect the points discussed at the meeting we had. The request from our recollection was that the town would supply us a list of the differences between the MD and the Town on the items we raised questions and concerns.

Thank you,

Reg & Erna Ference

On Jul 26, 2018, at 11:49 AM, Rod Ross <RodR@town.blackdiamond.ab.ca> wrote:

> Hi Reg and Erna
>
> On June 12 you met with our Mayor Ruth Goodwin, CAO Sharlene Brown, and Planning and Development Officer Denice Stewart to discuss the Town's proposal to annex your 10 acres into the Town. I understand you had a number of questions and concerns regarding this proposal, including:
>
> - <!--[if !supportLists]--><!--[endif]-->Impact on taxes and assessment
> - <!--[if !supportLists]--><!--[endif]-->Effect of town bylaws on keeping of pets and livestock
> - <!--[if !supportLists]--><!--[endif]-->Impact on existing poultry operation – restrictions on expansion; biosecurity concerns
>
> I also gather that you understand the Town's rationale for wanting to grow in this direction, and that you have been scaling back operations at this site, and have purchased other lands for future expansion of your operations.
>
> Can you state on what conditions you will support annexation of your lands?
>
> Kind regards,
>
> Rod
>
> **From:** Rod Ross
> **Sent:** Sunday, June 10, 2018 10:21 PM

To: Reg Ference [redacted]
Cc: Ruth Goodwin <R.Goodwin@town.blackdiamond.ab.ca>; Erna Ference <eference@gmail.com>; Denice Stewart <DeniceS@town.blackdiamond.ab.ca>
Subject: Re: Town of Black Diamond - Annexation

Hi Reg, I won't be able to attend, but I'll see if Denice Stewart can attend the meeting in my place. Ruth has already confirmed she can attend Tuesday.
Thanks for getting back to me Reg, I appreciate that summer is busy.
Rod Ross

Sent from my iPhone

On Jun 8, 2018, at 8:17 AM, Reg Ference [redacted] wrote:

> Hi Ross,
>
> Summers are busy, maybe on Tue next week (June 12th). We have a meeting at the ATB in Black Diamond at 10am we could meet before , say 9:30 at the town office ?
>
> Let us know, thanks.
>
> Reg Ference
>
> Sent from my iPhone
>
> On Jun 6, 2018, at 1:05 PM, Rod Ross <RodR@town.blackdiamond.ab.ca> wrote:
>
> > Hi Reg, I just want to touch base about meeting sometime soon to talk about the proposed annexation of your company's land by the Town of Black Diamond. Will you have some time in the next few weeks to meet?
> > Rod
> >
> > ---
> >
> > **From:** Rod Ross
> > **Sent:** Tuesday, May 29, 2018 3:39 PM
> > **To:** [redacted]
> > **Cc:** Ruth Goodwin (R.Goodwin@town.blackdiamond.ab.ca) <R.Goodwin@town.blackdiamond.ab.ca>
> > **Subject:** Town of Black Diamond - Annexation
> >
> > Hi Reg, it was good to speak with you this afternoon. Mayor Ruth Goodwin and I look forward to meeting with you at your convenience to talk about annexation, and how the Town can address any concerns you may have. Please let me

know when you're available to meet. I work Tuesday – Thursday, but might be able to accommodate meeting on a Monday or Friday, if need be.

Rod Ross RPP, MCIP
Planning Manager
Town of Black Diamond
p. **403.933.4348** | f. **403.933.5865** | Box 10 Black Diamond, AB T0L 0H0
rodr@town.blackdiamond.ab.ca **www.town.blackdiamond.ab.ca**
Serving Our Community

Majorville Farms Ltd.

RECEIVED
JUN 20 2018
TOWN OF BLACK DIAMOND

Mayor Goodwin & Members of Council
Town of Black Diamond
P.O. Box 10
Black Diamond, AB. T0L 0H0

June 20, 2018

Dear Mayor Goodwin and Members of Council,

Request for Annexation [redacted]

My company owns 80 acres of property adjoining your Town [redacted] We understand that the Town of Black Diamond will be soon be applying to the Alberta Government to annex additional land to accommodate anticipated growth.

We would like to have our property included in that application. As you are aware, we have undertaken planning and engineering work and are confident that our land, along with adjacent property, can be compatibly integrated with your community. Over the course of your procedure, we will refine our land use proposal, prepare additional engineering designs and generate further assurance that this addition will benefit the town.

Please consider our property within the scope of your application and advise what we can provide to further your efforts.

Sincerely,

President
Majorville Farms Ltd.
[redacted]

From: MFL Leslie
To: Ruth Goodwin
Cc: Sharlene Brown [redacted]; Leo Kyllo; Rod Ross; Brian Marconi; Jackie Stickel
Subject: Fwd: Letter to Town
Date: February 20, 2019 10:42:40 PM
Attachments: Feb 18 2019 - Letter to town.doc

Good Evening Mayor Goodwin,

I have asked Leo to ammend some statements he wrote in this letter that he based on prior discussions between he and myself and Brendan Eastwood and myself that he had misinterpreted and I trust that he will.

We would like to make it clear that we do not want to be annexed and we are not interested in being involved as part of a development group and do not wish for anyone else to speak on our behalf.

To avoid any further confusion, we ask that any correspondence or information regarding our approx. 80 acres on [redacted] be directed to us personally via email, letter mail or phone.

Thank you for your consideration.

Regards,

Leslie Posein

[redacted]

[redacted]

[redacted]

Begin forwarded message:

From: Leo Kyllo [redacted]
Subject: Letter to Town
Date: February 20, 2019 at 2:11:17 PM MST
To: Rod Ross <RodR@town.blackdiamond.ab.ca>, Brendan Eastwood [redacted], Brendan Eastwood [redacted], Leslie Posein [redacted]

Attached

KyAlta Project Consultants Inc.
[redacted]

Telephone: [redacted]
E-Mail: [redacted]

February 19, 2019

Town of Black Diamond
PO Box 10
Black Diamond, AB. T0L 0H0
Attn: Mayor Ruth Goodwin

Dear, Mayor Goodwin,

Annexation Matter
[redacted]

Since meeting with you and Rod Ross last fall, I assembled information about the annexation of the above noted property, prepared a development concept plan and presented this to the landowners. On November 22, 2018, I was asked by Leslie Posein, of Majorville Farms Ltd. the owners of the 80 acre parcel, to examine having part of their site considered for residential development. I then prepared a plan showing mixed highway commercial, light industrial, residential and open space components. After reviewing this with the owners, I submitted it to Rod Ross on January 24, 2019. On January 30, I presented the revised plan to your annexation committee and was advised that the Town did not want to mix residential and business aspects for this property due to the potential for incompatibility of activities, a policy with which I concur.

The next day, I advised the owners of this decision which was favourably received by Brendan Eastwood, the Black Diamond Property spokesman.

On February 4, I was advised by Leslie Posein that Majorville Farms did not want to proceed with the annexation due to the absence of an active market for business properties and the prospects that property taxes would increase following annexation. On February 7, I sent a memo to your CAO, Sharleen Brown with a copy to Rod Ross asking if correspondence from the Town could be provided to offset this tax objection. On February 12, Rod Ross esnt a memo to me advising that the Town had sent an advisory to all owners within the annexation area noting that taxes would remain at the previous level until development.

On February 14, I was called by Leslie Posein advising that they previously had this information but it did not remove their objections. I asked if they would consider selling the property. She said they would consider offers which indicates they were not opposed to the annexation.

Shortly thereafter, Brendan Eastwood called Leslie Posein to ask if they would reconsider but was refused. He also asked at what price they would sell. She asked him to make an offer which the family would then considerMs. Posein and asked if they would reconsider. She said no. He then asked for what price wouldthey sell. She would not state a price but asked him to make an offer.

I respectfully request that the Town proceed with the annexation application as currently structured. From my experience with annexations over more than four decades, urban communities should have a land supply of 30 years within their boundaries of which a 20 year supply is ready to be serviced and developed. This partial quarter section would provide that supply. Your supply for business and industry at present is far short of what you will require to meet the needs of a community within the growth sphere of Calgary. While slow currently, the pace of growth is expected to return close to previous levels.

Please consider this request.

Sincerely,

KyAlta Project Consultants Inc.



Leo Kyllo, President

cc: Brendan Eastwood - Black Diamond Property Developments
Leslie Posein – Majorville Farms Ltd.
Barry Potter – Potter Consultants

From:	Leo Kyllo
To:	Rod Ross; Brendan Eastwood; Brendan Eastwood; Leslie Posein; Barry Potter
Subject:	Letter to Town
Date:	February 21, 2019 12:33:29 PM
Attachments:	Feb 21, 2019 - Letter to Town.doc

Revised letter as requested by Leslie Posein.

Cheers,
Leo

KyAlta Project Consultants Inc.

[redacted]

Telephone: [redacted]

February 21, 2019

Town of Black Diamond
PO Box 10
Black Diamond, AB. T0L 0H0
Attn: Mayor Ruth Goodwin

Dear Mayor Goodwin,

Annexation Matter
[redacted]

Since meeting with you and Rod Ross last fall, I assembled information about the annexation of the above noted property, prepared a development concept plan and presented this to the landowners. On November 22, 2018, I was asked by Leslie Posein, of Majorville Farms Ltd. owners of the 80 acre parcel, to examine having part of their site considered for residential development. I then prepared a plan showing mixed highway commercial, light industrial, residential and open space components. After reviewing this with the owners, I submitted it to Rod Ross on January 24, 2019. On January 30, I presented the revised plan to your annexation committee and was advised that the Town did not want to mix residential and business aspects for this property due to the potential for incompatibility of activities, a policy with which I concur.

The next day, I advised the owners of this decision which was favourably received by Brendan Eastwood, theEastwood, the Black Diamond Property spokesman.

On February 4, I was advised by Leslie Posein Leslie Poseinwant to proceed with the annexationannexation due to the absence of an active market for business properties and the prospects that property taxes would increase following annexation. On February 7, I sent a memo to your CAO, Sharleen Brown with a copy to Rod Ross asking if correspondence from the Town could be provided to offset this tax objection. On February 12, Rod Ross sent a memo to me advising that the Town had sent an advisory to all owners within the annexation area noting that taxes would remain at the previous level until development.

On February 14, I was received a call from Leslie Poseinb advisinging that they previously had this information but it did not remove their objections. I asked if they would consider selling the property. She said they would consider offers. Shortly thereafter, Brendan Eastwood called her to ask if they would reconsider Leslie Posein to ask if they would reconsider but was refused. He also asked at what price they would sell. She asked him to make an offer which the family would then consider. She refused. He then asked at what price would they sell. She would not state a price but asked him to make an offer.

I respectfully request that the Town proceed with the annexation application including this quarter section. From my four decades of experience with smaller urban communities, they should have a land supply of some 30 years within their boundaries of which about 15 to 20 years should be ready to be serviced and developed. This partial quarter section would meet that requirement.

Your current land supply for commercial and businessis purposes is far short of what will be needed for a town within

I respectfully request that the Town proceed with the annexation application as currently structured. From my experience with annexations over more than four decades, urban communities should have a land supply of 30 years within their boundaries of which a 20 year supply is ready to be serviced and developed. This partial quarter section would provide that supply. Your supply for business and industry at present is far short of what you will require to meet the needs of a community within the growth sphere of Calgary. While slow currently, the pace of growth is expected to return close to previous levels.

Please consider this request.

Sincerely,

KyAlta Project Consultants Inc.



Leo Kyllo, President

cc: Rod Ross, Planning Manager
Brendan Eastwood - Black Diamond Property Developments
Leslie Posein – Majorville Farms Ltd.
Barry Potter – Potter Consultants

Serving Our Community

October 31, 2018

Robin,

Thank you for the phone conversation on October 15, 2018. I appreciate the opportunity to hear your concerns regarding the Town's annexation proposal. I can provide the following answers to your specific questions. The answer to your question regarding development of a riding arena was prepared in consultation with staff from the MD of Foothills.

1. **How will annexation impact the development rights of the [redacted] Specifically, will annexation by the Town impact the development of a riding arena on the land?**

   Under current status in MD of Foothills
   The [redacted] is currently located within the MD of Foothills, and land use and development is regulated by the MD's Land Use Bylaw, Municipal Development Plan, Intermunicipal Development Plan, and various guidelines and standards that the MD has adopted.

   The MD of Foothills Land Use Bylaw No. 60/2014 has assigned the [redacted] to the Agricultural District. This district lists permitted and discretionary uses that may be developed in this district. A copy of the Agricultural District is attached to this letter. Applications for permitted uses must be approved by the municipality, provided the application complies with the regulations of the Land Use Bylaw and all applicable statutory plans. Applications for discretionary uses may be approved or refused. Refusal of discretionary uses must be based on sound planning reasons.

   The MD of Foothills Land Use Bylaw outlines 3 classes of riding arena: *Arena, Private*; *Arena, Limited Public*; and *Arena, Commercial*. *Arena, Private* is a discretionary use in the Agricultural District so would only require a Development Permit to be granted from the MD at this time. *Limited Public Arena*, and *Commercial* Arena are not listed as uses in the Agricultural District, therefore would require a land use redesignation (rezoning) to Direct Control District #29 which is a district specifically for public arenas, then a Development Permit could be granted. Section 10.3 of the Land Use Bylaw outlines policies that all riding arenas must comply with.

   The SW 9-20-2 W5 is currently located within the *MD of Foothills, Town of Black Diamond, and Town of Turner Valley Intermunicipal Development Plan* (IDP), and is identified as being within an Urban Growth Corridor. The IDP identifies Urban Growth Areas to allow for the orderly, economical and beneficial growth of the Towns. Applications for redesignation, subdivision, and development are to be given special consideration by the MD of Foothills in consultation with the Towns, in order to address the immediate and long-term impacts that such proposals may have on the logical growth sequence for the Towns. If an application for any type of riding

arena were to be made on the [redacted], the Town would have concerns, as the location and scale could be detrimental to the long-term conversation of the land to urban use.

If annexed by the Town of Black Diamond

In the Frequently Asked Questions document provided to you, the Town states *"Black Diamond will acknowledge existing land use districts and maintain the development rights currently available under the current district in Foothills Land Use Bylaw until an application is made to redistrict or subdivide your property."* This is consistent with the Municipal Government Act which states *"bylaws and resolutions of the old municipal authority that apply specifically to the area of land continue to apply to it until repealed or others are made in their place by the new municipal authority"* ***(Sec. 135(1)(d))***. Immediately after annexation, the Town will apply the regulations of the MD of Foothills Land Use Bylaw in effect at the time of annexation to your property. Eventually the Town will amend its Land Use Bylaw to incorporate the regulations of the MD of Foothills Land Use Bylaw as they apply to your land. A Development Permit Application for a *riding arena, private*, would be reviewed in accordance with the applicable policies in the MD of Foothills Land Use Bylaw, and in accordance with the Town of Black Diamond Municipal Development Plan, and applicable guidelines and standards. The Town would have the same concern that the location and scale of the arena could be detrimental to the long-term conversion of the land to urban use.

In conclusion, the current plans and bylaws applicable to the SW 9-20-2 W5 provide the Town of Black Diamond a degree of involvement in the use and development of this parcel. Whether this parcel is annexed or not, the Town will seek to ensure that any development does not unduly conflict with or impede its future conversion to urban use.

2. **The MD of Foothills offers a discount of 6% for early payment of property taxes. The Town of Black Diamond does not offer this. Can the Town of Black Diamond ensure that the taxes on the SW 9-20-2 W5 do not increase as a result of annexation?**
   The Town of Black Diamond does not offer a discount for early payment of taxes, and has no plans to introduce one. The Town will tax and assess the annexed lands as though they were still in the MD of Foothills.

3. **The Town has said it will continue to assess annexed properties as though they were still in the MD of Foothills, and will apply the MD of Foothills tax rate for a period of time. For how many years will the Town do this?**
   The length of time for annexed properties to be assessed and taxed as though they were still in the MD of Foothills has yet to be determined, but the Town intends to allow enough time so that the annexed lands are not subject to the Town tax rate before they are developed.

Serving Our Community

I trust this answers your questions. I look forward to meeting with you next week.

Regards,

Rod Ross, RPP, MCIP
Planning Manager
Town of Black Diamond

cc:
Reeve Larry Spilak, MD of Foothills
Deputy Reeve Delilah Miller, MD of Foothills
Heather Hemmingway, Director of Planning, MD of Foothills
Mayor Ruth Goodwin, Town of Black Diamond

From: Rod Ross
To: "David HCL Hennigar"
Cc: Darlene Barkley; [redacted]
Subject: RE: Annexation Meeting on March 19 (Verne Thorarinson)
Date: July 26, 2018 9:47:00 AM

Hello David,

Our annexation discussions with the MD of Foothills are moving along, and we are looking at moving forward with some public consultation this fall. The Town has commissioned a servicing study for the annexation area, and we can share it with yourself and Verne when its complete. It will give a more complete picture of what's required to provide services to the annexed lands.

The Town is seeking letters from landowners in the annexation area stating their support of the Town's annexation area. Could you please provide one?
Rod

From: David HCL Hennigar [mailto:david@hconsulting.ca]
Sent: Thursday, March 08, 2018 8:39 AM
To: Rod Ross <RodR@town.blackdiamond.ab.ca>
Cc: Darlene Barkley [redacted]
Subject: Annexation Meeting on March 19 (Verne Thorarinson)

Good morning Rod,

As discussed on Tuesday with Verne Thorarinson, I have been asked to attend a meeting with you on Monday, March 19th at 1 PM. In case you need to get in touch with me ahead of the meeting, my contact information is:

David Hennigar
[redacted]

I look forward to meeting you.

Best Regards,

David Hennigar
[redacted]

The contents of this message may contain confidential and/or privileged subject matter. If this message has been received in error, please contact the sender and delete all copies.

From:	Darlene Barkley
To:	Rod Ross
Subject:	FW: Annexation NE 9,20,2,W5
Date:	August 24, 2018 11:00:22 AM
Attachments:	Scan0323.pdf

From: Darlene Barkley [redacted]
Sent: Friday, August 24, 2018 10:58 AM
To: 'rodr@town.blackdiamond.ab.ca'
Subject: Annexation [redacted]

Rod Ross
Good Morning:

Attached – Confirmation letter re: annexation of the above noted property.

Thanks.
Darlene

August 24, 2018

386809 Alberta Ltd. (Verne Thorarinson)
[redacted]

Mr. Rod Ross
Planning Manager
Town of Black Diamond
P.O. Box 10
Black Diamond, AB.
T0L 0H0

Dear Rod:

Further to our meeting March 19, 2018, 386809 Alberta Ltd. (Verne Thorarinson) is writing to confirm its support of the annexation of [redacted] by the Town of Black Diamond. In addition, as the owner of [redacted] we would also support annexation of this quarter section.

Verne Thorarinson
386809 Alberta Ltd.

TURNER VALLEY GOLF CLUB
EST. 1930

RECEIVED
JUL 06 2018
TOWN OF BLACK DIAMOND

July 03, 2018

Ruth Goodwin
Mayor
Town of Black Diamond
Box 10
Black Diamond, AB
T0L 0H0

Re: Town of Black Diamond potential annexation of Turner Valley GC MD Lands.

Dear Mayor Goodwin,

On behalf of the Turner Valley Golf & Country Club, I would like to thank you and Rod Ross for setting up a meeting with our Board Members, John Burke, Fred Woodlock and myself on May 9th. As you recall, the focus of that meeting was the potential annexation of our east property that currently sits in the M.D. of Foothills. In response to your letter of support for the annexation of this land, the Board of Directors met on May 31, 2018 for the purposes of this discussion. The results of that discussion is a declaration of support providing the below conditions can be met;

1. [redacted]
2. The land retains its current designation.
3. Property taxes will not increase as a result of annexation.

We hope that the Town of Black Diamond can agree to these conditions and we look forward to working with you.

Yours Truly,

J.D. Scheller
General Manager
Turner Valley Golf & Country Club

cc. Gregg Undershute, President, Turner Valley Golf & Country Club

From:	Al "Doc" Mehl
To:	Rod Ross
Subject:	Public comment on Black Diamond Proposed Annexation Plan
Date:	April 5, 2019 4:36:33 PM

Trying again, Rod, my first try had a typo in your email address.
Albert Mehl

---------- Forwarded message ---------
From: **Al "Doc" Mehl** [redacted]
Date: Fri, Apr 5, 2019 at 4:33 PM
Subject: Public comment on Black Diamond Proposed Annexation Plan
To: <rodr@town.blackiamond.ab.ca>, <Drew.Granson@mdfoothills.com>

Rod and Drew,

I am a resident of Black Diamond, and I attended the recent annexation open house on April 2. I appreciated the helpful staff that were present, and many of my questions were answered.

As I have reviewed the information that was offered that night, I have one additional thought to share, assuming that the period for public comment has not been officially closed.

Looking at the annexation map, I wonder if any additional thought was given to annexation of one more quarter section, namely the quarter section immediately south of the "Strategic Area" (deemed "strategic" because it would create the first common boundary to allow the towns of Turner Valley and Black Diamond to "touch" each other).

Annexing this additional quarter section south of the "Strategic Area" would allow Township Road 200 to continue westerly along the south boundary of the newly expanded town of Black Diamond, and then enter into Turner Valley (as 16 Ave SE) without traveling through a section of the Municipal District that doesn't touch either town. I think this second roadway connection between the two towns would simplify any confusion that might occur during emergency response for fire, police, or ambulance.

In addition, annexation of this additional quarter section would allow for a more significant connection between the two towns, about three times the linear distance of connection. Annexing this one additional quarter section would also allow for a strategic roadway connection between the two towns rather than simply a land connection that does not allow any additional roadway connection.

Of course, the idea I have proposed in this email does not take into account the wishes of the landowner(s) of the quarter section in question, and I do understand that is a variable that must be considered.

Thanks for the chance to comment, and thanks for a thoughtful process.

Albert Mehl
[redacted]

[redacted]

Appendix N
Annexation Negotiation Committee Meeting Minutes

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, February 22, 2018 at 2:30 P.M.
Town of Black Diamond Office

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
CAO, Sharlene Brown
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart

Municipal District of Foothills
Reeve Larry Spilak
Deputy Reeve Delilah Miller
Director of Planning, Heather Hemingway
Planner, Drew Granson

Alberta Municipal Affairs
Irene Black
Lisa Awid-Goltz

Municipal Government Board
Rick Duncan

1. **Call to Order**
   The meeting was called to order at 2:32 P.M.

2. **Appointment of Chairperson:**
   Ruth Goodwin was elected Chairperson.

3. **Adoption of Agenda**
   The agenda was adopted as presented.

4. **Presentation: Rick Duncan, Municipal Government Board – Annexation Process & Principles**
   Rick Duncan presented an overview of annexation, including legislation, process, and principles. Powerpoint slides are attached to these minutes.

5. **Presentation: Irene Black & Lisa Awid-Goltz, Ministry of Municipal Affairs – Facilitation and Mediation Services**
   Irene Black and Lisa Awid-Goltz presented an overview of mediation process and principles, and outlined the services available to the municipalities through Municipal Affairs. Powerpoint slides are attached to these minutes.

6. **Annexation Negotiation Committee Terms of Reference**
   Heather Hemmingway reviewed a draft Terms of Reference for the Annexation Negotiating Committee. A number of revisions were requested:
   - Replace all references to "panel" with "committee"
   - Section 5.3: Meetings are to be chaired by Mayor Ruth Goodwin, or, in her absence, Reeve Larry Spilak.
   - Section 7, add "Calgary Metropolitan Region Growth Plan" as a project influence.

7. **Notice of Intent to Annex**

R. Ross outlined the following:

- Black Diamond Town Council agreed to amend the Notice of Intent to Annex by removing the NE5-20-2-W5 from the annexation proposal;
- Black Diamond's recently adopted Economic Development Plan has identified a 105 acre deficiency in Industrial/Commercial development if the Town is to achieve tax ratio of 85% residential/ 15% non-residential;
- The SE16-20-2-W5 has been identified as the most advantageous location for a business park, and the Town hopes to annex this quarter in the short term, following review of the IDP;
- The remaining 2 quarters in the annexation area will satisfy residential land requirements for 30+ years.

Reeve Spilak asked if the IDP can be amended concurrently with an annexation application

- R. Ross noted that since processes for annexation and IDP amendment are both political processes involving consultation with agencies, landowners, and general public, it may be possible to run the processes concurrently;
- H. Hemmingway noted that MD administration has not supported amending IDP concurrently with annexation in the past.

Deputy Reeve Miller advised that the owner of SW9-20-2-W5 is opposed to being annexed into the Town

- It was suggested that the Mayor, Deputy Reeve, and administration from both municipalities meet with the landowner to discuss concerns
- It was noted that the MGB is very considerate of landowner wishes when determining annexation proposals.

D. Granson noted that annexation should address and clean up municipal boundary discrepancies along the Sheep River and West boundary of Black Diamond, specifically lands owned by the Town of Black Diamond.

R. Ross noted that the Town would be engaging in direct meetings with affected landowners in the coming weeks.

8. **Next Meeting**

The following meetings were agreed upon:

- March 29, 1pm, Black Diamond Town Office
- April 26, 1pm, MD Foothills Office
- May 24, 1pm, Black Diamond Town Office

9. **Adjournment**

The meeting adjourned at 5:01 pm.

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, March 29, 2018 at 1:00 P.M.
Town of Black Diamond Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
CAO, Sharlene Brown
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart

Municipal District of Foothills
Reeve Larry Spilak
Deputy Reeve Delilah Miller
Councilor, Jason Parker
Director of Planning, Heather Hemingway
Planning and Development Officer, Drew Granson

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1. **Call to Order**

   The meeting was called to order at 1:03 P.M. by Mayor Goodwin.

2. **Adoption of Agenda**

   Mayor Goodwin moved to accept the Agenda for the March 29th, 2018, Annexation Negotiation Committee Meeting.

3. **Adoption of February 22, 2018, Minutes**

   Deputy Reeve Miller moved to accept the Meeting Notes for the February 22nd, 2018, Annexation Negotiation Committee Meeting.

4. **ACP Grant Approval for Facilitation/Mediation Services**

   The Committee acknowledged the notice for grant approval from Municipal Affairs, being a one-third cost sharing partnership between the province and the two municipalities.

5. **Annexation Negotiation Committee Terms of Reference – Revised Draft**

   The Committee acknowledged the noted changes to the Terms of Reference.

   Councilor Marconi moved to direct Town and Municipal staff to provide the Terms of Reference to respective Councils for adoption.

6. **Landowner Consultation Update**

   R. Ross provided a review of consultation with Landowners who have been contacted by the Town since the February 22nd Committee meeting, these lands included properties within NE 16, SE 16, NE 9, SE 9, and SW 9-20-2 W5. In general, responses were positive and some landowners expressed desire for additional lands to be included within the proposed annexation.

   Councillor Stickel provided clarification that NE 5-20-2 W5M was originally contemplated within the initial Notice of Intent to Annex; however, further investigation regarding servicing costs for Town infrastructure would not be practical due to distance from existing services. In addition, Town staff noted that lands within Section 9 and the east half of Section 16 would provide more efficient and beneficial alignment for future servicing and are required to complete the service loop from existing infrastructure.

Deputy Reeve Miller noted that landowner consultation should not give the impression that additional lands would be annexed, additional lands can be considered through the negotiation process, but don't want to make landowners believe it is a sure thing as there are many factors that must be considered when determining lands to be annexed.

Mayor Goodwin noted that the Town will provide the MD notice and updates regarding landowners' interest and ensure landowners are advised of the process, benefits and implications of being annexed, and understand that they can request that their land be considered within the annexation, but that this does not guarantee inclusion.

H. Hemingway noted that a servicing feasibility study would be beneficial in justifying exclusion of NE 5 in exchange for including SE 16 within the lands considered for annexation.

7. **Town of Black Diamond Public Consultation Strategy**

On March 5, 2018, the Municipal Government Board (MGB) requested details from the Town regarding the Town's proposal for consultation with landowners, stakeholders, and the general public in regards to the Town's annexation proposal. A timeline for public engagement was provided for review prior to responding to the MGB.

R. Ross provided an overview of the draft Landowner & Public Consultation Strategy noting that once the Consultation Strategy has been finalized, this will be provided to the MGB.

Preliminary documents including a Landowner Letter, Annexation FAQs, and Brochure and Map are being drafted and will be presented to the Committee, as well an updated timeline for including information and links on the Town website would be initiated in May following the next meeting.

Council members agreed that a joint open house with the Town and MD both present would be the preferential to hosting separate open houses.

As a final step in the public consultation strategy, it is necessary for both Councils to hold Public Hearings prior to making motion on the annexation.

Town Staff provided a draft of Frequently Ask Questions (FAQs) for the purpose of providing additional information to affected landowners. No comments regarding the material were made at this time and Committee Members agreed that the FAQs could be sent out as a joint document from both municipalities.

Municipal Staff requested that an editable word document be provided to allow revisions and additions; an updated draft of the joint FAQs will be presented to the Committee at a later date.

8. **Discussion Item: Interpretation of Annexation Policies in the IDP**

R. Ross provided a review of annexation policies within the current Intermunicipal Development Plan (IDP).

Committee Members discussed the consideration of annexing lands not previously identified as Future Urban Growth within the current IDP. Committee Members determined that appropriate justification is necessary for any lands proposed in the annexation, regardless whether they have been previously identified for urban growth or not.

9. **Joint Press Release**

The committee discussed the proposed timeline for completing the first press release, noting that this may need to be delayed until proposed lands have been clearly identified. This press release can be as simple as identifying that the Town and Municipality are discussing annexation and a public meeting will be held in the future.

10. **Next Meeting**

The following meetings were agreed upon:

- April 26, 1:00pm, MD Foothills Office
- May 24, 1:00pm, Black Diamond Town Office

11. **Adjournment**

Mayor Goodwin moved to adjourn the March 29th, 2018, meeting at 2:32 pm.

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, April 28, 2018 at 1:00 P.M.
MD of Foothills, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart
Municipal District of Foothills
Reeve Larry Spilak
Deputy Reeve Delilah Miller
Councilor, Jason Parker
Director of Planning, Heather Hemingway
Planning and Development Officer, Drew Granson

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1. **Call to Order**

   The meeting was called to order at 1:11 P.M. by Reeve Larry Spilak.

2. **Adoption of Agenda**

   Deputy Mayor Marconi moved to accept the amended Agenda for the April 28, 2018, Annexation Negotiation Committee Meeting adding Agenda Item 5b Annexation Servicing Study

3. **Adoption of March 29, 2018, Minutes**

   Mayor Goodwin moved to accept the amended Meeting Notes for the March 29, 2018, Annexation Negotiation Committee Meeting to include the beaver ponds in the lands to be annexed (portion of the NE 8-20-2-5 linc #0021220477)

4. **Annexation Negotiation Committee Terms of Reference**

   R.Ross, advised that Black Diamond Council had requested an amendment to the Terms of Reference as follows:

   The Terms of Reference were adopted by the Black Diamond Town Council at the April 24 meeting with the following amendments: instead of naming the individuals appointed to the Committee, the Terms of Reference states that the Committee will be comprised of the Mayor/Reeve and 2 Councilors from each municipality.

   Deputy Reeve Miller referred to Article 5.4 Confidentiality. Rod Ross provided clarification that the Committee meetings are in held in public and In Camera sessions are held in confidence.

   Deputy Mayor Marconi moved that the Committee acknowledged the noted changes to the Terms of Reference.

5. **Black Diamond Annexation Proposal**

   R. Ross provided a slide show presentation regarding the annexation proposal.

   Deputy Reeve Miller requested clarity on the annexation area to satisfy Black Diamond's immediate growth needs. Mayor Goodwin responded advising of the changes to provide a

contiguous border with the Town of Turner Valley should amalgamation of the two communities occur.

Deputy Reeve Miller questioned the accuracy of the population growth rates provided in the presentation from the current population of 2700 persons to 9500 by 2075 as indicated in the growth chart.

H. Hemingway asked for a calculation of the total number of acres and the number of developable acres to enter into the discussion.

H. Hemingway asked for an explanation for including the golf course lands and Mayor Goodwin responded advising of the Inter-collaborative Framework (ICF) requirements and that an extension may be required should amalgamation of Black Diamond and Turner Valley proceed.

5.b. **Town of Black Diamond Annexation Servicing Study**

R. Ross advised that the Town's will have a servicing study prepared for annexation area that will provide a more detailed assessment of the new and/or upgraded infrastructure necessary to provide transportation, water, sewer, and stormwater services. The study will focus specifically on the SE 16-20-2-W5, NE 9-20-2-W5, SW 9-20-2-W5. The study will also provide a high level assessment of the issues involved in servicing additional quarter sections in the vicinity of the Town and annexation area. The study is expected to take 2 months for completion.

Reeve Spilak asked if the conclusions of the servicing study could result in Black Diamond changing the annexation proposal. R. Ross replied that it could. Reeve Spilak observed that he would prefer greater clarity from Black Diamond on the lands proposed for annexation prior to presenting the annexation to MD Foothills Council.

6. **Town of Black Diamond Public Consultation Strategy**

R. Ross advised that public consultation has not commenced and that existing consultation has only been one-on-one with affected landowners.

Mayor Goodwin advised that the Town would continue conversations with landowners, including the Turner Valley Golf and Country Club.

H. Hemingway proposed joint open house once the one-on-one conversations with affected parties has concluded.

7. **Joint Press Release**

The committee agreed that a joint press release will not be required until consultation with affected parties has been concluded.

8. **Next Meeting**

The following meeting was agreed upon:

- May 24, 1:00pm, Black Diamond Town Office

9. **Adjournment**

Deputy Mayor Marconi moved to adjourn the April 28, 2018, meeting at 2:11 pm.

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, May 24, 2018 at 1:00 P.M.
Town of Black Diamond, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart
Municipal District of Foothills
Reeve Larry Spilak
Deputy Reeve Delilah Miller
Councilor, Jason Parker
Municipal Manager, Harry Riva Cambrin
Planning and Development Officer, Drew Granson

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1. **Call to Order**

   The meeting was called to order at 1:04 P.M. by Mayor Goodwin.

2. **Adoption of Agenda**

   Deputy Reeve Miller moved to accept the Agenda for the May 24, 2018, Annexation Negotiation Committee Meeting.

3. **Adoption of April 28, 2018, Minutes**

   Deputy Mayor Marconi moved to accept the amended Meeting Notes for the April 28, 2018, Annexation Negotiation Committee Meeting to include clarification regarding the population projections within the *Black Diamond Annexation: Summary of Annexation Proposal for Discussion*, noting that projected rate of population grown is compounded on each consecutive year's growth.

4. **Black Diamond Annexation Servicing Study**

   Mr. Rod Ross, noted that Municipal Government Board requires that a municipality's annexation application include details regarding servicing of water, wastewater, stormwater and transportation infrastructure for the proposed lands. Based on a 60 year growth area the town is undertaking a high level servicing study expected to take two months to complete and will present to the Committee once complete.

   Mayor Goodwin clarified that the study will include the SE quarter of section 9 as it is the same landowner as the NE quarter, and asked the MD if this was appropriate to include these lands in the study.

   Deputy Reeve Miller noted that it is common for landowners to request to be annexed and the Town is not responsible to ensure all of one landowner's property to be included. Ultimately, the Town needs to justify the need for proposed lands and the cost effectiveness of including specific lands.

Clarification was requested from MD Committee Members regarding the densities used for the projected population growth and how much land was determined to be required for the low and high growth projections.

Mr. Rod Ross clarified that at the low projected growth rate, 2.2 quarter sections would be required for 40 years of growth, and 3.1 quarter sections would be required for the high projected growth. In addition, a density of 5.5 units per acre is the target for the first 10 years with goal to increase to 6.5 units per acre beyond 10 years.

MD Committee Members expressed concern that the growth projections don't seem to justify the proposed amount of land even when considering the high projected growth rate.

Mr. Harry Riva Cambrin noted that while it is desirable for the Town to obtain 40 to 50 years of land to secure for future growth, it is not entirely necessary to get all the land under one annexation. It can be more beneficial to obtain land for a shorter timeline then come back if more is required. This makes it easier to warrant servicing for the annexed lands, specifically water capacity and licensing to accommodate the growth.

Committee members determined that any properties that are being considered should be included within the high level servicing study. By including them it gives the Town a comprehensive understanding of the feasibility and financial requirements of servicing those lands and may help to eliminate properties that will be difficult or uneconomical to service.

5. **Landowner Consultation Updates**

Reeve Spilak made motion to go into Camera – Motion was passed at 1:35pm

Councillor Parker made motion to go out of Camera – Motion was passed at 2:04pm

6. **Public Consultation Program and Materials**

Mr. Rod Ross provided an overview of what actions have been commenced and the next steps. Notice of intent has been issued and The Town has been meeting with landowners in the annexation area. To date no information concerning the annexation proposal has been made available to the general public

Councillor Parker asked if the Town is awaiting the servicing study prior to identifying lands.

Mayor Goodwin noted that the goal is to complete the servicing study before the Town identifies specific lands proposed to be annexed and whether this will include 3 or 4 quarter sections. The notice of intent illustrates proposed lands, but these may change subject to the service study and negotiations.

The Committee acknowledged the current draft of the Frequently Asked Questions intended for public information and directed Municipal Staff to review and provide comments and additions for review by the Committee.

7. **Next Meeting**

The following meeting was agreed upon:

- June 28th, 1:00pm, at the MD of Foothills Joint Council Chambers in High River.

Note: Due to a scheduling conflict, the June 28th meeting was later relocated to be hosted by the Town of Black Diamond at the Black Diamond Council Chambers.

8. **Adjournment**

Mayor Goodwin moved to adjourn the May 24th, 2018, meeting at 2:27 pm.

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, June 28, 2018 at 1:00 P.M.
Town of Black Diamond, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
Planning Manager, Rod Ross

Municipal District of Foothills
Deputy Reeve Delilah Miller
Councilor, Jason Parker
Director of Planning, Heather Hemingway
Planning and Development Officer, Drew Granson

Regrets
CAO, Sharlene Brown
Planning and Development Officer, Denice Stewart

Regrets
Reeve Larry Spilak

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1. **Call to Order**

   The meeting was called to order at 1:06 P.M. by Mayor Goodwin.

2. **Adoption of Agenda**

   Mayor Goodwin moved to accept the Agenda for the June 28, 2018, Annexation Negotiation Committee Meeting.

3. **Adoption of May 24, 2018, Minutes**

   Deputy Mayor Marconi moved to accept the Meeting Notes for the May 24, 2018, Annexation Negotiation Committee Meeting.

4. **Annexation Negotiating Committee Terms of Reference – Adopted by MD Council**

   The Committee acknowledged the adoption of the Terms of Reference by the MD Council.

5. **Landowner Consultation Updates**

   Mayor Goodwin provided an overview of ongoing public consultation with directly affected landowners. Noting a few questions from landowners regarding the Town's Bylaws and how they would affect their property if annexed; specifically noting the Dog Bylaw, whereby dogs would require licensing within the town.

   Town staff and Mayor Goodwin intended to meet with additional landowners not being included within the proposed annexation.

   Other consultations have been generally positive with questions regarding process, timelines, and their rights as landowners.

6. **Public Consultation Program and FAQ Documents & Map**

Mr. Rod Ross provided an overview of what actions have been commenced and the next steps, noting that the Town is awaiting the servicing study to be completed prior to going public with specific lands.

The Committee Members were generally in agreement that the lands currently being proposed are appropriate providing that the servicing study illustrates that he lands can be serviced efficiently.

Members discussed how each of these forms of engagement will be acknowledged prior to announcing to the public.

Number 2 items within the Consultation Strategy, including Letters to Landowners, FAQs brochure and map, Annexation Website, Online Opinion Survey, and Joint Press Release, should be drafted for review at the September meeting.

The committee will aim to schedule the Joint Open House in mid-October.

An additional row should be added to the Consultation Strategy to include that each Council will hold a public hearing prior to making motion on the annexation agreement.

Committee Members reviewed the draft FAQs noting a few comments and changes to be implemented by staff and reviewed at the September meeting.

7. **Next Meeting**

The following meeting was agreed upon:

- September 6, 2018, at 10:00am, at the Town of Black Diamond, Council Chambers.
- *Tentative – November 1, 2018, at 9:30am, at Town of Black Diamond Council Chambers.*

8. **Adjournment**

Mayor Goodwin moved to adjourn the June 28, 2018, meeting at 2:57 pm.

DRAFT

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, September 6, 2018 at 10:00 A.M.
Town of Black Diamond, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart

Municipal District of Foothills
Deputy Reeve Delilah Miller
Councilor, Jason Parker
Municipal Manager, Harry Riva Cambrin
Planning and Development Officer, Drew Granson

Gallery

David Hawking
Diana Hawking

Regrets

CAO, Sharlene Brown
Reeve Larry Spilak
Director of Planning, Heather Hemingway

1. **Call to Order**

The meeting was called to order at 10:10 A.M. by Mayor Ruth Goodwin.

Mayor Goodwin acknowledged and welcomed individuals in the gallery for observation and completed a review of emergency evacuation procedures and building facilities for the Black Diamond Town Office and Council Chambers. Committee Members, planning staff, and public attendees greeted and introduced themselves.

2. **Adoption of Agenda**

Committee members agreed to move items #4 and #7 to the end of the meeting for convenience as Closed Meeting items.

Councillor Jason Parker moved to accept the Agenda for the September 6th, 2018, Annexation Negotiation Committee Meeting.

3. **Adoption of June 28, 2018, Minutes**

Deputy Reeve Delilah Miller moved to accept the Meeting Notes for the June 28, 2018, Annexation Negotiation Committee Meeting.

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5. **Public Consultation Program**

Mr. Rod Ross provided a summary and update of the Public Consultation Strategy, including a review of two notification and invitations letters for the October 15th Open House; for landowners within the proposed annexation area and for landowners within the IDP area but outside of the proposed annexed lands. Committee members discussed the letters and acknowledged them as satisfactory as drafted.

Committee Members reviewed the Draft FAQs noting minor textual corrections and suggest wording to provide clarification that connecting to town utilities would be considered as a "triggering event" whereby landowners would no longer be taxed at the Foothills rate.

Mr. Ross provided a review of the Black Diamond Annexation webpage, noting that it is still under development with the intent that it will be ready to launch following the open house.

Mayor Goodwin recommended that a page be added to include an annexation process flow chart and "we are here" update.

Committee Members reviewed the drafted Joint Press Release, noting that when the Town and MD are reference together, the Town should be listed first; ie. "Town of Black Diamond and MD of Foothills". Planning Staff to include link to the Black Diamond Website and contact information for Rod Ross and Drew Granson within the press release.

Committee Members confirmed the Open House date of October 15th, 2018, from 4pm to 8pm, as noted within the drafted Joint Press Release.

Mr. Ross reviewed the Opinion Survey questions. Committee members discussed minor changes in wording to ensure questions were clear and concise.

Committee Members discussed the release date of the Opinion Survey and determined that the survey should be open from October 15th through October 22nd and provide the survey at the open house for those that wish to fill in manually. As well, members felt it would be beneficial to provide an option for landowners to include contact information if they wanted follow up from the Town.

Councillor Parker asked whether further review or changes to the proposed annexation lands would be necessary following the open house. If any amendments were needed, could they be addressed through the public hearing with each Council?

Mr. Harry Riva Cambrin noted that this would be dependent on the comments received at the open house. If general support is received then could proceed to a public hearing, but if feedback necessitates significant changes then a second open house may be required.

Committee Members discussed potential timeline for drafting annexation agreement following the open house and proposed that at the November 1st, 2018, meeting, members could discuss open house feedback to determine if a second open house is necessary or to proceed with to a public hearings. Committee members set a goal to hold respective Public Hearings in December if only one open house is needed, or early January if a second open house is required.

Recess

Mayor Goodwin moved to break for a 15 minute recess at 11:40am.

Reconvene

Mayor Goodwin moved to reconvene the Annexation Negotiation meeting at 12:02pm.

8. **Taxation and Assessment of Annexed Properties**

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Mr. Ross noted two primary concerns for the landowners subject to annexation, being property assessment and taxation. Farm buildings within rural municipalities are typically exempt from assessment and subsequently taxation; however, the Town does not have such exceptions for specific buildings which may result in significant increase of assessed values. In addition, the Town has higher tax rates than the MD.

The potential increase in taxation often results in landowners voicing opposition to annexation. The committee members were advised to discuss timeline whereby annexed lands would be assessed and taxed as though they were still within the MD, noting that the MGB states that special tax provisions should generally be no longer than 15 years, unless under special circumstances; however, recent annexations have considered as long as 50 years. This tax provision would only be applied on a particular property until such time that the landowner undertook development, referred to as a "triggering event". Such events may include a development permit, redesignation, subdivision, or connecting to Town services.

Mr. Ross noted that for each year that the Town assesses and taxes newly annexed lands at the MD rate, the Town would forgo approximately $10,000 in tax revenue.

Committee Members discussed timelines for granting a tax exception, no timeline was determined.

Councillor Brian Marconi moved to include agenda item #6 as a Closed Meeting Item.

Councillor Parker moved to go into a Closed Meeting at 12:18 pm.

4. **Landowner Consultation Updates**

   Closed Meeting Item

6. **Boundary Roads**

   Closed Meeting Item

7. **Compensation for Annexed Properties & Infrastructure**

   Closed Meeting Item

Councillor Parker moved to go out of Closed Meeting at 2:07 pm

9. **Next Meeting**

   The following meeting was agreed upon:

   - November 1, 2018, at 9:30 am, at the Town of Black Diamond Council Chambers.

10. **Adjournment**

    Mayor Goodwin moved to adjourn the September 6th, 2018, meeting at 2:10 pm.

DRAFT

TOWN OF BLACK DIAMOND/ M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Thursday, November 1, 2018 at 10:00 A.M.
Town of Black Diamond, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Deputy Mayor, Brian Marconi
Councilor, Jackie Stickel
CAO, Sharlene Brown
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart

Municipal District of Foothills
Deputy Reeve Delilah Miller
Planning and Development Officer, Drew Granson
Director of Planning, Heather Hemingway

Gallery

David Hocking
Diana Hocking
Leo Kylo

Regrets

Reeve Larry Spilak
Councilor, Jason Parker
Municipal Manager, Harry Riva Cambrin

DRAFT

1. **Call to Order**

   The meeting was called to order at 9:40 A.M. by Deputy Reeve, Delilah Miller.

2. **Adoption of Agenda**

   Mayor Ruth Goodwin moved to amend agenda to add Eastwood as item 7(d), Landowner Consultation updates and to correct meeting start time to 9:30 A.M.

3. **Adoption of June 28, 2018, Minutes**

   Deputy Mayor Brian Marconi moved to accept the Meeting Notes for the September 6, 2018, Annexation Negotiation Committee Meeting.

4. **A) Black Diamond Annexation Lands Servicing Review**

Mr. Rod Ross provided a summary of the Annexation Servicing Study describing the current capacity for sewage treatment and collection, water supply, treatment and distribution as well as storm water management as provided in his Report.

Foothills Director of Planning, Heather Hemingway, inquired about roads and including the Foothills road along the west ½ of 10-20-2-W5 and a portion of the SW of 9-20-2W5 as figure 3 of the Annexation Lands Servicing Review, prepared by Urban Systems shows a portion of a connection route to be located within the SW of 9. Ms. Hemingway inquired if the Town had contemplated the ability to provide access through the NE corner of section 9-20-2-W5 to provide connection between Area 3 and 2 as shown on Figure 3 of the Annexation Lands Servicing Review.

B) Annexation Servicing Study – Expanded Scope

Mr. Rod Ross provided a summary advising the Committee that he would be requesting that Black Diamond Council reallocate funds to facilitate the preparation of a further Annexation Servicing Study to determine viability of including the NE 5-20-2-5 in the annexation proposal.

Foothills Director of Planning, Heather Hemingway, inquired if Black Diamond intended to expand the servicing study to include SE of 8-20-2-5 being the golf course driving range lands. CAO, Sharlene Brown, advised that there are several development restraints, including a gas line, force main and the topography of these lands, and that the servicing study would not be expanded to include these lands.

Councilor Jackie Stickel moved that the Committee acknowledge agenda items 4A and 4B as information.

5. **Public Consultation Program – Update**

October 15, 2018 Public Open House - Mr. Rod Ross provided a summary and update of the Public Consultation Strategy which has occurred since the September 6, 2018 meeting of the committee, including a review of the October 15, 2018 Open House. Mr. Ross advised on the attendance, information boards presented as well as a summary of comments and concerns verbalized during the Open House.

Online Public Survey Results - Mr. Ross reported on the online survey results, comments and concerns received through the survey as provided in his written report.

Newt Steps – Mr. Ross advised of the next steps as committed in the annexation process. Mr. Ross advised that in the event that the committee agrees to include additional lands, as requested by area landowners, that an additional Public Open House would be required.

Deputy Mayor, Delilah Miller, advised that it is important to ensure that there is an opportunity to consider a change the annexation proposal. Director of Planning, Heather Hemingway, advised that following a subsequent Open Public House, if the two Councils agree to the proposed annexation area and sign an annexation agreement, the Intermunicipal Negotiating Committee would be in a position to present and un-contested annexation to the Municipal Governance Board.

Mr. Ross advised that, consistent with the Terms of Reference, a Joint Press Release should be contemplated.

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Deputy Mayor, Brian Marconi, moved that the committee acknowledge agenda items 5 (a) to (c) as information.

6. **Correspondence**

The Committee was presented with correspondence items 6(a) thru (c). There was no further questions or conversation regarding the correspondence.

Mayor, Ruth Goodwin, moved that the committee acknowledge agenda items 6 (a) to (c) as information.

Recess

Deputy Mayor, Brian Marconi, moved to break for a 5 minute recess at 10:27a.m.

Reconvene

Deputy Reeve, Delilah Miller reconvened the Annexation Negotiation meeting at 10:37a.m.

Closed Meeting

Deputy Mayor, Brian Marconi, moved to proceed as a Closed Meeting at 10:37 a.m. to discuss landowner consultation, compensation and taxation of annexed properties.

7. **Landowner Consultation Updates**
   Closed Meeting Item

8. **Compensation for Annexed Properties & Infrastructure**
   Closed Meeting Item

9. **Taxation and Assessment of Annexed Properties**
   Closed Meeting Item

Councilor Brian Marconi moved to revert to Open Public Meeting at 12:10p.m.

10. **Next Meeting**

The following meeting was agreed upon:

- January 8, 2019, at 9:30 am, at the Town of Black Diamond Council Chambers.

11. **Adjournment**

Councilor Brian Marconi moved to adjourn the September 6th, 2018, meeting at 2:15 pm.

DRAFT

TOWN OF BLACK DIAMOND / M.D. OF FOOTHILLS
ANNEXATION NEGOTIATING COMMITTEE MEETING

Tuesday, February 19th, 2019 at 9:30 A.M.
Town of Black Diamond, Council Chambers

MEETING PARTICIPANTS

Town Of Black Diamond
Mayor, Ruth Goodwin
Councilor, Jackie Stickel
CAO, Sharlene Brown
Planning Manager, Rod Ross
Planning and Development Officer, Denice Stewart

Municipal District of Foothills
Reeve, Larry Spilak
Deputy Reeve, Delilah Miller (Chair)
Councilor, Jason Parker
Municipal Manager, Harry Riva Cambrin
Supervisor of Infrastructure, Jeff Edgington
Planning and Development Officer, Drew Granson

Gallery
David Hawking
Diana Hawking

Regrets
Deputy Mayor, Brian Marconi
Director of Planning, Heather Hemingway

Deleted: Section Break (Continuous)

1. **Call to Order**

   The meeting was called to order at 9:30 am by Deputy Reeve Delilah Miller.

   Deputy Reeve Delilah Miller acknowledged and greeted individuals in the gallery for observation.

2. **Adoption of Agenda**

   Councilor Jackie Stickel moved to accept the Agenda for the February 19th, 2019, Annexation Negotiation Committee Meeting.

3. **Adoption of November 1st, 2018, Minutes**

   Mayor Ruth Goodwin moved to accept the Meeting Notes for the November 1st, 2018, Annexation Negotiation Committee Meeting.

4. **Black Diamond Annexation Lands Servicing Review**

   Expanded Scope

   Rod Ross provided a review of the updated servicing study which was revised to include the NE 05-20-02 W5M and addressed two scenarios; including NE of Section 5 along with the lands previously

assessed in the initial study, and a second scenario including Section 5 but excluding SW 09-20-02 W5M.

The study illustrated that Section 5 is serviceable but would require extension to the existing water and sewer mains so would likely be developable after other lands have been developed.

Mr. Ross expanded to explain the expected alignment and capacity for future water, sewer, and growth impact on existing and future road networks.

Deputy Reeve Miller questioned where the next phase of the water treatment lagoon would expand.

Mr. Ross noted that the next cell is designed to be directly north of the existing facility.

Councilor Jason Parker moved to accept the report for information.

Councilor Jackie Stickel moved to reschedule agenda item #5 to after agenda item #7.

6. **Taxation, Assessment, and Triggering Events**

Mr. Ross noted two major concerns received from landowners subject to the proposed annexation, being the change in assessment and taxation of properties. The Town is suggesting to honor Foothills' 6% tax discount for early payment of property taxes on all annexed lands, as well to continue assessing annexed properties on the same basis as if they remained in Foothills. These two items are proposed for 25 years or until a landowner carries out a triggering event.

Triggering events are proposed to include Subdivision, Redesignation, or connection to the Black Diamond water and/or sewer services.

Mr. Harry Riva Cambrin asked whether the Town has a franchise fee for utility companies, noting that Foothills does not. The Town of High River is considering a one year grace period from paying utility franchise fees, for landowners being annexed.

Councilor Stickel moved to accept the discussion for information.

7. **Landowner Consultation Updates**

Mr. Ross reviewed public consultation which occurred in September and October of 2018. Letters and Frequently Asked Questions were mailed to lands within the Intermunicipal Development Plan Areas, and lands contemplated for annexation, a joint press release was issued, a Joint Open House was advertised and held, and the websites of each municipality have been updated to provide information regarding the proposed annexation.

The Committee was of the opinion that the annexation area has changed significantly since open; therefore, feel it is appropriate to issue an updated joint press release, mail updated letters to affected landowners, and host a second open house to receive feedback on the new lands proposed for annexation.

The Committee directed planning staff to prepare and advertised for an Open House on April 2nd, 2019, with the goal that an Annexation Agreement could be drafted and shortly thereafter.

Councilor Parker moved to accept the discussion for information.

Mayor Goodwin moved to add an item 'd' for further discussion of Public Consultation within the Private Meeting.

Mayor Goodwin moved to go into Private Meeting.

5. **Private Meeting**

Closed Meeting item.

Councilor Parker moved to go out of Private Meeting.

Councilor Stickel moved to direct respective Councils to acknowledge the new lands proposed for annexation.

8. **Next Meeting**

The Committee tentatively scheduled the next meeting for:

- April 9th, 2019, at 9:30 am to 12:00 pm, at the Town of Black Diamond Council Chambers.

9. **Adjournment**

Deputy Reeve Delilah Miller moved to adjourn the February 19th, 2019, meeting at 11:09 pm.

DRAFT

Appendix O
Notice of Intent to Annex

October 2, 2017

Municipal Government Board
15th Floor, Commerce Place
10155 – 102 Street
Edmonton, Alberta
T5J 4L4

MD of Foothills 31
Heather Hemingway
Director of Planning
Box 5605
High River, Alberta
T1V 1M7

Dear Sir/Madam;

RE: Formal Initiation of the Town of Black Diamond Annexation Application

In accordance with Section 116 of the Municipal Government Act and pursuant to a motion of the Town of Black Diamond Council dated September 20, 2017, the Town of Black Diamond is giving written notice to the Municipal District of Foothills and the Municipal Government Board of the initiation of the proposed annexation of lands into the Town of Black Diamond.

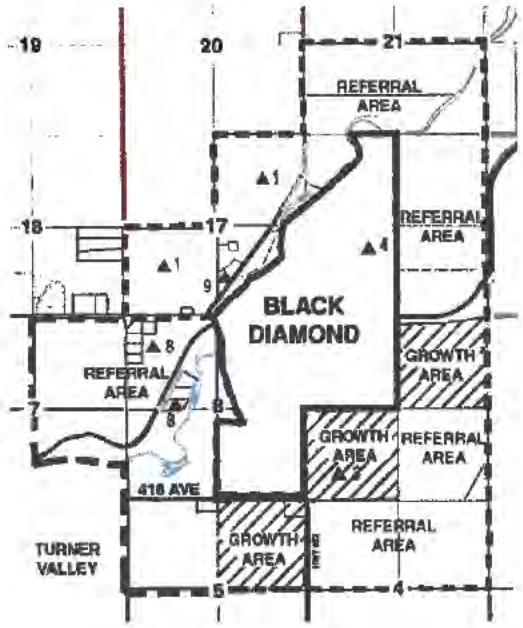
Within the Town's current boundaries there are approximately 65 lots available for residential development and at the current rate of development it is estimated that the inventory will be exhausted within 3 years. There is a 29 acre parcel of undeveloped lands within the NW of 9-20-2-W5M forming part of the Kaiser Area Structure Plan however cost of servicing has been an economic barrier for developers. The annexation of lands as proposed with facilitate the efficient and cost effective growth of the community and is in alignment with statutory plans, alternate transportation routes and satisfy the Town's growth projections.

The lands intended for annexation are those as listed in the table below and includes the three quarter sections that are identified in the MD of Foothills, Town of Turner Valley, Town of Black Diamond Intermunicipal Development Plan, adopted by Town of Black Diamond Council as Bylaw 02-05 on June 5, 2002. Excerpt from the Intermunicipal Development Plan (Black Diamond Urban Future Growth) has been inserted below.

Legal Description					
Quarter	Plan	Title #	Ha	Ac	Owner
Ptn NE 5-20-2-W5M		001110623003	60.749	150.23	[redacted]
Ptn NE 5-20-2-W5M	LK465, OT	121275486004	2.323	5.74	
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	
NE 9-20-2-W5M		101236396001	61.04	150.98	
Total			187.658	464.10	

The annexation proposes to include approximately 464 acres of land encompassing three quarter sections which are contiguous to the shared boundary with the Town of Black Diamond. The proposed annexation lands do not contain established residential subdivisions. There is one residence and cultivation farmland located on the NE of 5 and another four residences on the SW of 9 with the balance lands under cultivation. The NE of 9-20-2-5 is a bare quarter under cultivation. None of the lands contemplated for annexation are within the designated Flood Risk Area.

.../2



The strategy proposed for the annexation procedure is to facilitate meetings of an Annexation Committee consisting of Council members of the Town of Black Diamond and the MD of Foothills with respective staff assistance. A concurrent referral circulation and public consultation process will be undertaken in order to determine what concerns or objections may exist with respect to the annexation proposal.

In conclusion, we look forward to working collaboratively with all parties to proceed with the annexation.

Sincerely

Denice Stewart
PLANNING & DEVELOPMENT OFFICER
Town of Black Diamond

Attachments: Copy of Council Resolution

REGULAR COUNCIL
September 20, 2017

Core Strategy: Provide Safe and Effective Service
Annexation - Letter of Intent

Mayor Glen Fagan requested a recorded vote on this matter.

Moved by Deputy Mayor Mike Ross that Council agree to send a letter of intent to the Municipal government Board and the MD of Foothills for the annexation of lands as identified in the Intermunicipal Development Plan (2002). **Res. 2017-411**

IN FAVOUR:
Mayor Glen Fagan
Deputy Mayor Mike Ross
Councillor Jim Deacon
Councillor Ruth Goodwin
Councillor Jackie Stickel
Councillor Judy Thomson
Councillor Brian Marconi

AGAINST:

UNANIMOUSLY CARRIED

March 22, 2018

Rick Duncan, Case Manager
Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

Dear Sir:

RE: Proposed Annexation of Territory from the Municipal District of Foothills No. 31
Your File: AN17/BLAC/T-V01

In response to your letter dated March 5, 2018, requesting further information regarding the Town's proposal for consulting with the public and identifying how affected landowners will be kept informed of the progress of negotiations between the municipalities, as required by Section 116(2)(c) of the Municipal Government Act, I would like to provide the following summary of the Town's proposal for public consultation:

1. Written notification of the Town's annexation proposal to the following recipients, by way of copy of this letter and copy of the Town's Notice of Intent to Annex dated October 2, 2017:

    - Municipal District of Foothills No. 31
    - Town of Turner Valley
    - Alberta Health Services, Calgary Zone
    - Alberta Transportation, South Region
    - Foothills School Division No. 31
    - Christ the Redeemer Catholic Schools
    - Sheep River Regional Utility Corporation
    - Westend Regional Sewage Service Commission
    - Fortis Alberta Inc.
    - ATCO Pipelines Head Office
    - ATCO Gas

2. Creation of an annexation webpage on the Town of Black Diamond website, and ongoing updates as negotiations proceed; use of social media to inform the public, linking to the annexation webpage; online opinion survey of the general public on issues pertaining to annexation;

3. Information mailed to directly affected landowners, to landowners within the 'Black Diamond referral area' as defined in the Intermunicipal Development Plan, and to landowners adjacent to lands proposed for annexation but outside of the IDP referral area;

4. Information brochures mailed to residents as part of bi-monthly utility bill mailing;

5. Joint Press Releases prepared in conjunction with the MD of Foothills, to be issued quarterly;

6. Meeting(s) with individual landowners as required or requested;

7. A minimum of 1 Public Open House.

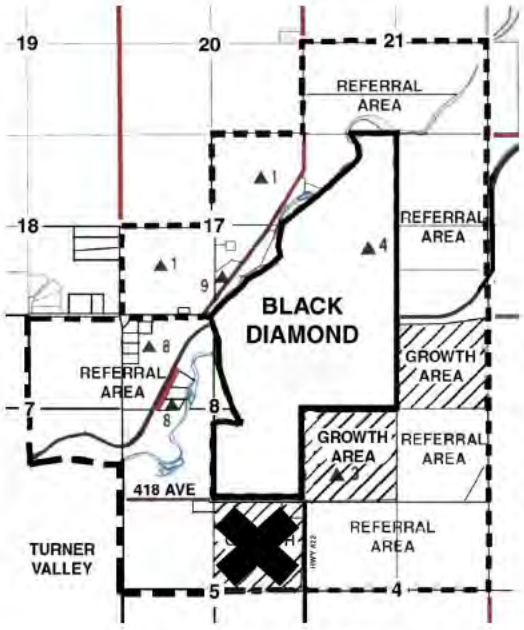
Furthermore, I would like to inform you that the Town of Black Diamond Council passed the following motion at it's February 14, 2018 meeting:

Res. 2018-89 *Moved by Councillor Sharon Hart that Council agree to amend the Intent to Annex by removing the quarter known as NE-5-20-2-W5M*

UNANIMOUSLY CARRIED

With the removal of the above-mentioned quarter section, the remaining lands proposed for annexation include the following:

Legal Description					
Quarter	**Plan**	**Title #**	**Ha**	**Ac**	**Owner**
~~Ptn NE 5-20-2-W5M~~		~~001110623003~~	~~60.749~~	~~150.23~~	[redacted]
~~Ptn NE 5-20-2-W5M~~	~~LK465, OT~~	~~121275486004~~	~~2.323~~	~~5.74~~	
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	
NE 9-20-2-W5M		101236396001	61.04	150.98	
Total			**124.586**	**308.13**	



The rationale for annexation remains as outlined in the October 2, 2017 Notice of Intent to Annex. The Town looks forward to working collaboratively with all parties to proceed with the annexation.

Sincerely,

Sharlene Brown
Chief Administrative Officer
Town of Black Diamond

Attachments: October 2, 2017 Notice of Intent to Annex
cc:

Shayne Anderson, Minister of Municipal Affairs
Pat Stier, MLA for Livingstone-Macleod
John Barlow, MP for Foothills
Larry Spilak, Reeve, Municipal District of Foothills No. 31
Heather Thomson, Interim CAO, Town of Turner Valley
Deb Rhodes, Vice President Corporate Services, Alberta Health Services
Darren Davidson, Regional Director, Alberta Transportation, South Region
John Bailey, Superintendent of Schools Foothills, School Division No. 31
Scott Morrison, Superintendent, Christ the Redeemer Catholic Schools
Harry Riva Cambrin, CAO, Sheep River Regional Utility Corporation
Laurie McCreary-Burke, Secretary Treasurer, Westend Regional Sewage Service Commission
Merlin MacNaughton, Stakeholder Relations Manager, Fortis Alberta Inc.
Jason Sharpe, Sr. Vice President and General Manager, ATCO Pipelines Head Office
Mike Shaw, Vice President, Calgary Region Operations, ATCO Gas

October 2, 2017

Municipal Government Board
1229 91 Street SW
Edmonton, Alberta
T6X 1E9

MD of Foothills 31
Heather Hemingway
Director of Planning
Box 5605
High River, Alberta
T1V 1M7

Dear Sir/Madam;

RE: Formal Initiation of the Town of Black Diamond Annexation Application

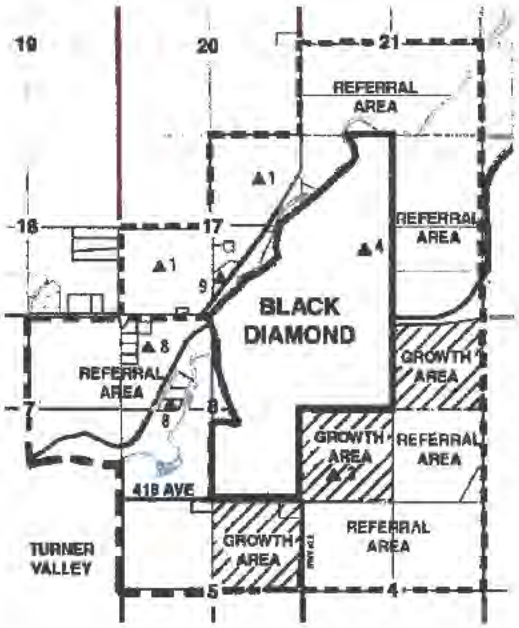
In accordance with Section 116 of the Municipal Government Act and pursuant to a motion of the Town of Black Diamond Council dated September 20, 2017, the Town of Black Diamond is giving written notice to the Municipal District of Foothills and the Municipal Government Board of the initiation of the proposed annexation of lands into the Town of Black Diamond.

Within the Town's current boundaries there are approximately 65 lots available for residential development and at the current rate of development it is estimated that the inventory will be exhausted within 3 years. There is a 29 acre parcel of undeveloped lands within the NW of 9-20-2-W5M forming part of the Kaiser Area Structure Plan however cost of servicing has been an economic barrier for developers. The annexation of lands as proposed with facilitate the efficient and cost effective growth of the community and is in alignment with statutory plans, alternate transportation routes and satisfy the Town's growth projections.

The lands intended for annexation are those as listed in the table below and includes the three quarter sections that are identified in the MD of Foothills, Town of Turner Valley, Town of Black Diamond Intermunicipal Development Plan, adopted by Town of Black Diamond Council as Bylaw 02-05 on June 5, 2002. Excerpt from the Intermunicipal Development Plan (Black Diamond Urban Future Growth) has been inserted below.

Legal Description					
Quarter	Plan	Title #	Ha	Ac	Owner
Ptn NE 5-20-2-W5M		001110623003	60.749	150.23	[redacted]
Ptn NE 5-20-2-W5M	LK465, OT	121275486004	2.323	5.74	
Ptn SW 9-20-2-W5M		101216209	59.379	146.85	
Ptn SW 9-20-2-W5M		001110623002	4.167	10.30	
NE 9-20-2-W5M		101236396001	61.04	150.98	
Total			**187.658**	**464.10**	

The annexation proposes to include approximately 464 acres of land encompassing three quarter sections which are contiguous to the shared boundary with the Town of Black Diamond. The proposed annexation lands do not contain established residential subdivisions. There is one residence and cultivation farmland located on the NE of 5 and another four residences on the SW of 9 with the balance lands under cultivation. The NE of 9-20-2-5 is a bare quarter under cultivation. None of the lands contemplated for annexation are within the designated Flood Risk Area.



The strategy proposed for the annexation procedure is to facilitate meetings of an Annexation Committee consisting of Council members of the Town of Black Diamond and the MD of Foothills with respective staff assistance. A concurrent referral circulation and public consultation process will be undertaken in order to determine what concerns or objections may exist with respect to the annexation proposal.

In conclusion, we look forward to working collaboratively with all parties to proceed with the annexation.

Sincerely

Denice Stewart
PLANNING & DEVELOPMENT OFFICER
Town of Black Diamond

Attachments: Copy of Council Resolution

REGULAR COUNCIL
September 20, 2017

Core Strategy: Provide Safe and Effective Service
Annexation - Letter of Intent

Mayor Glen Fagan requested a recorded vote on this matter.

Moved by Deputy Mayor Mike Ross that Council agree to send a letter of intent to the Municipal government Board and the MD of Foothills for the annexation of lands as identified in the Intermunicipal Development Plan (2002). **Res. 2017-411**

IN FAVOUR:	**AGAINST:**
Mayor Glen Fagan	
Deputy Mayor Mike Ross	
Councillor Jim Deacon	
Councillor Ruth Goodwin	
Councillor Jackie Stickel	
Councillor Judy Thomson	
Councillor Brian Marconi	

UNANIMOUSLY CARRIED

Appendix P
Council Minutes

MINUTES OF THE REGULAR MEETING OF THE COUNCIL OF THE TOWN OF BLACK DIAMOND, IN THE PROVINCE OF ALBERTA, HELD IN THE COUNCIL CHAMBERS, TOWN OFFICE ON WEDNESDAY, MAY 15, 2019 AT 7:00 PM.

PRESENT	Mayor Ruth Goodwin, Deputy Mayor Ted Bain Councillors Jackie Stickel, Sharon Hart, Veronica Kloiber, Brian Marconi CAO Sharlene Brown, Legislative Services Manager Verna Staples, Planning & Development Officer Rod Ross, Development Officer Denice Stewart
REGRETS	Councillor Daryl Lalonde was absent and sent his regrets.

Call to Order and Presentations

Mayor Ruth Goodwin called the meeting to Order at 7:00 pm.

Agenda - Addenda and Adoption

Moved by Councillor Sharon Hart that Council agree to adopt the Agenda, as presented. **Res. 2019-183**

UNANIMOUSLY CARRIED

Adoption of Minutes

Minutes of the Regular Meeting of Council held May 1, 2019

Moved by Deputy Mayor Ted Bain that Council agree to adopt the Minutes of the Regular Meeting of Council held May 1, 2019, as presented. **Res. 2019-184**

UNANIMOUSLY CARRIED

Minutes of the Special Meeting of Council held May 7, 2019

Moved by Councillor Veronica Kloiber that Council agree to adopt the Minutes of the Special Meeting of Council held May 7, 2019, as presented. **Res. 2019-185**

UNANIMOUSLY CARRIED

Unadopted

Public Hearings

Proposed Annexation Agreement

Mayor Ruth Goodwin opened the Public Hearing for a Proposed Annexation Agreement at 7:02 pm. Planning & Development Officer Rod Ross confirmed for the Chair that the advertising for the hearing had taken place in accordance with section 606(5) of the *Municipal Government Act.* Council and staff were introduced to the gallery. Mr. Ross then provided Council with his presentation on the agreement, as attached. Rod Ross advised the agreement will be amended so that section 17.1 (c) will reference part 10 not part 9. He stated that not all consent letters from Landowners in the annexation area have been received to date.

Mr. Ross indicated that two (2) have been received and others should be forthcoming. 2 property owners signed up to make a verbal presentation. Linda Buck spoke to Council regarding the attached written presentation submitted by Lorne and Linda Buck. Diana Hocking spoke for herself and David Hocking and raised concerns regarding:

- franchise fees and effective date; 25-year exemption from franchise frees was appropriate until a triggering event.
- Tax rate Urban versus Rural – payment reduction and TIPPS reduction.

Ms. Hocking's verbal presentation included a statement of an assumption that the lower of the County or Town tax rate would prevail. Mayor Ruth Goodwin clarified that the taxes would be at County rates until the 25-year maximum exemption or until a triggering event, whichever comes first. No written responses were received prior to the Agenda publication. There were no other persons presented who wished to submit any written responses. There were no further persons present who wished to speak to the Proposed Annexation Agreement, either opposed or in favour. Mr. Ross had nothing further to offer. At the request of the Chair, Council indicated that they were satisfied with the information provided at this hearing. The Chair closed the hearing at 7:35 pm.

Question Period

Question Period

Mayor Ruth Goodwin declared Question Period open at 7:36 pm. As there were no questions for Council, Mayor Ruth Goodwin closed Question Period at 7:36 pm.

Question Period Actions

None required

Unadopted

Delegations

Delegation Presentations

Foothills Children's Wellness Network - Youth Branch

- representative Sharon Dowdall attended to provide Council with information outlining the Foothills Children's Wellness Network update, as attached.

Delegation Decisions

As required

Bylaws

Public Hearing Decisions

Bylaws

Bylaw 19-09 2019 Tax Rates Bylaw

Councillor Brian Marconi requested recorded votes for the motions pertaining to 1st, 2nd and 3rd reading of the bylaw.

Moved by Councillor Sharon Hart that Council agree to give Bylaw 19-09, 2019 Tax Rate Bylaw, first reading. **Res. 2019-186**

MOTION CARRIED

IN FAVOUR:	OPPOSED:
Mayor Ruth Goodwin	Councillor Brian Marconi
Deputy Mayor Ted Bain	
Councillor Sharon Hart	
Councillor Daryl Lalonde	
Councillor Veronica Kloiber	
Councillor Jackie Stickel	

Unadopted

Moved by Councillor Jackie Stickel that Council agree to give Bylaw 19-09 second reading. **Res. 2019-187**

MOTION CARRIED

IN FAVOUR:	OPPOSED:
Mayor Ruth Goodwin	Councillor Brian Marconi
Deputy Mayor Ted Bain	
Councillor Sharon Hart	
Councillor Daryl Lalonde	
Councillor Veronica Kloiber	
Councillor Jackie Stickel	

Moved by Councillor Veronica Kloiber that Council agree to present Bylaw 19-09 for third reading at this time. **Res. 2019-188**

UNANIMOUSLY CARRIED

Moved by Deputy Mayor Ted Bain that Council agree to give Bylaw 19-09 third and final reading. **Res. 2019-189**

MOTION CARRIED

IN FAVOUR:	OPPOSED:
Mayor Ruth Goodwin	Councillor Brian Marconi
Deputy Mayor Ted Bain	
Councillor Sharon Hart	
Councillor Daryl Lalonde	
Councillor Veronica Kloiber	
Councillor Jackie Stickel	

Action Items

Town of Black Diamond and Foothills County Annexation Agreement

Moved by Councillor Sharon Hart that Council agree to defer this matter to its meeting scheduled for May 28, 2019. **Res. 2019-190**

UNANIMOUSLY CARRIED

Intermunicipal Public Transit Strategy Steering Committee Update

Moved by Councillor Sharon Hart that Council accept the report for information. **Res. 2019-191**

UNANIMOUSLY CARRIED

Unadopted

CFEP application - Oilfields Curling Club

Moved by Councillor Jackie Stickel that Council agree to accept the letter of support written for the Oilfields' Curling Club in support of the Community Facility Enhancement Program for information purposes. **Res. 2019-192**

UNANIMOUSLY CARRIED

Donation Request Oilfields High School Girls Basketball Provincials

Moved by Councillor Sharon Hart that Council agrees to donate $500.00 to Oilfields' High School for hosting the 2020 2-A Girls Provincial Basketball Tournament for the 2019 Goods, Mayor Misc Expenses. **Res. 2019-193**

UNANIMOUSLY CARRIED

Resignation: Sustainable Black Diamond Advisory Committee

Moved by Councillor Veronica Kloiber that Council agree to accept the resignation of Jen Stenseth from the Sustainable Black Diamond Advisory Committee Board with regret and request that Administration send her a letter of appreciation for her service to the board. **Res. 2019-194**

UNANIMOUSLY CARRIED

Moved by Councillor Veronica Kloiber that Council agree to direct Administration to advertise the vacancy position on the Town's website. **Res. 2019-195**

UNANIMOUSLY CARRIED

Request for Computer Replacement

Moved by Deputy Mayor Ted Bain that Council agree to authorize the purchase of a new desktop computer for the Community Peace Officers, at a cost of $1,172.40, with the funds to come from the Protective Services Computer Equipment Reserve. **Res. 2019-196**

UNANIMOUSLY CARRIED

Budget Reallocation: Server Warranty Renewal

Moved by Councillor Brian Marconi that Council agree to authorize the purchase of a 1-year warranty renewal for the Town Office server, at a cost of $356.25 with the funds to come from the Administration Computer Goods Reserve. **Res. 2019-197**

UNANIMOUSLY CARRIED

Unadopted

Correspondence and Information

Correspondence, Reports and Information
No items to discuss

Administrative Inquiries
No items to discuss

Correspondence Decisions
None required

Committee and Councillor Reports

Committee Minutes - requiring Council acceptance
No items to discuss

Councillor Reports

Council Reports

Moved by Councillor Brian Marconi that Council agree to accept the Councillor Reports for information. **Res. 2019-198**

UNANIMOUSLY CARRIED

Notices of Motion
None submitted

Closed Session (In-Camera)
None scheduled

Adjournment

As there was no further business, the meeting was Adjourned at 8:48 pm by Mayor Ruth Goodwin.

Unadopted, Unsigned
MAYOR

Unadopted, Unsigned
LEGISLATIVE SERVICES MANAGER

Unadopted

ROD

Attention: Black Diamond Council – Public Hearing May 15, 2019

Re: Proposed 'Annexation Agreement' between Foothills County & Black Diamond

Submitted by Lorne & Linda Buck. Box 810, Black Diamond, AB T0L 0H0

We are long-time owners & residents on property legally described as [redacted]
Lands are located within Foothills County [redacted]

We have knowledge & understanding of the annexation proposals & proceedings; given the following:

- ✓ 60 years & 5 generations of ongoing personal history in &/or adjacent to Black Diamond
- ✓ 35+ years as owners/operators of a successful private business; in the construction industry, within the City of Calgary
- ✓ Have been in direct consultation & negotiations with the Town; as [redacted] originally intended for 'current' annexation
- ✓ Undertook a full review of studies, strategies, land-use bylaws, et.al.; as referred to in Blk Dmd's annexation proposals

We request approval to address 'Council' directly about serious concerns regarding &/or related to above noted 'Agreement' & future application and wish the 'Public Record' to exhibit these concerns as set forth in this letter.

That immediate annexation &/or acquisition of 780+ acres seems Unreasonable & Excessive; *effectively doubling the existing Town area of approx. 800+ acres* and is not supported by the alleged 'hi-level' studies, reports etc.; as prepared & provided by Black Diamond Planning & Development and being publicized & promoted by the Town.

Some concerns include, but are not limited to:

Within the JGS (Joint Growth Strategy 2016) *Primary document *collaboration of BD & TV to equally & eventually 'grow' together (30/60yr plans)*

- **'Higher Growth' population predictions appear Grossly Inflated;** ***more than 3X*** *the 1127 in previous 30yrs (1985 Pop 1450 to JGS est 2577) and more than double Calgary's projections of 1.4% growth in same time frame*
  - 3% cumulative growth 2015-2045 = 3500+ population increase (2015 Est Pop. 2577 to 6105) *(Pg 26, Fig 10)*
- **'Gross Land Requirements' are being exceeded & acquired prematurely**
  - 2015-2045 30yr Gross 199 acres (Hi-growth - 191ac Residential & Balance to Comm/Ind) or 135 acres (Lo-growth – 132ac Res)
  - 2015-2075 60yr Total Gross 977 acres (Hi-growth – 903ac Residential, Commercial 51ac, Industrial 23ac) *(Pg 33, Fig 15)*
    (Note: available publications do not include SE9 (ALSR Area 6) in the 'preferred' Scenario#3)

Within the ALSR (Annexation Lands Servicing Review)

- **Area 2 (NE9) appears sufficient for minimum 20-year needs & is the only 1/4 required in short term**
  - Developable Area 152.5 acres = 127.5ac Residential - Pop. Capacity of +1988 & 25ac Ind – +237 Jobs *(Pg 14 – 4.2 Service Population)*
  - Required: Adjacent NW9; completing 1992 Kaiser ASP & deficiencies in existing water/sewer infrastructure
- **Existing, long-standing & required infrastructure deficiencies & costs** *being included as part of expansion &/or development on newly annexed lands & to be recovered via off-site levies (Note: no distinction between Towns current &/or newly annexed lands or existing/future development)*
  Westend **Lagoon Upgrade** Project, 2018 ***Est $18.2M***; at capacity, does not meet AEP (Alberta Environment & Parks) requirements, continue to discharge over-strength effluent to the Sheep River *(Nov 7, 18 Council minutes)*
  - *Nov **2013** original Business Case for lagoon system upgrade presented to AB Transport, project placed on potential list; AB Municipal Water & Wastewater Partnership, Est 61% funding considered based on provincial priorities & budget availability. Any project costs not covered by provincial or federal funding will need to be covered by the municipalities. (Note: Est **$7.1M balance** split 50/50 between BD & TV)*

  Water **Looping Upgrade**, 2018 ***Est $1.6M***; east side (NW9/SW16) Inadequate Fire Flow, too many dead-end mains & redundancies in water distribution; initially to be paid by Town, significant portion to be recovered via off-site levies when lands benefiting from looping are developed
  - ***2013** 'Fire Underwriter Survey' recommends 2400 lgpm for commercial/industrial; Service Commercial area reported 1000 lgpm inadequate; (Note: Sept 25,18 Council minutes - Council has not budgeted for this & will not be increasing fire flow volume at this time)*

➢ *(Okotoks Western Wheel Jan-Feb 2019),* **Water reservoir levels continue down to 65%** *stating various pump issues & resolving with direct intake from Sheep River. Red Zone if hits 60% & will necessitate level 3 water restrictions. (Note: Suspect direct intake is limited to shared licensing agreements & must discontinue during Spring run-off; allegedly the main cause is 'undiscovered' leak within the Town of Black Diamond)*

Within other available Black Diamond documentation

- **Strategies to 'aggressively increase economic activity' appear Overly Optimistic & Untimely** having a "core economic development objective" to expand non-residential assessment ratio from 10.3% to 15%
  - Economic Development Plan, aptly titled 'Imagination at Work' concludes there is a 105ac deficiency of commercial/industrial lands; determined that JGS 60yr forecasts being too modest *(as above)*
  - 2017 Assessment Ratios: Okotoks 13.4%, Turner Valley 8.1%

An unbiased report issued by the CFIB (Canadian Federation of Independent Business) 2018 'AB Municipal Spending Watch Report', 2006-2016) ranks **Black Diamond in bottom 10 for demonstrating unsustainable municipal operating spending over past 10 years**

"In Alberta municipalities, operating spending growth exceeded sustainability benchmark of inflation and population growth, ultimately leading to a combination of lower infrastructure spending and/or increased taxation, both which dampen economic development & job creation. Analysis shows more than half of this spending (57%) was on public sector salaries, wages and benefits; distribution of revenue sources indicates the practice of raising taxes to fund unsustainable municipal spending. In 2016 AB businesses paid, on avg, two & a half times more in property taxes"

*Provincial ranking of 182 municipalities (*Pop over 1,000*) #1 Best to #182 Worst * **AB average; Pop Growth 24% * Real Operating Spending 62%***

- **Blk Dmd #175 – Population Growth 19%, Real Operating Spending Growth 257%, Per Capita Increase 199%**
- Tnr Vly #182 – Pop. Growth 41%, Real Operating Spending Growth 841%, Per Capita 569%
- Okotoks #2 – Pop. Growth 140%, Real Operating Spending Growth 104%, Per Capita -15% *(Reduced spending)*

The justifications, rationale & general propaganda being put forward in support of Black Diamonds current &/or future annexations and the current 'Agreement' presume that:

- Despite all evidence to the contrary; both current & historical
- Despite Alberta's devastated & crippled economy and the negative financial pressures; being felt by every citizen
- & Unlike any other town &/or municipality in this province
- This Town possesses the plans, the strategies, the knowledge or overall 'vision' that will alter &/or defy 'reality'.

Is this current annexation about promoting the Town 'Vision' of a "thriving sustainable community" or is this about "sustaining the vision" with an est. $5.1M in assessment value & approx. $39K in continually rising property taxes?

(per Foothills County - 2017 Assessments Farm/Res $1.6M, Com/Ind $2.7M, Municipal/Exempt $8K ** 2018 Tax Rates Farm/Res $10.8K, Com/Ind $28.2K)
(using County 2017 Assessments ** Blk Dmd 2018 Tax Rates Farm/Res $18.2K, Com/Ind $32.6K)

Additionally; in the absence of substantial population growth & the developers needed to promote any development whether residential, commercial &/or industrial & subsequently increase economic activity – Where are the tens of millions of dollars to be acquired from?? **Where is the sustainability to be derived from??**

As such, we believe there will be **considerable negative 'financial' impacts & long-term consequences** with this annexation and that the financial burden of these costs will fall primarily to a few newly annexed landowners & the citizens of Black Diamond. This, in addition to the weight of escalating taxes & costs already being felt by ranchers, farmers, landowners & citizens alike.

We thank you for your time & consideration in listening & reviewing our concerns and comments. We hope that Council will give 'careful thought & deliberation' about this annexation agreement & future application before submittal to the Municipal Government Board.

Lorne & Linda Buck

It should be noted that having not been able to view the actual 'executed' Agreement & it's associated schedules and given Black Diamond documentation still lists [redacted] it's associated infrastructure; we are in no way assured that this quarter has been removed from the 'current' annexation area; despite Black Diamond's statements otherwise.

(Note – All information was derived from public documents, mainly from Town of Black Diamond website; any personal calculations are based on this data)

MINUTES OF THE REGULAR MEETING OF THE COUNCIL OF THE TOWN OF BLACK DIAMOND, IN THE PROVINCE OF ALBERTA, HELD IN THE COUNCIL CHAMBERS, TOWN OFFICE ON TUESDAY, MAY 28, 2019 AT 9:00 AM.

PRESENT Mayor Ruth Goodwin, Deputy Mayor Ted Bain
Councillors Jackie Stickel, Veronica Kloiber, Daryl Lalonde, Brian Marconi

CAO Sharlene Brown, Legislative Services Clerk Lina Mangal, Planning & Development Officer Rod Ross, Development Officer Denice Stewart

REGRETS Councillor Sharon Hart was absent and sent her regrets.

Call to Order and Presentations

Mayor Ruth Goodwin called the meeting to Order at 9:00 am.

Agenda - Addenda and Adoption

Moved by Deputy Mayor Ted Bain that Council agree to adopt the Agenda, as presented. **Res. 2019-199**

UNANIMOUSLY CARRIED

Adoption of Minutes

Minutes of the Regular Meeting of Council held May 15, 2019.

Moved by Councillor Daryl Lalonde that Council agree to adopt the Minutes of the Regular Meeting of Council held May 15, 2019, as amended by the removal of Councillor Daryl Lalonde's name from the In Favour column of the recorded votes in resolutions 2019-186, 2019-187 and 2019-189. **Res. 2019-200**

UNANIMOUSLY CARRIED

Public Hearings

None scheduled

Question Period

Question Period

Mayor Ruth Goodwin declared Question Period open at 9:02 am. As there were no questions for Council, Mayor Ruth Goodwin closed Question Period at 9:02 am.

Question Period Actions

None required

Unadopted

Delegations

Delegation Presentations
None scheduled

Delegation Decisions
None required

Bylaws

Public Hearing Decisions
None required

Bylaws
No items to discuss

Action Items

Town of Black Diamond and Foothills County Annexation Agreement

Mayor Ruth Goodwin declared a Recess at 9:07 am for 5 minutes.
The meeting was Reconvened at 9:21 am by Mayor Ruth Goodwin.

Moved by Councillor Jackie Stickel that Council support the Town of Black Diamond and Foothills County Annexation Agreement as presented and authorize the appropriate Officers of the Town of Black Diamond to execute the Agreement. Further, Council authorizes administration to represent Black Diamond's position at any Provincial hearings or meetings deemed necessary with respect to the annexation. **Res. 2019-201**

UNANIMOUSLY CARRIED

Safety Codes Services Quality Management Plan

Moved by Councillor Brian Marconi that Council agree to adopt the 2019 Safety Codes Services Quality Management Plan. **Res. 2019-202**

UNANIMOUSLY CARRIED

Safety Codes Services Fee Schedule

Moved by Councillor Brian Marconi that Council agree to approve the 2019 Safety Codes Fee Schedule as presented; to come into effect August 1, 2019, and further agree to request that Administration amend Policy DEV-003 as required to incorporate these new fees. **Res. 2019-203**

UNANIMOUSLY CARRIED

Unadopted

Letter of Support - Westwinds Communities

Moved by Councillor Jackie Stickel that Council agree to accept the letter of support written for the Westwinds Communities' Community Facility Enhancement Program application for information purposes. **Res. 2019-204**

UNANIMOUSLY CARRIED

Request for Special Meeting May 30th, 2019

Moved by Councillor Veronica Kloiber that Council agree to hold a special Council meeting May 30, 2019, at 6:00 pm, as a closed session meeting, and request that Administration prepare an agenda and advertise accordingly. **Res. 2019-205**

UNANIMOUSLY CARRIED

Conversion of Playground Fill

Moved by Deputy Mayor Ted Bain that Council agree to accept the quote for pour in place playground bases and background documents for information purposes. **Res. 2019-206**

UNANIMOUSLY CARRIED

Performance Management Policy (HR-008) and Annual CAO Review

Moved by Councillor Jackie Stickel that Council agree that Mayor Ruth Goodwin, Councillors Jackie Stickel and Veronica Kloiber will compile Council's written performance evaluations and present the completed evaluation to the CAO. **Res. 2019-207**

UNANIMOUSLY CARRIED

Moved by Councillor Daryl Lalonde that Council agree to request that Administration schedule a Closed Session meeting on Wednesday, June 5, 2019, at 5:00 pm to discuss and conduct the CAO evaluation. **Res. 2019-208**

UNANIMOUSLY CARRIED

Moved by Councillor Veronica Kloiber that Council agree that Mayor Ruth Goodwin, Councillors Veronica Kloiber and Brian Marconi will work with the Legislative Services Manager to conduct the scheduled 3-year review of the HR-008 Performance Review Policy, its associated Procedure documents and the appended CAO evaluation forms. **Res. 2019-209**

UNANIMOUSLY CARRIED

Unadopted

Community Declaration - Seniors Week 2019

Moved by Deputy Mayor Ted Bain that Council agree to declare June 2-8, 2019 as Seniors Week in the Town of Black Diamond. **Res. 2019-210**

UNANIMOUSLY CARRIED

Correspondence and Information

Correspondence, Reports and Information

Marigold Library System

Elkford's 2019 Wildcat Days Parade

Quest 2018-2019

Sheep River Health Trust

Administrative Inquiries

Christmas Parties, Snow Removal, Grass Cutting and Facility Utilization

Mayor Ruth Goodwin left the Council meeting at 10:49 am.
Deputy Mayor Ted Bain assumed the Chair at that time.

Moved by Councillor Jackie Stickel that Council agree to request Administration place facility utilization (summer and winter usage) and promotion on the Parks and Recreation Committee agenda. And further, agree that a report to Council be provided by 2019-year-end. **Res. 2019-211**

UNANIMOUSLY CARRIED

Moved by Councillor Brian Marconi that Council agree to accept the Administrative inquiries for information purposes. **Res. 2019-212**

UNANIMOUSLY CARRIED

Correspondence Decisions

Moved by Deputy Mayor Ted Bain that Council agree to accept the Correspondence, Reports and Information for information purposes. **Res. 2019-213**

UNANIMOUSLY CARRIED

Unadopted

Committee and Councillor Reports

Committee Minutes - requiring Council acceptance

No items to discuss

Councillor Reports

To be submitted at the 2nd Regular Meeting of Council each month

Notices of Motion

None submitted

Closed Session (In-Camera)

None scheduled

Adjournment

As there was no further business, the meeting was Adjourned at 11:12 am by Deputy Mayor Ted Bain.

MAYOR

LEGISLATIVE SERVICES MANAGER

Unadopted

FOOTHILLS COUNTY/TOWN OF BLACK DIAMOND DRAFT ANNEXATION AGREEMENT

The public hearing in connection to the Draft Annexation Agreement for the proposed annexation of 821.44 +/- acres from Foothills County to the Town of Black Diamond was opened. D. Stewart, R. Ross, D. and D. Hocking, and L. and L. Buck were in attendance.

The subject parcels are located in three parts; Annexation Area A is a 152.0 +/- portion of 08-20-02 W5M located directly west of the current Town boundary; Annexation Area B is a 156.0 +/- acre portion of NE 05-20-02 W5M including the Government Road Allowance (418 Avenue West) located directly south of the Town's current southern boundary; and Annexation Area C is a 458.0 +/- acre portion of 09-20-02 W4M including the Road Allowance (402 Avenue West) located adjacent to the Town's current Southeast boundary. There are no County owned lands located within the proposed annexation area. Public consultation was achieved by way of direct mail outs, advertising on Municipal websites, online Annexations Survey and two public open houses.

L. Buck submitted concerns to the annexation, citing the size of the proposed area of annexation, implementation of process fees, loss of the County's 6% discount for early payment of taxes, exemptions to certain assessments, and the 25 year assessment and taxation provisions offered under the current terms of agreement. It was noted that L. and L. Buck's property is no longer included in the proposed annexation area.

D. Hocking reiterated concerns regarding the utility franchise fees being charged to annexed landowners following a three year reprieve and loss of the County's 6% discount for early payment of taxes.

R. Ross, Planning Manager for the Town of Black Diamond submitted that a 6% early payment discount will be offered, and the town will continue to assess the annexed lands as they would have been assessed by the County for the next 25 years. Franchise fees apply to the distribution fee on gas and electricity bills.

Letters of concern were submitted by E. Ference, D. and D. Hocking and L. and L. Buck.

The public hearing was closed.

496 Ms. Miller moved that Council support the Town of Black Diamond and Foothills County Annexation Agreement as presented and authorize the appropriate Officers of Foothills County to execute the Agreement. Further, Council authorize administration to represent Foothills' position at any Provincial hearings or meetings deemed necessary with respect to the annexation.

CARRIED