UNIVERSITY OF CALGARY

Crowsnest Pass
Planning Analysis & Recommendations

ZEITGEIST Planning Consultancy

SPIRITED COMMUNITY PLANNING


Megan Asbil


Mahshid Fadaei


Dimitri Giannoulis

PLAN630 - Advanced Professional Planning Studio
Instructor: Francisco Alaniz Uribe
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Image: https://www.myeastkootenaynow.com/

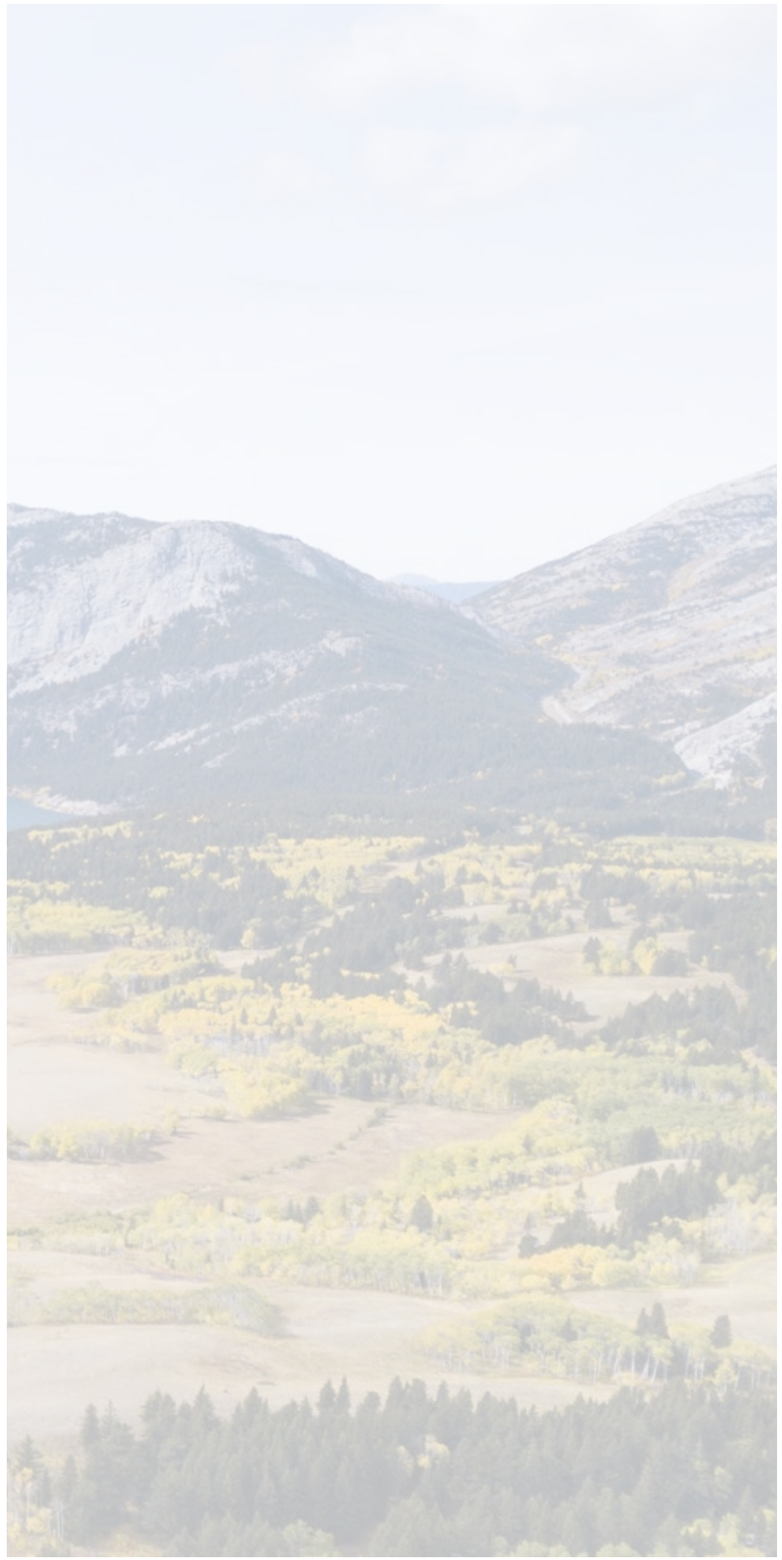
Thank You

to our Professor Francisco Alaniz Uribe and the Steering Committee.

Steering Committee:
Terry Hrudey - Chair Municipal Planning Commission
Ian Crawford & Cam Davidson - Bellecrest Community Association
Joey Ambrosi - Frank Slide Interpretive Centre
Sacha Anderson - Chamber of Commerce
Stephen Brunell, Johan Van der Bank & Katherine Mertz - Municipality of Crowsnest Pass
Manuel Sudau - Lecturer ETH-Zurich

Land Acknowledgement:

We acknowledge that the land on which we are analyzing, planning, and discussing is on the traditional territory of the Tsuu t'ina, Blackfoot, Niitsitapi, and Ktunaxa Nation. We also acknowledge that Crowsnest Pass is part of Métis Nation of Alberta Region 3, and is within the boundares defined by Treaty 7.



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Executive Summary

Crowsnest Pass is a Municipality located on the western border of Alberta along Highway 3. This route is an important corridor, but the municipality is somewhat distant from the major centres of Lethbridge and Calgary. The Municipality of Crowsnest Pass (MCNP) is made up of five major communities: Coleman, Blairmore, Frank, Bellevue, and Hillcrest. These five communities all have a unique character that distinguishes them from one another, yet they all face challenges for future growth and development. The MCNP is rich in environmental features and heritage assets, which can be leveraged for local enjoyment and tourism. After a period of population decline, the population is now expected to grow significantly based on the latest Municipal Development Plan. Our project aims to create solutions to address the pressing issues MCNP faces.

Our project started with an analysis phase and a community open house which gave us an understanding of the site, the municipality's strengths, risks, and opportunities. Along with our site visits, we've been able to gain a strong understanding of the site, which has allowed us to create a set of recommendations related to land use, mobility, parks and open space, and main streets.

The project focuses on 'Sites of Opportunity' and creating systems that work together. We are leveraging main streets as areas of multiple benefits and have created solutions that incorporate community input. This document contains general and site specific interventions that will assist with MCNP's future development including: improvements to the public realm, infrastructure, and commercial main streets; and addresses housing needs, heritage assets, mobility, and park networks.

This project is the result of an academic exercise between the University of Calgary's Advanced Professional Planning Studio, with 2nd year planning students, and the Municipality of Crowsnest Pass, including members of the steering committee as well as community members. This document includes: a thorough site analysis (using site data and statistical data), community input, and student recommendations.

1. Project Introduction

1.1 About the Firm

ZEITGEIST
Planning Consultancy

Zeitgeist Planning Consultancy (ZPC) is the name of our fictitious planning firm which we've imagined as being an ambitious up-and-coming planning consultancy. Our company is founded on the notion of sustainable low impact community growth, facilitating re-development and revitalization of existing communities. We believe in organic growth, and look at the development project as if it is a live organism struggling to achieve balance and harmony. We ensure planning is based on community and stakeholder engagement and work with designated steering committees to identify key issues and concerns. We address these issues by creating empowering solutions that bring back community independence and self sufficiency.

Our success is primarily rooted in our commitment to accommodate sustainability from all aspects.Our work strives to provide solutions for environmental conservation while activating places in terms of economic and social diversity.

ZPC is composed of a highly professional team of various backgrounds, with a diverse set of skills. Our team shares a common agenda advocating for sustainable development. Our values include low impact development, environmental conservation, economic growth, and high-quality social life. Therefore, we plan for community revitalization through flexible and strategic growth to meet ever-changing long-term and short term needs, and build opportunities for future improvement.

About the Team

Zeitgeist Planning Consultancy is comprised of three Master of Planning candidates at the School of Architecture, Planning, and Landscape at the University of Calgary. Megan, Dimitri, and Mahshid each have unique skills and passions within planning.

Megan Asbil - BArch, MPlan
With an undergraduate degree in architecture, Megan is interested in the built environment. She has a passion for activating community through engagement, and environmental justice. Megan has previously worked in airport planning, and has gained experience with working with community groups and stakeholders.

Dimitri Giannoulis - BSc., MPlan
Dimitri has an undergraduate degree in geography which is the basis for his interest in the spatial relations between people and spaces. His work with Business Improvement Areas in Calgary has engaged his interest in making walkable and fun mainstreets. Transportation is an additional realm of knowledge.

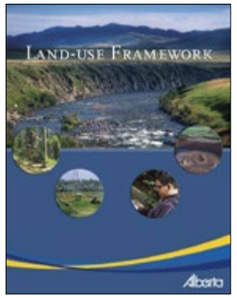
Mahshid Fadaei - BA., M.A, MPlan
Mahdhid comes from a design rich background, and is passionate about exploring the intersection between urban planning and architecture. She has long-term experience working on and researching affordable housing and participatory architecture. She won the 54th edition of the WorldArchitecture Prize for an architectural design of a working-class housing complex in 2016. She also has a great passion for resilient community growth and low impact development.

1.2 Legal Framework

Existing policies, plans, and legislation affect future possible actions. The following documents are outlined in general below, and have been studied and referenced specifically as part of the project methodology.

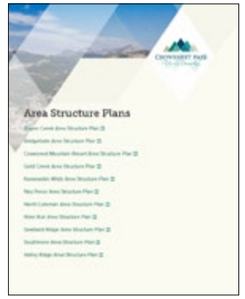
Provincial Framework

There are four province-level documents setting the legal foundation which must be considered. The Municipal Government Act and the Alberta Land Stewardship Act are important pieces of legislation for outlining the legal boundaries and possible tools. The Land Use Framework is a policy document which initiated the creation of the South Saskatchewan Regional Plan: A regional statutory plan that all plans created at a more local level must adhere to. These plans are important, but general in nature. There are also two Intermunicipal Development Plans with Pincher Creek and Ranchland.



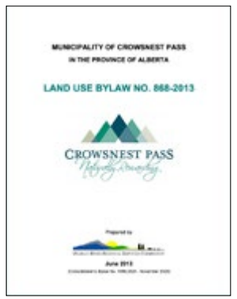
Local Framework

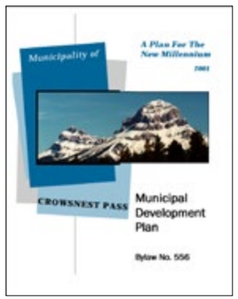
Additionally, there are plans at the local scale. The Pass Powderkeg Masterplan Concept is a non-statutory plan regarding the municipally-owned ski area, and there are also 11 Area Structure Plans, which are legally-binding planning documents for specific areas. There are no Area Redevelopment Plans currently.



Municipal Framework

For the entirety of Crowsnest Pass, the Municipal Development Plan and Land Use Bylaw are statutory documents that must be abided by. Several other plans are relevant to the whole municipality, but are not legally binding; these include four infrastructure master plans (for control systems, water distribution, wastewater collection, and community trails), and the Heritage Management Plan.





1.3 Regional Context

To understand how the Municipality of Crowsnest Pass (MCNP) is affected by its surroundings, various scales and topics must be considered. Figure 1 shows that the MCNP is located in Alberta, along the border of British Columbia. It is within 75 kilometres straight-line distance from the United States, but the distance to drive to the nearest border crossing is over 120 kilometres. The largest urban centre in the relevant vicinity is Calgary, Alberta, which is approximately 160 kilometres to the northeast, with a population of over 1.3 million. The next largest urban centre is Lethbridge (population over 100,000), approximately 110 kilometres to the east. There are five First Nations reserves within 100 kilometres, three in Alberta, two in BC; by population and size, the Kainai reserve Blood 148 is the largest. The Piikani Nation includes the Piikani Reserve and the Timber Limit 147B. In BC, the Tobacco Plains Band and Ktunaxa (Kootenay) Nation are both in relative proximity. Fernie, Sparwood, and Pincher Creek are three nearby population centres with between 3,600-5,300 inhabitants.

Regional Context Map

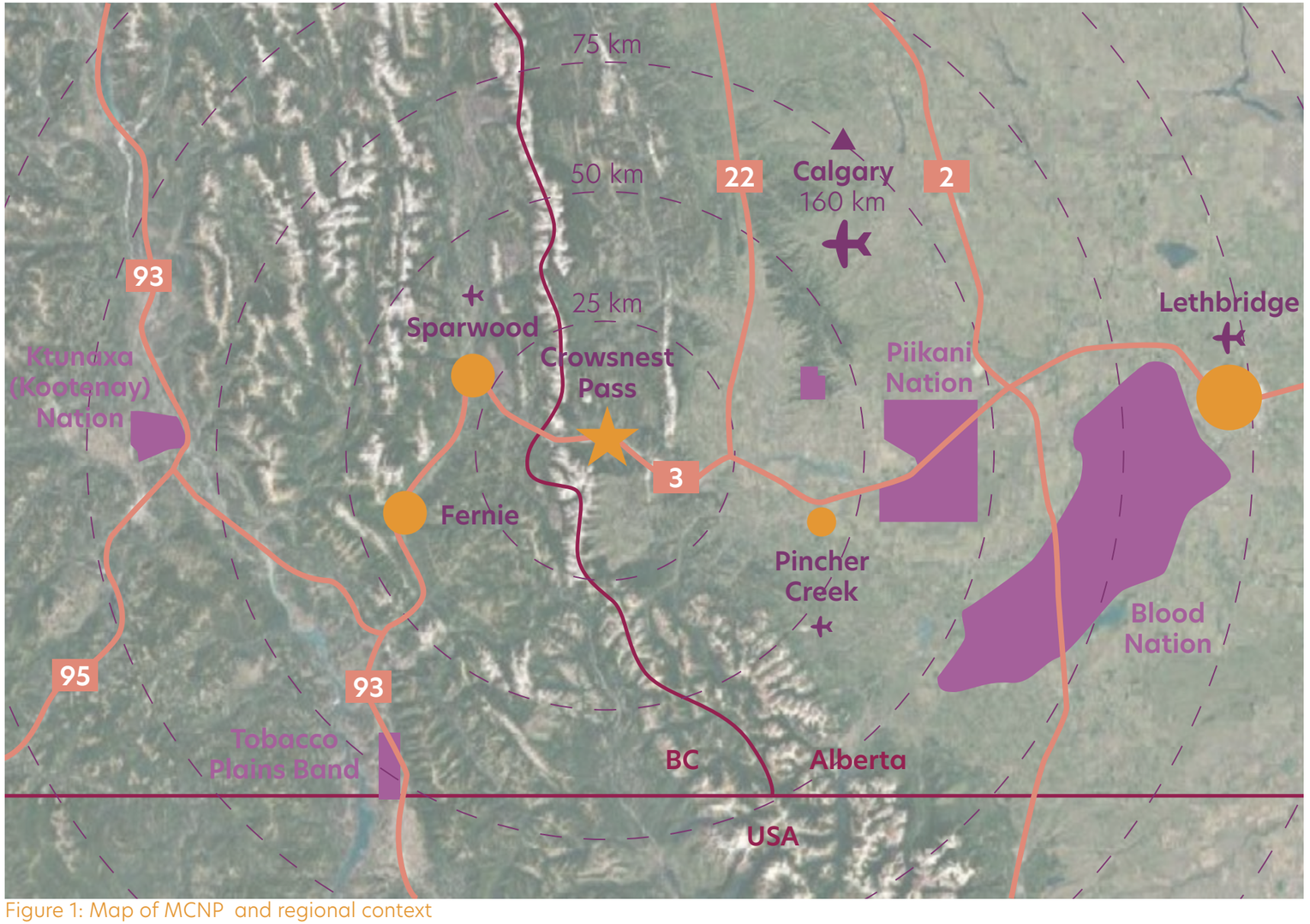


Figure 1: Map of MCNP and regional context

For transportation, rail, highways, and airports are important socioeconomic considerations. A rail line passes directly through the Crowsnest Pass, but does not have any stops. Highway 3 is an important east-west connection going through the Crowsnest Pass, and it connects to several north-south oriented highways. The nearest international airport is in Calgary, national airport is in Lethbridge, and Sparwood and Pincher Creek have regional airports.

The regional geography of the Crowsnest Pass is significant because the Crowsnest Pass is a low-elevation corridor for animals, people, and regional infrastructure lines. It is the intersection of the mountain and foothills ecosystems and it is in the headwaters of the Oldman Watershed, which supplies many communities and farmers with water

Oldman River Watershed

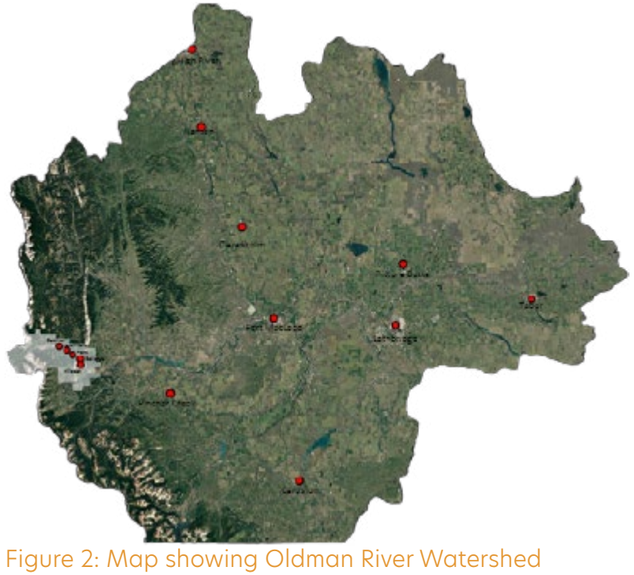


Figure 2: Map showing Oldman River Watershed

1.4 Municipal Context

Five Communities, One Municipality, Many Heritage Assets

The Municipality of Crowsnest Pass is shown in Figure 3, comprising five community areas known (in descending order of population size) as Blairmore (~2,100), Coleman (~1,500), Bellevue (~800), Hillcrest (~400), and Frank (~100). These community areas were separate towns until they were amalgamated in 1979. The pattern of settlement and activity is linear, roughly following the path of the rail line/Highway 3 and the natural valley of the pass. Running north, Highway 40 intersects Highway 3 in Coleman, and the Great Divide Trail for hikers also passes through Coleman. There are many significant locations and tourist destinations in and around the Municipality of Crowsnest Pass (MCNP). Fernie Alpine Resort and Castle Mountain Resort are major ski hills within a 45 and 30 minute drive, and Head-Smashed-In Buffalo Jump is an hour away. There are significant destinations throughout the MCNP, the most notable include Leitch Collieries, the Bellevue Underground Mine Tour, Hillcrest Mine Disaster Memorial Cemetery, Frank Slide Interpretive Centre, Pass Powderkeg Ski Hill, Crowsnest Pass Golf Club, and the Crowsnest Museum. For designated historic sites there is/are one national, 18 provincial, five municipal, and a 105 which are municipally inventoried but not designated. Thus, the Crowsnest Pass is a unique place, but to understand how it has become so unique, we will next elaborate on the history of the area.

Municipal Context Map

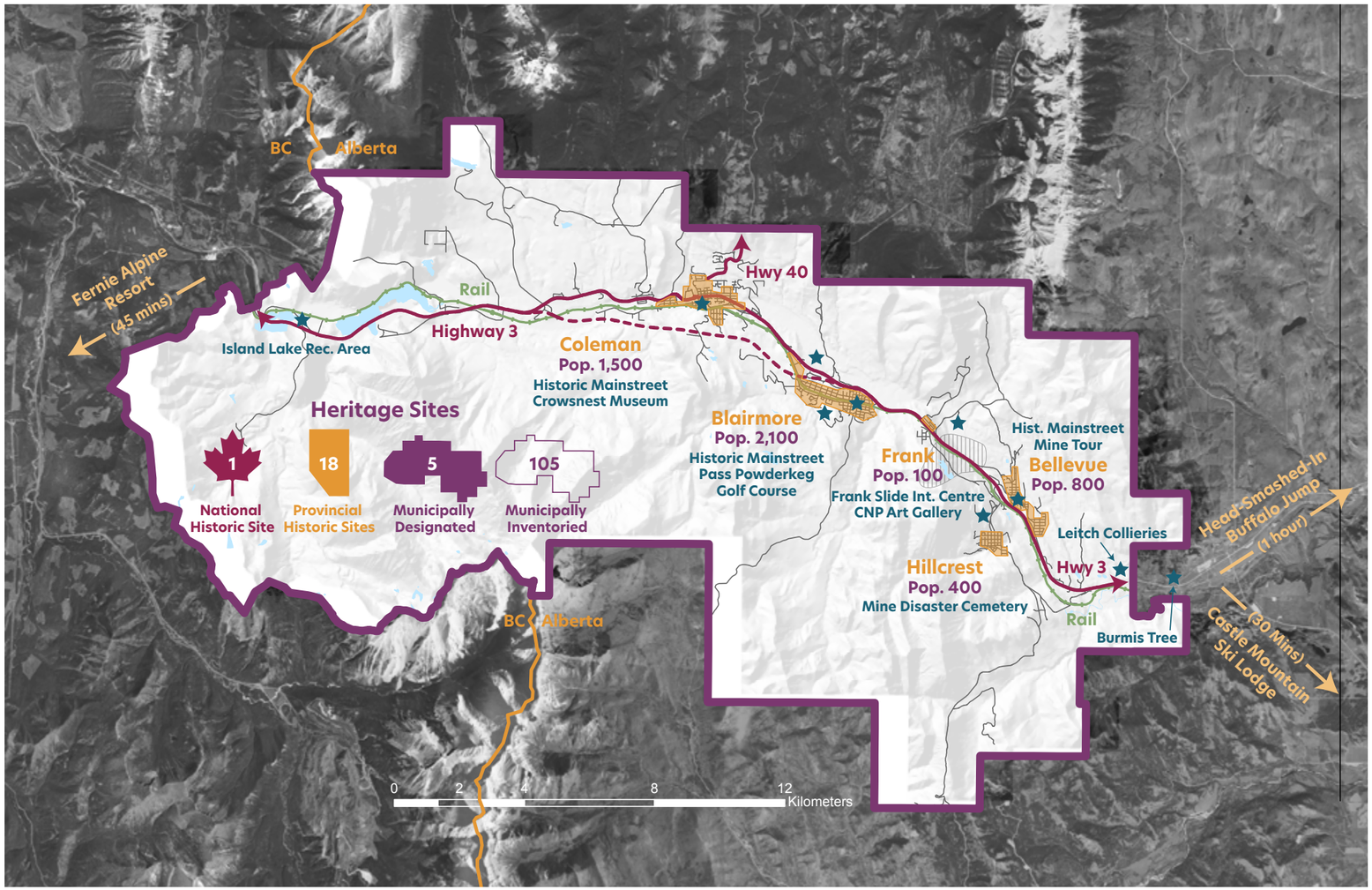
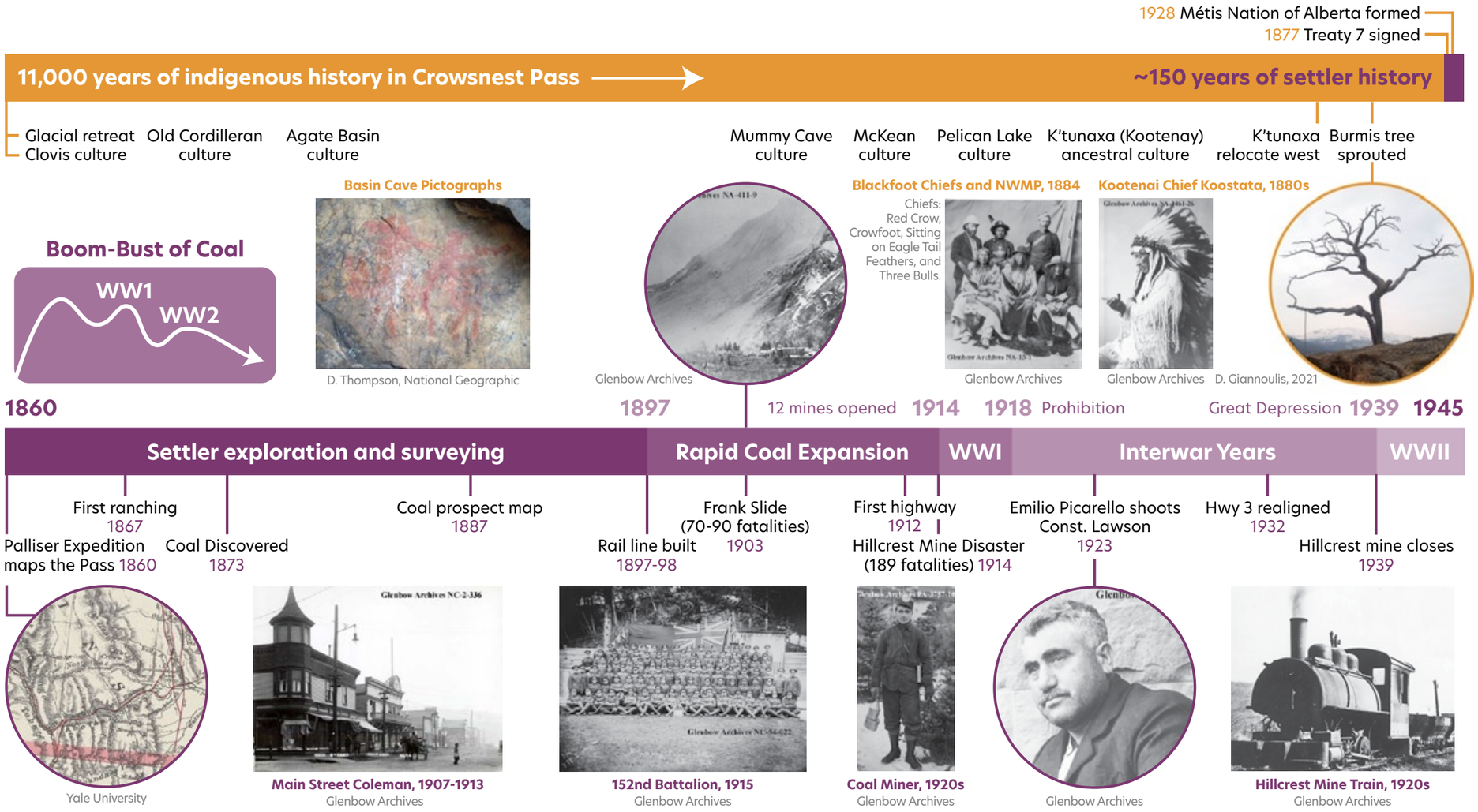


Figure 3: Map of MCNP and municipal context

1.5 History

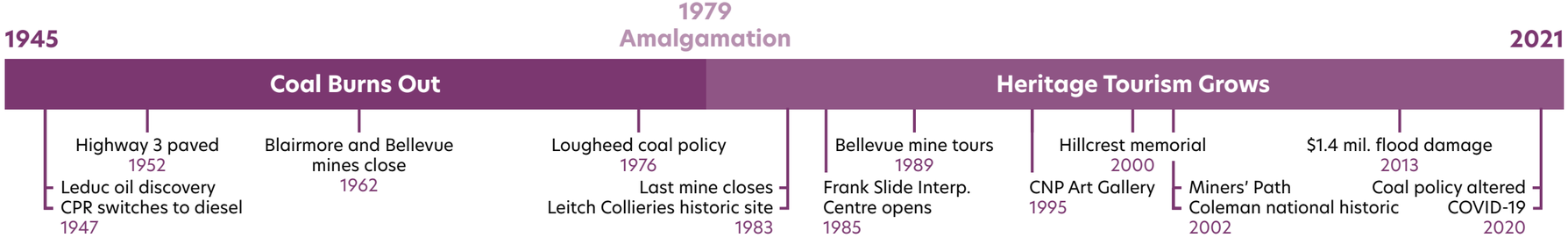
Early History

The Crowsnest Pass has a long and rich history. The first evidence of people in the Crowsnest Pass is from 11,000 years ago, beginning with the Clovis Culture, followed by the Old Cordilleran, Agate Basin, Mummy Cave, McKean, and Pelican Lake cultures (Reeves, 1978; MCNP, 2013). Ancestors of the present day Ktunaxa (Kootenay) used and lived in this area until displaced by Blackfoot groups approximately 1,000 years ago (Driver, 1975; Reeves, 1978). The Crowsnest Pass was first mapped by settlers in 1860, ranching first occurred in 1867, and coal was first discovered in 1873 (Wilson, 2000; MCNP, 2013). Coal mining and town development were enabled to grow rapidly after the completion of the rail line through the area in 1898, with 12 mining companies opening mines by 1911 (Innovisions and Associates, 2019; MCNP, 2013). The growth of mining in the area brought many people and much prosperity, but it was not without many disasters, including floods, fires, and the most notable disasters being the Frank Slide in 1903 and Hillcrest Mine Disaster in 1914 (Buckley, 2004). Other economic drivers historically included forestry, limestone mining, and brick/cement manufacturing (MCNP, 2013). Highway 3's current route is not the original route it took in 1912, which explains why the historic main streets are off the current highway (MCNP, 2013). Since the original coal boom, a general decline occurred, and although both world wars induced periods of demand, coal mining on the Alberta side of the border was over by 1983 (MCNP, 2013). However, coal mining in BC is ongoing to this day, and many residents of the MCNP work in those mines.



Recent History

The recent history of the Crowsnest Pass may be marked by amalgamation in 1979, when the Municipality of Crowsnest Pass was formed from the once distinct towns. Amalgamation was motivated by cost-savings from combining services and municipal administration, but the legacy of having once-separated infrastructure systems has created a complicated infrastructure landscape (Buckley, 2021). Since the Leitch Collieries Provincial Historic Site was opened as an interpretive destination in 1983, more historic sites have been upgraded to act as tourist destinations, including the Frank Slide Interpretive Centre (1985), Bellevue Underground Mine Tour (1989), Hillcrest Cemetery Memorial (2000), and the Miners' Path (2002) (Crowsnest Heritage Initiative, n.d.). These sites have helped grow the heritage tourism industry in the MCNP, and natural recreation tourism in the area has also grown. In recent months, there have been many discussions about new coal mining in the area, but the future for which is uncertain.



Bellevue Underground Mine Tours, 1989

Crowsnest Pass Public Art Gallery, 1995

Hillcrest Mine Disaster Memorial Park, 2000

History commercialized:
"Emperor Pic's Moonshine", 2021

Leitch Collieries Historic Site, 1983

Heritage is a tourism asset

Some deteriorating/vacant heritage buildings

Uncertainties: coal, COVID, highway expansion

All photos by D. Giannoulis, 2021

1.6 Project Methodology

Our approach combines various methods during a six phase process. Our methods included a desktop research and analysis of data, in-person site visits, and various forms of community engagement (workshops and open houses).

From our initial research of the site, during the foundation building phase, we noticed the aging population, the lack of diverse economic opportunities, and development constraints. We also noted some opportunities within heritage assets and the natural environment. These concerns and opportunities were further explored during the analysis phase where we conducted desktop research and analysis of data (provided by the municipality and other outside sources) and through in-person site visits.

The third phase of the project consisted of public engagement. For a strategic and thorough process, two groups of community members were consulted: a steering committee and community members from the general public. First we presented our analysis findings to the steering committee, who offered feedback and shared their views of MCNP. Engagement with the general public was conducted afterwards through a community workshop, as a way to hear their opinions on what they thought were opportunities and risks within the Municipality.

The following phases include the draft concept ideas, the draft review and revision, and the final submission. Within these final three phases initial ideas (draft ideas) were created and shared with the steering committee for feedback. Then ideas and recommendations were finalized, shared with the steering committee, general public, and planning commission for further feedback. This report, the last phase, includes our final recommendations to the Municipality of Crowsnest Pass.

Project Phases

2. Site & Context Analysis

2.1 Research Methods

Textual, Spatial, and Numeric Sources

A focused but comprehensive site and context analysis was the foundation for our recommendations. We analyzed social, environmental, and economic considerations as they pertain to the present and future issues and opportunities for the Municipality of Crowsnest Pass and its people. Our spatial data sources included maps, historic air photos, and Geographic Information System (GIS) files provided by the Municipality of Crowsnest Pass, community-generated maps found online, Google Maps, and Google Streetview. Our textual sources of data included academic journals, published books, municipal reports and plans, websites, and publicly available social media information. Additionally, census data was a source of numeric data. To validate and expand on the information from these sources, site visits and community engagement were used as primary information sources. One limitation faced was the lack of data accessibility from some private, provincial, or federal stakeholders, such as rail traffic counts or commercial vacancy data. As a general strategy and to mitigate limitations, we found that having multiple information sources and validation techniques was important for an accurate and holistic analysis.

2.2 Social Spatial Analysis

Approach

In this section, each community has had a social spatial analysis conducted. The analysis considers community nodes, mobility connections, and mobility barriers. The community nodes were typified as local or municipal, depending on the perceived magnitude of their draw. Please note that many tourist destinations were intentionally not included as community nodes: although locations such as the Bellevue Underground Mine Tour are important, they are not necessarily important for the week-to-week social life of residents in the same way that a library or grocery store would be. Highway 3 was considered both a connector and barrier because it is often hard to cross as a pedestrian or even as a vehicle. Steep slopes, streams, and the rail line were considered barriers, making their crossing points significant. Spatial patterns are influential for understanding how each community is experienced by its residents, and is influential for planning recommendations. For example, planning an intervention near the grocery store would give it high visibility for most residents, or planning a community node along the rail line far from a crossing point would make it inaccessible.

Coleman

First, examine Coleman in Figure 4. Coleman is the only community to have Highway 3 (shown in red) directly bisect through, however there are eight crossing points. Highway 3 is also intersected by Highway 40, which runs north and is used to access many recreational destinations. The historic commercial area is off Highway 3, along the rail line which also bisects the community. There are three notable trails in Coleman: the Crowsnest Community Trail (for walking/cycling within the municipality), the Great Divide Trail (a renowned 1,100 kilometre trail (Great Divide Trail, n.d.)), and the Miners' Path interpretive hike. The sports complex (with a curling and a hockey rink), Horace Allen Elementary School, and Crowsnest Consolidated High School are all highly important community nodes. There are many other community nodes distributed across Coleman; however, the pattern of Coleman is relatively fragmented.

Coleman

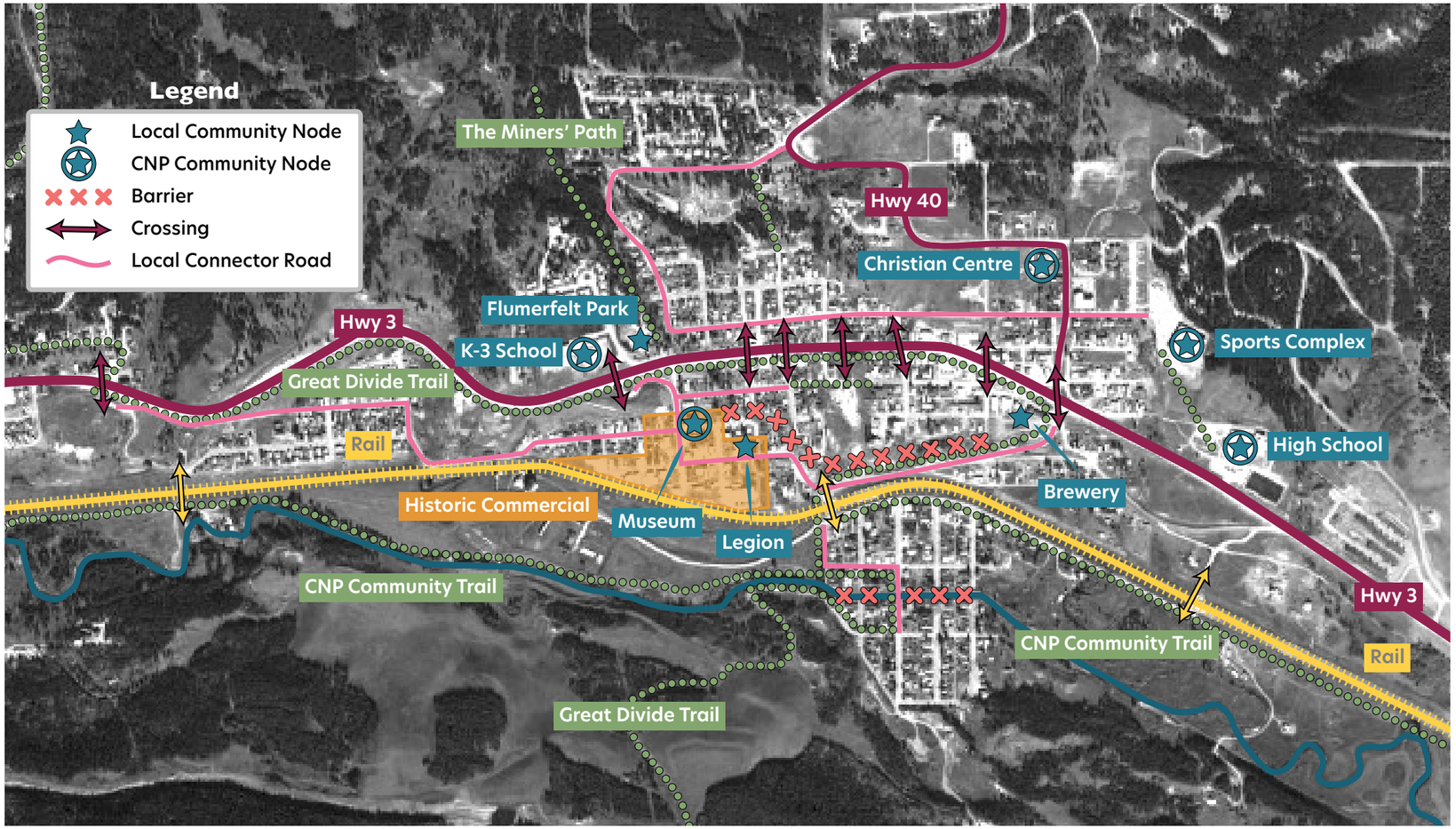


Figure 4: Social Spatial Analysis of Coleman

Figure 5: Looking out at Gazebo Park and Pass Powderkeg (D. Giannoulis, 2021)

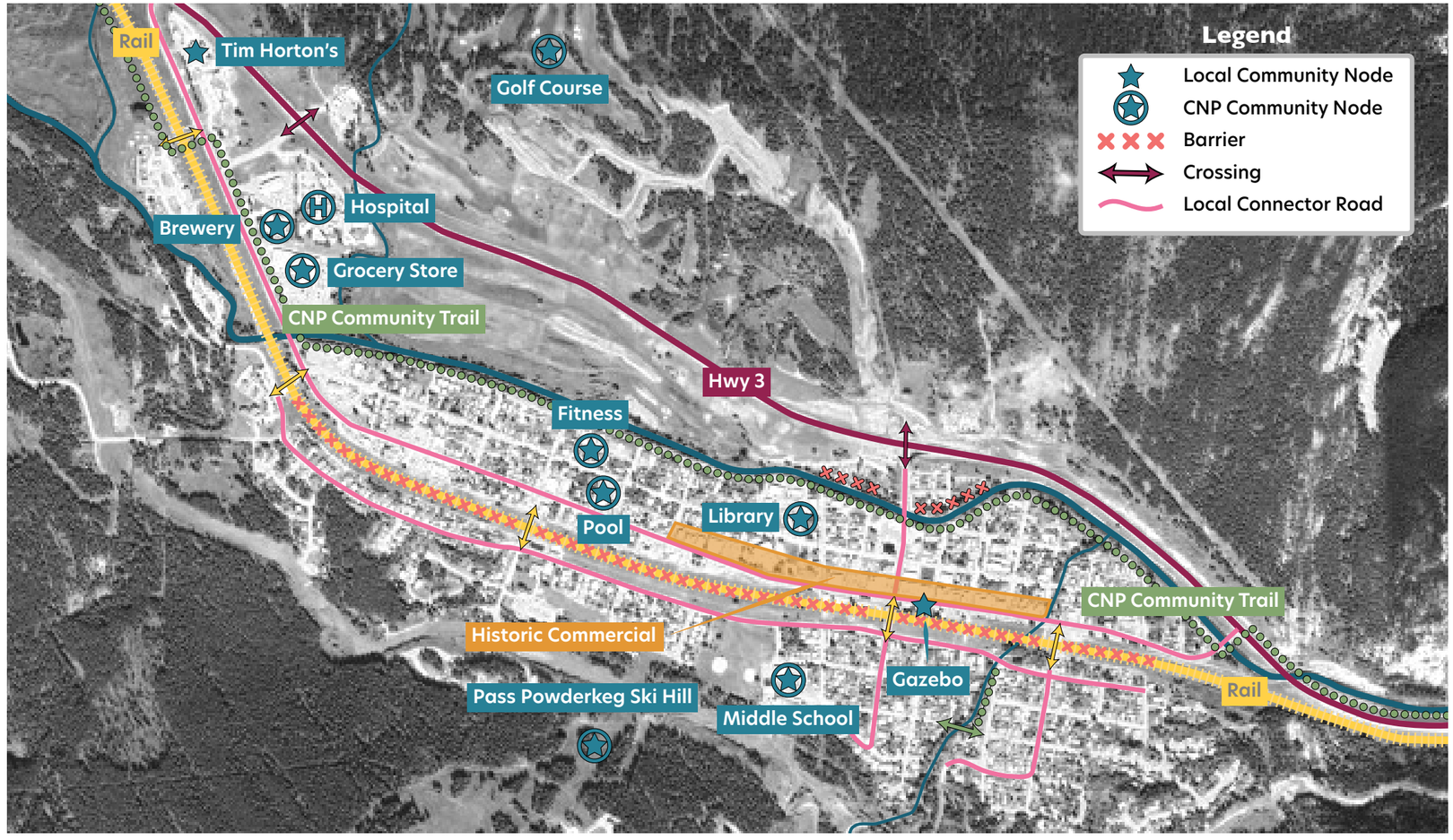


Figure 6: Social Spatial Analysis of Blairmore

Blairmore

Shown in Figure 6, Blairmore is linear in shape, running parallel to the rail line (with five crossing points). Blairmore is off Highway 3 with four local road connections. The major local roads, Crowsnest Community Trail, and the historic main street are all parallel to the rail line, showing how influential it has been to the community. Blairmore has many significant community nodes such as a major grocery store, Crowsnest Pass Golf Club, Pass Powderkeg Ski Area, Crowsnest Pass Health Centre, the public pool, and Isabelle Sellon Middle School. However, the distribution of these nodes is relatively spread out, and often off the main local networks.

Bellevue

Next, see Bellevue in Figure 7. Bellevue is also separated from Highway 3 and the rail line, with three access points to the highway. The settlement pattern is concentrated in two pockets, connected by an important local road, which passes through the short linear historic main street. The Crowsnest Community Trail passes through Bellevue, connecting some but not all of the community nodes.

Hillcrest

Hillcrest is also off the highway and rail line, and is a small, mostly residential community. There are only two access points to the community, and the Crowsnest Community Trail terminates in the centre of Hillcrest. There are limited community nodes in Hillcrest, and the historic commercial area is small. The stream that runs through Hillcrest is well crossed by roads and pedestrian bridges, maintaining the community as very walkable.

Frank

The smallest community, Frank, is shown in Figure 8. The highway and rail line run adjacent to the community, clearly denoting the edge of the community. The conventional residential is also supplemented by country residential to the northeast. Two churches, a small park, and an A&W restaurant are the community nodes in Frank.

Similarities and Differences

Comparing the five community areas, each one has a different relationship to the highway, rail line, and its historic main street. Blairmore and Coleman have the most major community nodes, but the smaller communities also have reasons for all MCNP residents to visit/socialize. Geography poses additional challenges in each community area, but the existing trails and crossings help mitigate these barriers.

Bellevue

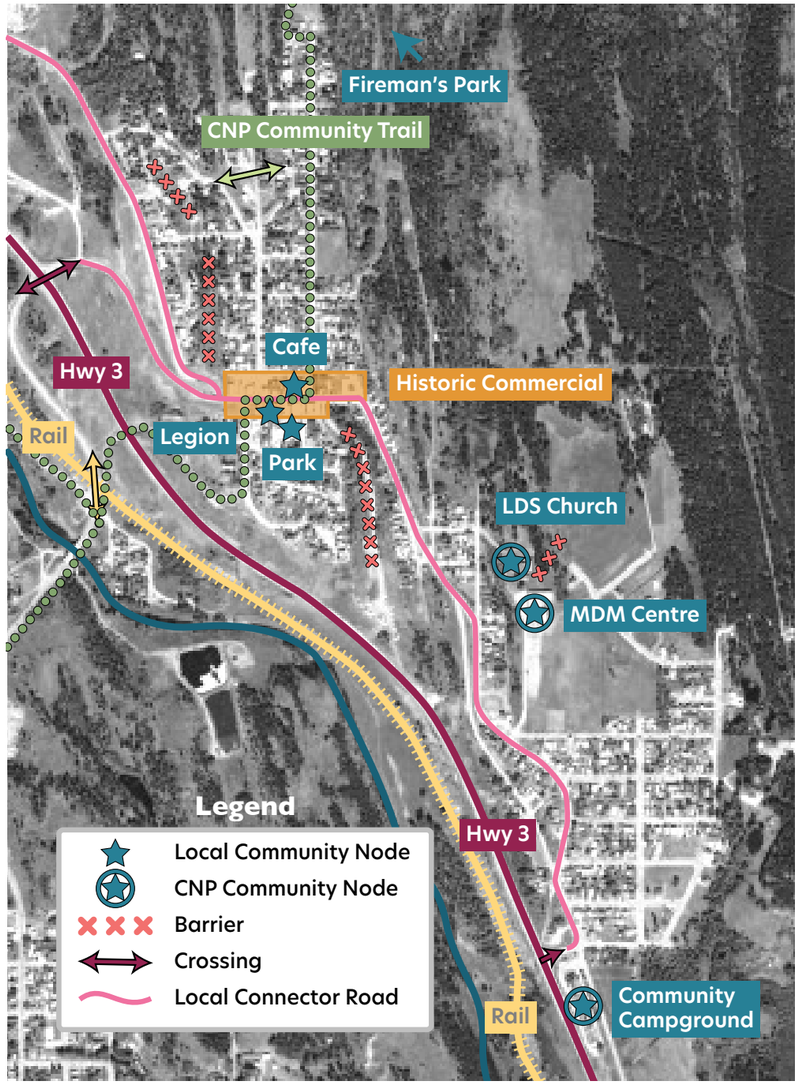


Figure 7: Social Spatial Analysis of Bellevue

Frank (Top) & Hillcrest (Bottom)

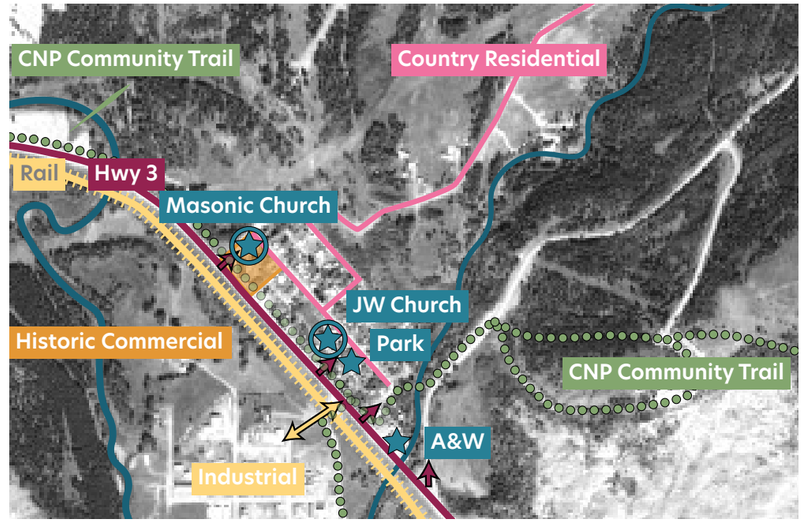


Figure 8: Social Spatial Analysis of Frank

Figure 9: Social Spatial Analysis of Hillcrest

2.3 Demographics

Population Size

Demographics related to housing, economics, and social characteristics are important to consider for planning recommendations. We used federal census data from 2016 to uncover the most significant social attributes of the area, comparing against Alberta as a relative benchmark. Population size is the first consideration. Between 1996 and 2016, the population of Alberta has increased by 51%, rising from 2.70 to 4.07 million people: a stark contrast from the Municipality of Crowsnest Pass (MCNP) which has dropped by 12% from 6,350 to 5,600 people. Looking forward in time with population projections, Alberta is expected to continually grow in size, and the MCNP is expected to begin growing again, expected to reach 8,500 people by 2046 (MCNP, 2021).

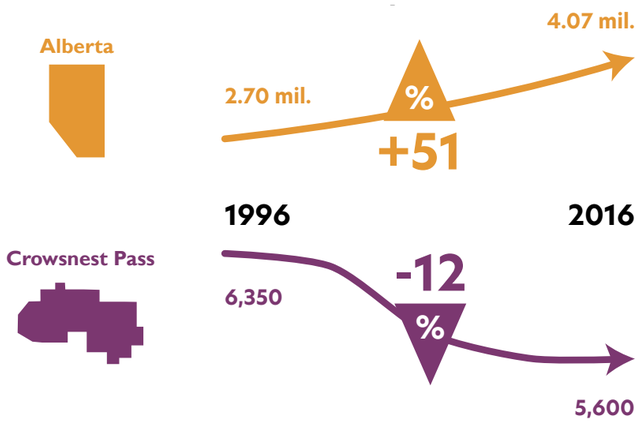
Age Attributes

Next, considering age attributes, the population of the MCNP is generally older than Alberta's. The median age of Alberta is 36.7 years, compared to 50.9 in the MCNP. A 'population pyramid' is a visualization of various age groups side-by-side. The population pyramid for the MCNP reflects its high median age, with 32% of the population being over the age of 60 (compared to 18% for Alberta), and only 19% of the population is under 19 years old (compared to 25% for Alberta). The MCNP has a low workforce participation: 59% of the population; Alberta has a workforce participation of 71%, but they have nearly identical unemployment rates of 8.8 and 9 percent. This may partially be explained by the MCNPs elderly population because of more retirees.

Employment and Income

Lower incomes are often associated with retirees, which may be one factor of the MCNP having a median family income lower than Alberta's: $95,000 to $85,000. The middle income brackets between the two are relatively similar, but the MCNP has notably more individuals making under $30,000 a year (17% compared to 12% for Alberta), and less making over $125,000 a year (25% compared to 35%). In 2016, a remarkable 18% of workers in the MCNP worked in BC, and 22% worked elsewhere in Alberta (outside the MCNP).

Population Size: 1996 - 2016



Population Projection for 2046

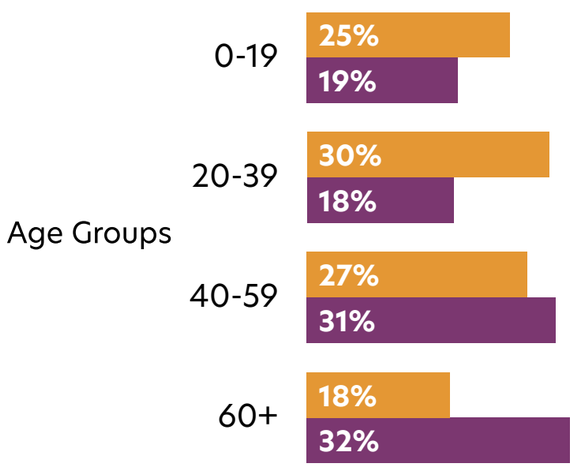
6.2 Million | **~ 8,500***

*Based on 2021 MDP projections for 8-9 thousand for 2040.

2016 Census Canada Data

Median Age

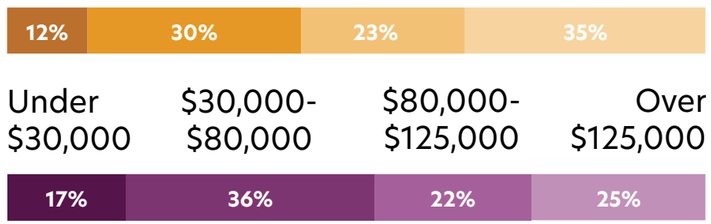
Population Pyramid



Workforce Participation

Unemployment

Income Groups (Individuals)



Median Family Income

Ethnic Origins

Census Canada collects data about people's self-identified ethnic origins (with multiple selections possible per individual), which in 2016 showed that European origins comprise the majority of residents, but 300 reported as First Nations, 235 as Métis, and 100 as East and Southeast Asian.

Dwellings

The MCNP has a relatively homogeneous, old, and low-value housing stock. The statistics on housing type show that 84% of dwellings are single-detached houses in the MCNP, compared to 64% for Alberta. The MCNP also has 8% movable dwellings compared to 3% for Alberta, and only 5% compared to 22% for apartments of all styles. This correlates to the MCNP having a tenure composition of 82% owned, 18% rented. Age of construction is another important metric to consider; 46% of dwellings were constructed prior to 1961, and only 12% between 2001-2016.

Interconnections

There are several major conclusions from the demographic analysis with implications for our planning recommendations. Although the population size has shrunk in recent times, it is set to grow significantly. The current population has a high age profile, which correlates with a low workforce participation, and low median income. Low dwelling values are correlated with below average incomes and an old housing stock. The low housing value logically fits with the high proportion of commute workers because dwelling values are higher in Fernie and Sparwood. However, the lack of housing diversity is an issue for affordability because single-detached houses are less affordable (even at reduced values) than apartments. Thus, the statistics above are not isolated metrics, but highly interconnected indicators of complex interacting factors.

Major General Groups

European

First Nations & Métis

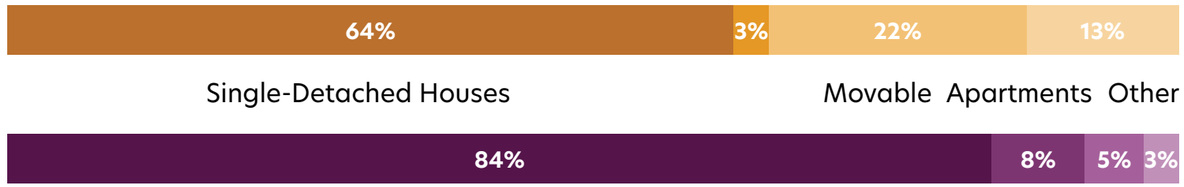
East & South East Asian

Alberta

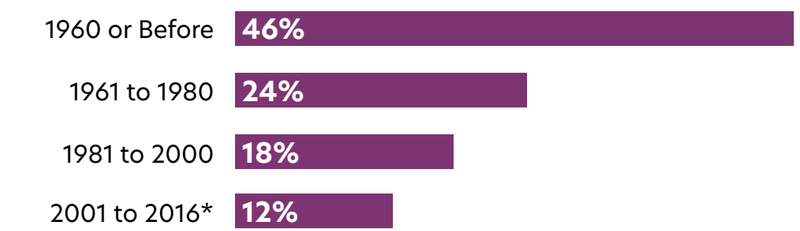
Crowsnest Pass

2016 Census Canada Data

Dwelling Type



Year of Dwelling Construction



***15 year period only**

Tenure Type

Median Value of Dwellings

Challenges

- Low housing diversity
- Many need repairs
- Supply shortage

2.4 Hydrology & Topography

Mountainous Geography

The Municipality of Crowsnest Pass (MCNP) is surrounded by natural beauty; with this natural beauty comes environmental constraints such as hydrology and topography. We first conducted a slope analysis to determine developable land, then looked at the stream network, waterbodies, and flood hazard areas. This analysis highlights the environmental constraints and hazards on development.

The slope analysis divided the land into four categories based on the slope, as shown in Figure 10. The light green represents a 0-10% slope which is considered easy to develop; the darker green is 10-15% slope which is considered moderate to develop; the orange represents 15-20% slope which is also considered moderate to develop, however cost is considered to be much more expensive; and the red represents any slope above 20% which is considered non developable due to slope and cost of development. From this analysis we've determined that 73.2% of all land in MCNP is considered non-developable. The area that is considered developable is located where development has already been taking place, as shown in Figure 11.

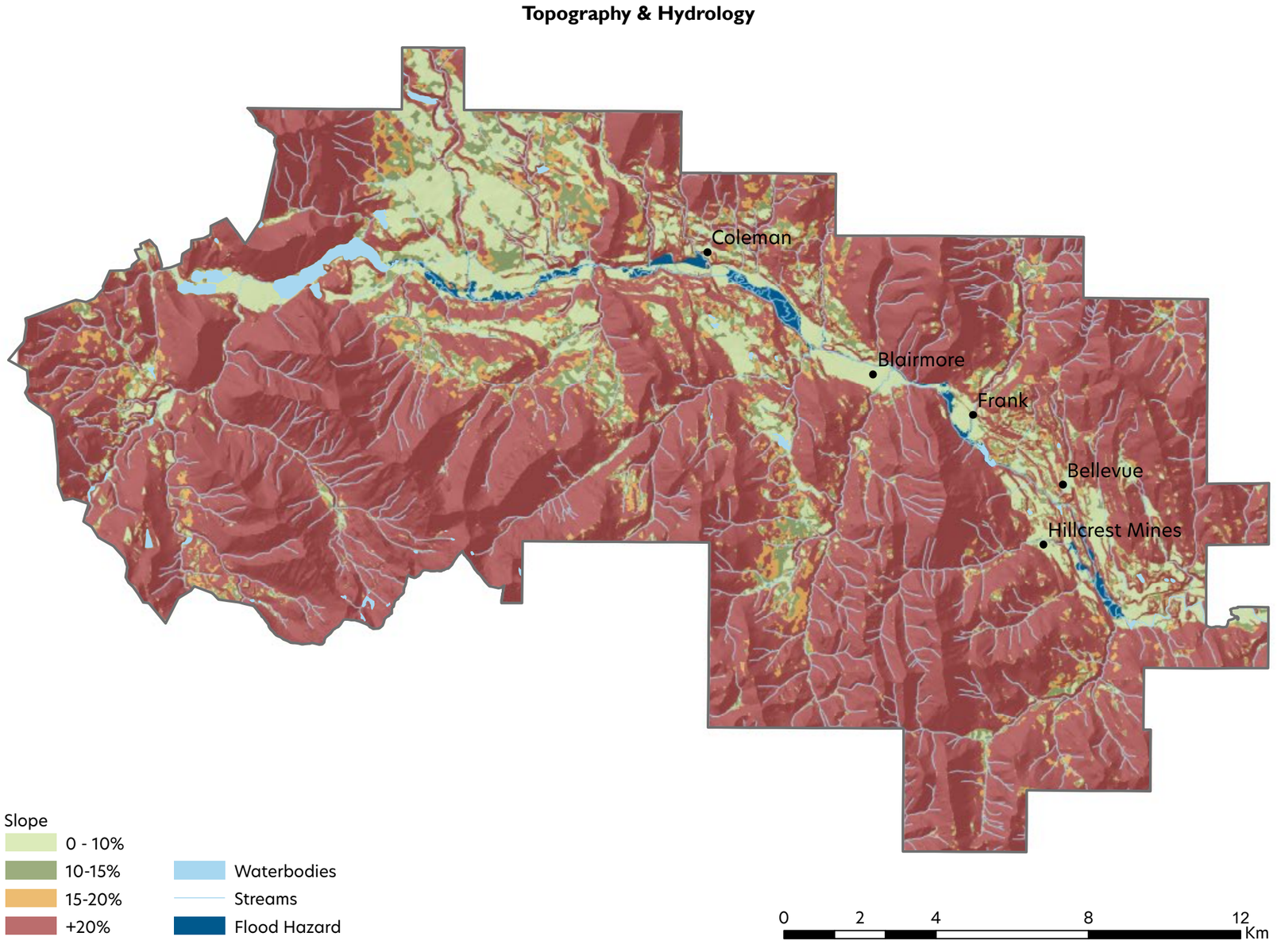


Figure 10: Map of MCNP slope analysis categorizing the slope into four categories; easy to develop (0-10%); moderate to develop (10-15%); moderate but more expensive to develop (15-20%); non-developable (+20%).

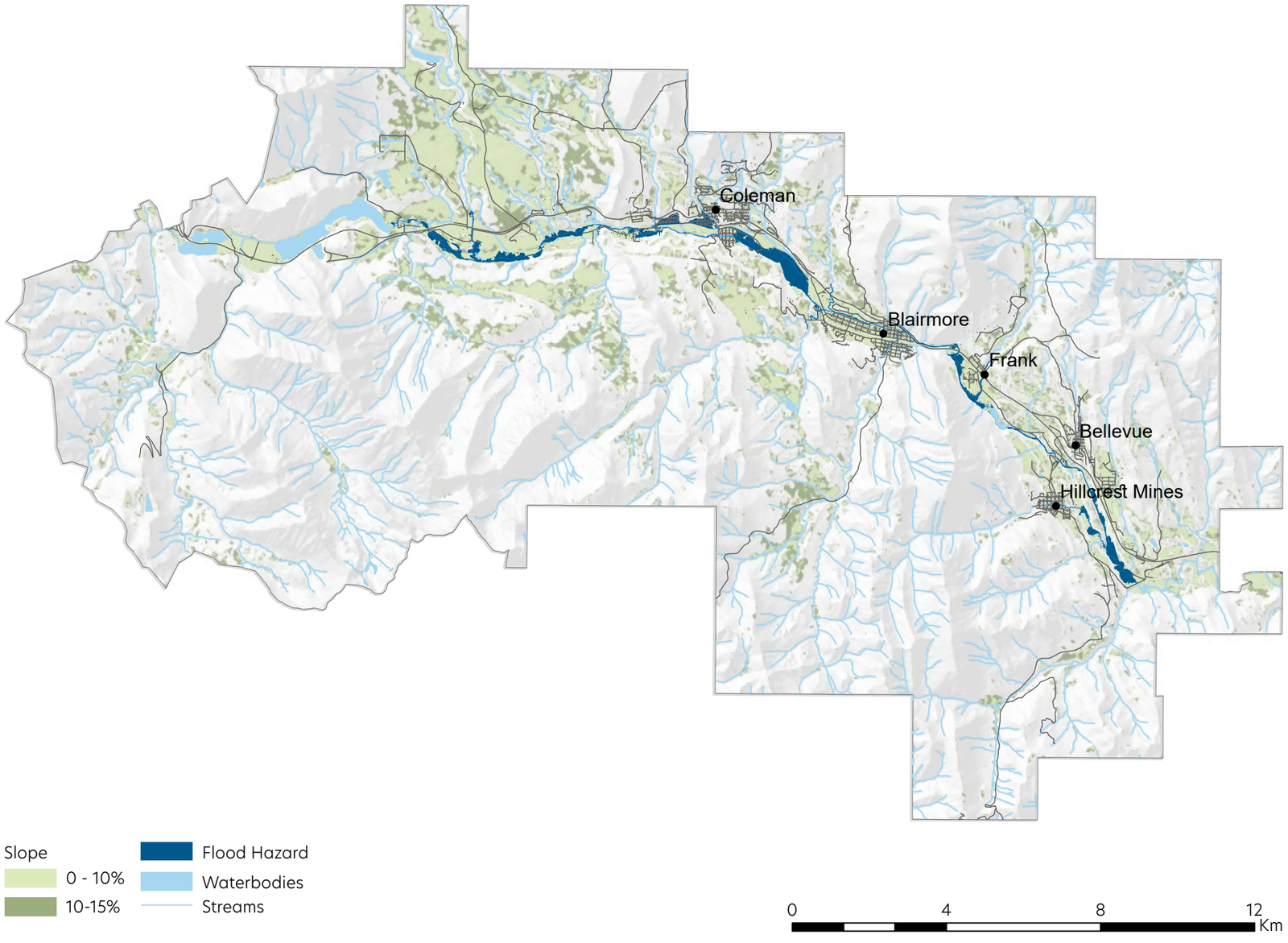


Figure 11: Map of MCNP highlighting the developable land in relation to the stream and waterbodies newtwork

A Flood Hazard in Coleman

Next we looked at waterbodies and the stream network and analyzed flood hazard areas, shown in Figure 12. Some areas in Coleman are currently in the flood zone, and those buildings are at risk of flooding.

Through the hydrology and topography analysis we discovered environmental constraints on the site. The topography limits where development should take place; signifying that development should take place where it is focused currently, and that densification should be chosen over building outwards. However, one thing to be considered with new development is the flood hazard areas, especially in Coleman.

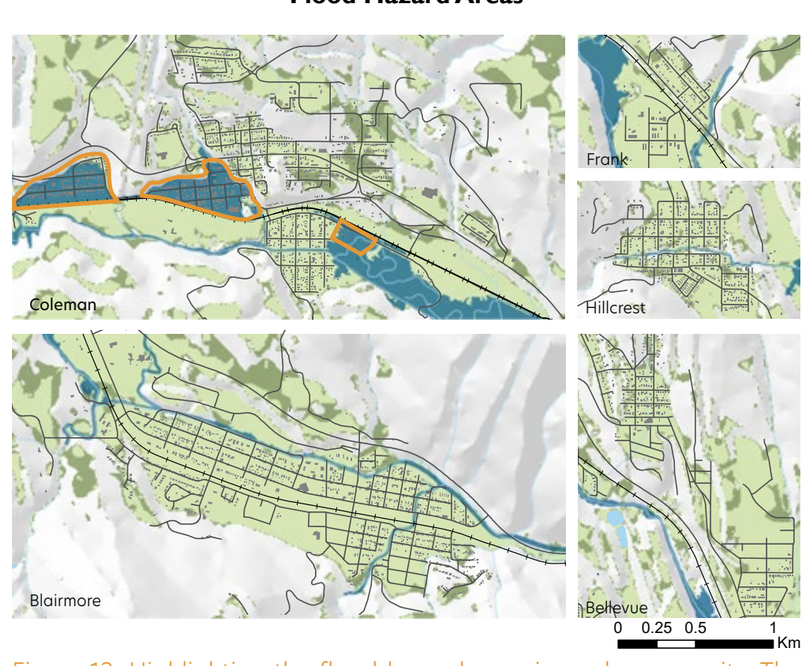


Figure 12: Highlighting the flood hazard area in each community. The orange outlining the areas of risk.

2.5 Wildlife

An Ecological Highway

The natural environment throughout MCNP contains critical wildlife and key biodiversity zones. With these key wildlife areas there are potential risks of human wildlife conflicts.

MCNP is situated in a crucial wildlife area within the Oldman River Watershed, as shown in Figure 13 (Stelfox, 2021). The mountain range contains important north/south wildlife movements and MCNP is in a critical location and has the opportunity to further enhance and connect this corridor.

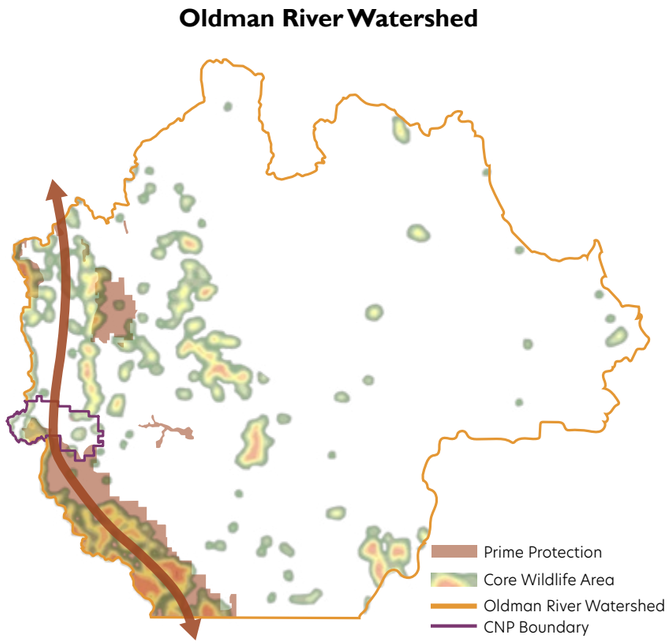


Figure 13: The location of MCNP in relation to the Oldman River Watershed, and the importance of MCNP to the region's wildlife corridors.

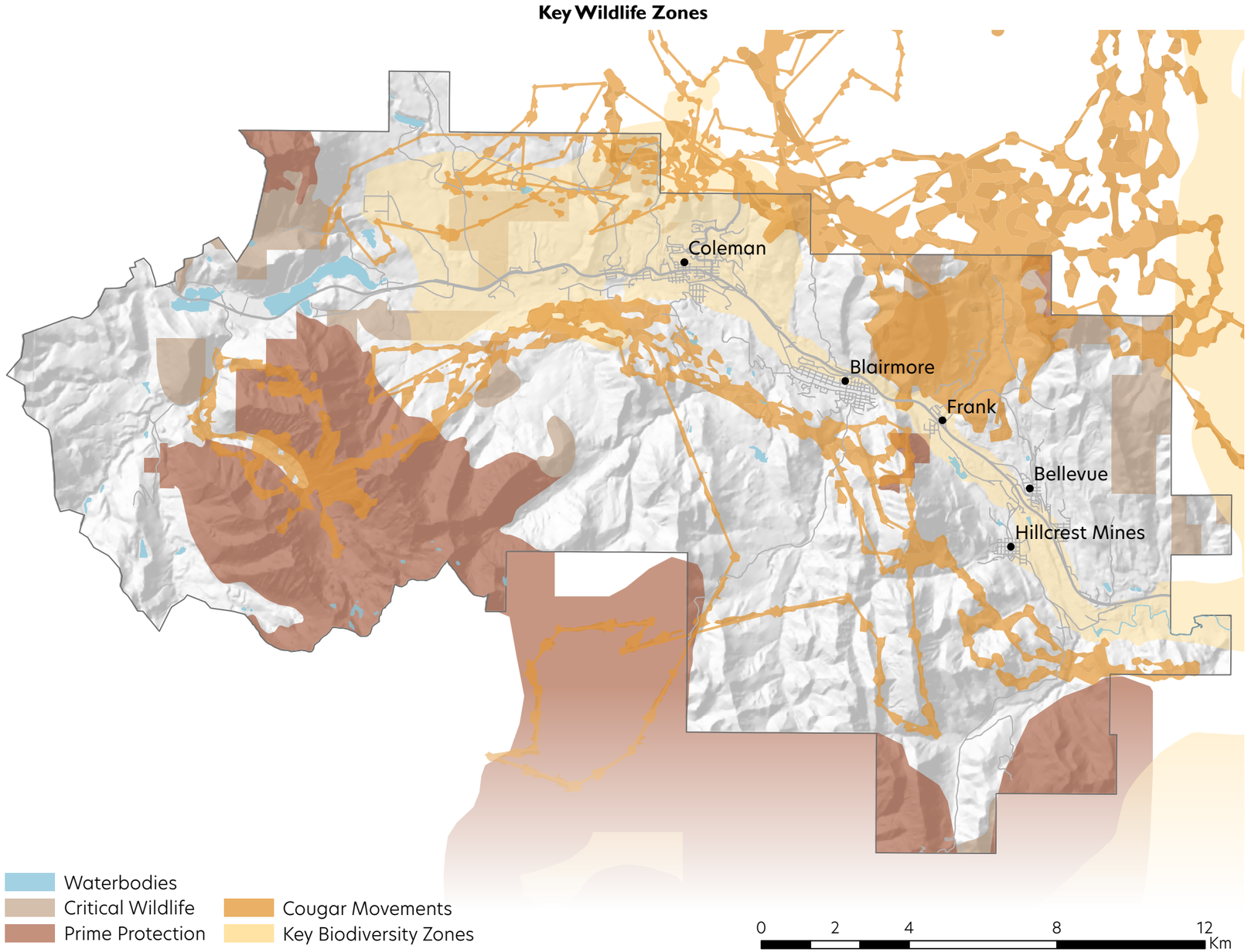


Figure 14: Map shows key wildlife areas and movements within MCNP.

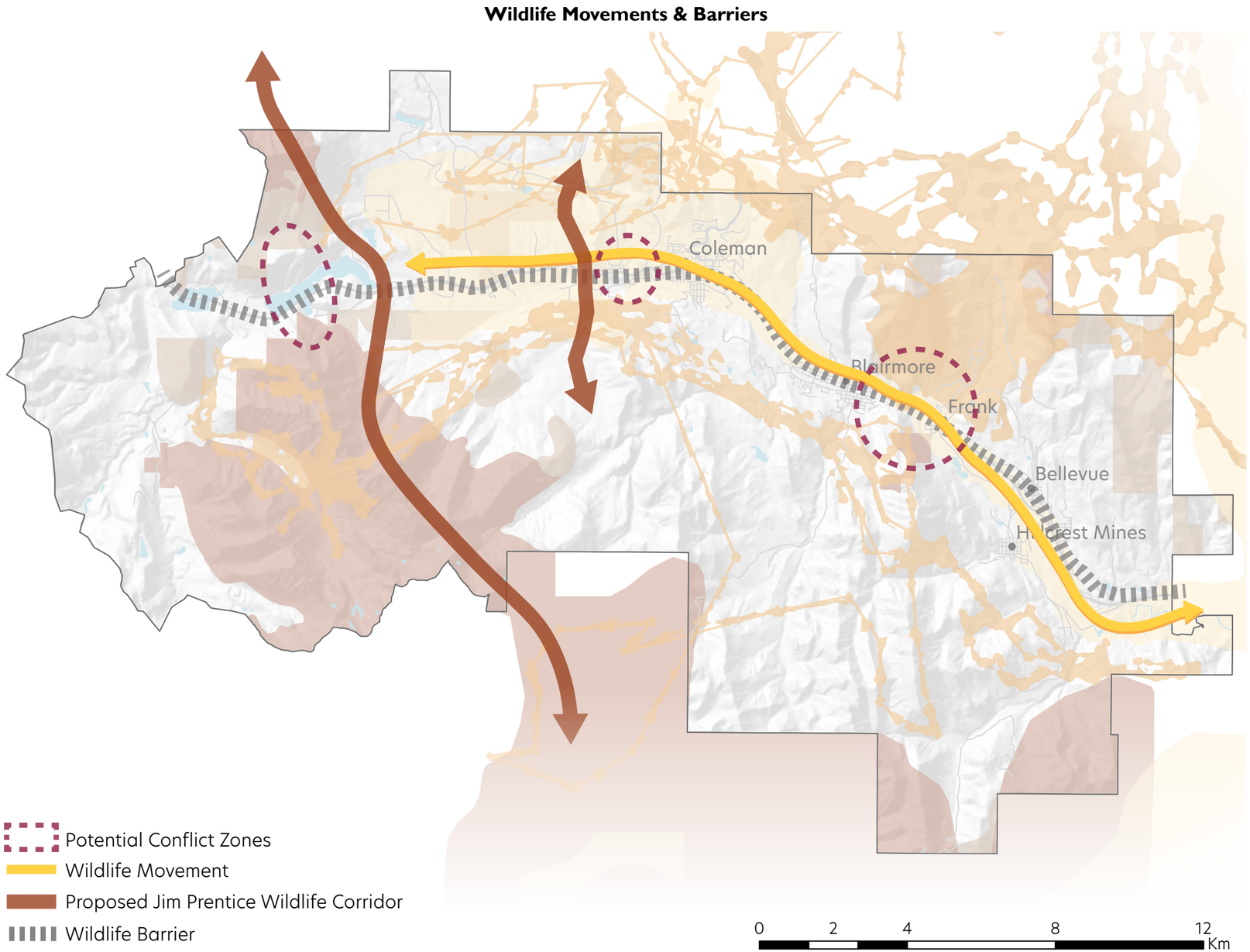


Figure 15: Map of MCNP highlights the barriers to wildlife movements and the potential human wildlife conflict zones.

Conflict Zones & Crossing Points

It should also be noted that there is some wildlife movement taking place along the streams and rivers, and that there is also some cougar activity taking place close to the communities, as shown in Figure 14. The communities, railway, and Hwy 3 act as a barrier between the core areas and the cougar movements, as shown in Figure 15. These barriers may pose a potential risk and may worsen depending on how future development takes place.

We've addressed wildlife corridors through our proposal by focusing on where development has currently been taking place. Our concept addresses the eastern side of MCNP, allowing the western side to enhance wildlife connections with the proposed Jim Prentice Wildlife Corridor (NCC, n.d.).

2.6 Sun Exposure & Climate

Sunshine in the East

In order to understand the seasonality and weather conditions of the site we analyzed sun exposure, average temperature, precipitation, and wind. We also explored the future changes in weather due to climate change.

Sun Exposure

As shown in the maps in Figure 16, the sunniest parts of the municipality are located where development is currently taking place, on the eastern end of MCNP. Due to the mountain ranges in the west, the hillside creates a more shaded area and Figure 17 shows how the eastern side of the site has more potential for photovoltaic power solutions (SolarGIS, n.d.). As the communities are located in areas with high photovoltaic potential, there is a great opportunity to include solar panels within new and existing development.

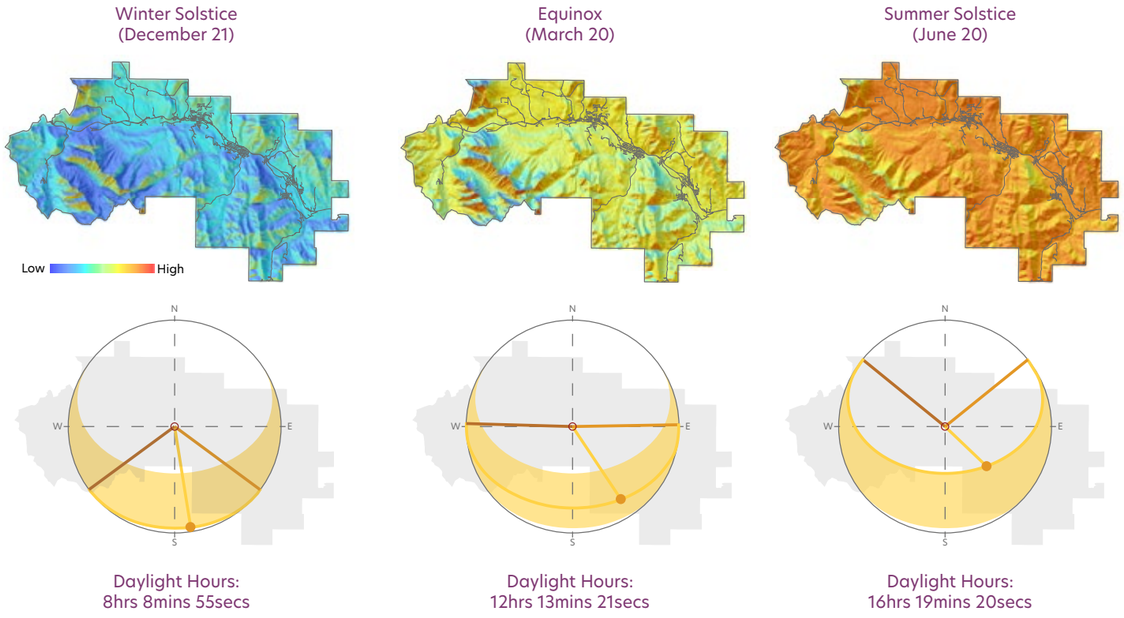


Figure 16: These maps and diagrams show sun exposure in MCNP at three dates throughout the year.

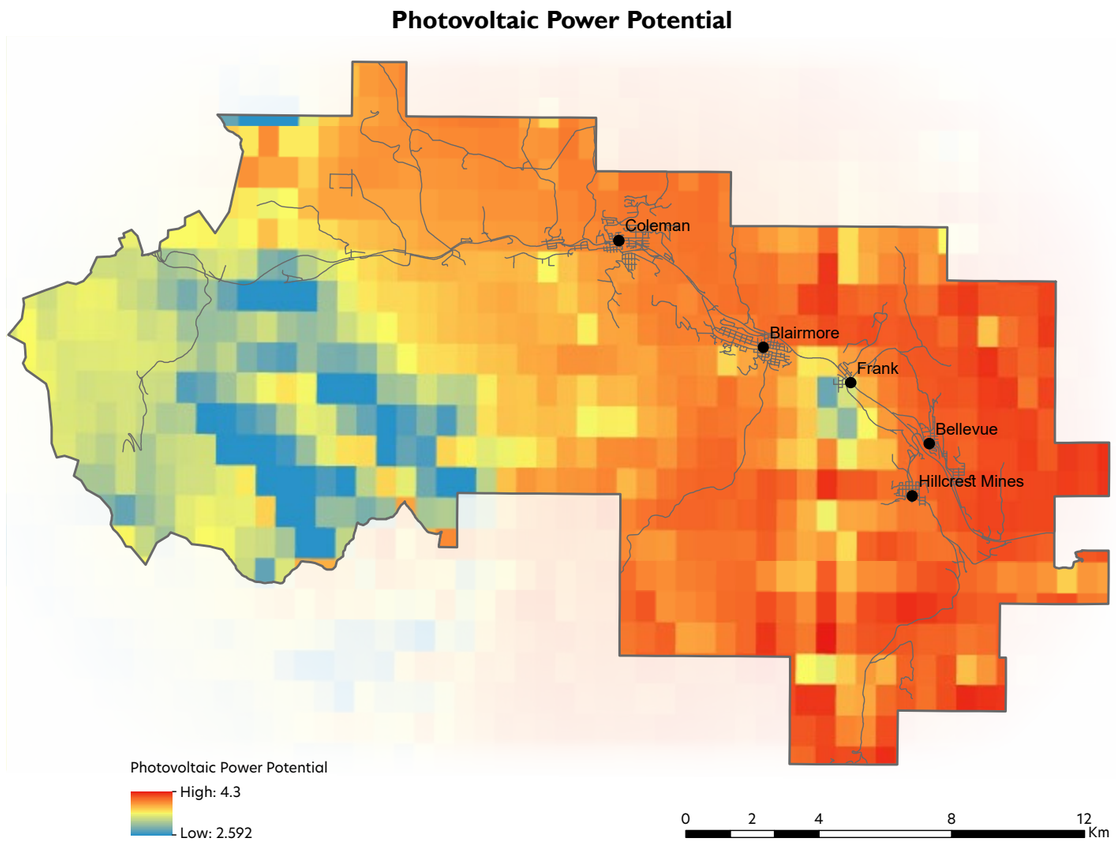


Figure 17: This map shows the photovoltaic power potential for MCNP.

Temperature & Precipitation

Figure 18 and 19 shows the average monthly temperature of MCNP, which is expected to increase significantly due to Climate Change. This emphasizes the need to create smart solutions and implement green infrastructure, such as solar panels. The average amount of precipitation is also expected to increase as a result of Climate Change, as shown in Figure 21. The increase in precipitation suggests that more flooding may occur in MCNP, and that new development should not take place within the flood zone.

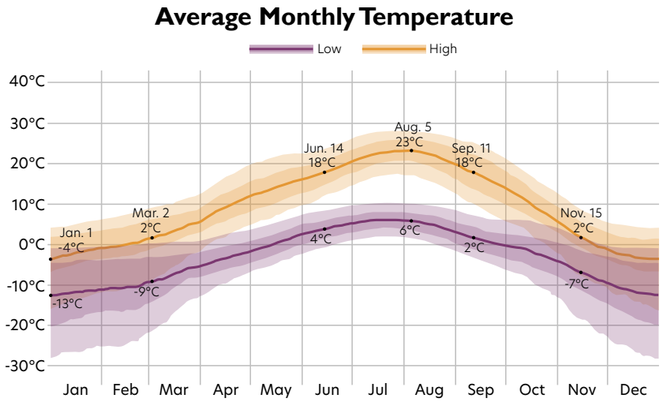


Figure 18: Graph showing average high and low temperature per month throughout the year.

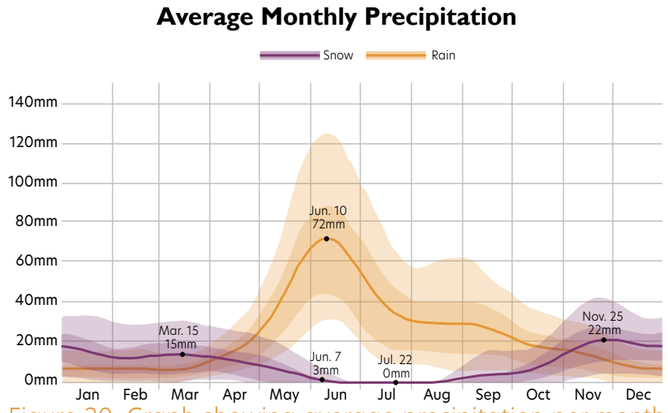


Figure 20: Graph showing average precipitation per month throughout the year.

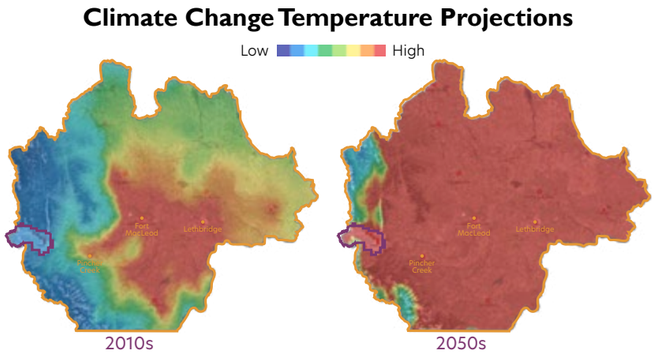


Figure 19: Two maps showing the projected difference in temperature from 2010 to 2050 due to climate change.

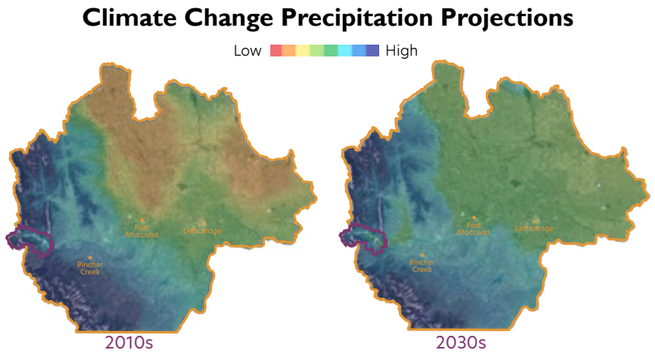


Figure 21: Two maps showing the projected difference in amount of precipitation from 2010 to 2030 due to climate change.

Wind

Lastly we looked at wind patterns and determined that MCNP receives predominantly western wind (Weatherspark, n.d.). The windiest time is between October and April, and this may have an impact on the type of activities taking place in MCNP. For example, we heard from community members that Crowsnest Lake is too windy to be able to skate or partake in other winter activities. Figure 22 shows that there is some potential to implement wind power (Global Wind Atlas, n.d.). However, the areas for best wind power harvesting are of mountain sides/ tops, and solar power may be a less complicated option.

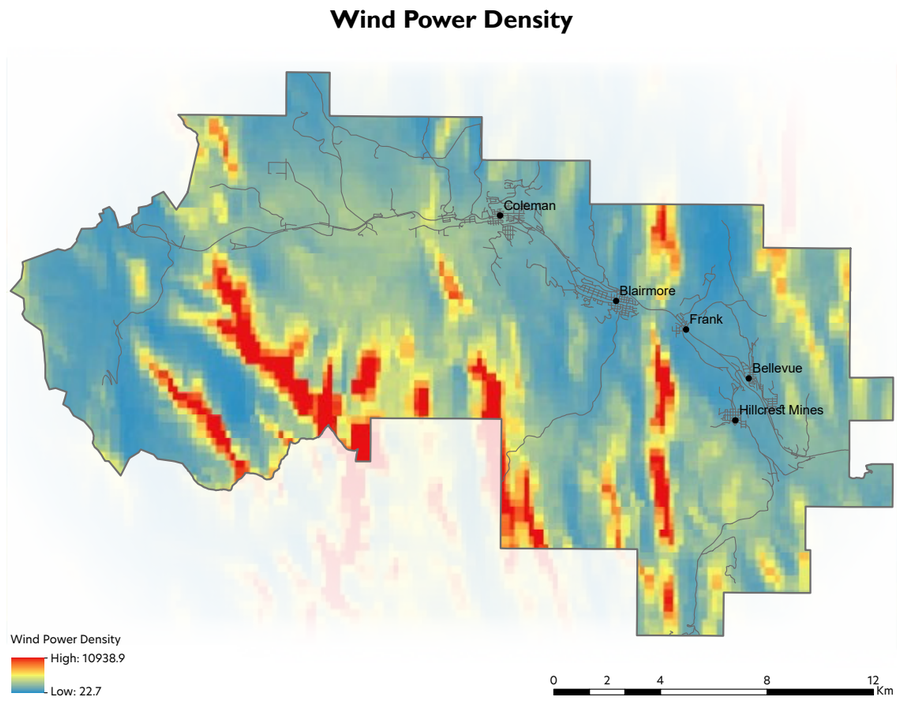


Figure 22: This map shows the wind power density for MCNP.

2.7 Transportation & Traffic

Road Network & Traffic

Transportation within MCNP has a strong focus on the car, with Highway 3 being the major connector between communities. Currently Highway 3 is busiest at the intersections leading into Blairmore, as shown in Figure 23. However, that will change as Alberta Transportation has plans for a highway twinning (Alberta, 2019). The highway twinning includes a highway bypass south of Coleman and would ultimately create two roads: the main highway, and a secondary community road that would connect all main streets together, as shown in Figure 24.

Road Heirarchy & Traffic Count

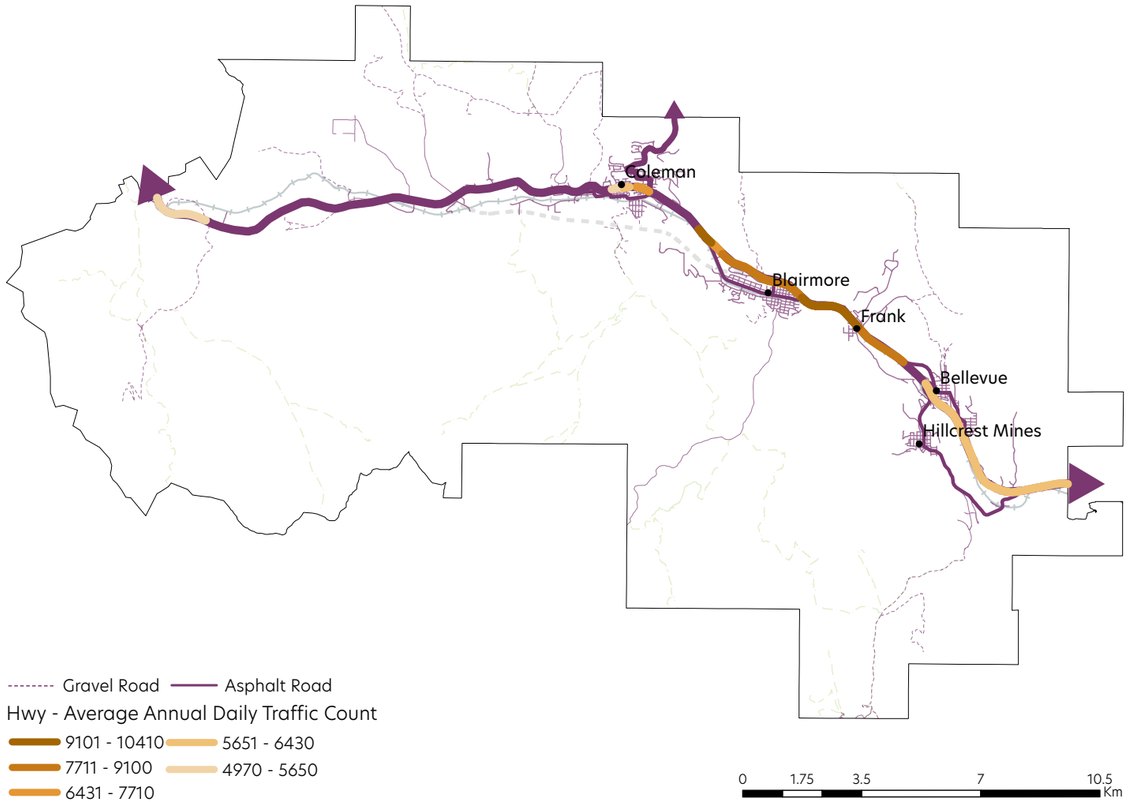


Figure 23: This map shows the heirarchy of roads and the traffic count along Highway 3.

Alberta Transportation Highway Twinning

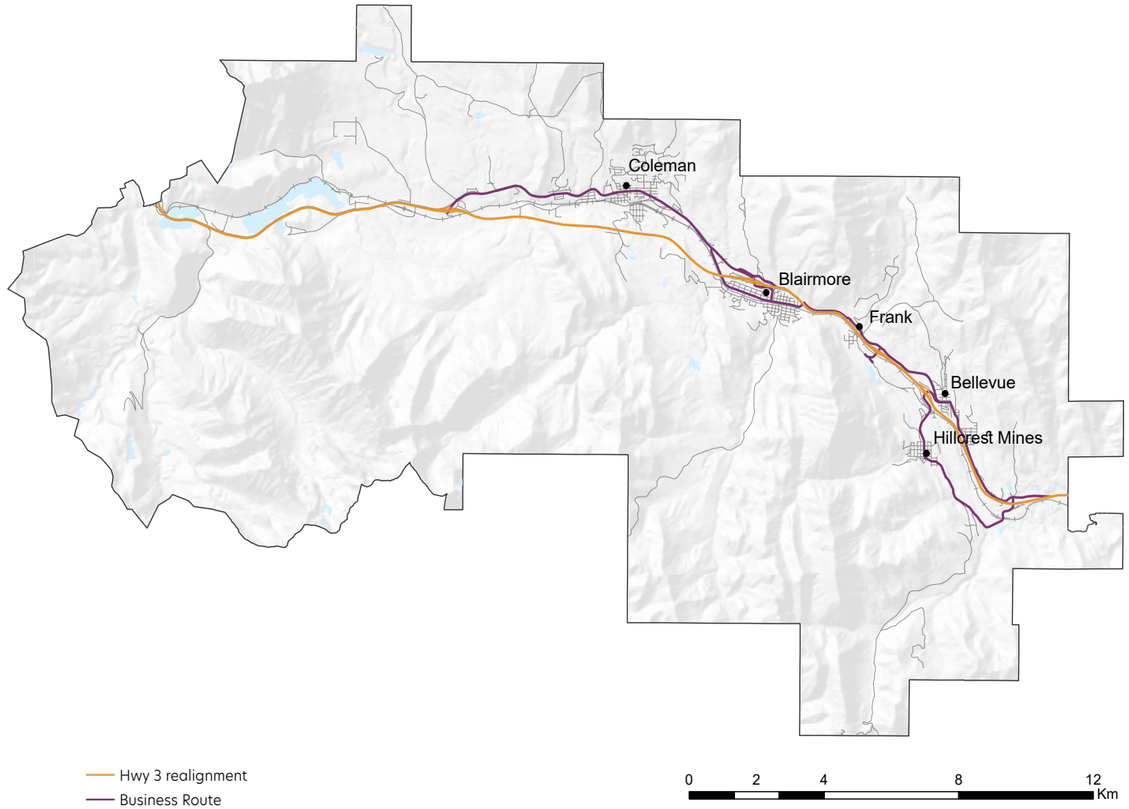


Figure 24: This map shows Alberta Transportation's plans for the highway twinning (in orange) and the new community road (in purple).

Road & Sidewalk Conditions

Road conditions within MCNP vary, however most streets are wider than the 3m width that is needed. Figure 25 shows the road condition of Highway 3 as it passes through Coleman. This portion of Highway 3 is inconsistent with sidewalk placements; in some areas, residential walkways lead onto the shoulder of the highway (with no sidewalk), as shown in Figure 26; and other areas where the sidewalk appears and then abruptly ends, as shown in Figure 27. With the proposed highway twinning, there is space available to add sidewalks and bike infrastructure to the current road.

Highway 3 - Coleman

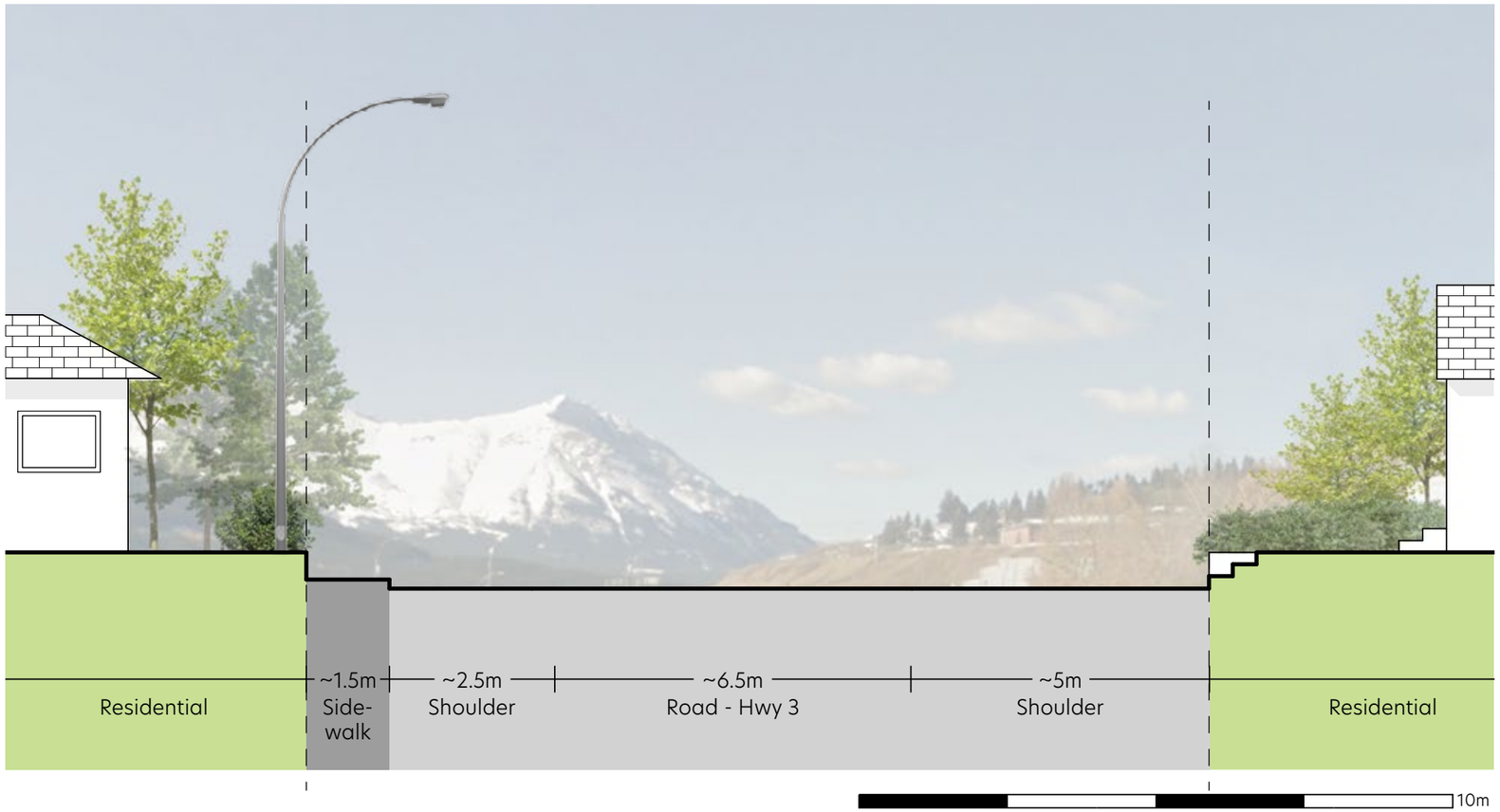


Figure 25: Section through Highway 3 as it passes through Coleman.

Google Streetview. (2014)

Google Streetview. (2014)

Figure 26 & 27: The right image shows how residential houses lead onto the shoulder of the highway. The left image shows the inconsistencies in sidewalk placement along highway 3, ending abruptly and not leading anywhere.

Figures 28 & 29 show the historic main streets of Coleman and Blairmore. Both streets have wide roads, on-street parking, and wide sidewalks. However, in Blairmore only one side of the road is active with storefronts while the other side is underused greenspace. Wide roads encourage vehicles to drive at faster speeds, but there is enough space to expand bike infrastructure, create buffers, and create a more enjoyable main street experience.

Blairmore Main Street

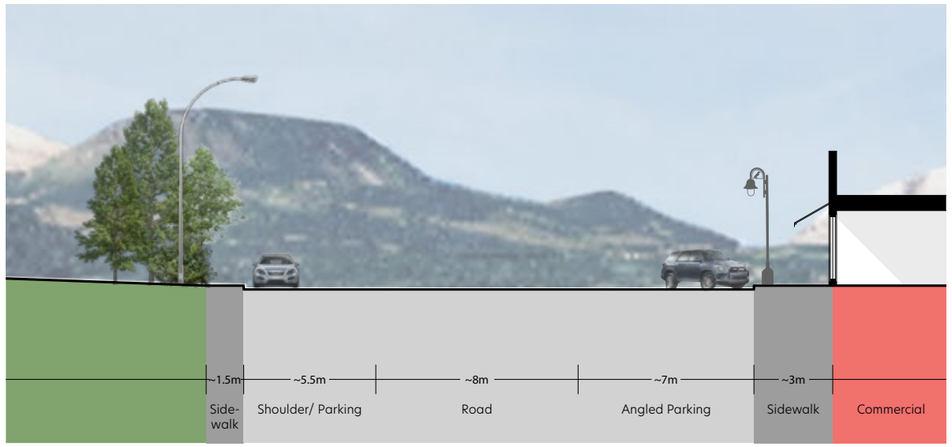


Figure 28: Section through Blairmore main street.

Coleman Main Street

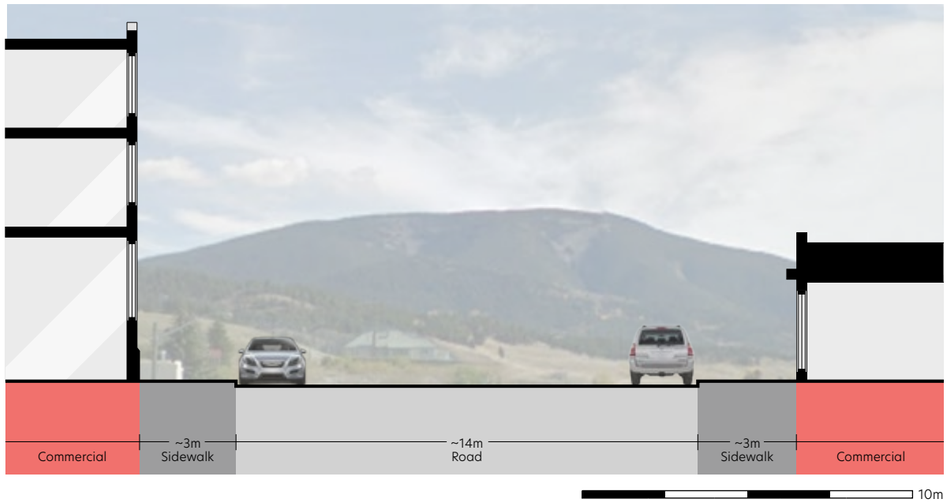


Figure 29: Section through historic main street in Coleman.

Lastly, we looked at the condition of the residential streets, as shown in Figure 30. The main typologies that stood out from residential streets were the wide roads and on street parking. We noticed that not all residential streets have sidewalks, but that sidewalks may not be necessary in all residential areas. We heard from community members that the lack of residential sidewalks was not an issue as the streets are calmer, and that they would prefer sidewalk upgrades/additions in busier areas.

Something that is consistent throughout MCNP is the priority given to the vehicle. It is quite difficult and sometimes dangerous for pedestrians or cyclists to access certain areas of the community. The future twinning of the highway might be an opportunity to create a safer community road (the current Highway 3) and will be discussed in the mobility section of this report.

Typical Residential Street

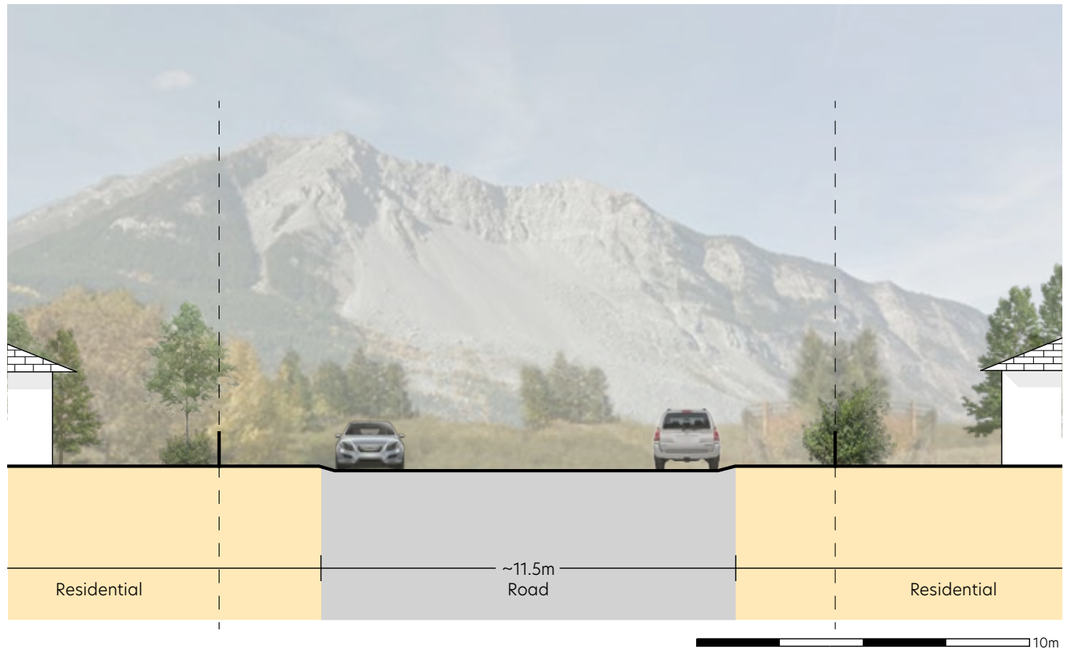


Figure 30: Section through typical residential street in Crowsnest Pass.

2.8 Water Infrastructure

Treated Water

Treated water in MCNP is produced from 8 wells and 4 reservoirs; the reservoirs being located in Coleman, Blairmore, Bellevue, and Hillcrest, as shown in Figure 31. These wells and reservoirs are all connected together through one system.

Treated Water Infrastructure

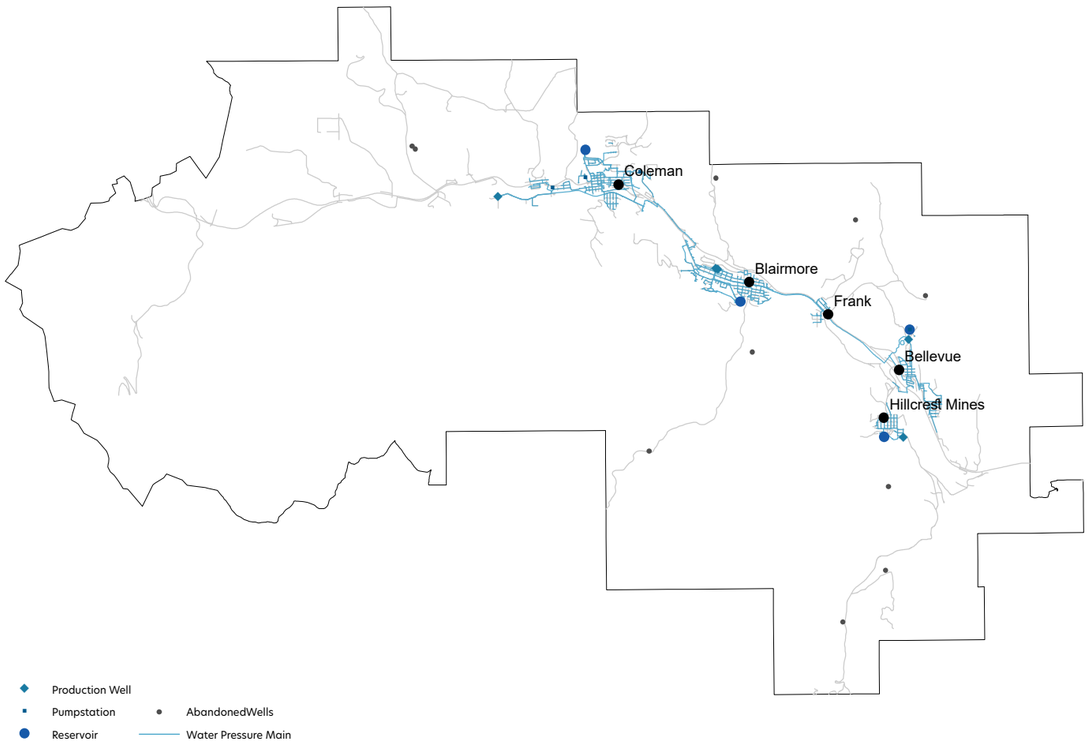


Figure 31: This map shows the treated water infrastructure within the Crowsnest Pass.

Wastewater Treatment

Unlike treated water, wastewater treatment is split into two systems, as shown in Figure 32. The first system services Coleman, Blairmore, and Frank, while the second system services Bellevue and Hillcrest. Both wastewater treatment facilities are currently not being used to capacity, with the Coleman, Blairmore, and Frank system being used at 50% capacity, and the other at 60% (Crowsnest Pass, 2019).

Before amalgamation, it was costly to operate each town's infrastructure independently. However, there are also challenges from the amalgamated system: the servicing area remains large and spread out, and the legacy of having independent systems complicates the matter. However, an advantage of the MCNP is that its treatment facilities have significant remaining capacity.

Wastewater Treatment Infrastructure

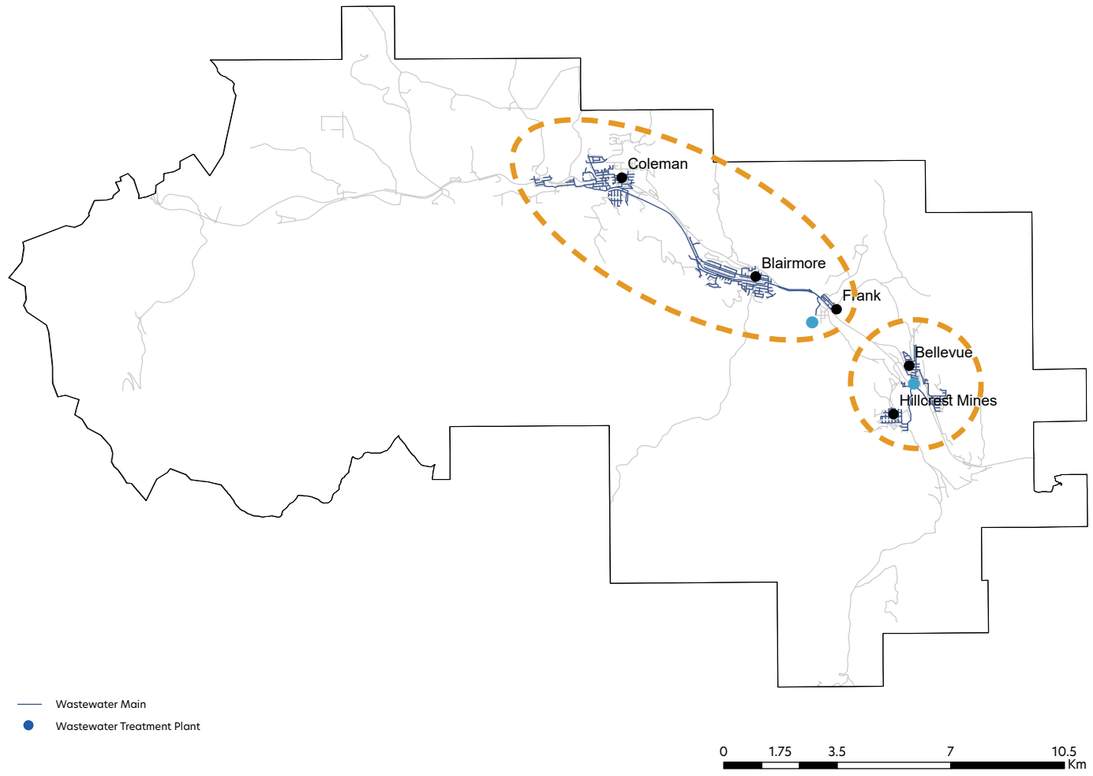


Figure 32: This map shows the waste water infrastructure within the Crowsnest Pass.

2.9 Power & Gas Infrastructure

Transmission Lines, Power Lines, Pipelines, Gas Lines

Other infrastructure systems explored were transmission lines and power lines, Figure 33; and gas lines and pipelines, Figure 34. From this data we can assume that many buildings and homes may be serviced by natural gas (ATCO Gas); and we know that there will be some setbacks for development that takes place close to the pipeline.

Similar challenges to the water infrastructure are the large footprint and the original planning of the townsites that make servicing difficult and costly. In order to plan for future development we have determined a developable area based on topography and proximity to infrastructure. By focusing development in these areas we can develop at a lower cost as infrastructure systems will be expanded minimally.

Transmission Lines & Power Lines Infrastructure

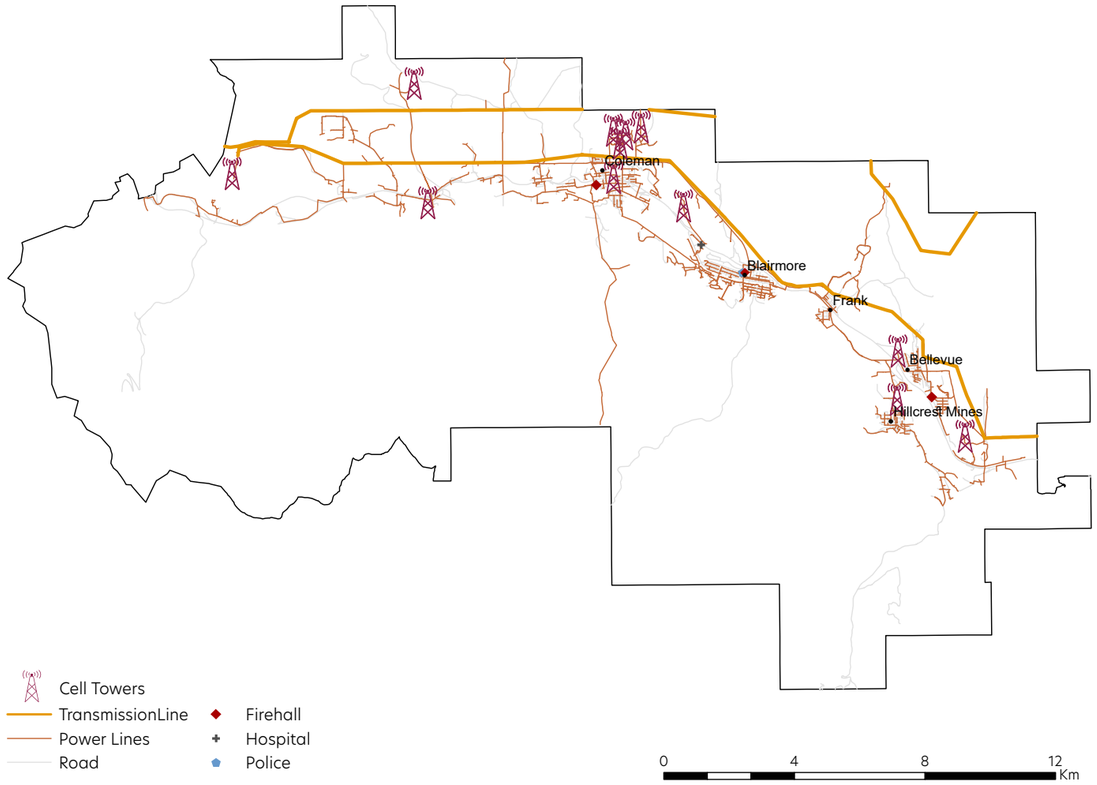


Figure 33: This map shows the transmission lines and power lines within the Crowsnest Pass.

Pipelines & Gas Lines

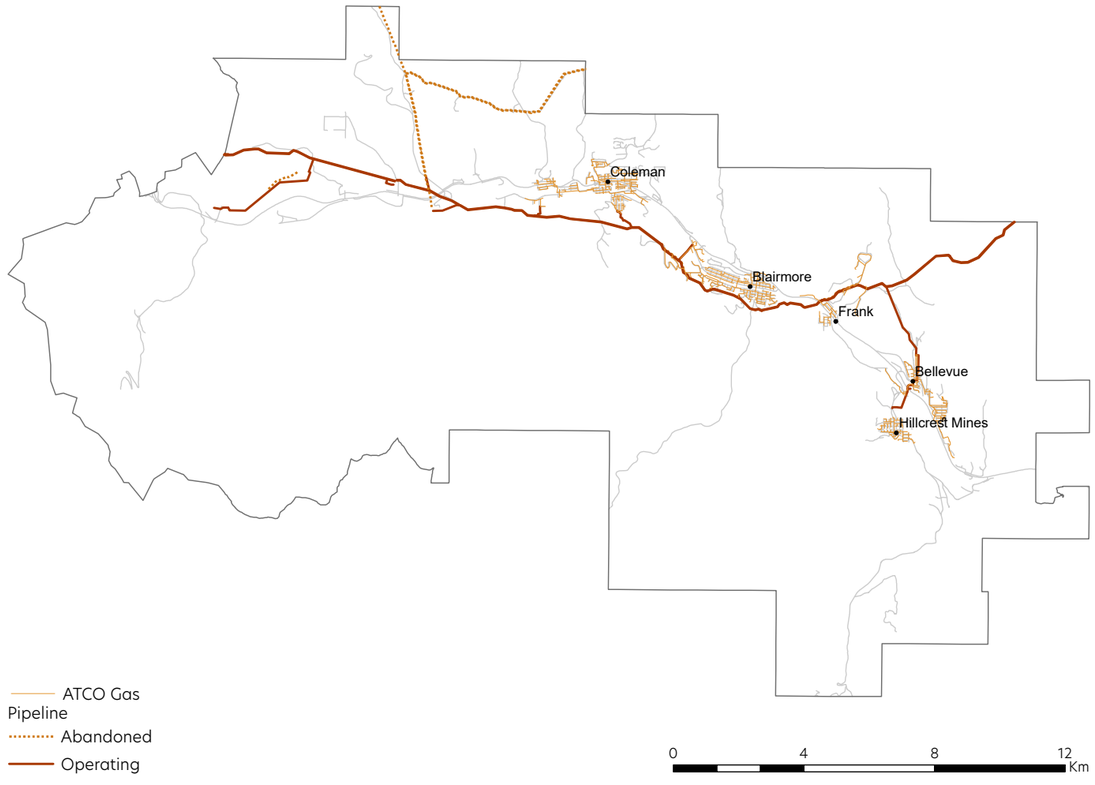


Figure 34: This map shows the location of pipelines and gas lines within the Crowsnest Pass.

2.10 Land Ownership

A Majority of Crown Land

The two main distinctions for land ownership are 'public' or 'private' ownership, but there are also other nuances to consider. For example, there are different allowances/restrictions for municipally, provincially, or federally owned land. According to the Alberta Land-Use Framework (2008), 'White Areas' are areas of settlement and private land ownership, while 'Green Areas' are public Provincial Crown Lands. To understand the relevant issues and opportunities, we mapped land ownership types and boundaries. Data was collected from the Municipal Development Plan (MDP) and Eastern Slope Land Use Zoning (Figure 35). As shown in Figure 36, 73% of the Municipality is Provincial Crown Land (60% of which is 'Forest Reserve Area' and 6% is 'Provincial Recreational Areas and Parks'). The remaining 27% of land (the White Area) is not owned by the Province. It is owned by private landowners and the Municipality of Crowsnest Pass: note the linear distribution of this area along Highway 3. It is only within this White Area that development may occur, however, local zoning must also be considered. Presently, 60% is zoned to allow for development, while 37% is zoned as a Non-Urban Area. Land may be rezoned, but it is still an important consideration. One additional factor is the designated historical sites, which are protected from development to a degree. To conclude, the municipal boundary of the Crowsnest Pass is much larger than the developable land allowed, based on land ownership and land use zoning.

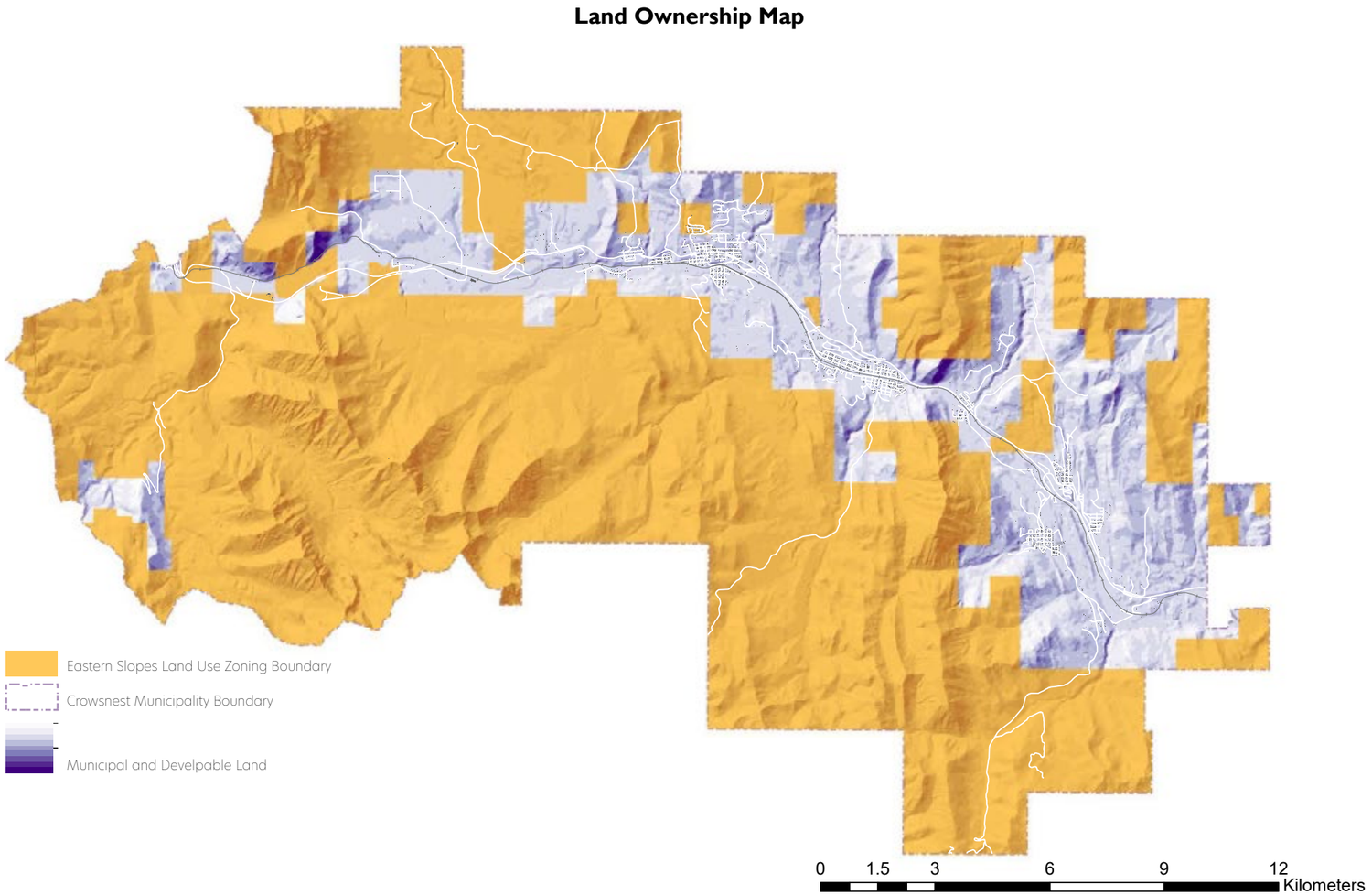


Figure 35: This map shows the Crown Land and Municipal Land with in the MCNP boundary.

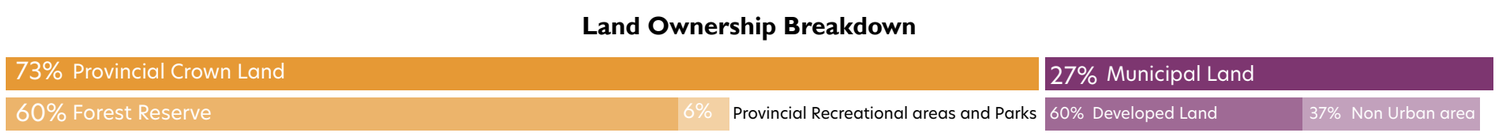


Figure 36

2.11 Human Footprint

A History of Human Activities

The 'human footprint' is considered to be areas where human development or concentrated disturbance has occurred. This includes urban and country residential areas, forested areas, industrial areas, and mines. As shown in Figure 37, there are abandoned underground mines located underneath developed areas. These underground mines should be considered as a potential limitation and risk to future development. Industrial areas, primarily located along Highway 3, are important to consider as industrial uses can cause soil pollution; although this is only a correlation and not based on local studies of the sites.

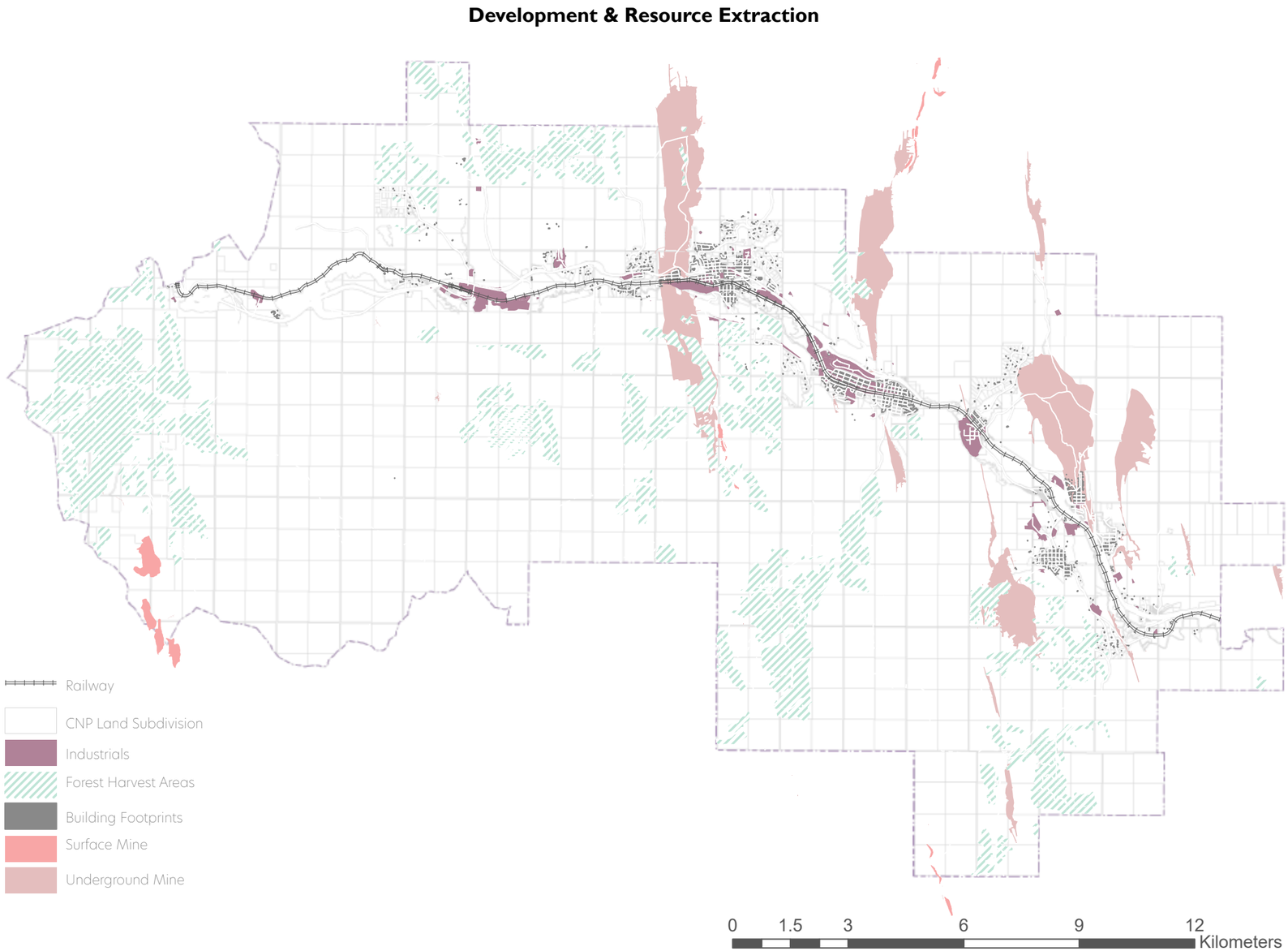


Figure 37: This map shows the human footprint of the Pass (ie. industrial, harvested forest area, building footprints, and mines)

2.12 Municipal-Scale Land Use Analysis

Various Activities Along the Highway

The spatial distribution of land uses across the municipality is an important consideration: patterns may reveal issues or opportunities. For example, a cluster of industrial land uses may be an economic opportunity, or, may pose issues if it is beside an incompatible use. Figure 38 shows land uses mapped with representative circles. Each circle represents area coverage and location. From many land use categories, they were simplified into: commercial, industrial, (urban) residential, country residential, institutional (and public), and parks and open space. The pattern of land uses roughly matches the alignment of Highway 3, with some country residential pockets existing further from the highway. Commercial and institutional uses occur primarily within residential areas, and industrial uses are only located outside of them. Park uses occur within and outside of residential areas. Industrial, park, residential, and country residential locations range from small to large, but institutional and commercial land uses are all relatively small. Thus, there are patterns between these various land use types.

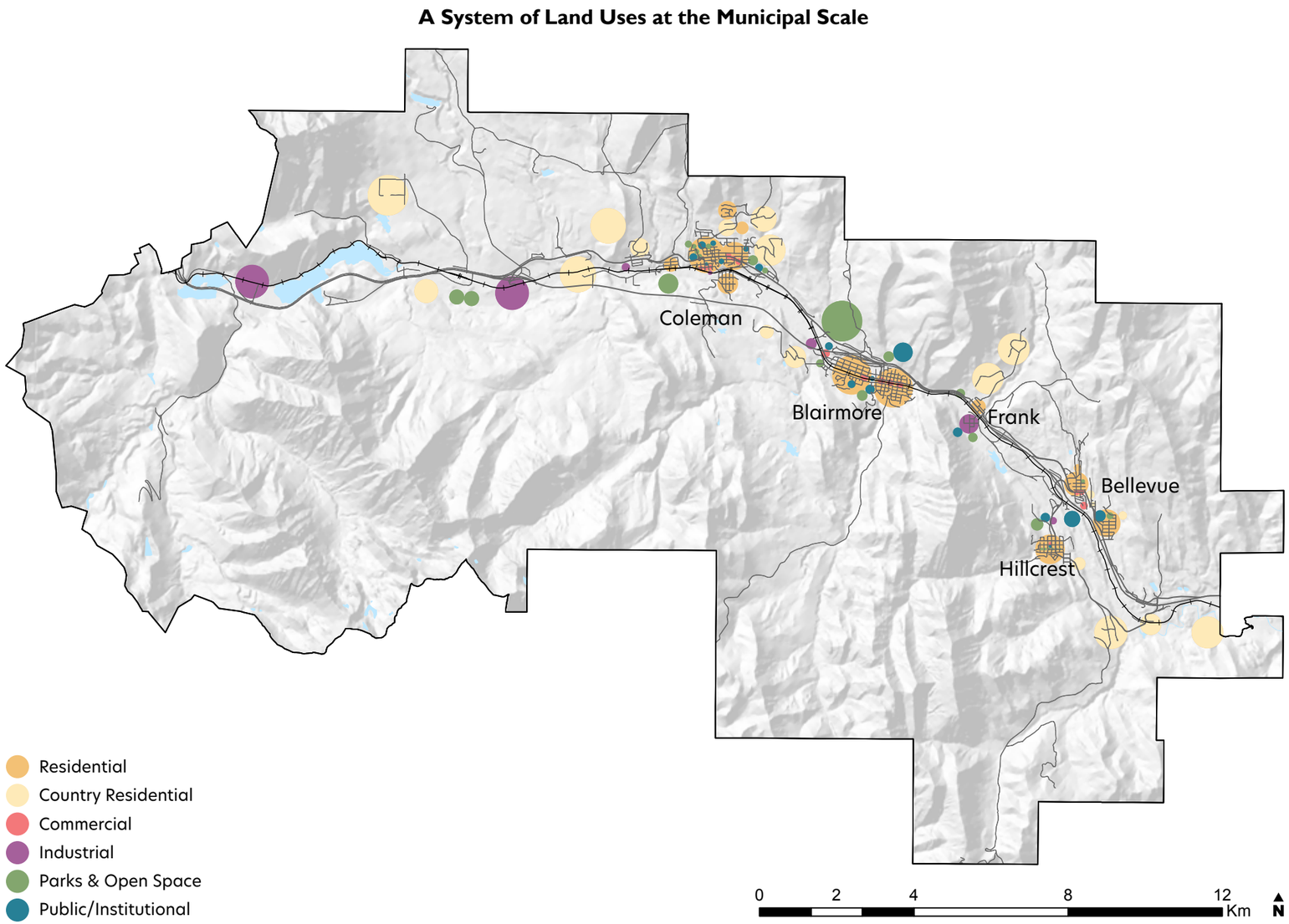


Figure 38: A diagrammatic land use map of the municipality.

Economic, Social, and Residential Systems

Between these six land uses, three systems may be created considered:

1. Residential (residential & country residential)
2. Economic (commercial & industrial)
3. Social (parks & institutional)

These systems are isolated and independently shown in Figure 39. The size of the circles were enlarged for visibility. First, the residential system. The urban residential areas only exist at the five community locations; country residential areas are found adjacent to and far from the community areas. Two pockets of country residential to the west are the most isolated. Next, the economic system. Blairmore and Coleman have the majority of the commercial land. Frank and Hillcrest have some industrial land, but the largest industrial areas are out in the Sentinel area west of Coleman. Lastly, the social system. The communities have institutional and park land of varying amounts, but little of each type exists far from the communities.
In conclusion, land use types and distribution correlate (positively and negatively) with the highway alignment,

community locations, and other land use types. Having commercial, park, and institutional land uses within community areas and not outside them is an opportunity for making highly livable communities, but the separation of country residential uses may imply a service accessibility issue for residents of those areas.

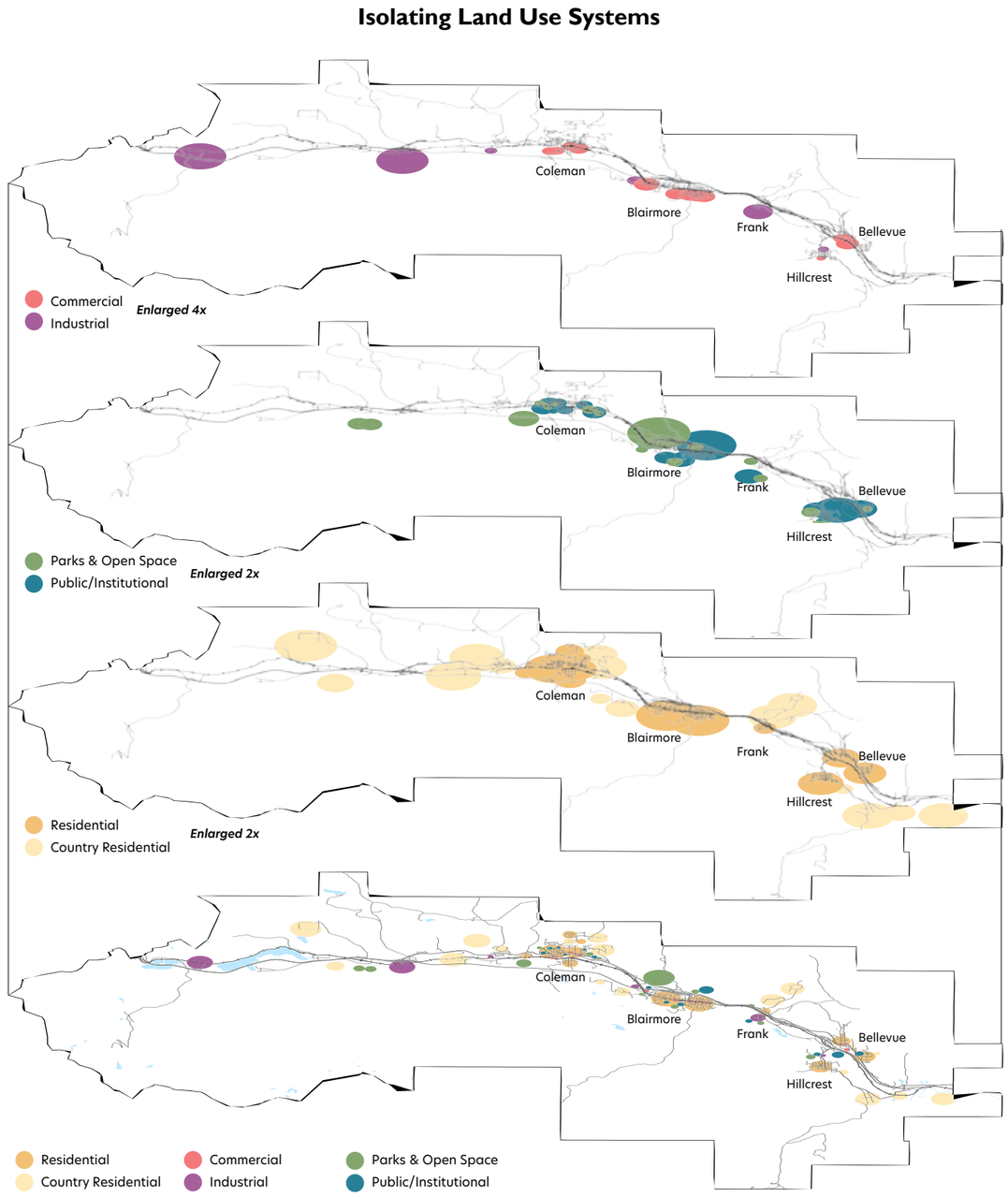


Figure 39: Layered land use diagram.

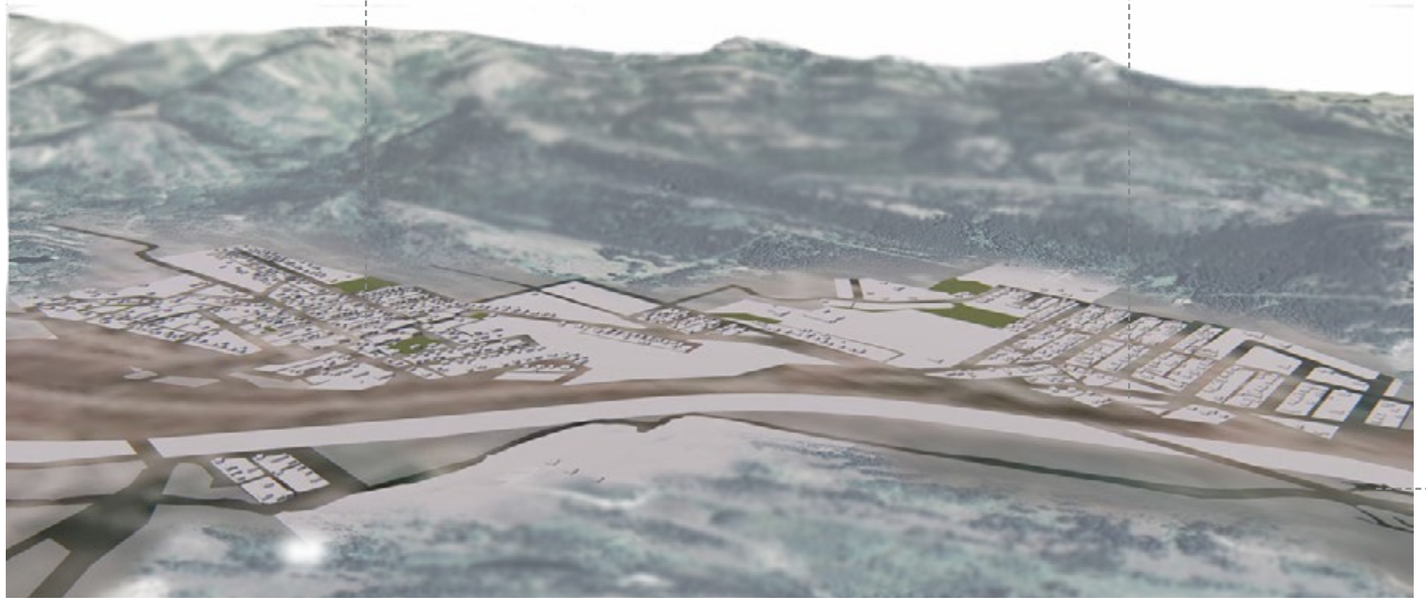
2.13 Community-Scale Land Use Analysis

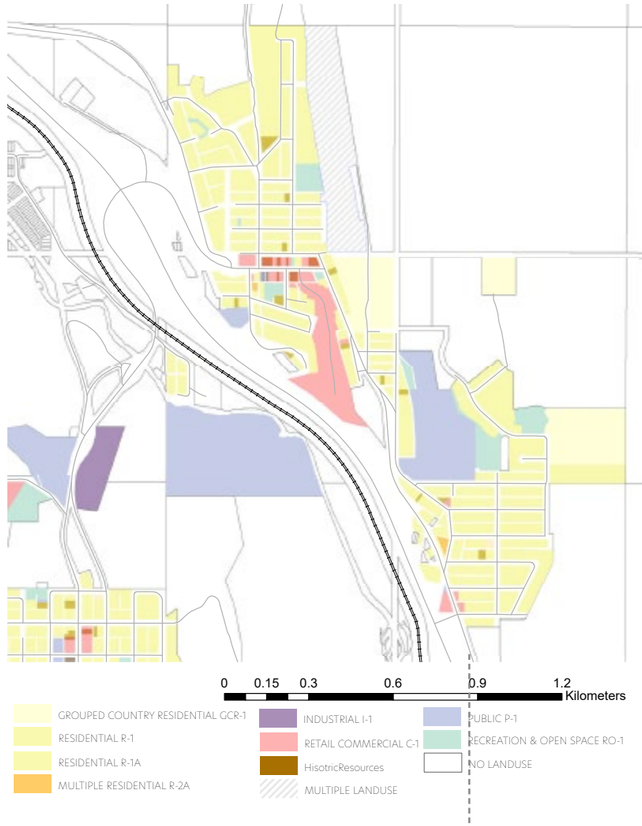
Bellevue

Bellevue is located at the eastern entrance of the municipality. It exhibits a unique socio-cultural environment articulated with multiple historical and recreational resources. As shown in Figure 40, single-family housing is the predominant housing option comprising 80% of the land development. This indicates low housing density and diversity within the community. Commercial land-uses comprise 10% of the developed area; most commercial parcels are along the historic main street, but there are several near the southern entrance to the community. The Bellevue Underground Mine Tour is a single, very large site that disproportionately increases the amount of commercial land. Thus, the amount of usable commercial land for other enterprises is considerably smaller. However, there is still commercial capacity because many lots are inactive or undeveloped. Residential accessibility to services is low, revitalizing the main street and intensifying development in proximity to the main street may be beneficial.

Old Commercial Street- Bellevue

Underground Mine Tour- Bellevue





Community Camp Ground- Bellevue

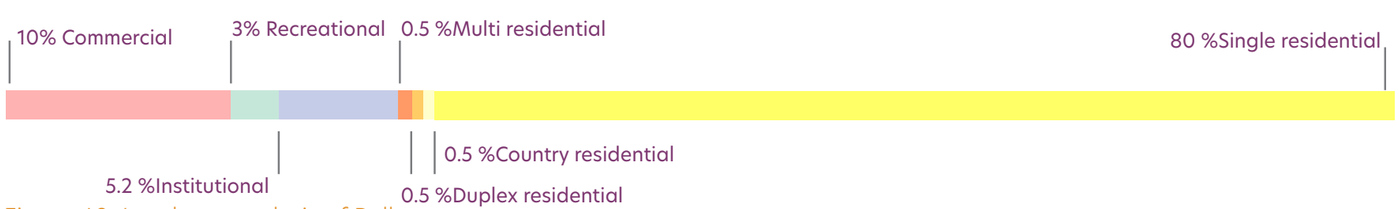


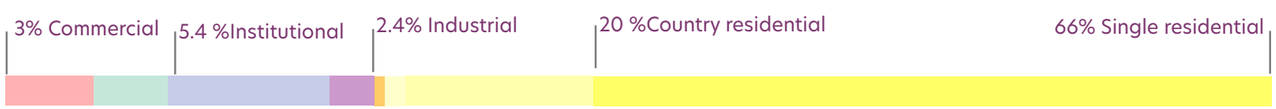
Figure 40: Land use analysis of Bellevue

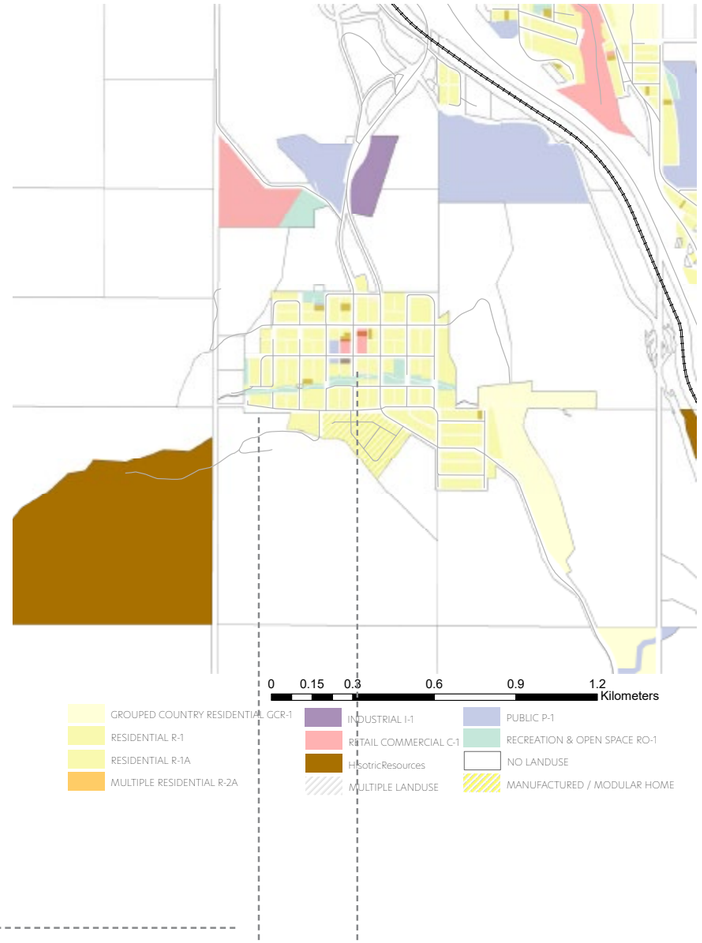
Hillcrest

Figure 41 shows how Hillcrest is a residential community with a small commercial area at its core, and there is linear park space on either side of a stream. Three percent of the land is zoned as commercial, but much of that area is undeveloped or unoccupied. This results in residents having inadequate access to services and amenities. Low-density residential comprises 86% of the land (66% residential, 20% country residential). To the north, there are institutional (Hillcrest Mine Memorial and Cemetery), industrial (developed), commercial (not developed), and park land uses (no facilities). Thus, the residents of Hillcrest are underserved by park and commercial space, but the zoning offers some opportunities for these uses.

Commercial Street - Hillcrest

Miners Club - Hillcrest





Pedestrian Bridge- Hillcrest

Vehicle Bridge- Hillcrest

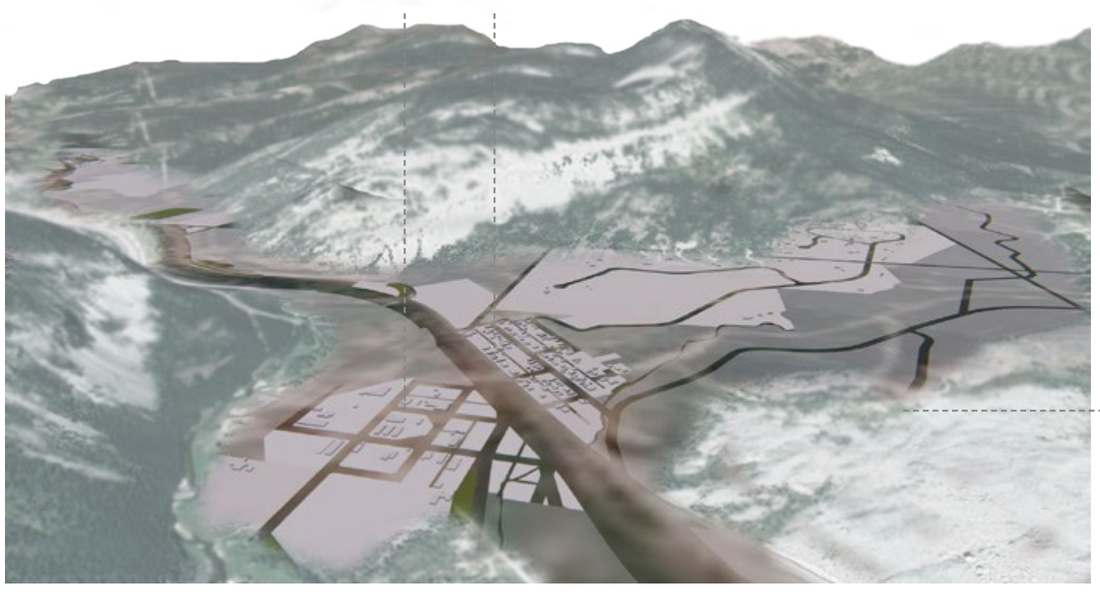
Figure 41: Land use analysis of Hillcrest

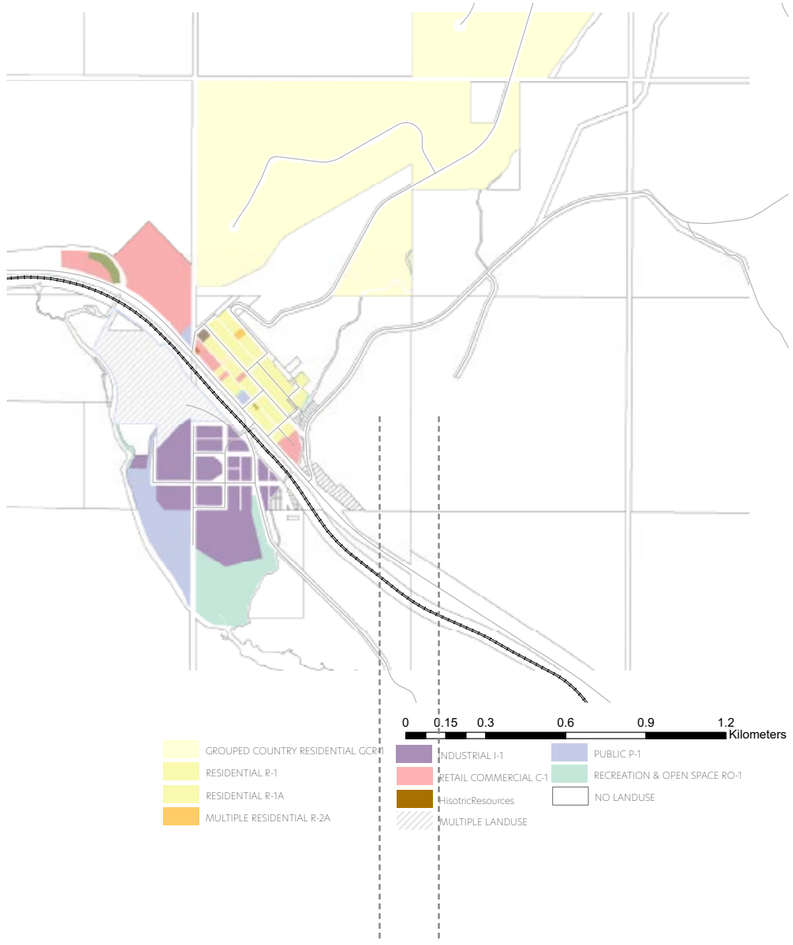
Frank

As shown in Figure 42, Frank is located along the highway with residential sectors to the north and industrial uses to the south. Beyond the urban residential area along the highway, there is a large area of country residential to the northeast. The widespread country residential housing causes inefficient land servicing and utility distribution. Also, the community is lacking a diverse commercial sector and quality amenities. Commercial land covers 9% of the area, but most of this is related to a single undeveloped parcel (on the north-west corner of the site). In terms of opportunities, being along the highway brings about a chance for commercial expansion but at the same time, it poses safety issues when it comes to public realm quality concerns. At the south side of the highway, a big chunk of land has been assigned to industrial uses, however, it is being moderately used.

Industrial Area- Frank

Commercial Street along Highway- Frank





Frank Slide Interpretive Centre- Frank

Frank Slide Trail- Frank

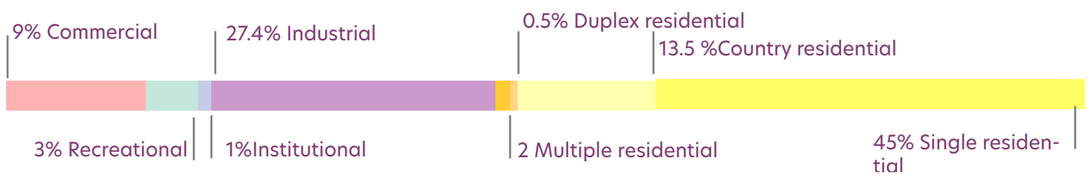


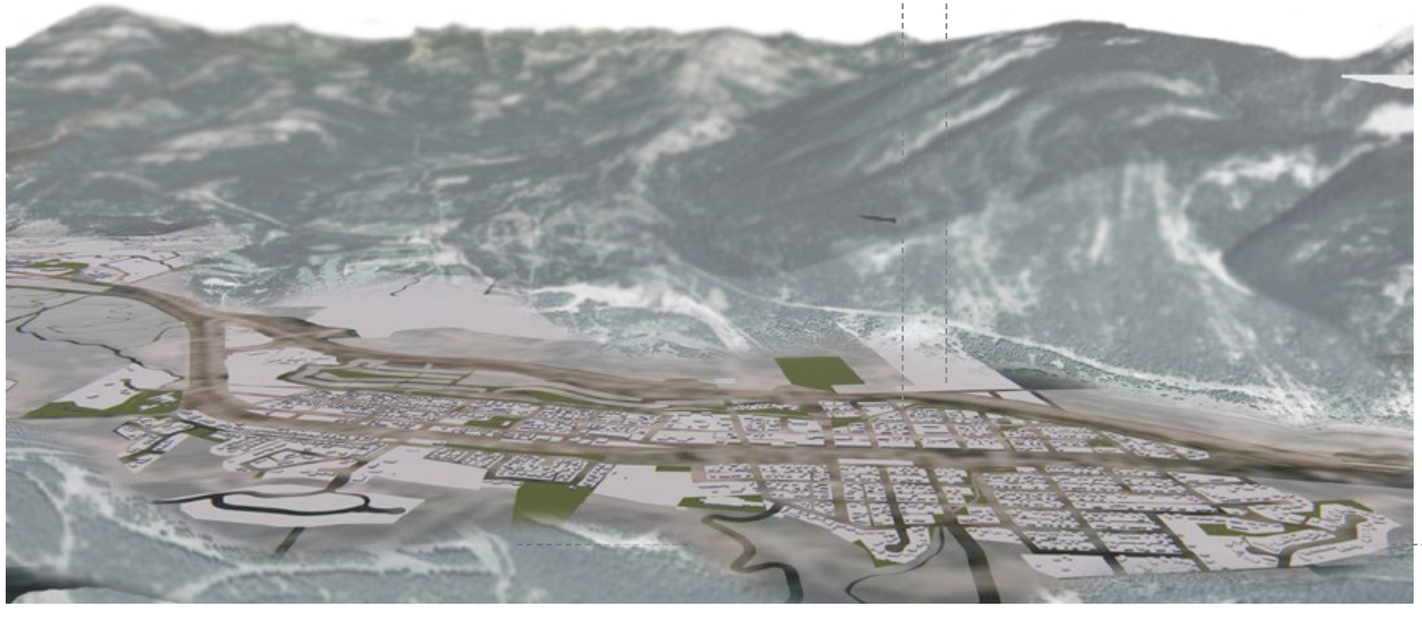
Figure 42: Land use analysis of Frank

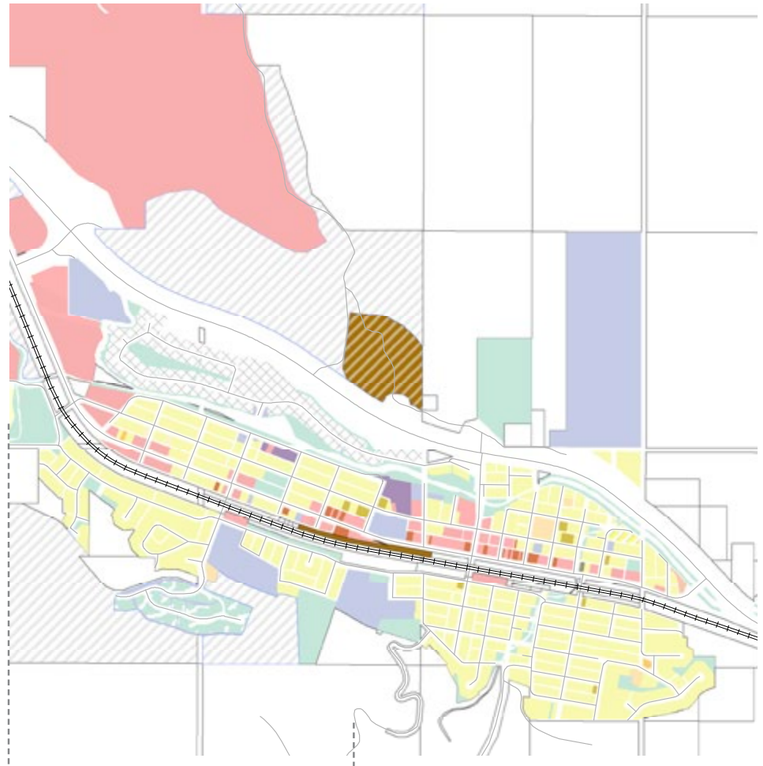
Blairmore

The community of Blairmore, with the highest population, offers few housing alternatives due to the predominant single-family housing, constituting 68 percent of the land. This amount in comparison to the 5.3%of multiple residential-style, implies the low density and low diversity of housing. There is little industrial, but 5% institutional land use, for various public uses. The large commercial parcels around the grocery store and a golf course in the North-West corner contribute to the commercial being 12%. The commercial corridor at the upper edge of the rail line provides a vital and well-connected network to serve the whole community. However, the recreational use at the southern edge, near the Powderkeg site area, is under-serviced and lacks appropriate accessibility. Therefore, transformational uses, revitalization, and interpretation in this area may be encouraged. Similarly, the open space network inside the community and at the edge where it expands outward needs to be connected via community trail expansion and requires public realm improvement.

Historic Commercial Street- Blairmore

Community Trail- Blairmore





Lost Lemon Camp ground- Blairmore

Powderkeg Ski Area- Blairmore

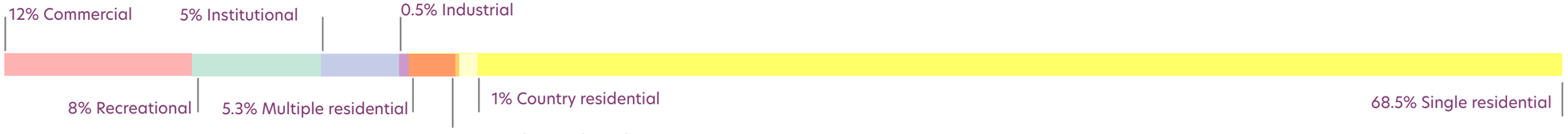


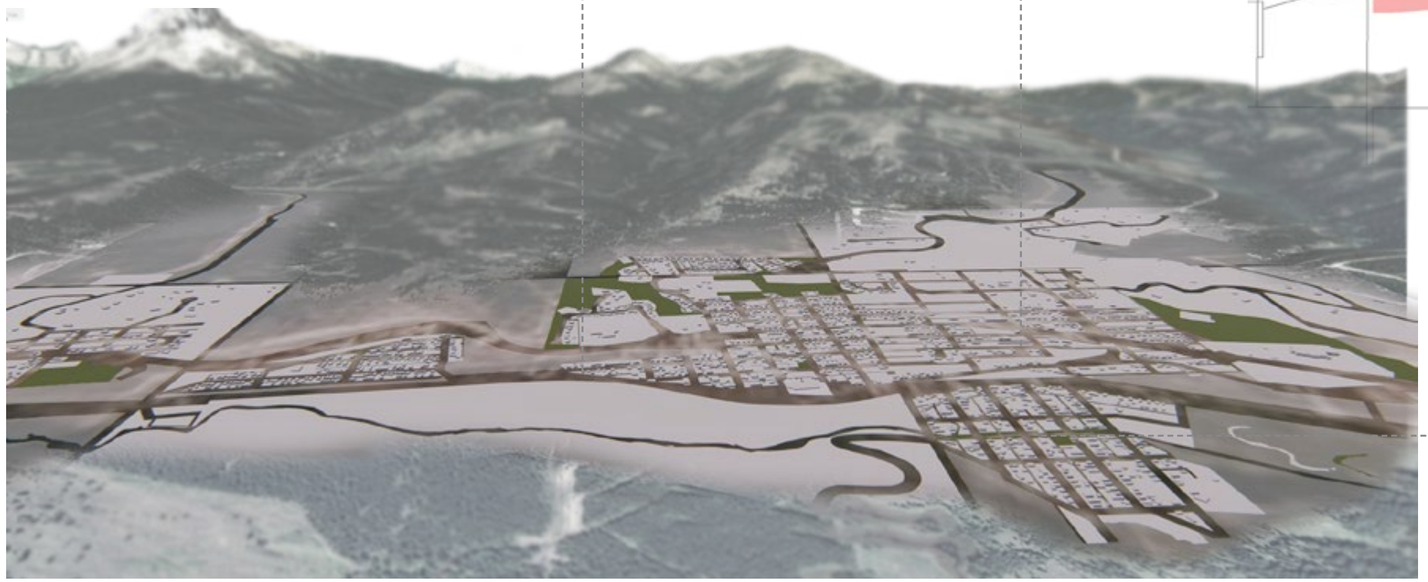
 Figure 43: Land use analysis of Blairmore

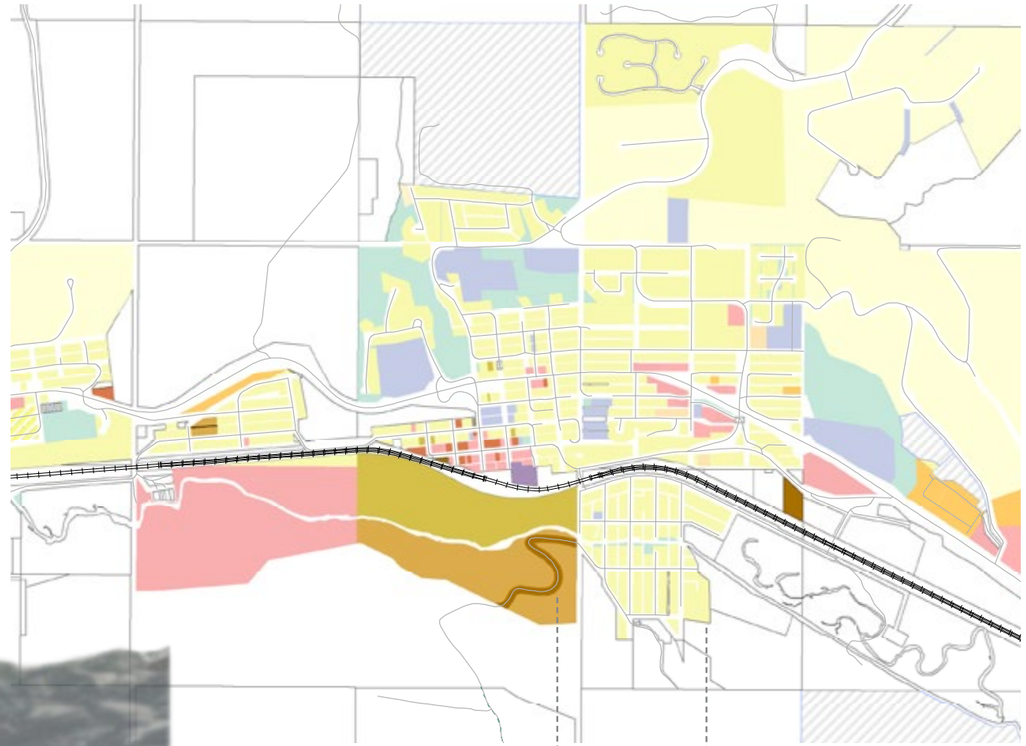
Coleman

Coleman is located at the western entrance of the municipality and represents immense historical resources ready for revitalization and adaptive reuse. It has a relatively good mix of land use types, but the residential is still mostly single-family. The commercial areas are divided between the Main Street and on-highway commercial. The school sites and their fields comprise large institutional and recreational areas. Also being the second highly populated community, it seems to need more variety in residential types. The commercial network has low diversity and could be improved along the highway. Furthermore, most of the open and public spaces, including the recreational areas at the edges, are disconnected from community services and other amenities within the community.

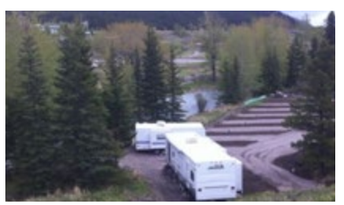
Historic Commercial Street- Coleman

Community Trail- Blairmore





Community Trail- Blairmore



Coleman RV Campground- Coleman

Figure 44: Land use analysis of Coleman

2.14 Building & Parcel Typologies

Diversity of Residential Typologies

In this section we examine the size and geometry of property parcels and blocks for residential, commercial, and institutional land uses. Parcel and block attributes must be considered as they can have significant social and economic implications.

Our study is summarized and shown in Tables 1 & 2, with parcels on one axis and blocks on the other. Most common parcel types accommodating residential uses, including single-family detached units, are categorized into three principal types in relation to narrow to wide block types. These blocks are subdivided into narrow parcels and arranged along the linear service corridors, highway, and commercial areas. Rectangular blocks as another category are subdivided widely and narrowly, forming rectangular parcels around the historical dense core area. In some communities, such as Hillcrest, the arrangement of blocks and subsequent parcel types transform to square type to accommodate the final composition of the built fabric.

Multi Family Dwellings-Blairmore

Detached Single Family House-Bellevue old main street

Multi Family House-Blairmore

Single Family House-Frank

Residential Building & Parcel Typology

Residential

Block Types

Parcel Types

Narrow

Approx length 30m-35m width 7.5m-10m

Rectangular

Approx length 30m-35 width 10m-18m

Combination

Narrow

Approx length 150m-180m width 60m-80m

Square

Approx length 75m-90m width 75m-80m

Rectangular

Approx length 85m-120m width 55m-85m

Combination

Others

Table 1: Analysis of residential building and parcel types.

Diversity of Commercial, Industrial, and Institutional Typologies

For commercial land uses, most of the blocks follow a linear arrangement and are subdivided narrowly. There are a few ultra-long blocks found widely along the highway or around the core and historical main streets. Also, few rectangular parcel types emerge in relation to the predominant block composition in each community at the edges. Institutional parcels are often larger (for example, to fit schools) but are usually rectangular. Industrial parcels are often larger, and less rectangular. Almost all buildings in the Crowsnest Pass are under three stories.

In summary, parcel typology studies indicate that some of the parcel attributes such as narrow format subdivision in the core area allow for commercial variation and expansion of the service. Similarly, potentials such as walkability and the possibility for densification are brought about by general block size and proportions.

Industrial Sector- 17 Ave- Coleman

Cowsnest Museum-Coleman High school Building

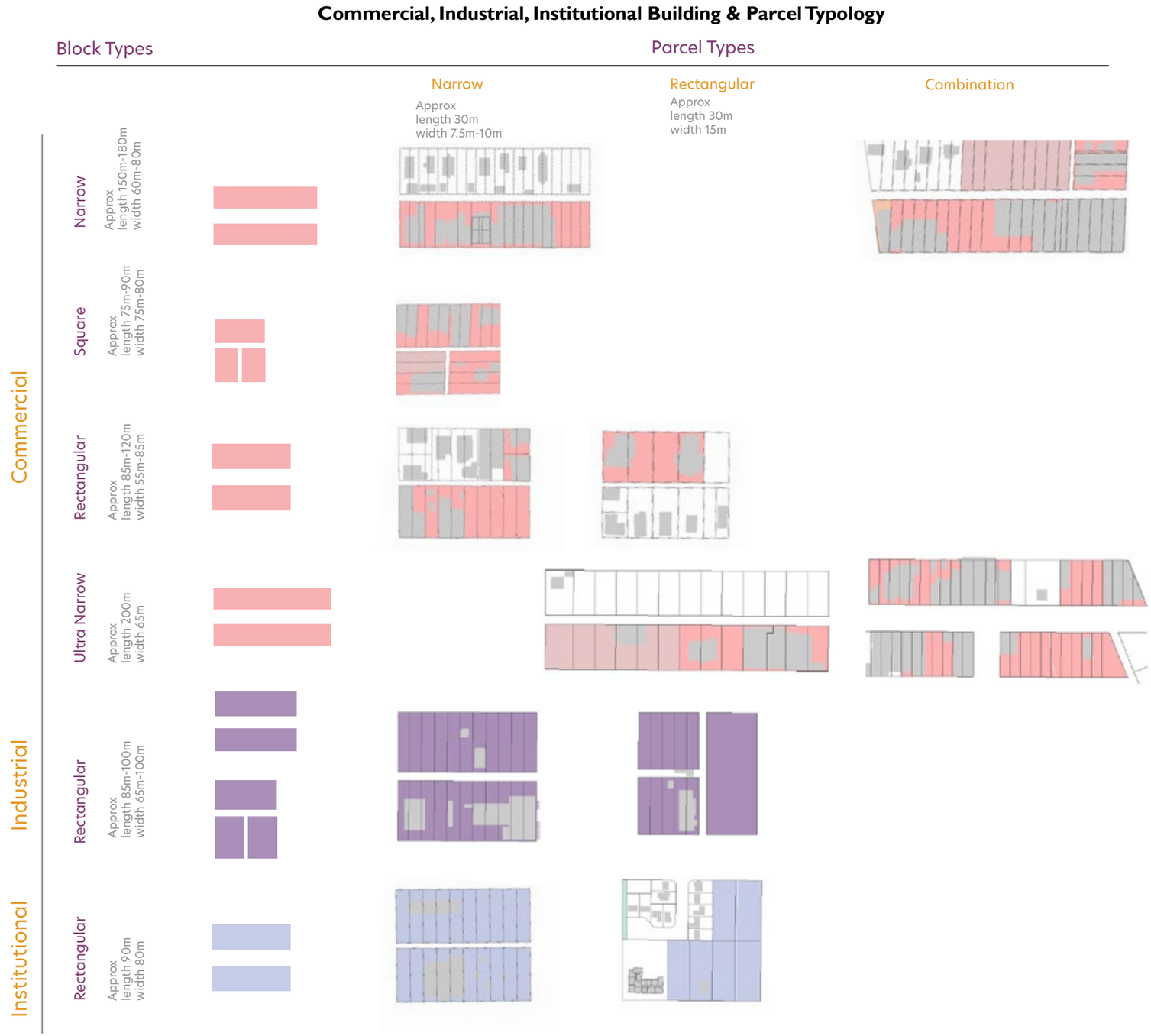


Table 2: Analysis of commercial, industrial, and institutional building and parcel types.

Google Streetview. (2014)

Homogeneous Housing and Service Inaccessibility

In summary, our zoning study has revealed that a primary concern for every community is a housing landscape that lacks diversity, almost entirely consisting of single-detached or country residential zoning. This typology is in conjunction with centralized infrastructure, contributing significantly to the lack of community services, disconnected mobility, and underserviced open spaces. The most common issues associated with public and commercial zoning, in all five communities, include: low diversity of the commercial sector, under serviced open spaces and recreational areas, a fragmented natural landscape, and a need for public realm improvements. However, historical sites and resources, high-quality natural environment, and immediate access to the utility in some underdeveloped areas offer a new opportunity for land-use redesignation and quality improvements.

3. Public Engagement

3.1 Approach & Process

Engagement During A Pandemic

Our community engagement process included consultations from various groups throughout the project. These groups included a 'steering committee' (of community members representing various stakeholder groups), experts from the municipality and development board, and the general public. The purpose of our community engagement was to improve the quality and usefulness of our planning recommendations for the community. This was done in various ways by learning from local knowledge, incorporating feedback/ideas, and responding to priorities/values. Our approach was to be transparent, open, and respectful of community members at every step of the process. Due to the COVID-19 pandemic, all community engagement events took place virtually, but some discussions were safely conducted with municipal experts during the first site visit.

The community engagement process was completed in five steps throughout different stages of the project, and included different forms of engagement. It opened with an initial feedback from the steering committee, which had been followed by a public workshop. The workshop attempted to establish a trustworthy relationship in order to create meaningful participation and an effective opinion harvest. This process took place in the form of a Q and A workshop using Zoom and other online communication tools. A short questionnaire along with an online survey were designed to explore challenges and opportunities from the community's point of view. This process helped us to validate what we learned from our analysis and site visits.

The next phase included two steering committee consultations. One to provide feedback on our draft design concept, and the second to provide feedback on our final recommendations. The last two engagement opportunities took place in the form of a virtual Open-house, and a presentation to Council and planning staff at the municipality. Based on the feedback we received from the final three engagement opportunities, this final report has been created and shared with community members. This comprehensive engagement process provided us with constant feedback at various stages, and created a platform for genuine evaluation of public needs and interests.

Community Engagement by Phase:

1. Research and Analysis:

To determine the most important issues and opportunities in the MCNP

a. Preliminary site visit with Municipal staff to discuss issues/opportunities
b. Community workshop to uncover issues/opportunities
c. Presented research and analysis to steering committee for feedback

2. Draft Recommendations

Preliminary ideas to be evaluated by the community approval

a. Focus group with resource extraction community members to discuss ideas
b. Presented draft recommendations to steering committee for feedback

3. Final Recommendations

Final adjustments accepted and recommendations shared widely

a. Presented final concepts to steering committee for feedback
b. Shared posters at a virtual open-house for community feedback
c. Presented final concepts to Council and planning staff for feedback
d. Final booklet of recommendations made freely available online

3.2 Feedback Received

The two sets of questions were prepared to elicit feedback regarding the quality of the four main land use categories, including: Housing, Parks and Open Spaces, Economy, and Mobility. One set of questions was to discuss issues, the other to discuss opportunities. A brief summary of the feedback is provided here.

Housing

Regarding housing, the most challenging issue that all five communities are facing is low housing diversity. The community expressed how the lack of housing diversity has resulted in less affordable options. The lack of budget-friendly housing alternatives prevents the community from aging in place. The limited types and sizes being offered makes it difficult for new residents, including temporary workers and permanent families, to settle down. It has been mentioned multiple times by the community that there is always a need for short term rentals to accommodate weekenders and visitors.

Moreover, according to the residents, multiple highly serviced lands are available within the community for densification and diversification of the housing sector. They suggested that narrow lots in Coleman could be a great opportunity for new more compact development. They also mentioned that infill development can take place in backyards or by adding secondary suites.

Parks and Open Space

Regarding the quality of open spaces, major concerns centered around a lack of facilities, underutilized playgrounds, and disconnected trails. They noted the lack of a standard central area for community gatherings and the need for a dog park. Underused heritage buildings in disrepair and unattractive highway sightlines were also mentioned as leaving negative impacts on the community.

Regarding the opportunities, the majority of residents agreed that the Hillcrest Baseball Diamond offers potential for hosting large events. while parks like Fireman's Park have enough space to accommodate smaller outdoor events. They also talked about high quality viewscapes within all communities and suggested expanding recreational activities in these areas. Multiple comments mentioned the potential for expanding the trail system.

Mobility

The community raised safety concerns about access to the highway. They expressed that it is unsafe and difficult to cross the highway, both in a vehicle and as a pedestrian. On busy routes, gaps in the sidewalk and cycling network were identified as a safety and comfort issue. They also mentioned that community involvement for the Provincial highway realignment plans felt inadequate. Other concerns were about predominant motorized transportation systems, a lack of commercial spaces in convenient places, unsafe segments on the Crowsnest Community Trail, and a lack of signage and wayfinding for hikes and trails.

For an effective, safe, and enjoyable local street network, it was suggested that vacant lots make a street feel disconnected, more traffic calming measures need to be in place (especially at the intersections), and that some sidewalks require maintenance and improvements.

Economy

The tourism industry was identified as a promising opportunity, but challenges exist. Adding facilities for outdoor activities was expressed to be an opportunity with economic benefits for locals and tourism. Individuals expressed that the tourism value of the Crowsnest Pass as a regionally and nationally attractive destination was being undersold and that awareness of outsiders was lower than it should be. For the economics of real estate, it was expressed that not enough incentives or support for development were being provided. Also, some industrial locations along streams would be better served as recreational areas. Parking and access for visitors with RVs was expressed as important for the tourism economy, but there were also concerns about people parking their RVs in undesignated areas for weeks. Other opportunities to boost tourism were suggested such as supporting more all-season activities and the arts community.

Limitations and Gaps

Due to the COVID-19 pandemic, all presentations and public engagement sessions were held virtually. This allowed for a great amount of collaboration, co-creation, and discussion to happen with the community, but there were also limitations and gaps. Inclusivity may have been negatively impacted for those without easy access to a computer or those who may not be able to comfortably navigate the virtual process. For example, those with audio or visual disabilities, a low income, or unfamiliarity with computers would be disadvantaged. Despite these limitations, virtual options were still safer and relatively accessible for a diverse range of community members. The work schedules of resource extraction workers was an identified issue that was solved by setting up a dedicated focus group at a time that worked for them. Another strategy was to design the booklets and posters to be easily printable so that in addition to being available online for community members, the materials may easily be shared in-person by the Municipality once in-person activities resume as normal.

4. Issues, Opportunities, and Vision

4.1 Issues & Opportunities

Issues

Through research, analysis, and community engagement, several major issues have been identified. Please note that only issues pertinent to the scope and purpose of this report have been included.

- Limited housing supply
- Limited housing diversity
- Housing affordability
- Vacant dwellings
- Dwellings in disrepair
- Inaccessibility of shops, services, and daily needs
- Shortage of shop and service types
- Aging infrastructure
- Low workforce participation
- Below median income
- Shortage of child care facilities
- Shortage of senior facilities
- Shortage of hotel rooms
- Dangerous highway crossings (people and vehicles)
- Gaps in the sidewalk network
- Shortage of cycling infrastructure
- Specific unsafe locations along Crowsnest Community Trail
- Vacant heritage commercial buildings
- Some areas lack parks/community space
- Smaller communities lack recreation facilities
- Pathway signage unclear
- Trail conflicts between user types
- Heritage buildings in disrepair
- Albert Stella Memorial Arena closure
- Train traffic abrasive to main street Blairmore
- Some park spaces lack activation
- Lacking a dog park
- Alberta visitor information centre closed down
- Divided community identity
- Shortage of young working families
- Shortage of nightlife opportunities

Opportunities

Although the municipality has its challenges, it is also abundantly stocked with exciting opportunities. Many, but not all of these opportunities relate to the natural beauty and rich heritage of the area.

- Many heritage tourism assets
  - Frank Slide Interpretive Centre
  - Bellevue Underground Mine Tour
  - Crowsnest Museum
  - APP Police Barracks
  - Hillcrest Mine Disaster Memorial
  - Leitch Collieries
  - Burmis Tree
- Many recreational tourism assets
  - Crowsnest Pass Golf Club
  - Renowned trout fishing
  - Pass Powderkeg Ski Area
  - Mountain biking trails
  - Snowmobile trails
  - Hiking trails
  - Mountain climbing/bouldering
  - Equestrian trails
  - Skijoring
- Distinct and unique historic main streets
- Charming heritage buildings
- Interesting local history
- Crowsnest Community Trail
- Great Divide Trail
- Natural beauty
- Walkable street grid
- Strong community activism
- Variety of land use parcel types, shapes, and sizes
- Planned highway upgrades
- Developable areas within existing community extents
- Gateway to regional recreation destinations

4.2 Vision, Goals, & Strategies

Vision

It is not a question about if Crowsnest Pass has potential, it is a question about how that potential will materialize, and who it benefits. Thus, it is our vision that the Crowsnest Pass will develop as a socially, environmentally, and economically sustainable and resilient community that maintains its unique character. It is important to us that existing residents continue to feel connected to the municipality as it inevitably evolves, and that existing residents are able to personally thrive as changes occur.

We envision a diverse economy, with growth in the tourism sector playing an important role. We envision that the housing stock is diverse, ensuring livable options for seniors, families, and low-income individuals. We envision that the natural environment is stewarded within and around developed areas, allowing for intimate and personal connections with nature to be a part of daily life. We envision that the heritage of the Pass is not sacrificed for growth, instead, heritage sites may be adaptively reused as community assets in an economically viable way. We envision that residents are connected with each other and daily amenities by enhancing the mobility network, and by adding amenities within each community. And lastly, we envision that main streets may be built-upon as the social, commercial, and heritage trifectas of the municipality, where people gather, shop, and engage in civic life.

Crowsnest Pass has the promising ingredients to make this all possible, but they must be combined in just the right way to be successful.

Goals & Strategies

With the issues, opportunities, and our vision solidified, specific goals and strategies may now be determined. Our recommendations are categorized into the major topics of land use, mobility, parks and open space, housing, heritage conservation, sites of opportunity, and main streets. Each topic requires special consideration, but holistically, all the topics must complement each other and work in unison to achieve the vision. For example, for a new park or main street improvement to be successful, it must be well connected by the mobility network.

1
- **Goal** A cohesive, functional land use pattern
- **Strategy** Consider residential, recreational, and economic land uses as systems that work together

2
- **Goal** A safe, convenient active transportation network
- **Strategy** Upgrade or extend the existing Crowsnest Community Trail

3
- **Goal** Accessible, enjoyable recreation for all
- **Strategy** Add amenities to existing parks and add new recreation sites where lacking

4
- **Goal** High housing diversity and affordability
- **Strategy** Build new housing in various types and locations

5
- **Goal** More heritage resources are used in vibrant, feasibly ways
- **Strategy** Policy incentives and adaptive reuse recommendations

6
- **Goal** Enhance Sites of Opportunity for socio-economic benefits
- **Strategy** Propose multi-dimensional interventions that leverage the site's positive attributes

7
- **Goal** Vibrant, walkable, unique main streets
- **Strategy** General and specific interventions for mobility, gathering spaces, vegetation, and programming

The remainder of this booklet, until the conclusion, will elaborate on these strategies, adding specificity through design, guideline, and policy recommendations.

5. Land Use

5.1 Residential

Residential Growth Recommendations

As shown in Figure 45, the current land use pattern may be divided between residential and country residential areas of living. The Municipal Development Plan (MDP) explains some of the problems associated with the expansion of country residential areas in recent decades. This expansion has resulted in disproportionately more non-permanent residents and it is expensive to service with infrastructure (MCNP, 2021). Additionally, we advise against more country residential development because it induces a large human footprint on the landscape, causes further distances to be driven daily, is not an affordable form of housing, strains community development because neighbours are spaced out, and distances people from amenities.

Greenfield development is when development/building occurs on a site that has not previously been developed, whether it is a maintained or unmaintained vegetated area. We recognize that new greenfield development may be necessary to accommodate the population growth that is expected within the next 25 years, but we advocate for growth within existing community areas as generally preferable to developing on the perimeter of existing communities. The MDP outlines potential areas for growth in each community except for Frank. Developing the areas that are within communities instead of adjacent to communities is preferable as it reduces the loss of naturalized areas, promotes walkability, reduces the need for infrastructure expansion, and creates a more pleasant residential environment by filling under-loved vacant lots. When developing new residential on the perimeter of a community, there are several guidelines that should be considered: mobility connections with the existing community, stormwater capture practices, a mixture of housing sizes and types, adding high-quality parks and recreational spaces, designing with the prevailing wind and sun patterns in mind, using a grid or fused-grid street pattern opposed to cul-de-sacs or loops, incorporating an abundance of trees and native vegetation, respecting the local architectural style and form, and designing streets to be pleasant for all modes of mobility. Designing a new community should be taken very seriously, decisions made will have implications for decades if not centuries to come.

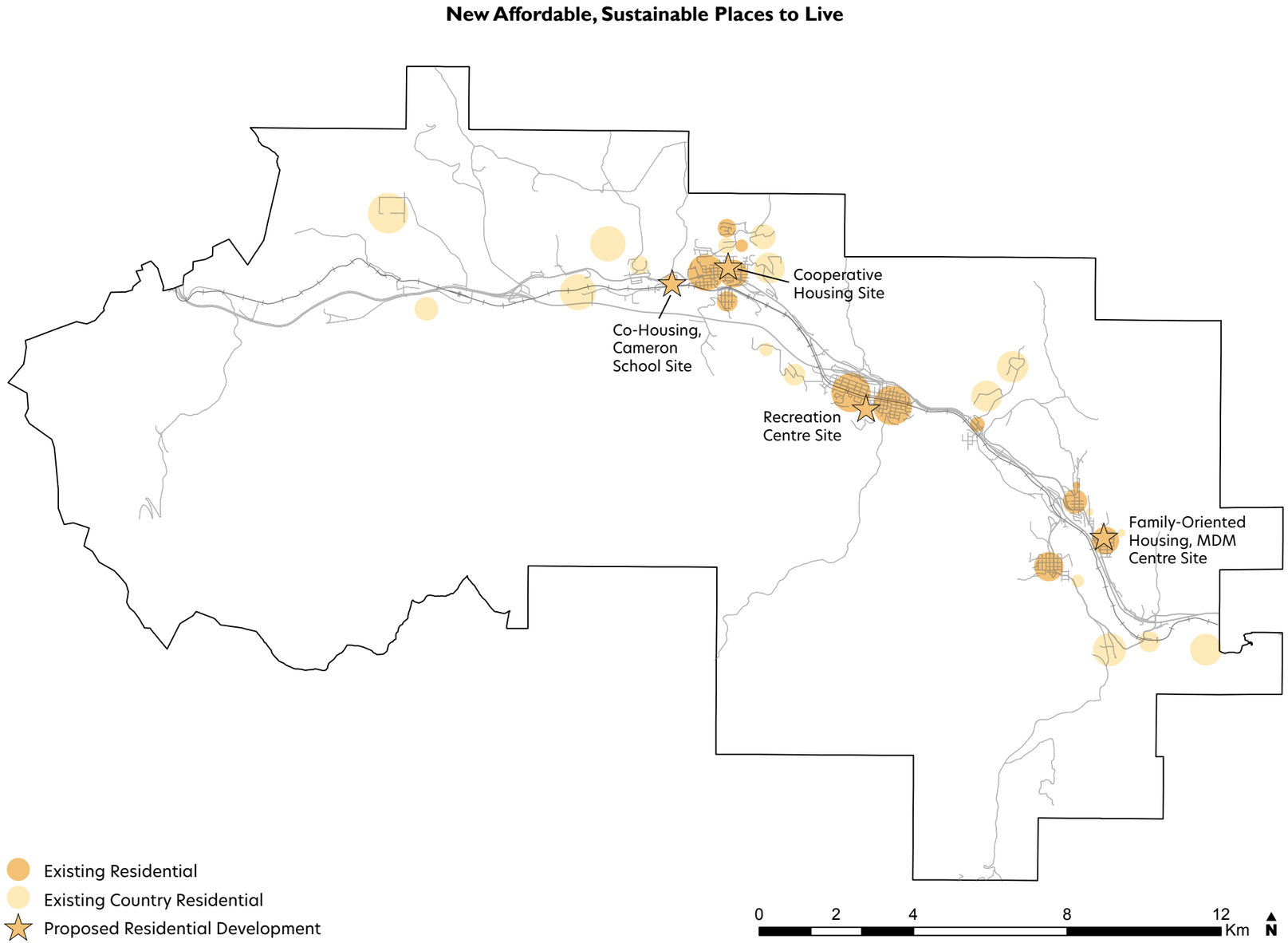


Figure 45: Existing residential land uses and proposed developments

Referring to Figure 45, note the locations of the designs that we detail later in this report. Distributed throughout the municipality, these interventions include co-housing, cooperative housing, and family-oriented housing. Each of these will be explained in more detail in the housing section of this report, just note that their locations are all within existing community extents, supporting the existing pattern of residential land uses.

5.2 Commercial & Industrial

Economic Recommendations

The pattern of commercial and industrial land use in the MCNP is shown in Figure 46, with implications for our economic strategies. To achieve the vision of a diverse economy with growth in the tourism sector, our approach focuses on main streets, historic buildings, and tourism destinations. Each of these strategic areas will be elaborated on in more detail in their own section (new tourism destinations are included as part of the sites of opportunity section). However, it is important to note that our economically relevant initiatives work together and are distributed across the municipality. Additional tourist destinations will help attract visitors to the area. Main streets will be important tourist destinations as well, by supporting visitors with shops and services. Commercial heritage buildings are especially important, however residential buildings are also important: they comprise the majority of the built landscape and have an impression on visitors. The revitalization or adaptive reuse of historic buildings adds economic value to the Pass as heritage buildings offer uniqueness, intrigue, and charm: creating appeal for visitors.

Having a balanced amount of industrial land is beneficial for a municipality because industrial land uses generate more tax dollars per hectare than residential or commercial land uses. Also, industrial land uses help diversify the economy and give a wider variety of employment opportunities. In the Municipal Development Plan, options for a future light industrial business park have been identified near Bellevue and Hillcrest (MCNP, 2021). We support a business park, but we suggest these guidelines: mitigate noise, air, light, and water pollution; consider truck access and traffic through communities; encourage circular uses of resources from the area (for example, yard waste may be used as a compost or fuel source); and consider sightlines from the highway to promote a scenic drive. Unsightly industrial uses near Sentinel were identified by community members as a problem, as they leave a negative impression about the area.

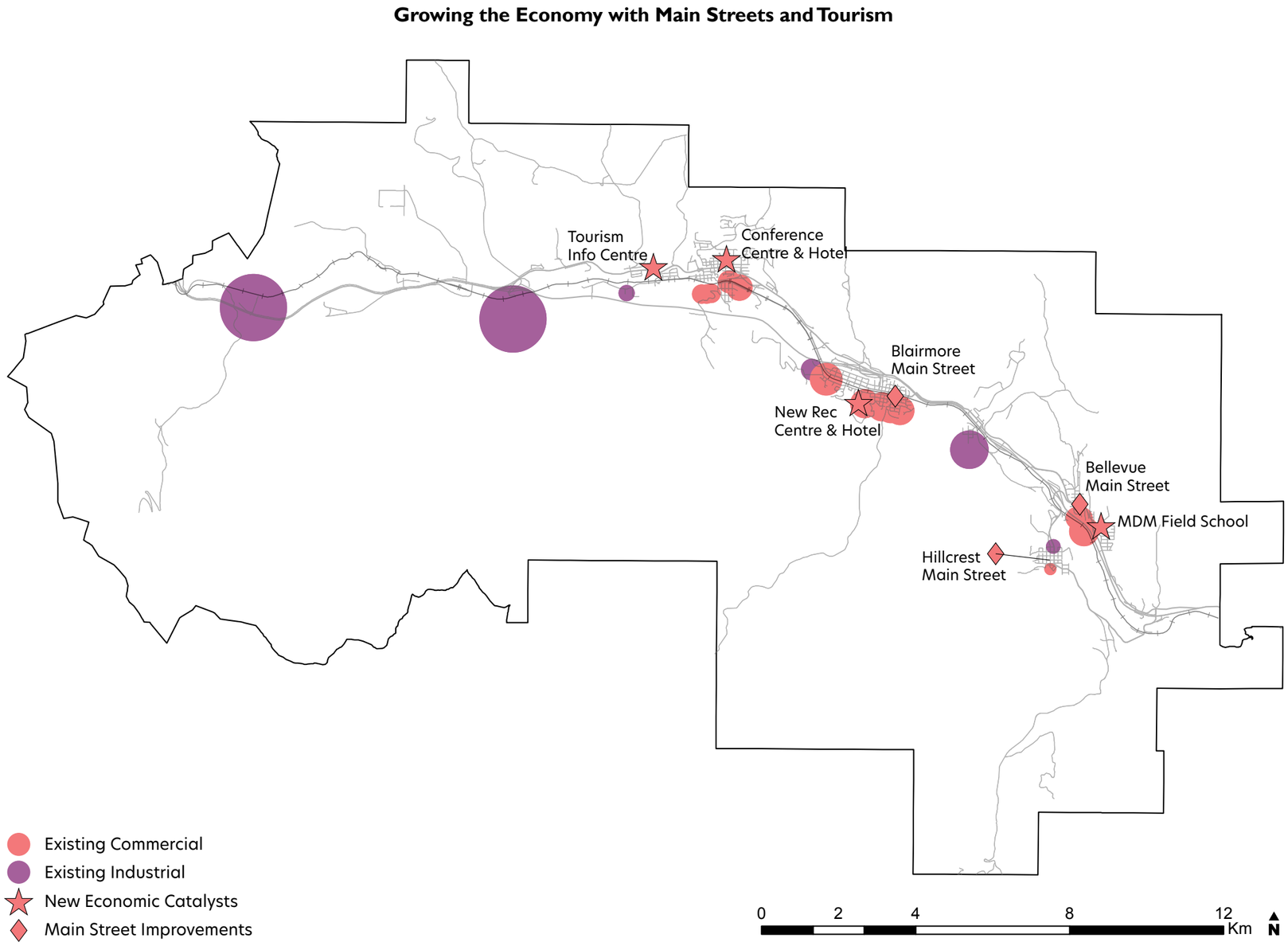


Figure 46: Existing economic land uses and proposed interventions

5.3 Parks & Institutional

Recreational and Social Strategies

Parks and public spaces are essential to a healthy civic culture and have many social and economic benefits. The map in Figure 47 illustrates how our proposed parks and community amenity interventions fit in the existing parks and institutional land use pattern. Elaboration on the specific interventions will happen in subsequent sections, but there are some general points to be made.

We employed several strategies to improve this land use system at the municipal scale. First, we made it a priority to distribute our proposed interventions between the communities. Second, we aimed to add parks and community services where there were gaps in their distribution. Combined, these two strategies are important because health and social benefits depend on the parks and amenities being easily accessible by foot. Our third strategy was to leverage the existing strengths of each community while solving issues, optimizing the benefits of each investment. For example, our recommended main street improvements in Hillcrest add to the lack of gathering spaces while also complementing its quaint atmosphere. Fourth, we added park and social spaces directly on the main streets to emphasize them as social places. Fifth, we aimed to add parks/recreational space with each of our 'Sites of Opportunity' to ensure that each location is adding public benefit in strategic locations. Sixth, we aimed to connect the parks and community amenities with our mobility network. Seventh, we strategically added recreational or community amenities to existing parks to add vibrancy to underutilized spaces. Eighth, we added amenities for a diverse range of ages and users. Many of these strategies synergize together, and help create a holistic system for public use across the municipality.

Strategies:

- New amenities in each community
- New amenities in existing distribution gaps
- Add to existing strengths of each community
- Add parks/social spaces on main streets
- Add public amenities with each 'Site of Opportunity'
- Connect parks/amenities with the mobility network
- Add amenities to underutilized spaces
- Add amenities for a diverse range of users

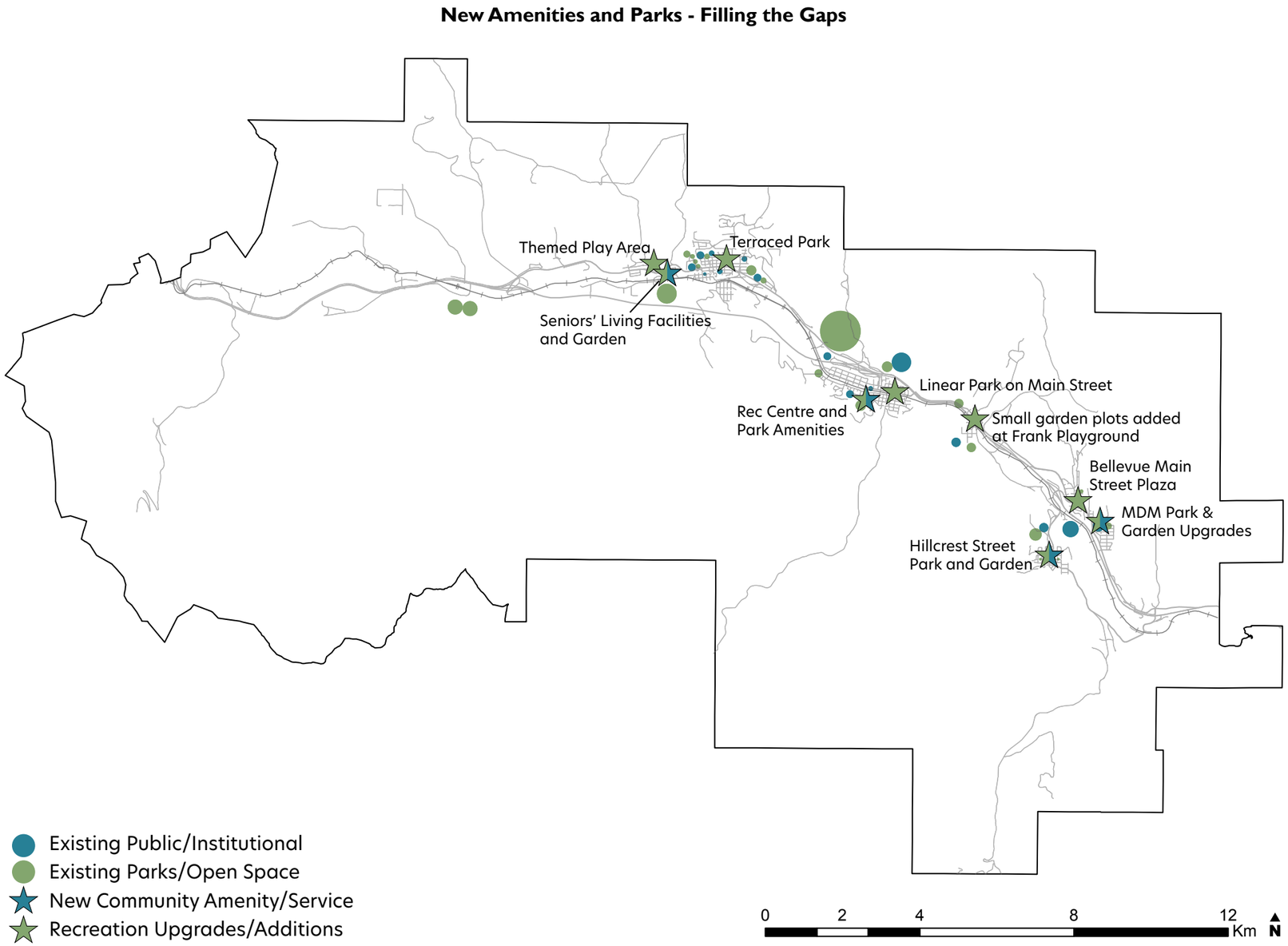


Figure 47: Existing residential park and institutional uses and proposed interventions

6. Mobility

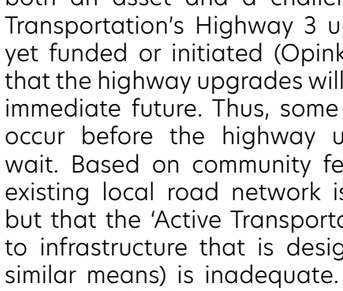
6.1 Active Transportation Network: Phase 1

Planning with Highway 3 In-Mind

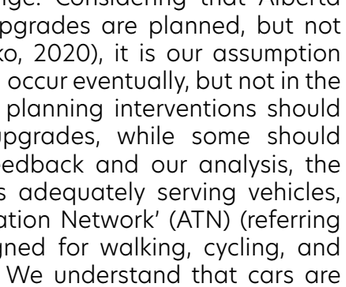
A safe, effective mobility system is essential for moving goods and people and for recreation. Our interventions are contextualized for the Crowsnest Pass, with Highway 3 being both an asset and a challenge. Considering that Alberta Transportation's Highway 3 upgrades are planned, but not yet funded or initiated (Opinko, 2020), it is our assumption that the highway upgrades will occur eventually, but not in the immediate future. Thus, some planning interventions should occur before the highway upgrades, while some should wait. Based on community feedback and our analysis, the existing local road network is adequately serving vehicles, but that the 'Active Transportation Network' (ATN) (referring to infrastructure that is designed for walking, cycling, and similar means) is inadequate. We understand that cars are important for the economic and social life of many residents, but creating walking and cycling as a safe and convenient option empowers all people, even those who own cars.

Phase 1 Priorities and Strategy

Phase 1 of the Active Transportation Network (ATN) interventions should occur in the near future, prior to the highway upgrades taking place. The first phase prioritizes the improvements that will have the biggest impact for the safety and convenience of local residents. For this reason, ATN expansions within Coleman, Blairmore, and Bellevue should occur. The ATN we proposed within these communities was informed by our social spatial analysis and it was our goal to connect the ATN to more local amenities using convenient routes. Additionally, upgrades are suggested for the two Crowsnest Community Trail (CCT) routes east of Frank: Community members identified these locations as particularly problematic so interim solutions are proposed in Phase 1.



Crowsnest Community Trail
D. Giannoulis (2021)



On-Street Bike Infrastructure
Government of Ontario (2021)

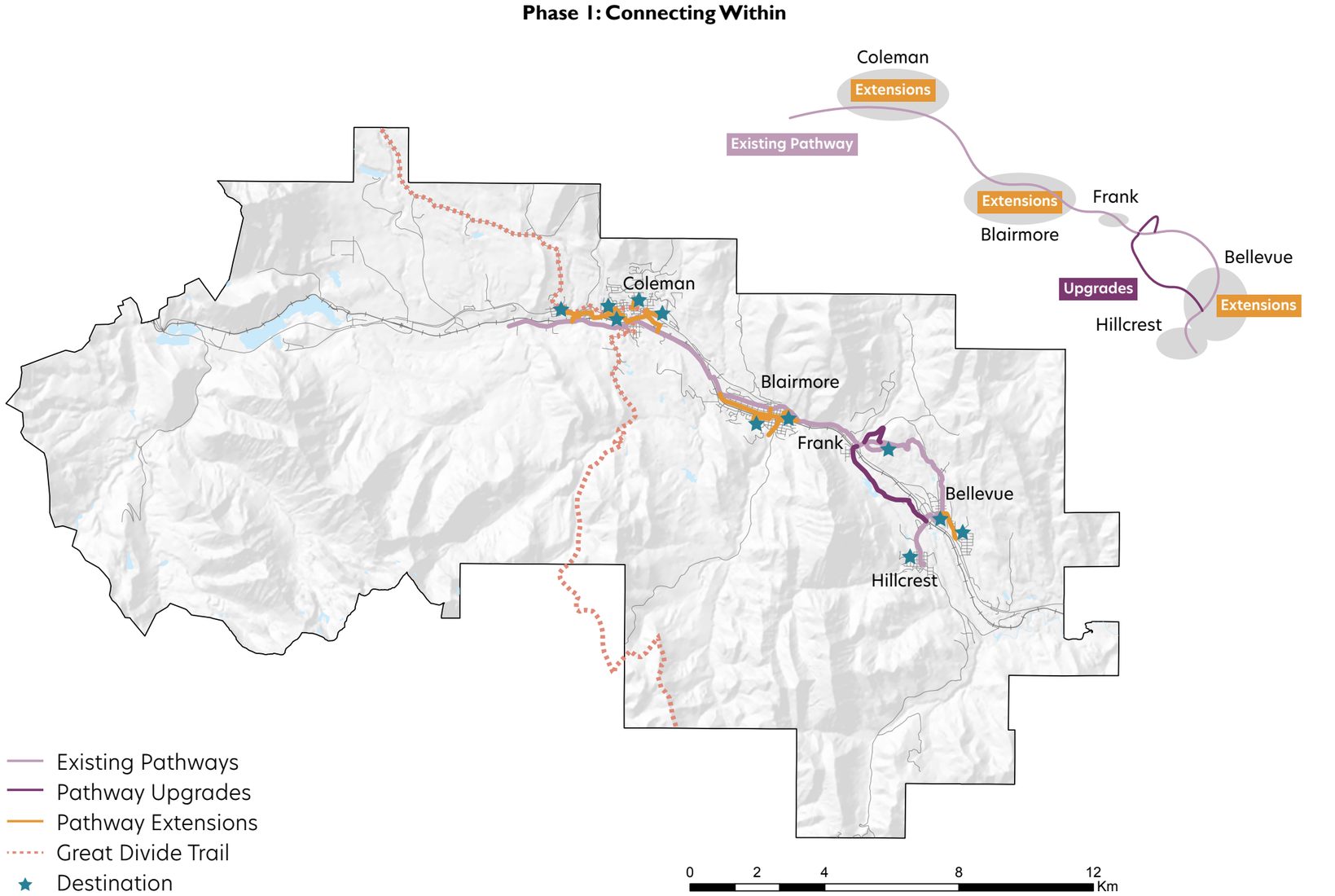


Figure 48: A map of existing pathways and proposed Active Transportation Network extensions and upgrades, Phase 1

This network will include on-street cycling lanes and off-street pathways for cyclists and pedestrians. Where feasible, separating pedestrians from cyclists on the pathways is encouraged. Cyclists should be physically separated from traffic, instead of just by painted lines on the pavement. A row of parallel parked cars can make a great buffer from the driving lane, just ensure that the passenger-side door is given space so that it does not open into the bike lane. We encourage sidewalk extensions in the communities, particularly along segments of the ATN where they are lacking: The new ATN segment in Bellevue is an example. Extending sidewalks on every street may not be economically feasible, but locations around schools and other high-traffic destinations should be prioritized.

Connecting Residents with Amenities and Main Streets

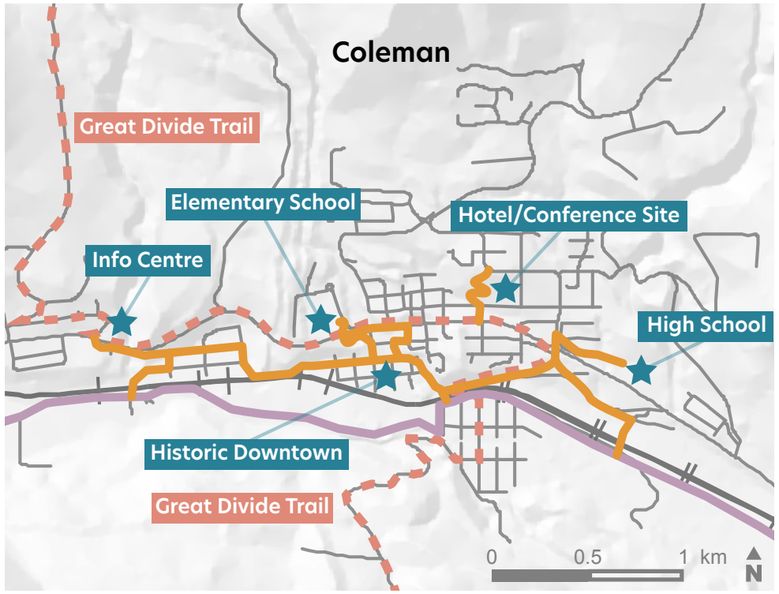


Figure 49: Coleman Mobility Phase 1

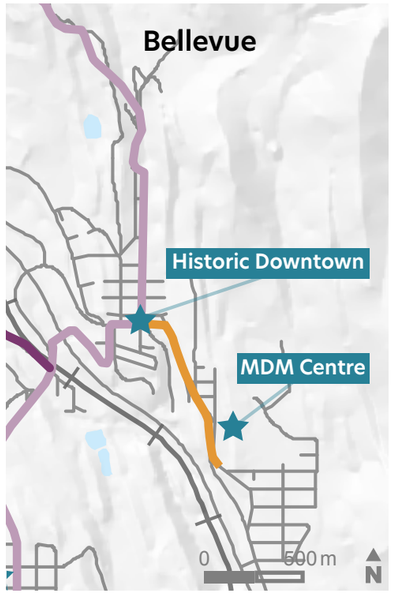


Figure 50: Bellevue Mobility Phase 1

Figure 51: Blairmore Mobility Phase 1

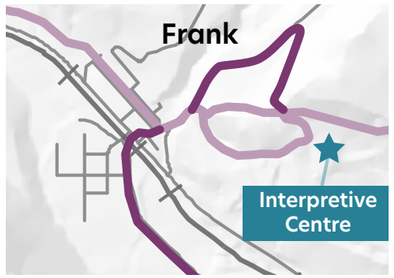


Figure 52: Frank Mobility Phase 1

Figure 53: Hillcrest Mobility Phase 1

Existing Pathways
Pathway Upgrades
Pathway Extensions
Great Divide Trail
Destination

Coleman

Examine Coleman in Figure 49, where the most significant ATN extensions would take place. Extensions are necessary in Coleman because the CCT does not currently connect residents with important destinations like the high school, elementary school, or historic main street. An extension would also be necessary to the proposed information center, where even sidewalks are currently lacking. The ATN extensions would connect with the existing CCT in three places, and with the commercial areas on Highway 3, which are anticipatory of phase two.

Blairmore

Figure 51 shows the proposed ATN in Blairmore for phase one. We propose adding cycling/walking infrastructure along the entire length of 20 Ave (running east-west), with several north-south connections. A connection would be necessary to connect with the new recreation center adjacent to Isabelle Sellon School, and another route is recommended to formalize a popular walking route along the creek. This would create four points of connection with the existing CCT, and create three safe crossings of the rail line.

Bellevue, Hillcrest, and Frank

Phase one would not necessitate any extensions in Hillcrest of Frank, which are currently well-serviced by the CCT. However, Bellevue requires a network extension, shown in Figure 50. The extension in Bellevue would include the main street, and extend down 27 Ave, connecting with the MDM Centre. This extension, currently missing sidewalks for part of its length, is important because 27 Ave is the primary connection between north and south Bellevue, and is not a comfortable place to cycle with high volumes of traffic. Where the extension terminates at the MDM Centre, quieter local roads connect the pathway to the front doors of residents in south Bellevue.

Active Transportation Network Benefits (Speck, 2018)

Environmental
- Reduced carbon emissions from vehicles
- Improved air quality
- Encourages a smaller urban footprint

Economic
- Attract young professionals
- Reduce spending on gas, vehicle maintenance
- Attract and protect tourists

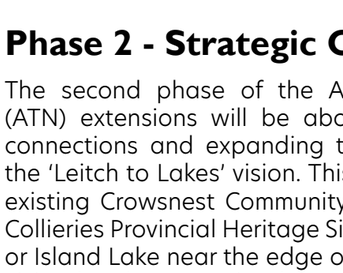
Social
- Recreational enjoyment
- Health benefits of walking/cycling
- Reduce the risk of pedestrian injury/death
- Less cars make for a more pleasant, sociable street

6.2 Active Transportation Network: Phase 2

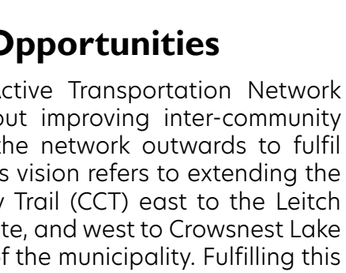
Phase 2 - Strategic Opportunities

The second phase of the Active Transportation Network (ATN) extensions will be about improving inter-community connections and expanding the network outwards to fulfil the 'Leitch to Lakes' vision. This vision refers to extending the existing Crowsnest Community Trail (CCT) east to the Leitch Collieries Provincial Heritage Site, and west to Crowsnest Lake or Island Lake near the edge of the municipality. Fulfilling this vision has been put in phase two because it will be a great recreational amenity, but is less essential for the daily needs of residents than the extensions in phase one.

Figure 54 shows the connections of Coleman-Blairmore and Frank-Bellevue, which should be implemented in phase two because they are reliant upon the planned highway upgrades. The extension between Frank-Bellevue coincides with a new proposed local road (proposed by Alberta Transportation). The road should be built to support active transportation as it would offer a safer and more direct route from Frank to Bellevue (and Hillcrest). The connection improvement between Coleman and Blairmore would not include an entirely new road being built, but would only be possible with the highway truck bypass being built. Once the bypass is built, the current highway may be repurposed to prioritize locals instead of freight trucks.



Leitch Collieries
D. Giannoulis (2021)



Crowsnest Lake
D. Giannoulis (2021)

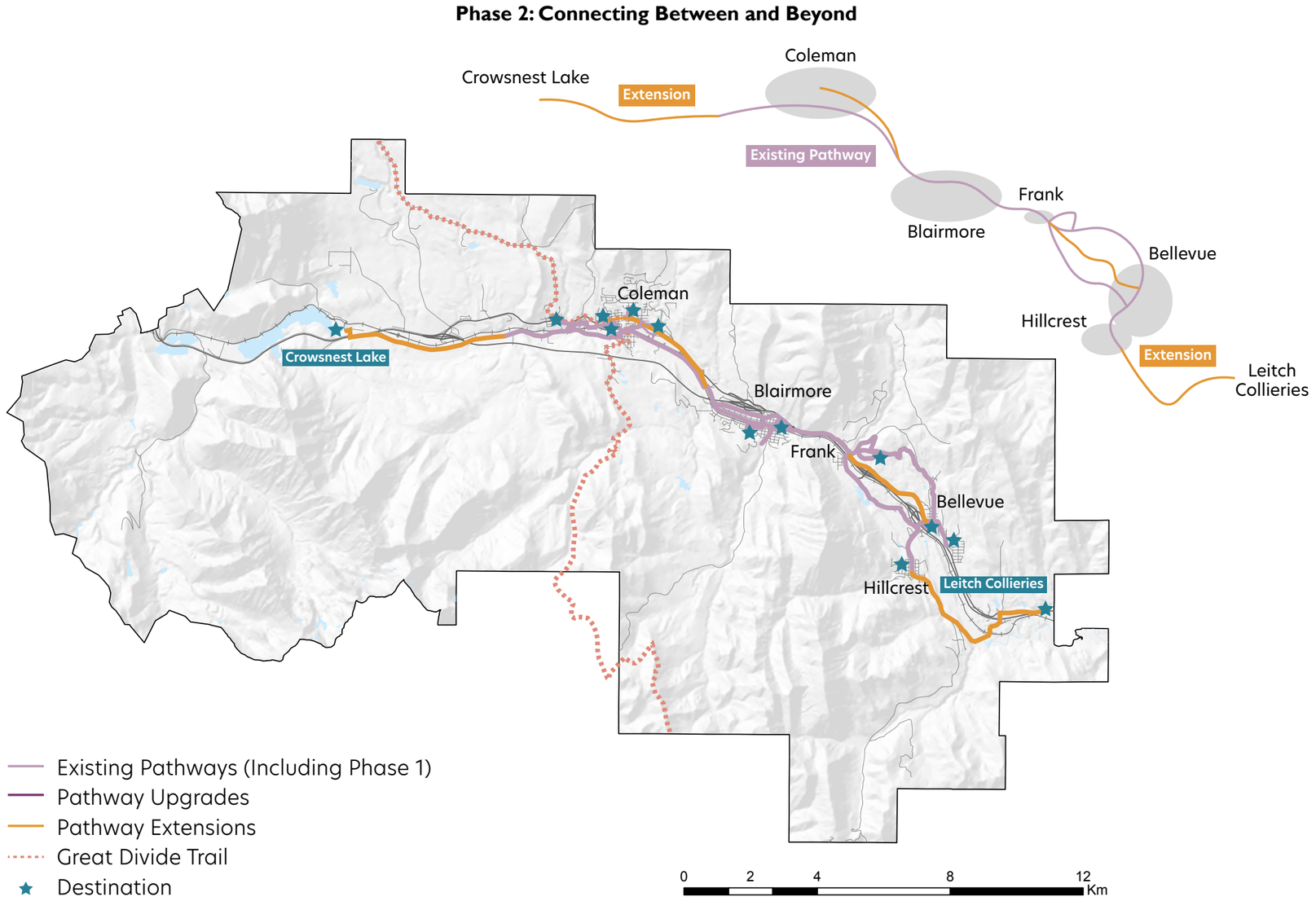


Figure 54: A map of existing pathways and proposed Active Transportation Network extensions and upgrades, Phase 2

Connecting Residents with Amenities and Main Streets

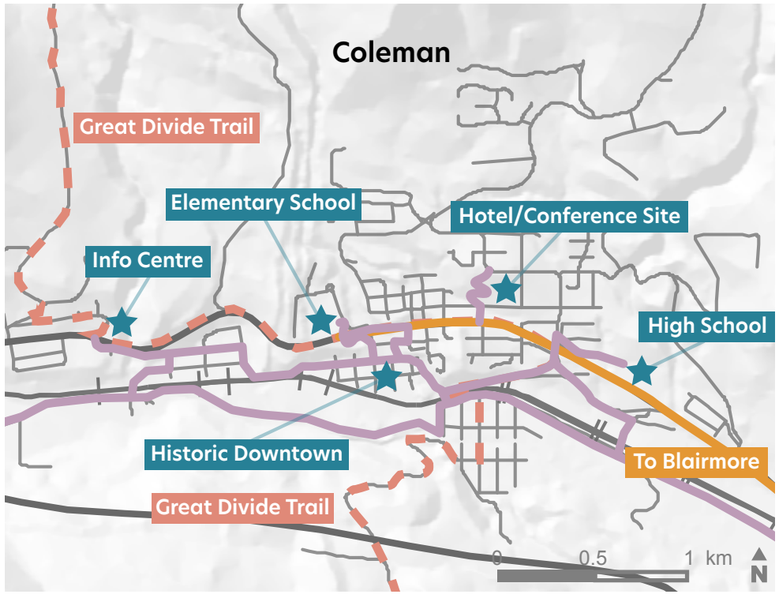


Figure 55: Coleman Mobility Phase 2

Figure 56: Bellevue Mobility Phase 2

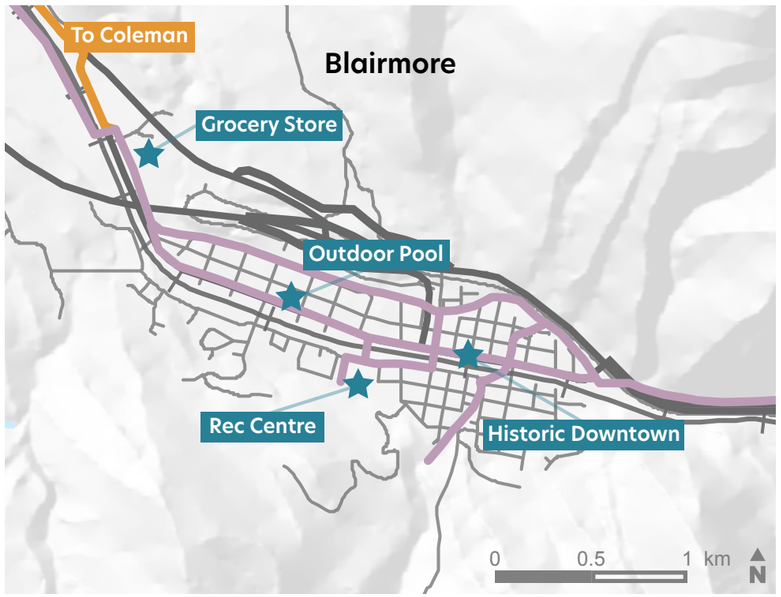


Figure Blairmore Mobility Phase 2

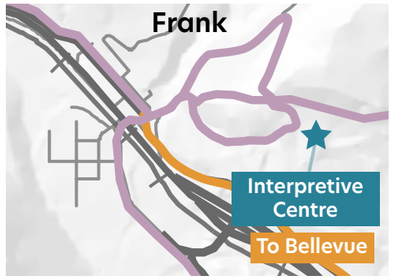


Figure 58: Frank Mobility Phase 2

Figure 59: Hillcrest Mobility Phase 2

Existing Pathways
Pathway Upgrades
Pathway Extensions
Great Divide Trail
Destination

Proposed Phase 2 Improvements

The maps of Coleman and Blairmore (Figures 55 and 57) show how the new ATN extensions would connect with the network. In Coleman, the extension services an important commercial area, and would fill a gap in the ATN; in Blairmore, the extension would connect with the CCT near the grocery store, and give residents a more direct route between the two communities. The maps of Frank and Bellevue (Figures 58 and 56) show where the local road and ATN extension would connect seamlessly with the established ATN. Figure 59 shows how the network would seamlessly continue out of Hillcrest towards Leitch Collieries.

Active Transportation Network - Snow Removal

It is becoming increasingly popular in Canadian cities for people to run and bike in the winter months. In the same way that clearing sidewalks and roads is an important practice for mobility and public safety, bike lanes and multi-use pathways should have a snow removal strategy. We heard from stakeholders that snow clearing is an important practical consideration. We recommend "Winter Bike Lane Maintenance: A Review of National and International Best Practices" by Alta Planning + Design (2014) as a great introductory document.

Figures 60 and 61: Snow removal vehicle and winter pathway users (Alta Planning + Design, 2014)

Bike lanes should not be used as snow storage for the road, but a buffer between the bike lane and road can be a great place to store snow. Since parking needs are higher in the summer than the winter, dedicating segments of on-street parking for snow storage may be an option in particular locations. Salt is a common de-icing applicant, but is highly corrosive to bike components. A beet juice and brine solution is a popular alternative for de-icing that is less corrosive. De-icing shortly before a snow event can help melt the snow as it lands, resulting in a faster and more efficient clean-up after the event. A dedicated snow removal vehicle may be needed for the protected bike lanes and multi-use pathways, but there are many options to help fit the needs of the Crowsnest Pass. For the expense spent on roadway snow clearing, a degree of parity is only fair for ATN snow clearing, particularly considering those who will rely on the network because they cannot afford a vehicle. However, it is reasonable to assume that not every segment of the pathways can be cleared, thus, the Municipality should devise a snow clearing strategy that prioritizes the busiest routes and routes to important destinations, like schools. Be aware, bikeway snow clearing is an evolving practice: keep up to date for the most efficient and effective approaches.

6.3 Frank Trail Upgrades

Existing Route Options Unsafe

The Crowsnest Community Trail (CCT) currently offers two routes through the Frank Slide area: to the north and to the south of Highway 3. Both routes are scenic and practical, but require cyclists to travel on a local road unprotected from vehicular traffic. Community members expressed that this does not feel safe, particularly with their children. The Frank-Bellevue connection proposed in phase two will create a safe, direct option, but upgrades are needed in the meantime.

Solutions for 152 Street & 153 Street

152 Street is a gravel road that connects Hillcrest and Frank, passing through the Frank Slide on the south side of the highway. There are limited destinations along the route, so closing a portion of it to vehicular traffic is an option, but may be undesirable. Dust from the road was identified as an issue, but paving the road would be expensive, encourage faster driving and increase traffic. Instead, reducing the speed limit to 20 or 30 km/h would maintain access, allow visitors to enjoy the route on a driving tour, while reducing the amount of dust, and increasing pedestrian/cyclist safety. Figure 64 shows that the existing road width of 152 Street is narrow, but could accommodate a bike lane separated with vertical posts. The material of the post could be wood or stone to complement the character of the street.

153 Street leads to the Frank Slide Interpretive Centre. From the east, the CCT connects with the parking lot of the interpretive centre where pedestrians may take a wooded hiking trail to connect to Frank, but the detour for cyclists is to take 153 Street. The cross-sections in Figure 63 & 65 show two options or phases for an improvement along the street. Using the existing road width, a single bike lane could be separated from traffic by vertical posts and paint markings. If the road were widened by two metres, a wider separated lane could more comfortably accommodate cyclists. Many day-trip tourists visit the interpretive centre but do not visit the community areas. Improving the connection at this point would allow tourists to comfortably cycle into Frank or beyond. The interpretive centre could be the starting point or a destination for tourist or local day-trips.

Context Map

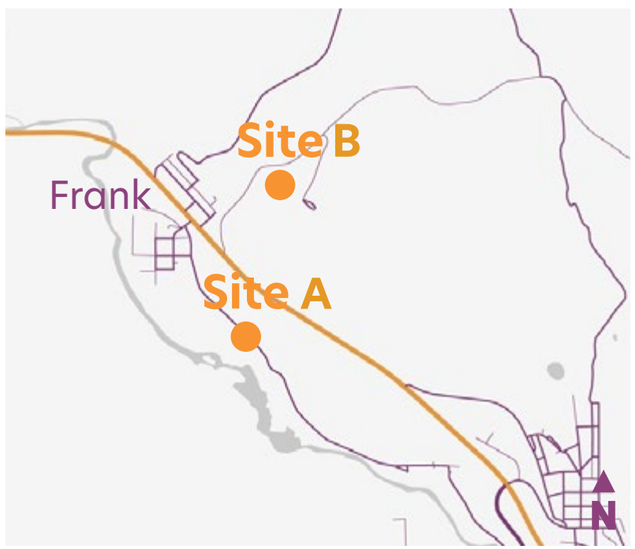


Figure 62: Location of 152 (A) & 153 (B) Street

Site B: 153 Street (Existing Width)

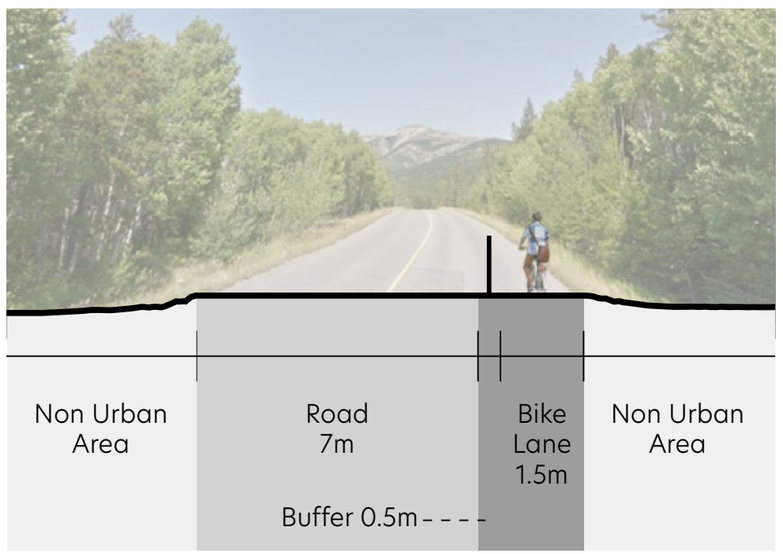


Figure 63: Cross-section of bike lane on 153 Street, existing width

Site A: 152 Street

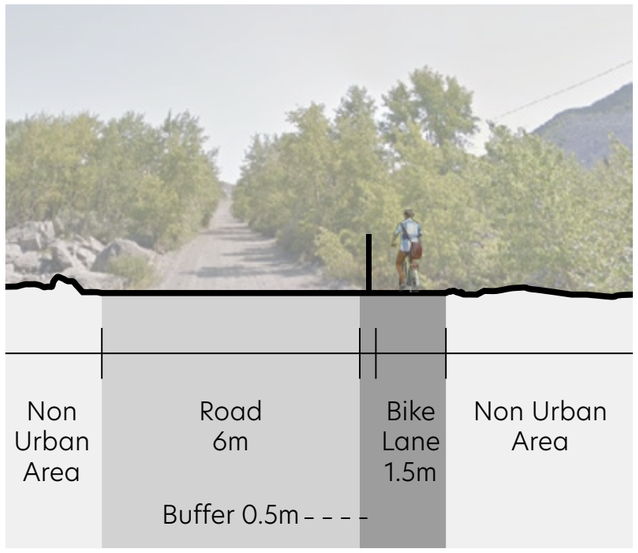


Figure 64: Cross-section of new bike lane on 152 Street

Site B: 153 Street (Widened 2 Metres)

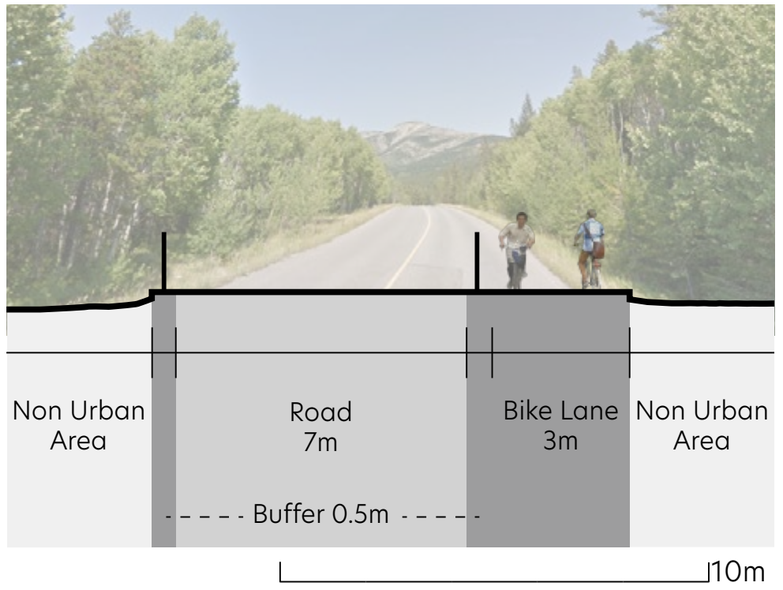


Figure 65: Cross-section of bike lane on 153 Street, widened 2 metres

7. Parks & Open Space

7. Parks & Open Space

The region around Crowsnest Pass has an incredible abundance of recreational opportunities. That is a major asset, but it does not replace the need for closer-to-home parks and recreational opportunities. The Municipality identifies that there is a hierarchy of parks in the Crowsnest Pass; small or low-amenity parks are attractive for residents within a short walking distance, while more significant parks can draw residents from across the municipality (MCNP, 2013). Having a balanced, well-distributed, well-connected hierarchy of parks is important for park accessibility and diversity.

Benefits of Parks and Open Spaces (Sherer, 2006):

- Recreation, health, and happiness
- Connection with nature
- Fostering sense of place
- Higher property values
- Ecological functions

7.1 Parks and Recreational Amenities

A Community-Scale Strategy

This section explains how this system of parks will work at the community-scale, including how the parks will be connected by our proposed mobility network (both phases combined). Detail at the site scale will be included for each of the five locations that are Sites of Opportunity. The following maps represent the hierarchy of parks: smaller circles denote localized destinations, while bigger circles represent destinations that would attract people from across the municipality or region. The maps identify which parks are existing versus proposed, helping to illustrate how our interventions 'fill in gaps' or emphasize existing recreation nodes.

MDM Centre: A Scenic Spot for New Park Additions

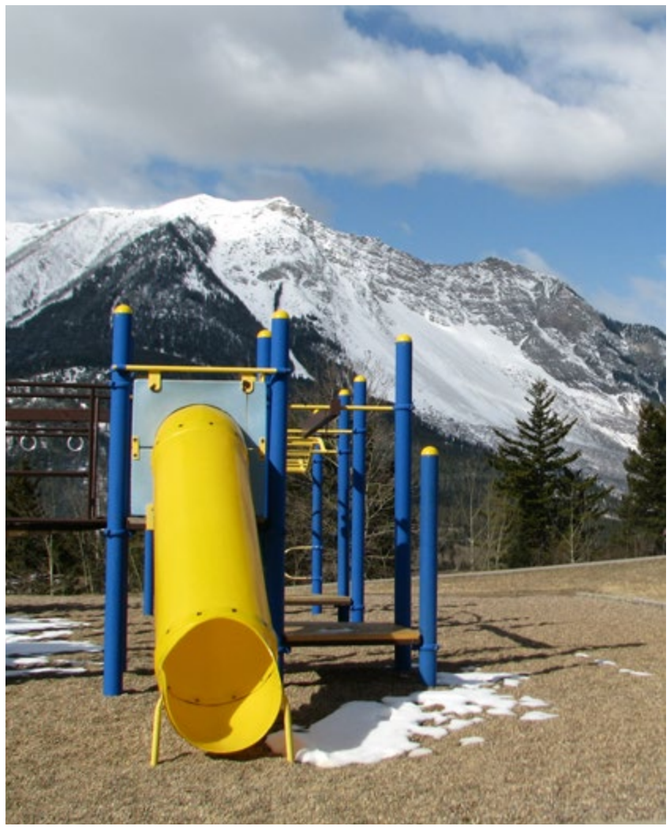


Figure 66: Playground at the MDM Centre, Bellevue
D. Giannoulis (2021)

New Parks and Amenities with 'Sites of Opportunity'

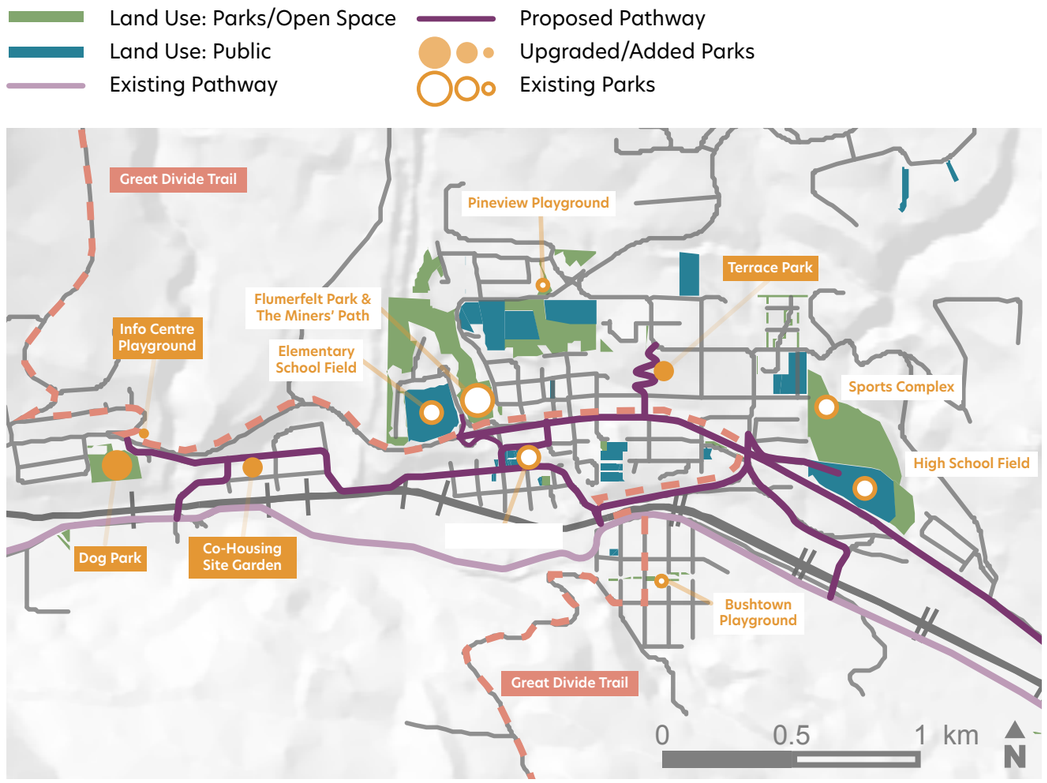


Figure 67: Existing and proposed parks/amenities and mobility network in Coleman

MDM and Main Street Additions

Figure 68: Parks and mobility in Bellevue

Coleman

In Coleman, Figure 67 shows that the existing parks are not well connected by the CCT, but our proposed mobility network would connect most. Three 'Sites of Opportunity' are the locations for the four proposed park additions we recommend for Coleman. The tourism information centre would add a small playground and large dog park, the Cameron School co-housing site would add a landscaped park and vegetable garden, and a terraced park is included with our proposed hotel in north Coleman. For site details on each, progress to the 'Sites of Opportunity' section.

Bellevue

In Bellevue, we propose adding park amenities near the MDM Centre and on the main street, and the two would be connected by our Active Transportation Network (Figure 68). The MDM Centre additions would greatly benefit those in south Bellevue, where they currently lack park amenity diversity.

A New Recreation Hub and Main Street Make-Over

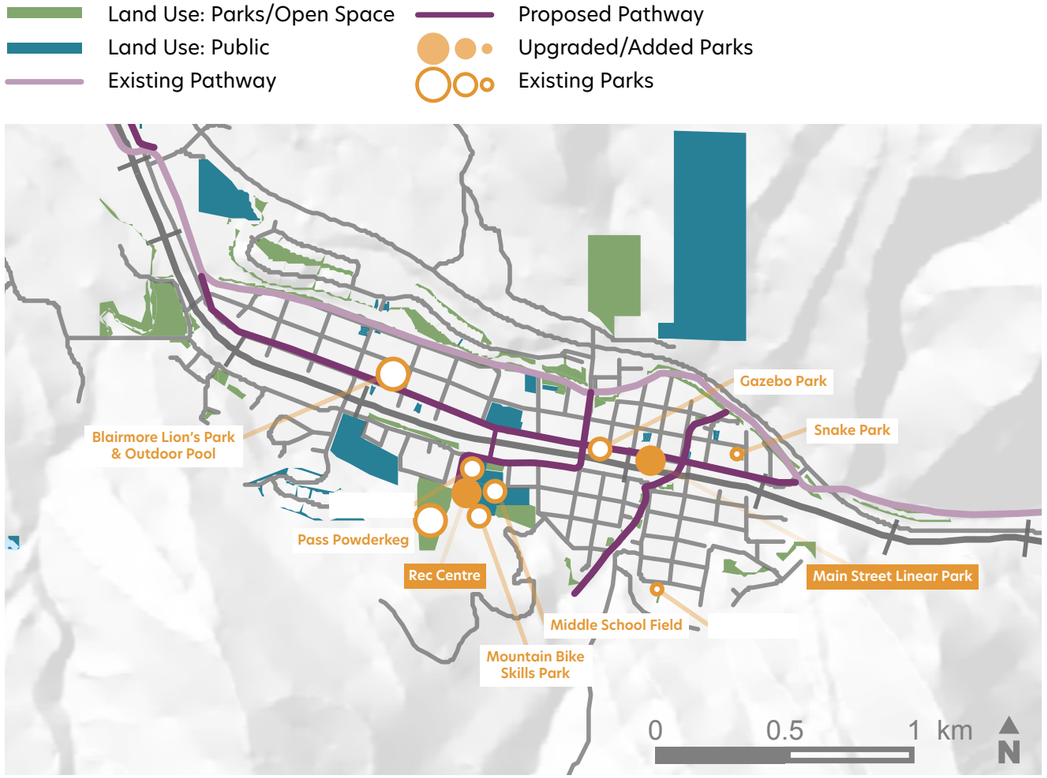


Figure 69: Existing and proposed parks/amenities and mobility network in Blairmore

Improvements in Small Places

Figure 70: Parks and mobility in Frank

Figure 71: Parks and mobility in Hillcrest

Playgrounds are Good, but All-Age Amenities in Need

Figure 72: Hillcrest Miners Playground, Hillcrest: D. Giannoulis (2021)

Blairmore

In Blairmore (Figure 69), the existing Crowsnest Community Trail (CCT) does not connect any of the park destinations, but our proposed network extensions will improve that, connecting Gazebo Park, Lions Park, and all the amenities around Isabelle Sellon School. The pre-existing cluster of park amenities around the school will be emboldened with the new recreation centre, emphasizing it as an exciting recreational hub. The second major park addition in Blairmore will be the Linear Park along the main street.

Hillcrest & Frank

Figure 70 shows that in Frank, we propose adding garden plots at the existing park. This will help diversify the users of that park and generate local food. Residents of Frank can use the CCT to access the adjacent beautiful natural areas. Lastly, in Hillcrest, a new park and social space addition on the main street will help give all residents a place to gather (Figure 71).

7.2 Community Gardens

Improving Food Access + Other Perks

There are dozens of benefits (social, health, economic, and environmental) from community gardens. Table 3 outlines many specific benefits, as compiled by Mintz and McManus (2014). Specifically in the context of the Crowsnest Pass, community gardens are a great way of improving food access in the four communities which lack a grocery store (Blairmore being the only one with a grocery store). There are currently two community gardens in the municipality (Figure 73): there is one at Horace Allen [Elementary] School, used by the school for education and enjoyment by the children, and there is one at Pete's Park, which is used by the Boys and Girls club. We propose four additional gardens spread out through the municipality. In Coleman, a community garden will be incorporated with the Cameron School co-housing site as one of the shared resources. In Frank, a small number of plots (to match the small population) may be added adjacent to the playground. In Bellevue, a large community garden may be added between the MDM Centre and the family-oriented housing units. In Hillcrest, wooden boxes can be added to the main street in the proposed social space. These locations will all be central to potential users, and will complement the other activities of the space.

We heard from the community that wildlife pose a problem for exposed vegetables, so fences should be constructed to protect the gardens. For the fences, we recommend avoiding chain-link in lieu of a more attractive design/material, to make the fence a place-making asset instead of an eye-sore. The produce yielded from community gardens may be used creatively for additional benefits. For example, the produce may be sold in cafes, catering to tourists, and reaping the profits. Or, a food bank from community grown produce may help support those in need.

Fresh Food in Every Community: Strategically Placed Community Gardens

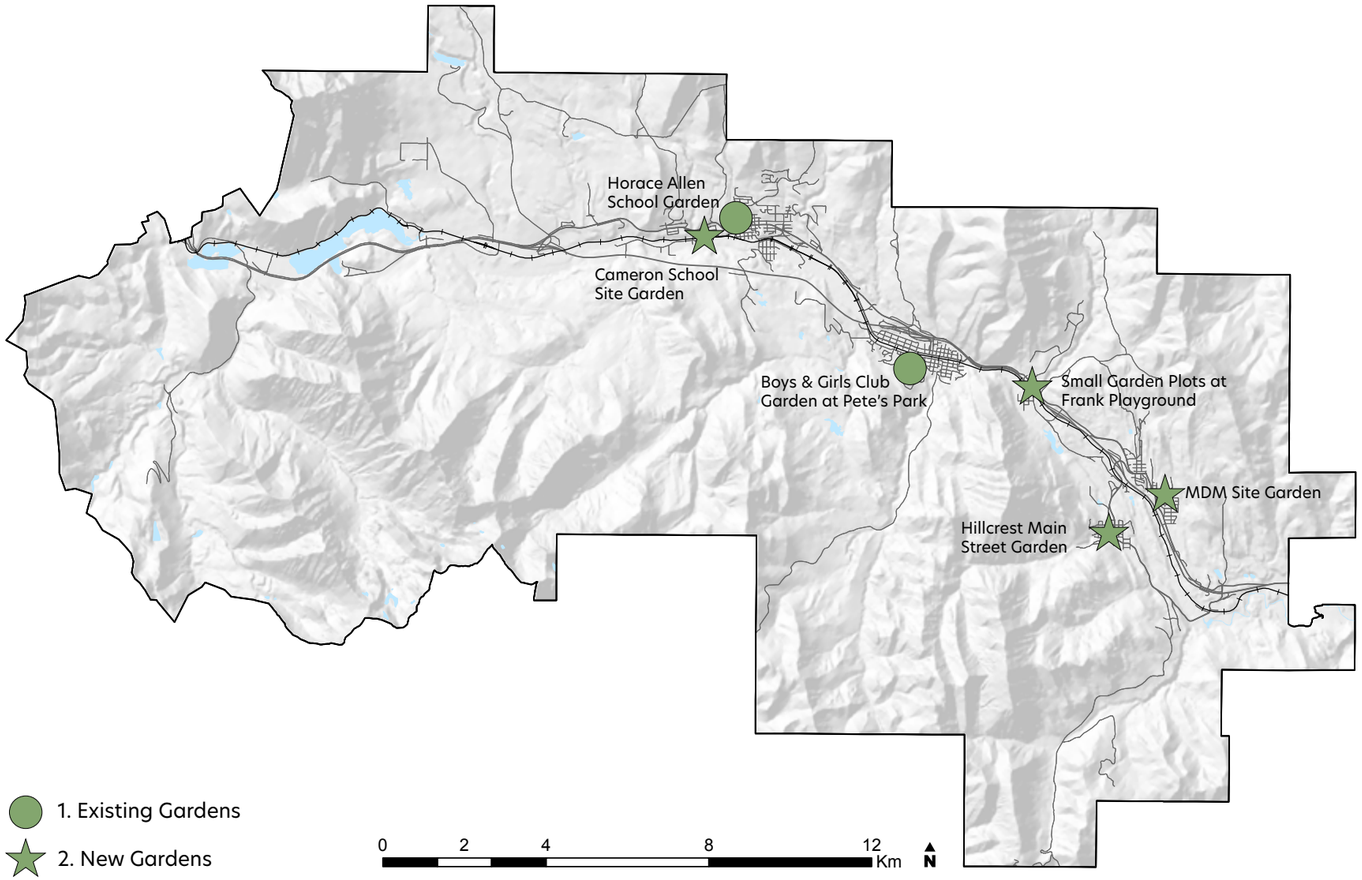


Figure 73: A map of existing and proposed community gardens

Economic, Environmental, Health, and Social Benefits (From a Paper by Mintz & McManus, 2014)

Economic	Environmental	Health	Social
Decreased healthcare costs	Biodiversity conservation	Decreased obesity and other health problems	Political activity and social engagement
Reduced food expenditures	Reduced water consumption	Improved access to food with higher nutritional value	Fostering sustainable practices and ecological citizenship
Reduced food distribution costs	Reduced food miles and greenhouse gas emissions	Improved food security	Reconnection to the land and increased control of food supplies
Promotion of horticultural innovation	Decreased pesticide use, soil degradation and erosion	Increased fruit and vegetable consumption	Urban revitalisation and preservation of community character
Improved self-reliance and skill development	Reduced energy consumption and improved waste management	Improved self-esteem, self-confidence and self-actualisation	Environmental education, awareness and attachment to local environment
Increased economic sustainability	Decreased reliance on non-renewable resources	Psychological and therapeutic benefits, enjoyment and stress relief	Increased socialisation, improved cohesion and overcoming social barriers
Less exploitation of workers	Urban greening and reduced heat island effect	Increased physical exercise	Improved safety and stronger community support networks

Table 3: Benefits of Community Gardens (Mintz & McManus, 2014)

8. Housing

8.1 Cooperative Housing

Cooperative Housing

Co-housing and cooperative housing are not to be confused: Even though they are both community-oriented approaches to housing, they are fundamentally distinct. The contemporary concept of co-housing was established in Denmark in the 1960s and was introduced in North America in the 1980s (Tchoukaleyska, 2011). The fundamental premise of co-housing is that residents have private spaces, but shared indoor and/or outdoor spaces are shared and managed by the residents in a deliberate community-oriented way (Community Social Planning Council, 2016). Co-housing communities can range in size from a handful to hundreds of participating residences, and they can vary widely in design, approach, and management (Canadian Cohousing Network, n.d.). Co-housing is equally viable in single-detached or multi-family housing context. Despite variability, three common attributes are: accessible social spaces, shared meals, collective decision making/management (McCamant & Durrett, 1989).

What:
- Not-for-profit housing
- Residents are collective owners
- No external landlord
- Residents democratically make decisions
- Subsidized or unsubsidized by government

Why:
- Affordability: Rent does not fuel profits for an external owner
- Empowerment: Members collectively make decisions through voting
- Tenure Security: Unlike social housing, residents decide when to move
- Community Building: Residents work together and build social networks
- Neighbourhood Integration: Cooperative housing can fit in well to existing communities
- Long-Term Decision Making: Members are vested so short-sightedness is avoided
- Resident Satisfaction: Self-determination results in higher satisfaction
- Income-Mixing: Cooperatives typically have more income variety of residents than social housing

Figure 74: Cooperative housing conceptual diagram.

Precedent: Fraserview Housing

Figure 75: Fraserview Housing Co-operative, Vancouver

Starting in 2020 “Vancouver Community Housing Land Trust” delivered more than 100 Co-operative units in 4 sites within the Vancouver City providing communities with a chance to pool their financial resources, buy a share of land, and own a house with desirable quality.

8.2 Co-Housing

Co-Housing

Co-housing offers a unique form of 'semi-public' space that can be greatly valuable for developing community. Co-housing shared spaces are semi-public because they are inclusive to members and authority is shared, but the space is not truly 'public'. Collective management and empowerment is a common effect from both co-housing and cooperative housing, but co-housing has nothing to do with the ownership/tenure structure of cooperative housing.

Co-housing has a perception of being highly idealistic, but in reality, many of the benefits are very practical. In particular, seniors and families benefit greatly from co-housing because it simulates a 'village' social structure where individuals contribute according to their means for the well-being of others (Canadian Cohousing Network, n.d.). Children can benefit from being able to play together in a safe, nurturing environment, and parents benefit from being able to share child-raising responsibilities, reducing child care expenses and increasing parents' ability for employment (Tchoukaleyska, 2011). Including seniors has a positive intergenerational result where there is mutual support and socializing (Community Social Planning Council, 2016). There are also economic and environmental benefits from the sharing of resources (Canadian Cohousing Network, n.d.). Often, the private dwellings can be smaller and more affordable because more daily activity occurs in the shared spaces (Canadian Cohousing Network, n.d.). For example, power tools could be shared or kids clothing could be gifted between families (reducing individual expense and associated emissions from production). Also, by pooling resources, the outdoor spaces are often of a higher quality and design and are more pleasant for pedestrians (Canadian Cohousing Network, n.d.)

What:
- Private dwellings
- Shared indoor and outdoor spaces
- Shared meals
- Collective design and management decisions

Why:
- Creates strong social bonds
- Frequent fun, affordable social ongoings
- Affordable units
- Community empowerment
- Shared resources for economic and environmental benefit
- Higher quality buildings and outdoor spaces
- Zero external onus (for governments, organizations)

How:
- Build new or convert existing properties
- Promote and educate residents on execution
- Groups of interested residents can form
- Groups can collectively decide construction/ conversion specifics
- Once established, co-housing is self-managing

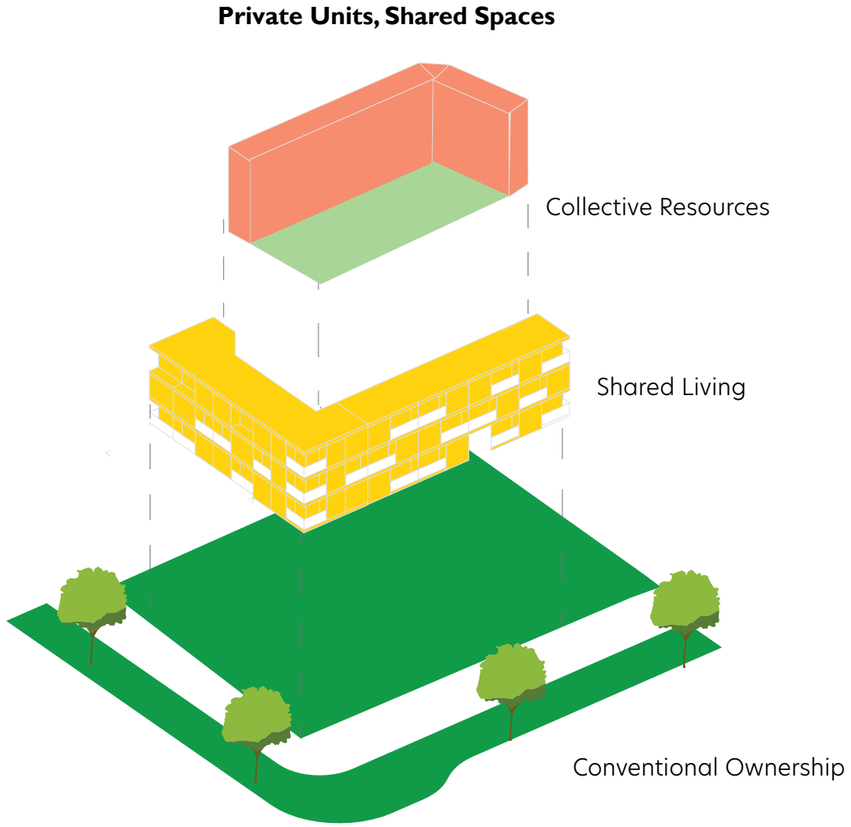


Figure 76: Co-Housing conceptual diagram

Precedent: Urban Green Co-housing

Figure 77: Urban Green Cohousing, Edmonton

This precedent is under construction in Edmonton as an environmentally-minded co-housing development. Sharing resources and fostering a well-knit community are supported by design.

8.3 Infill

Bridge the Gap

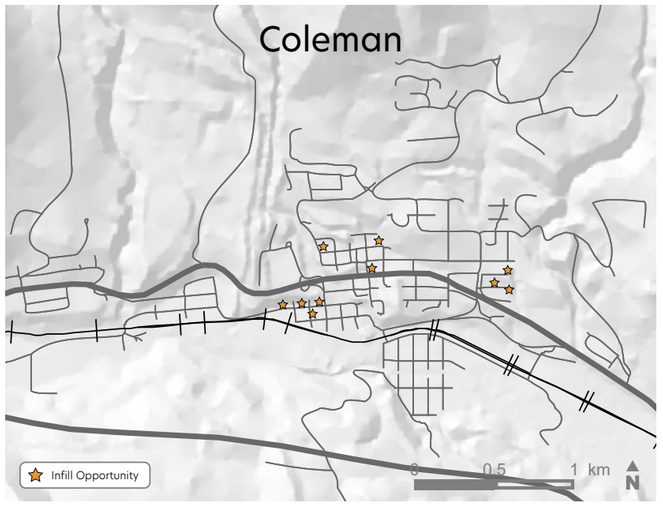


Figure 78: Sites with potential for infill

Through the analysis and community feedback we noticed an opportunity to infill vacant lots in Coleman with missing housing types. This is one of the housing strategies we recommend to densify and broaden housing development. Depending on the size and location, infill could take place in the form of single detached or multi-family homes ranging in sizes. Figure 78 shows some locations within Coleman that could benefit from infill developments. Some of these lots are owned by the municipality, while others are privately owned. The municipality should encourage property owners and developers to introduce new housing options to the area, and can facilitate the planning and development process.

Potential Infill Options:

- Single family homes
- 3-unit apartments (as shown in Figure 79)
- 3-storey multi-family housing units (as shown in Figure 80), which can be developed on one large lot or over multiple vacant lots

Image by M.Fadaei, 2021

Figure 79: Concept for subtle 3-unit apartment infill

Benefits of Infill:

- Help meet the housing need
- Diversify housing mix
- Add multi-family housing to the area
- Reduce the need for expensive infrastructure expansions

Image by M.Fadaei, 2021

Figure 80: Concept for a 3-story multi-family infill

8.4 Family Oriented Housing

Low Scale Development

One of our strategies responding to low housing diversity in the Bellevue community would be to bring in limited scale development defined as rowhomes and stacked houses. Introducing this land-use in response to evolving demand for affordable housing provides a wide variety of types and sizes and helps balance the housing development. This infill could take place on municipality owned lands around MDM Center providing wider choices for new families to settle.

Benefits of Family Oriented Housing

- Balancing housing types within the community and
- Housing alternative for families with kids
- Affordable option for various groups with different budget and income
- Flexible typology to meet families of different sizes.

Areas for Diversification

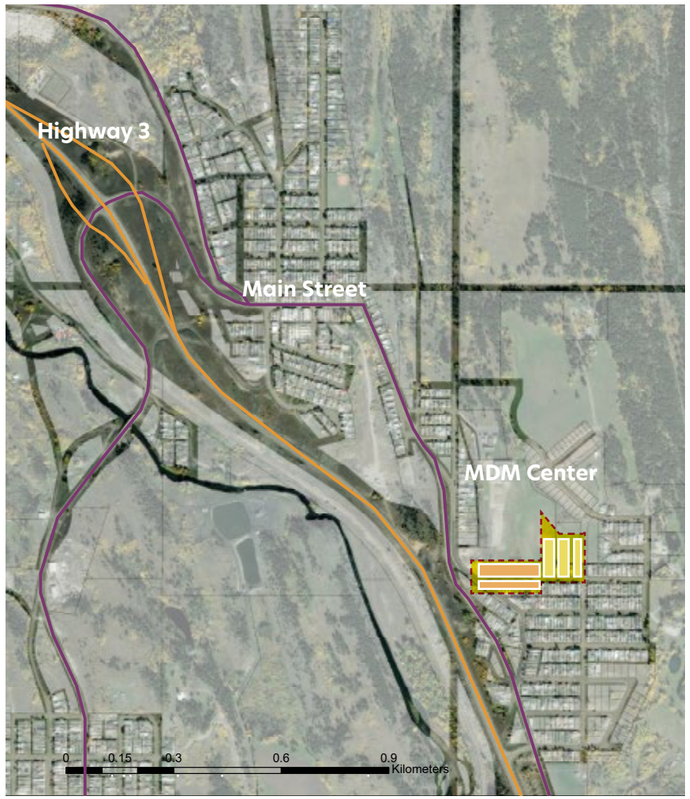


Figure 81: Bellevue Housing sites

Row Townhomes

Figure 82: Inner city rowhomes-Civicworks/ RNDSQR-Calgary

Stacked Townhouses

Figure 83: Inner city rowhomes-Civicworks/ RNDSQR-Calgary

Diversification of Types

Figure 84: Conceptual Street showcasing diversification of housing types

9. Heritage Conservation

9.1 Frank Heritage Building Relocation

Heritage Buildings Under Threat

There are three heritage buildings in Frank that are at risk of demolition due to Alberta Transportation's plans for the highway twinning (Figure 85). These buildings should be preserved as they are huge assets to the community and the local history of the MCNP. The affected buildings are: the Frank Community Hall (currently the Public Art Gallery), the Blaise General Store, and the Vysohlid Residence. By relocating these buildings the history of MCNP is maintained and the community can continue to enjoy these heritage assets.

We recommend that the Frank Community Hall be moved to Bellevue's main street, as shown in Figure 86 & 87. The relocation to Bellevue's main street will add a year round attraction, while filling a vacant lot with an active frontage to the street. We recommend that the Blaise General Store and the Vysohlid Residence be relocated to another location within Frank, as shown in Figure 88. Alberta Transportation's plans for the highway twinning will see a new local road coming through Frank's 21 Ave. The two buildings should be relocated to the north/west corner of 21 Ave and 148 St (Figure 89). By relocating the buildings to this location, not only can the buildings remain in Frank, but the General Store can be prominently located along the new local road, and the Vysohlid Residence can remain in a residential area.

Frank Community Hall

D. Giannoulis (2021).

Blaise General Store

Municipality of Crowsnest Pass. (2014). Heritage Inventory Project - Phase 2.

Vysohlid Residence

Municipality of Crowsnest Pass. (2014). Heritage Inventory Project - Phase 2.

Location of At-Risk Heritage Buildings in Frank

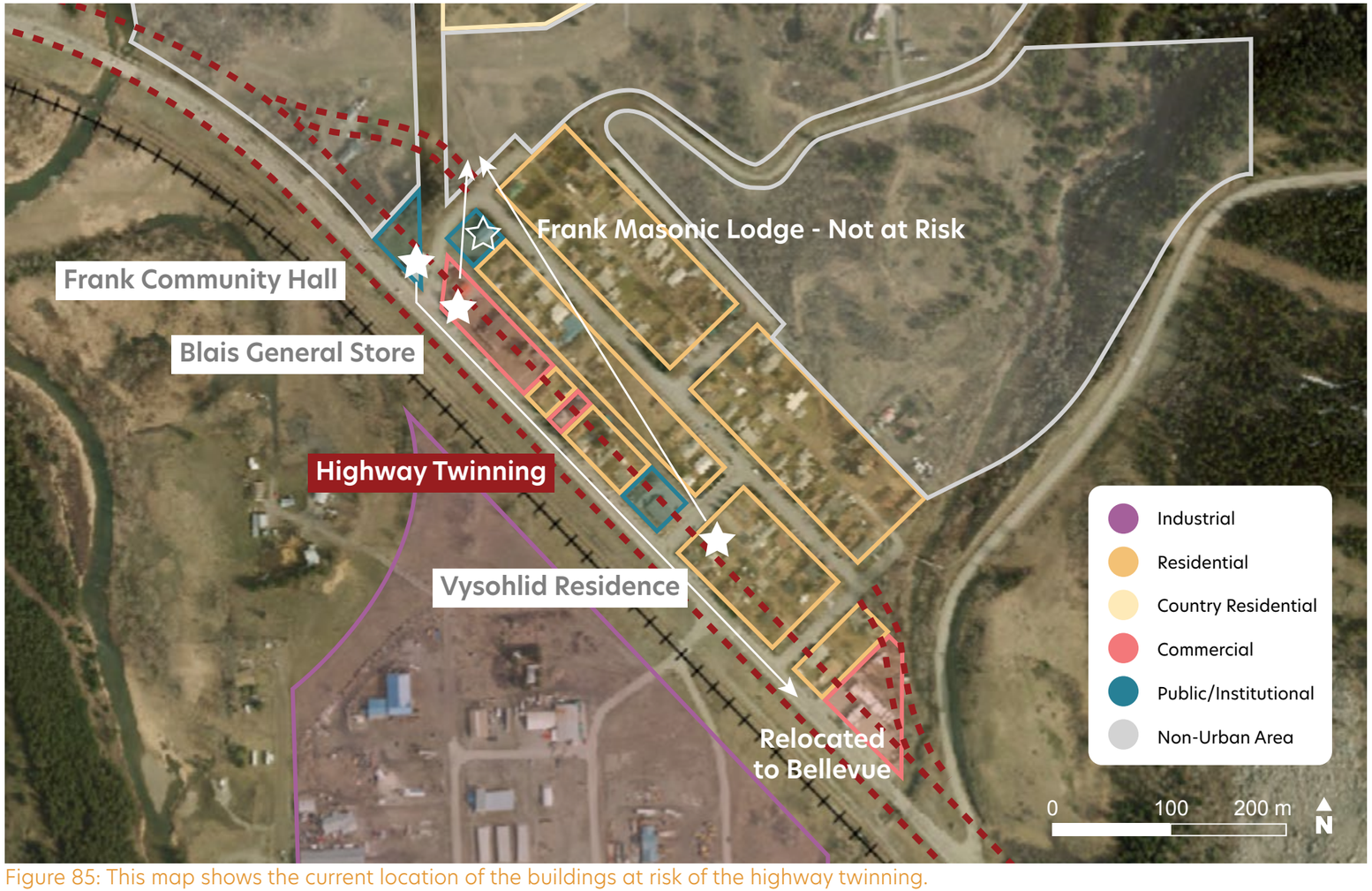


Figure 85: This map shows the current location of the buildings at risk of the highway twinning.

Relocated and Revitalized

The relocation of heritage buildings can be accomplished simply through planning and funding. We suggest that negotiations are made with Alberta Transportation and that the relocation of these buildings be a condition of purchasing the land; Alberta Transportation is responsible for relocating these buildings if they decide to purchase the land.

Relocation to Bellevue Main Street

Figure 86: This map shows the relocation of the Frank Community Hall to Bellevue's main street.

New Life On Main Street Bellevue (Before & After)

Google Streetview. (2014).

Figure 87: These images show a before and after view of the proposed Frank Community Hall relocation to Bellevue.

Relocation to Frank

Figure 88: This map shows the relocation of the Vysohlid Residence & Blaise General Stores within Frank.

New Prominent Location in Frank (Before & After)

Google Streetview. (2014).

Figure 89: These images show a before and after view of the new 148 St and 21 Ave intersection.

9.2 Heritage Incentives

Policies and Economic Strategies

Heritage buildings in Frank are not the only ones at risk. Many buildings throughout MCNP are in disrepair. In order to repurpose and continue to use heritage buildings, incentives need to be created. These incentives would encourage heritage building owners to have pride in these buildings and to maintain and repair them as needed. We propose that the municipality encourages heritage building owners to receive provincial designation, to introduce an interest-free loan policy, create a tax exemption and reduction program for heritage buildings, as well as waive permit fees for conservation and restoration projects.

By encouraging heritage building owners to seek provincial historic designation, owners will have access to provincial funding and grants. Owners should be encouraged and have assistance from the municipality as they seek designation. Other financial incentives should include an interest-free loan program, where interest is waived for all heritage buildings and for a set amount of time. Municipal property tax reductions and exemptions should also be applied to heritage buildings. The amount of tax reductions and exemptions should be assessed based on the repairs and work required to restore the heritage building; they should also last for a set amount of time and up to a set amount of money, determined by the repairs needed. Once the building has been restored, the property can be reassessed at a higher value and property taxes paid back at the higher amount. A final incentive should be to waive all permit fees for any conservation or restoration work taking place on a heritage building.

Together these heritage building incentives will encourage building owners to maintain and care for their heritage buildings. This will allow these important assets to remain in the community for years to come, and will help liven the community.

Proposed Incentives:

Provincial Historic Designation

Interest-free Loans

Municipal Property Tax Reductions & Exemptions

Waive Permit Fees for Conservation & Restoration Projects

Miner's Cottage

Fadaei, M. (2021).

Cruickshank Burnett Store

Google Streetview. (2014)

Holyk's Grocery

Google Streetview. (2014)

Roxy Theater

Google Streetview. (2014)

Morrison Block

Google Streetview. (2014)

Italian Hall

Google Streetview. (2014)

10. Sites of Opportunity

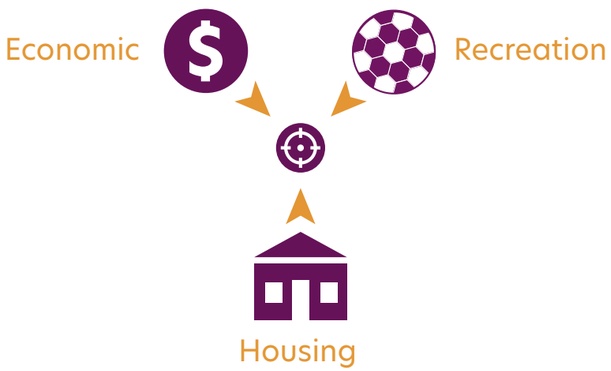
10.1 Overview

Five Sites, a Plethora of Opportunities

This section will elaborate about five unique site designs. Each site is rich, synergizing multiple purposes at a single strategic location. Figure 90 is a map of their locations, spread out across three communities. Today, each of these sites are very underutilized, either as fields of grass or vacant building spaces. The design interventions proposed consider innovative ways that housing, recreation, and economic purposes can synergize on a single site. Table 4 breaks-down which purposes each site combines.

Transforming Underutilized Spaces

Multiple Purposes in One Strategic Location



Recreation, Housing, and Economic Purposes

Site	Recreation	Housing	Economic
MDM Centre	✓	✓	✓
Tourism Info Centre	✓		✓
Hotel & Co-op Housing	✓	✓	✓
Cameron Co-Housing	✓	✓	
Recreation Centre	✓	✓	✓

Table 4: Checklist of purposes per site

Located in Coleman, Blairmore, and Bellevue

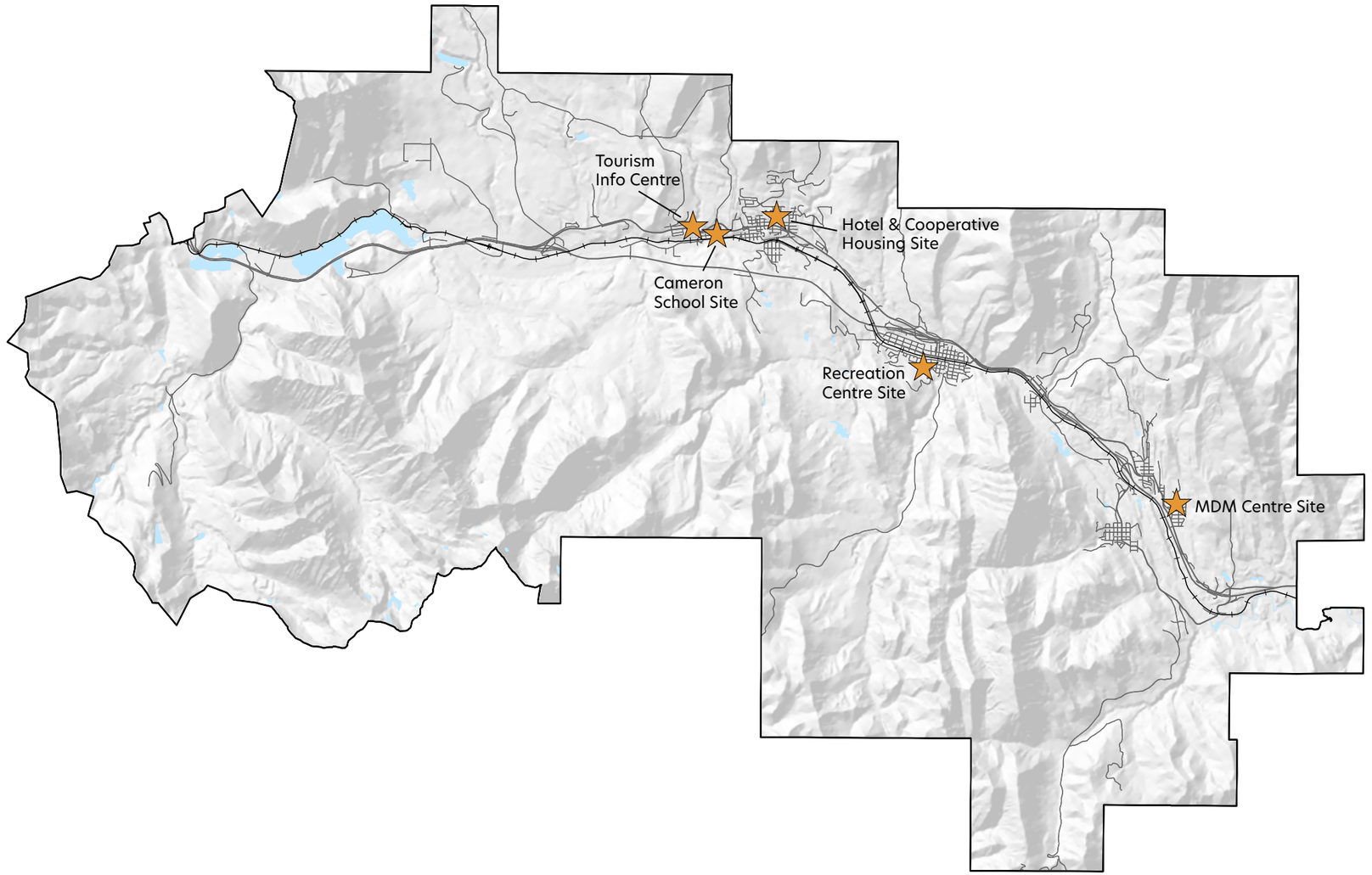


Figure 90: 'Sites of Opportunity' locations

10.2 MDM Center & Housing

Introduction

Figure 91: Context Map

The MDM Centre is a building located centrally in Bellevue (context map: Figure 91), with a playground and open field. The MDM Centre was previously a school, but is now used by various community groups. It exists as an excellent example of adaptively reusing existing buildings, but it is not currently being used to its full capacity. New adaptations are thus possible to optimize the use of the building. The municipally owned field surrounding the site can also be repurposed: it is severely underutilized because there are no facilities or amenities there and the surface is too uneven for most sporting activities. The existing building and undeveloped field are both assets that are centrally located in Bellevue, and Municipal ownership is an asset for instigating action on the site for the benefit of the community. Also, the site will be connected to Bellevue's family-oriented main street by our proposed mobility network. Our recommendation for this space has three components. First, an adaptation of part of the MDM Centre to include dormitories for several economic benefits. Second, add recreational amenities to a portion of the field. Third, develop family-oriented housing in the remaining portion of the field. Due to the size of the site, phasing has been made an important consideration. The economic, recreational, and residential additions will complement each other and ensure that the full potential of the site is unlocked.

Site Plan

No structural changes are proposed for the MDM Centre in this site plan; the internal adaptations and discussion for phasing will occur separately. The recreational additions include a community garden, picnic area, firepit seating area, gathering area with a small outdoor stage, and improved open space for free play. We also recommend landscaping the park with strategically placed trees to add enclosure

MDM Centre Housing + School Adaptation

Figure 92: MDM Center and Housing, Plan View

Image by M.Fadaei, 2021

without making the park feel claustrophobic or inaccessibly. These park additions are relatively inexpensive but will add variety to the park amenities and attract a diverse range of users. The elements of the park will be connected together with the MDM Centre and residential area by pathways.

Four lots of residential development are demonstrated in the site plan as Phase 1 of development; there are five additional lots that could be developed in subsequent phases (shown as brown boxes). Phasing is recommended on the site because housing demand will increase gradually over time, not overnight. Additionally, future development may be tailored more appropriately to future needs which may not yet be foreseen. In the present, affordable family-oriented housing was expressed as a need by the community. Therefore, we recommend infill development of approximately 48 new 2-4 bedroom dwellings in Phase 1. These would be row houses and stacked townhouses because they are more affordable than new single-detached houses but are more family-friendly than apartment buildings. These units would help diversify and balance Bellevue's housing mix which is almost entirely single-detached dwellings. We also recommend that the housing units be designed with solar photovoltaic panels in mind: even if they are not installed at the time of construction, the architecture of a building matters if future residents choose to install panels - this is one of the sunniest residential locations in the Crowsnest Pass based on our analysis.

Figure 93: Family-Oriented Infill Development

Before & After

This perspective shows how the scale of the new residential units would be experienced on the site: the new units would increase the number of new homes without sacrificing the human-scale feeling of the street. Also, getting a glimpse of the park, you can see that an abundance of park space is maintained, but it is made more appealing by the addition of amenities, trees, and human activity.

Potential of MDM Center Dormitory Additions

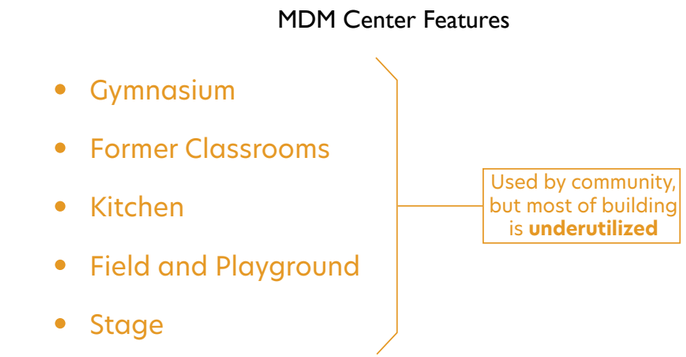
We propose renovations within the MDM Centre to generate additional use value from an existing building in an affordable and innovative way. The primary renovation will be to convert unused classrooms on the second floor to dorm rooms, but upgrading the kitchen and front entrance may also support the initiative. We have identified four beneficial uses for the dorm rooms: for public school visits, university program visits, summer camps, and for Sinister 7 visitors.

During the school year, public schools from across southern Alberta and BC would be invited to stay in the dorm rooms and partake in a programmed educational experience. Existing destinations such as the nearby Leitch Collieries, Bellevue Underground Mine Tour, and Frank Slide Interpretive Centre would make great educational visits, boosting visitor numbers in the off-season. The new park amenities would also be perfect for the kids to utilize. Meals could be prepared in the kitchen or catered by a local business.

A steering committee member explained that University groups from Alberta, Saskatchewan, and maybe even beyond have been known to visit the Crowsnest Pass because it is a rich field learning opportunity for archaeology, geology, paleontology, history and more. By actively reaching out to universities and enticing them with affordable accommodations, more groups could be attracted. An intangible benefit of giving primary school and university students a chance to stay in the Crowsnest Pass and learn about its rich character is that it leaves a lasting positive impression. A tangible benefit are the dollars they spend on main street on their free time!

We heard from community members that there is a lack of child care facilities. Overnight and full-day summer camps for local and non-local children would easily be accommodated if local staff were hired as camp counsellors. The camps could be an affordable option for local working parents during the summer.

'Sinister 7' is a major annual marathon event that draws an incredible surge of visitors, overwhelming local accommodations for a short period of time. We heard that the Municipality allows camping in designated areas as a pop-up accommodation solution, so it is reasonable to assume that visitors would also be willing to stay in a dorm room. This would generate upfront revenue and also help support the event which has great value for the Crowsnest Pass



Transformation Strategy

1. Turn classrooms into dorm rooms
2. Establish a meal room
3. Hire local staff
4. Plan programming and fieldtrips
5. Invite school groups from BC/Alberta

Precedent: Kamp Kiwanis Outdoor School

Figure 94: Kamp Kiwanis Promotional Image. (Kamp Kiwanis Facebook Page, 2020)

Kamp Kiwanis explains their programs on their website. Located west of Calgary, they offer various educational outdoor learning experiences with on-site lodging and meal preparation. Seven months of the year they offer 2-5 night stays for kids in grades 4-8. They teach kids about nature in an engaging, outdoor environment. They also offer summer camps for grades 4-11, band retreats, and more.

Where:
- Bellevue
- MDM Centre building
- MDM Centre field

What:
- Adding new park amenities
- New community garden
- New family-oriented dwellings
- Zones for future development
- Adapting the MDM building for dorm rooms

Why:
- Recreational enjoyment of the park
- Maximize the capacity of the MDM Centre
- Attract visitors for tourism and area awareness
- Families can benefit from the park amenities
- Families can benefit from lower-cost dwellings
- Produce local food in gardens

How:
- Rezone the land to accommodate the desired units
- Invest in park upgrades
- Invest in MDM adaptations
- Design educational programs
- Market the MDM Centre programs

10.3 Cooperative Housing & Terraced Hotel

Introduction

Figure 95: Context Map

In the north end of Coleman, we are introducing cooperative housing as a strategy that can be subsidized by the provincial or federal government or be an unsubsidized option that is still below market rates. Two blocks would be ideal for the cooperative housing model because of its location within Coleman, and accessibility from multiple directions. This strategy will provide the community with a chance to pool their financial resources, buy a share of land, and own a house with desirable quality. Also, according to the "Canadian Cohousing Network", it could be an environmentally friendly alternative to provide affordable dwelling and shared amenities in a well-knit community. Moreover, by bringing in various types and sizes, It would help diversify housing within the community while providing gears to community income options causing Coleman to act as a destination for low-income families and seniors.

Site Plan

This development proposal would deliver a total of 120 residential units with a variety of options including 48 triplex and fourplexes, 36 duplexes, and 32 rowhomes.
According to the steering committee, shifting the economy necessitated the development of some fundamental servicing units such as hotels and conference rooms. The south of the site is ideal for such development, and hence we recommend a terraced hotel in this area. Slopes will grant stunning views for the hotel rooms which can be capitalized on more through a conference and wedding venue.

Cooperative Housing + Terraced Hotel & Park

Figure 96: Cooperative housing and terraced hotel and trail path, plan view

Image by M.Fadaei, 2021

Figure 97: (Facing east from the terraced park) Perspective illustration of terraced hotel and venue.

The hotel proposal would provide 7400 Square meter building footage to accommodate approximately 100 rooms plus a moderate size conference spaces and wedding venue attached.

The slope is also an opportunity for a terraced park with a trail winding up the hill at the west side of the hotel site. This trail can also act as a link for mobility that connects the northern part along Highway 40 to the rest of the community.

Before & After

This perspective shows the spectacular view provided with the terraced hotel and how it can be experienced on the site. The trail connecting the south site to the north is also shown at the right of the image.

Where:
- Coleman
- Near intersection of Highway 3 & 40
- Undeveloped parcels
- Sloped and flat areas

What:
- Cooperative housing
- Terraced hotel
- Wedding/conference venue
- Terraced park/pathway connection

Why:
- Scenic views for weddings, visitors
- Affordable, community-oriented housing
- Convenient location for locals and visitors
- Area in need of park space and mobility connection

How:
- Private investment for the hotel
- Private and public investment for the housing
- Public investment for the park

10.4 Cameron School & Senior Facility

Introduction

Figure 98: Context Map

The Cameron School site is located on the west side of Coleman, as shown in Figure 98. The Cameron School building is a beautiful but poorly maintained vacant heritage building. For this site, we propose converting the existing building for co-housing and infilling vacant space to the west side with dedicated seniors facilities. This flexible housing option not only helps to preserve the heritage site but also provides sustainable and shared-resource living spaces in a supportive community. This strategy has been picked to respond to evolving demand for housing especially for short term stays.

Site Plan

According to the steering committee, the community has wished for the Cameron School to be given new life. A private investor began planning the adaptive reuse of the building, but the project has stalled, and the designs were not utilizing the site to its full potential for housing with social benefits at this unique location. The site is opportune because it is within an established community, near amenities, and serviced by infrastructure. The existing building offers approximately 1,000 square metres, allowing for multiple affordable private units along with shared indoor and outdoor spaces and amenities. The outdoor co-housing spaces can be shared with the adjacent seniors facilities, including a vegetable garden.

Seniors' Facilities & Cameron School Reuse as Co-housing

Figure 99: Cameron School, Site Plan

Image by M.Fadaei, 2021

Figure 100: Adaptively re-used site shown in foreground and senior's housing in the background

We suggest adding two seniors' living facilities beside the Cameron School building as a great compatible use. Our demographic analysis shows that there is a high elderly population, and the steering committee expressed that this large senior population is underserved by affordable independent-living and assisted living units. Often, senior couples will require a transition from independent to assisted living at different ages. By keeping the facilities together, spouses may still be easily connected, as is demonstrated in our precedent example. The whole complex can provide 10 units of assisted living pockets plus 7 units in the form of independent residential. The Cameron School co-housing and the seniors' living facilities will allow for different age groups to bond, take care of each other, and share resources.

Before & After

This perspective displays how the Cameron school building would look like after the conversion. Also, it provides a glance of how the landscaping could be done to be more inclusive and open to the community around while provides private spaces and semi public separated open spaces. At the background, the senior facility is shown to give a sense of physical form and how it might be combined with the existing building and site.

Where:
- Coleman
- Cameron School site
- West of main street, south of Highway 3

What:
- Heritage building adaptive reuse
- Independent and assisted living for seniors
- Co-housing community
- Community garden

Why:
- Revitalize and save an important heritage building
- Infill unused space with needed seniors facilities
- Convenient but quiet location
- Community-building for residents and neighbours

How:
- Seniors housing developed privately
- Co-housing designed by future residents
- Shared spaces managed collectively

10.5 Tourism Information Centre

Making Lemonade

Until recently, the Municipality of Crowsnest Pass (MCNP) has benefitted from the Provincial visitor information centre near Crowsnest Lake. Unfortunately, the centre has closed. A lack of visitor awareness about the MCNP and local attractions was identified as an issue, so to promote the growth of the tourism economy, a new information centre is recommended. Our proposition is to repurpose a historic building in a strategic location, adding recreational and commercial amenities.

Info Centre, Dog Park, Play Area + More

The playground visible in Figures 101 and 102 is imagined as a Crowsnest-themed interpretive playground: Potentially including a coal cart, train engine, and moose designed as play equipment. This would lure families to stop, foster sense-of-place, and be educational. Free rentals of adventure safety equipment (e.g. bear spray, GPS units) could draw visitors while improving safety and reducing emergency response costs. The McGillivray Mine Office building has great visibility from the road and has a unique charm, making it an asset. Also, the site is directly on the route of the Great Divide Trail, which was identified in the Municipal Development Plan (MDP) as an untapped economic opportunity. The centre could directly support (and profit from) those hikers by offering information, washrooms, paid showers, and retail items to restock their supplies. Additionally, the site has great access to downtown Coleman, sending vehicles or pedestrians/cyclists (using a proposed mobility network extension) along scenic 19 Ave to the historic main street. The dog park would serve visitors and locals alike, and families traveling with pets will be attracted to pull over. The area proposed as a dog park is currently zoned as a park, but is an underutilized area of mostly grass. RV parking was expressed by the community as an important consideration, and it can be accommodated across the street; the size of the southern parking area is only slightly smaller than the parking area provided at the previous visitor information centre, which accommodated large RVs and 15 regular parking stalls. However, most parking will be adjacent to the information centre for convenience and to minimize pedestrian crossings of the road. Controlled pedestrian crossings should be added, but traffic on this road will be reduced once the Highway 3 bypass is completed. Our site plan is considerate of the adjacent neighbours to the building by maintaining their vehicle access in a convenient way.

Capitalizing on Road Location, the Great Divide Trail, and a Unique Heritage Building

Figure 101: A plan-view map of the proposed tourism information centre

Before: A Local Treasure Left Vacant

(D. Giannoulis, 2021)

After: An Information Centre that is an Attraction Unto Itself

Figure 102: (Facing east) A perspective illustration of the proposed tourism information centre

What About Travelers From the East?

We heard from community members that having tourism information at the eastern end of the municipality is also important. Funding two information centres may not be economically feasible, so our suggestion is to create a series of outdoor unattended information boards along the highway at the eastern entrance of the municipality. The information could be managed by the primary information centre, and direct people to the primary information centre for additional services.

Where
- Repurpose/revitalize the McGillivray Mine Office
- At the western edge of Coleman (20 Ave and 66 Street)

What
- Tourism information centre
- Retail and recreational equipment rental
- Crowsnest-themed playground
- Picnic area
- Dog park
- RV Parking

Why
- Improve the tourist experience
- Catch visitors as they enter the municipality
- Capitalize with retail and rental services
- Directly on the Great Divide Trail
- Serve visitors and locals with a dog park
- Repurpose an important heritage building

How
- Potential for a tourism development grant
- Potential for a heritage conservation grant
- Fund operations through commercial renters
- Use local experts to curate the information

10.6 Recreation Centre

A Definitive Hub for Recreation

Constructed in 1955, the Albert Stella Memorial Arena was permanently closed in 2019 due to structural issues (Benning, 2019). Skateboarding, wall climbing, lacrosse, soccer, and gymnastics were all previously enjoyed there, and many of these activities have no similar facilities in the municipality. Our proposed intervention will replace the lost amenities and add new amenities, solidifying the location as an emboldened recreation hub.The new recreation centre will not be built on the old parcel of the Albert Stella Arena, but across the field in order to better accommodate the Pass Powderkeg Ski Area. The direct adjacency to Pass Powderkeg is key for leveraging the full potential of the site. Our proposal does not dictate any changes on school property, although we have been mindful of the school in our designs, and there are obvious benefits of locating a school and recreation centre side-by-side.

Where
- Blairmore: Albert Stella Memorial Arena
- Adjacent Isabelle Sellon School
- Adjacent Pass Powderkeg Ski Area

What
- Indoor and outdoor recreation amenities
- Hotel: 40-50 rooms
- Space for Pass Powderkeg Use
- Commercial/restaurant space
- Daycare
- Mixed-income residential development: 35-42 units

Why
- Replace the lost recreation centre amenities
- Grow the tourism industry
- Capitalize with commercial space
- Alleviate housing stress in Blairmore
- Perfect location next to Pass Powderkeg, the School
- All-season recreation

How
- Potential Provincial grant
- Fund construction through residential development
- Fund operations through hotel, recreation centre revenue
- Reduced maintenance cost for outdoor amenities
- Partner closely with Pass Powderkeg to find synergies
- Connect centre via the Active Transportation Network

Capitalizing on Road Location, the Great Divide Trail, and a Unique Heritage Building

Figure 103: A plan-view map of the proposed tourism information centre

Vehicle access from 19 Ave helps avoid residential road traffic, and residential garage access is maintained. There is pedestrian access from multiple directions, including the base of Pass Powderkeg, and a bike lane connects to the site. At the base of Pass Powderkeg, we observed people parking informally on the grass and socializing. We propose formalizing the parking stalls and adding a small picnic area. There are 72 parking stalls in this plan with additional underground parking for the hotel. The main parking area acts as a spatial buffer between the recreation centre and the adjacent houses. Also, the height of the hotel is subtle because of its attachment to the centre. The proposed residential development is in a desirable location: proximal to a school, main street, ski hill, and recreation centre. The units should be evenly split between high-end, moderate, and controlled affordable housing units: benefiting low income families with the location benefits and the luxury units will help fund the project.

Before: A Prime Location Underutilized

(D. Giannoulis)

After: An All-Season Wonderland for Locals and Visitors

Figure 104: A perspective: Winter at the recreation centre

Figure 104 shows how the space can be enjoyed in the winter. The ski runs are highly visible, creating a unique sense of place. The outdoor area will be blocked from the westerly winds by the building, and fire pits are a popular way of encouraging winter outdoor socializing.

Six Components in Symbiosis

The six major components of the site are: indoor recreation facilities, outdoor recreation amenities, a hotel, facilities that support Pass Powderkeg, commercial spaces, and new residential development. The indoor recreation facilities provide all-ages and all-weather opportunities for recreation, while the outdoor amenities offer drop-in friendly opportunities that are always available and affordable. The outdoor amenities will be adjacent to large windows on the building to foster vibrancy. The hotel will be attached to the recreation centre, offering 40-50 rooms (4 floors of rooms, lobby on the ground floor). Including a hotel will help fund the initial construction and contribute to ongoing revenue for the recreation centre operations.

The hotel and the recreation centre will benefit because guests will be able to use the facilities. Data and community members have indicated that hotel rooms are in need in the municipality, but that the winter months can be slow. By placing the hotel adjacent to indoor facilities and Pass Powderkeg, winter visitors will be attracted. The manager of Pass Powderkeg, Katherine Seleski, explained how improvements to the ski area since 2017 have tripled ridership numbers, but there is still unlocked potential (Personal communication, March, 2021). Seleski explained that additional services and rooms could benefit the ski hill, particularly for their growing niche of hosting events, but the expansions to the existing lodge would be difficult. Thus, we propose that the portion of the recreation centre closest to Pass Powderkeg could help provide some of the necessary services and spaces, including a restaurant and day care (which would also benefit the recreation centre users). The other ongoing sources of revenue and local employment would include a cafe under the hotel and user admissions, which could even turn the recreation centre into a direct source of revenue for the municipality, instead of an expense.

However, the upfront construction cost of the facility would be expensive; we propose using the Albert Stella Memorial Arena parcel for residential development as a win-win-win solution. Win #1: the development will help fund the recreation centre. Win #2: it will help add housing stock to Blairmore's stressed market. Win #3: Future residents will be close proximity to the recreation amenities, Blairmore's main street, and Isabelle Sellon School. The trade-off is by sacrificing space, however, we assert that it is not about the quantity of space, it is about the quality of the space. Figure 103 shows how outdoor amenities can be added while open field space by the school and a full-size soccer field can be maintained. In summary, the six major components of the space are not isolated systems, but highly interconnected and mutually benefiting.

Precedent: The Boulevard, Saanich BC

This precedent was used as a reference for the building size, lot coverage, and vehicle access. Each two-storey block of buildings includes 5-6 units with on-street unit access and attached garages. Based on this precedent, the development proposed could contribute 35-42 units, or approximately 65-90 residents. The pathway connection is another notable addition by the developer.

Figure 104: Townhouses and vehicle access to parking (Google Streetview, 2018)

Figure 105: The Boulevard townhouses and pathway connection (Google Streetview, 2018)

Commercial Space, Indoor Facilities, Outdoor Amenities

Figure 106: A plan of the recreation centre programming

A Closer Look at the Recreation Centre

The locations of indoor and outdoor amenities were carefully considered. In Figures 106 to 108, blue represents public indoor spaces, green represents public outdoor spaces, and red represents commercial spaces. The recreation centre would include a gymnasium, pool, daycare, fitness centre, and wall climbing (partially indoor, partially outdoor). We encourage extra consideration for community members with disabilities for an accessible site and building design, as well as for the services/programs provided in the facility. Figure 107 shows how the middle part of the building would be a tall one-storey area (8 metres), but the ends of the building would include 2-storeys within that 8-metre height. Outside, there is a hockey rink, family skating area (grass in the summer), picnic area, skatepark, soccer field, and run/walk circuit. The hockey rink could be used for lacrosse or basketball in the summer. Installing a roof over a portion of the skatepark (not pictured) would help maximize its usable number of days a year. The run/walk circuit would be great for adults and seniors: A full loop can be done without having to cross a road, and there would be interesting activities to watch while you run. The placement of the picnic area and walking/running circuit by the skatepark and hockey rink would help mix the age groups of users.

Integrating but Differentiating the Hotel from the Centre

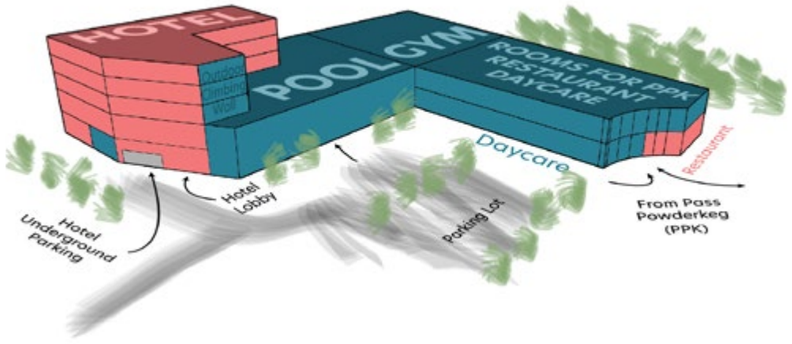


Figure 107: (Facing southeast) 3D isometric diagram of the facility

Where Indoor and Outdoor Fun Meet

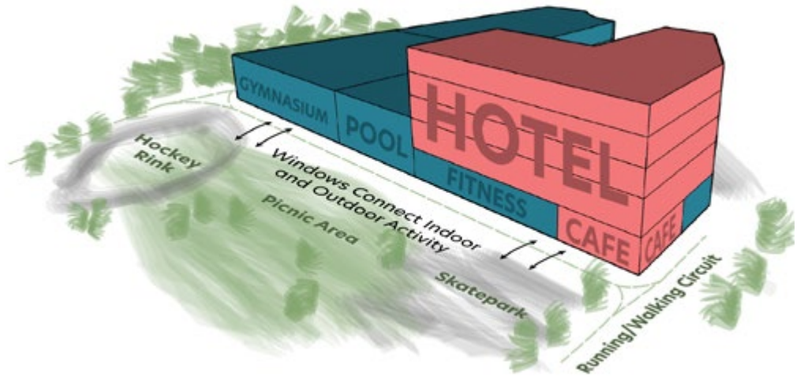


Figure 108: (Facing southwest) 3D isometric diagram of the facility

Precedent: Rocky Mountain, Calgary

This precedent shows how indoor climbing facilities can include a climbing wall on the building exterior. Apart from recreation, it would make the building easily identifiable and visually marketable. For security, access is from the 2nd floor.

Figure 109: Outdoor climbing wall at Rocky Mountain (Calgary Climbing Centre, n.d.)

Precedent: Elevation Place, Canmore

Elevation Place includes a climbing gym, pool, fitness centre, library, art gallery, and more (Town of Canmore, n.d.). The centre serves locals and visitors, responding to and enhancing the mountain recreation culture of the area. Climbing is a popular activity for young adults: this would attract them, a key economic age group.

Figure 110: Elevation Place (Town of Canmore, n.d.)

11. Main Streets

11.1 Main Street Overview

Main Street Strategies

We've focused on four main streets in the communities as an opportunity to enhance the main commercial areas, add to park and community space, and to enhance pedestrian networks. We consider each main street as being unique, therefore they each serve a different purpose. Bellevue is considered to be family oriented; Hillcrest is considered to be more grassroots and community oriented; Blairmore is considered to be the main tourist and business node; and Coleman is considered as the main arts node with some tourist destinations as well.

For all main streets we have created five general strategies that should take place. The strategies include: heritage building improvements, opportunities for adaptive reuse, enhanced spaces for community gatherings, infill opportunities, and infrastructure improvements. These strategies will enhance the main street experience and create new community opportunities.

As Coleman has recently gone through main street improvements, we have focused on Bellevue, Hillcrest, and Blairmore, which are detailed in the following sections of this report.

- Heritage Building Improvements
- Adaptive Re-use
- Spaces for Community Gathering
- Infrastructure Improvements
- Infill Opportunities

11.2 Bellevue Main Street

Plaza (Before & After)

Google Streetview. (2014)

Bellevue Main Street Plan

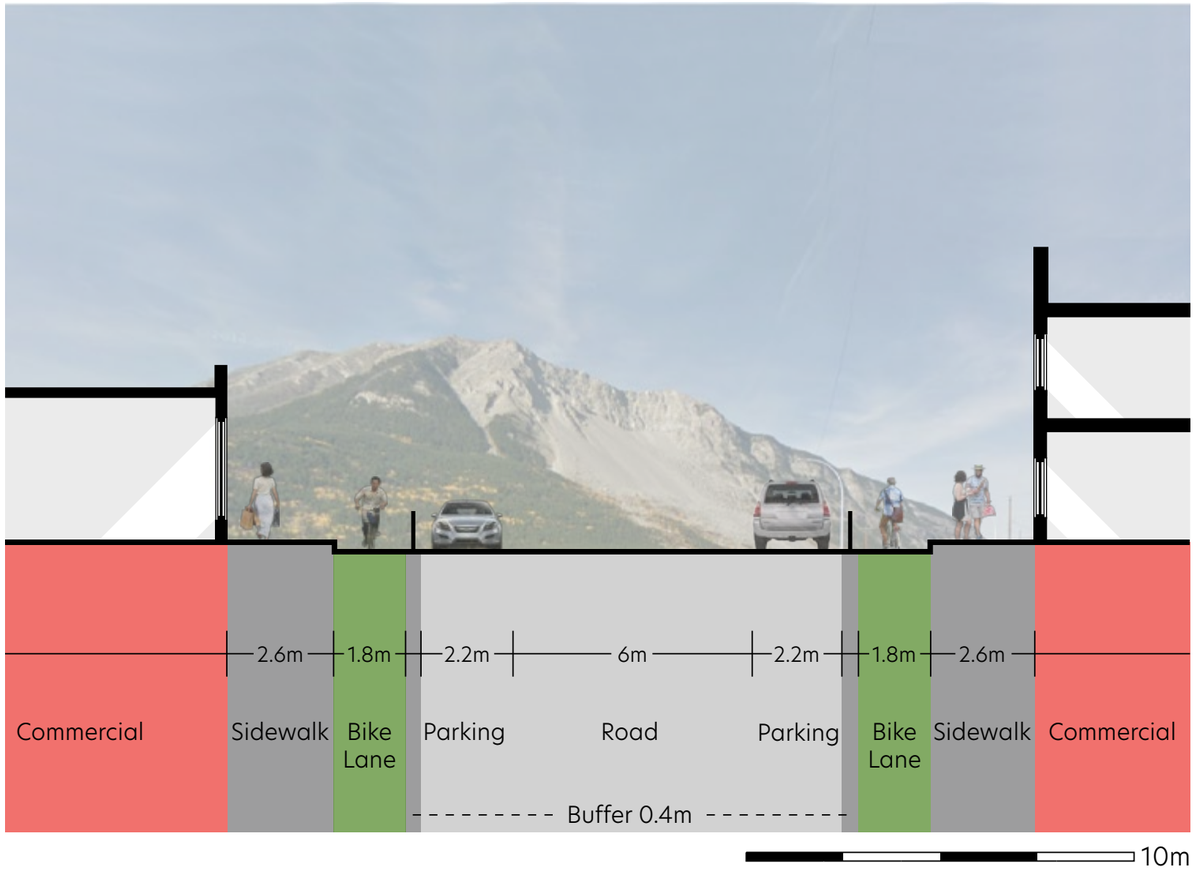
Family Oriented Main Street

Bellevue presents a great opportunity for a family-oriented main street for three reasons. First, the mine tour and ice cream store exist as great family attractions. Second, many families live in Bellevue because it is more affordable than Blairmore or Coleman, and third, because our family-oriented recommendations for the MDM Centre site will be complementary. This street is a great area for events, has many opportunities for infill and adaptive re-use, however it needs infrastructure improvements.

As mentioned in section 8.1, we recommend that the Frank Community Hall should be moved to Bellevue's main street. It should be located on the west end of the street, where there is currently a parking lot, and should be set back to allow for a small plaza space. This location will allow for a year round attraction to take place on the street; will infill lots and contribute to a more engaging main street; and will allow for some parking to be maintained behind the building. Another infill opportunity is located on the east end of the street, on an empty lot that is currently owned by MCNP. Both of these infill opportunities will foster a more active street with on-street frontage. The buildings highlighted with red stars are great opportunities for adaptive re-use. By adapting and re-using these buildings we can revitalize the main street while conserving its character. These opportunities for adaptive re-use can take place in the form of office space, restaurants, or retail, and should contribute to the revitalization of the main street.

As the family oriented node, it is important to add more spaces for community gathering and to connect the existing park spaces. Therefore, we recommend an event plaza space next to the current Ice Cream Shop,in the adjacent lot currently owned by MCNP. This plaza space will allow for spill out seating for the OLd Dairy Ice Cream Shoppe, it will provide a main event space for community events, and it will further connect the residential area to the north with Memorial Park. With the Mine Tour entrance located next to this plaza, and mining being a major part of MCNP's history, we see this as an opportunity to have the plaza spill out across the street and create a Miner's Garden. This garden space will add to the vibrancy of the main street while also creating an informal learning area on the mining history of the Pass; it can be enjoyed by locals and visiting tourists.

Bellevue Main Street Section With Improvements



As shown in the plan traffic calming has been recommended on the west and east ends of the street in order to slow down the speed of traffic. As the road is currently quite wide we recommend improving the current infrastructure. We recommend widening the sidewalks and adding buffered bike lanes in order to enhance the pedestrian experience and to create further connections in the mobility network. These additions will allow us to maintain on street parking and maintain standard road widths.

Functional Diagrams (Before & After)

Through this design we can expand the pedestrian (shown in purple), bike (shown in orange), and park networks (shown in blue), while creating a more vibrant mainstreet and enhanced commercial frontages.

Where:

- Bellevue main street

What:

- Street infrastructure (including bike, pedestrian, and traffic calming)
- Opportunities of infill and adaptive reuse
- Addition of parks and enhanced park network connections

Why:

- To create a more inviting pedestrian experience and better bike connections
- Create a more active main street with on street frontage
- Fill in missing gaps of commercial/retail
- Create a year round destination in the community
- Enhance areas for community gathering

How:

- Utilize underused space
- Negotiate with Alberta Transportation for the relocation of the Frank Community Hall

11.3 Hillcrest Main Street

Space for the People

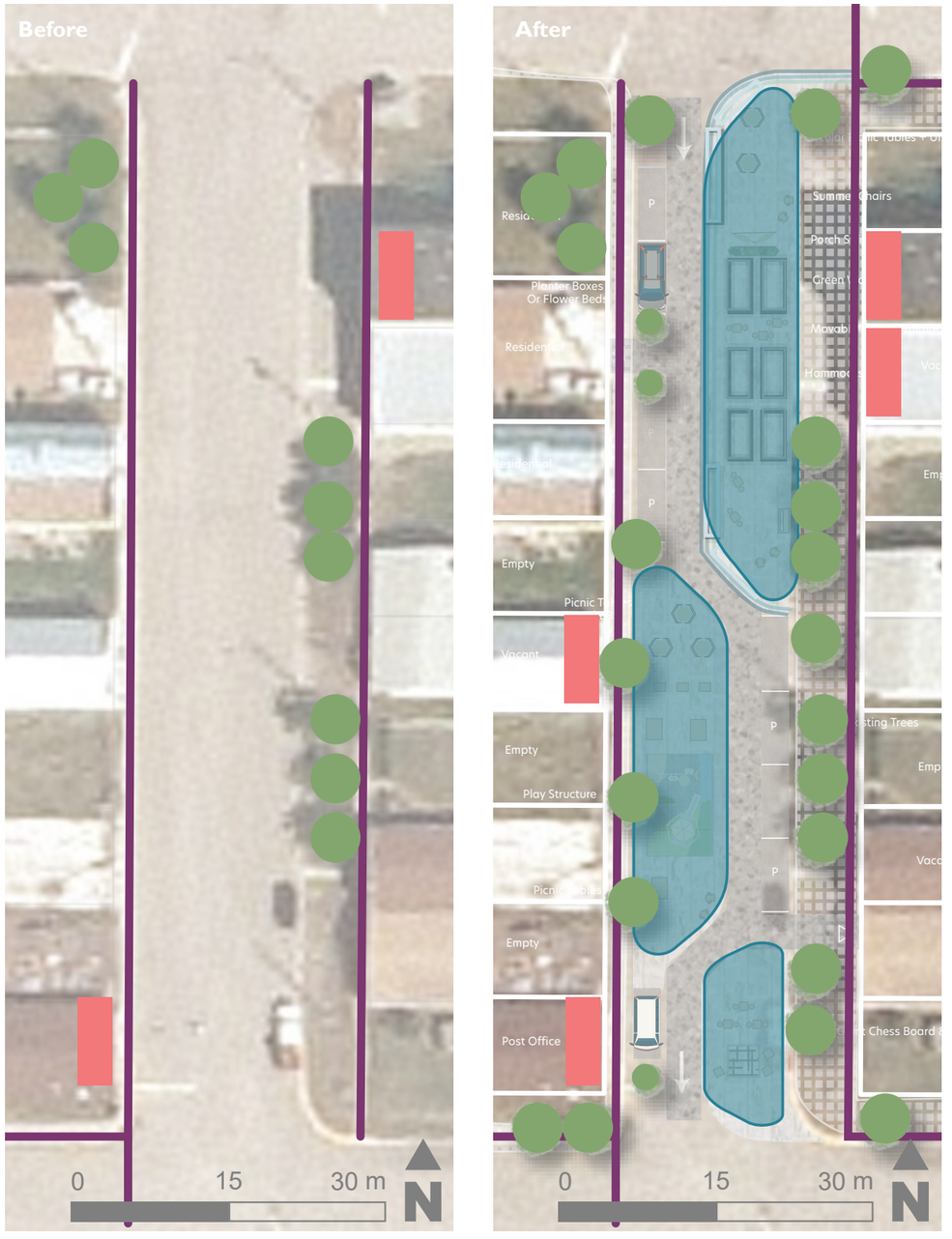
Hillcrest is small with limited commercial amenities, therefore we envision revitalizing the main street as a grassroots, community-oriented place. We suggest converting the old commercial street into a community space as a way to add to the limited park space and amenities in the community, and as a way to empower the community. Although it may not be a large visitor attraction, this unconventional upgrade may still attract enough outside visitors to help support more local commercial activity in Hillcrest, such as a cafe or corner store.

We recommend limiting vehicle access to the street through a one way single lane. This will allow us to maintain access to the existing residential and commercial uses, while also slowing down traffic through the curved road design. The remaining space should be used by the community and can include a playground, moveable and fun seating options (such as hammocks, garden chairs, patio tables), and a community garden. This transformation could start as a pilot project with paint, moveable furniture and a low budget, and it could grow to include custom elements and eventually replace the asphalt with vegetation. This can be accomplished with any budget and should encourage the community to transform the space based on what they want. This intervention should add vegetation to the street, expand community spaces, and over time, reactivate the few commercial spaces on the main street.

The functional diagrams demonstrate how the site has been transformed with this intervention. The addition of park space and vegetation can liven the street and encourage the revitalization of the commercial spaces.

Hillcrest Main Street Plan

Functional Diagram (Before & After)

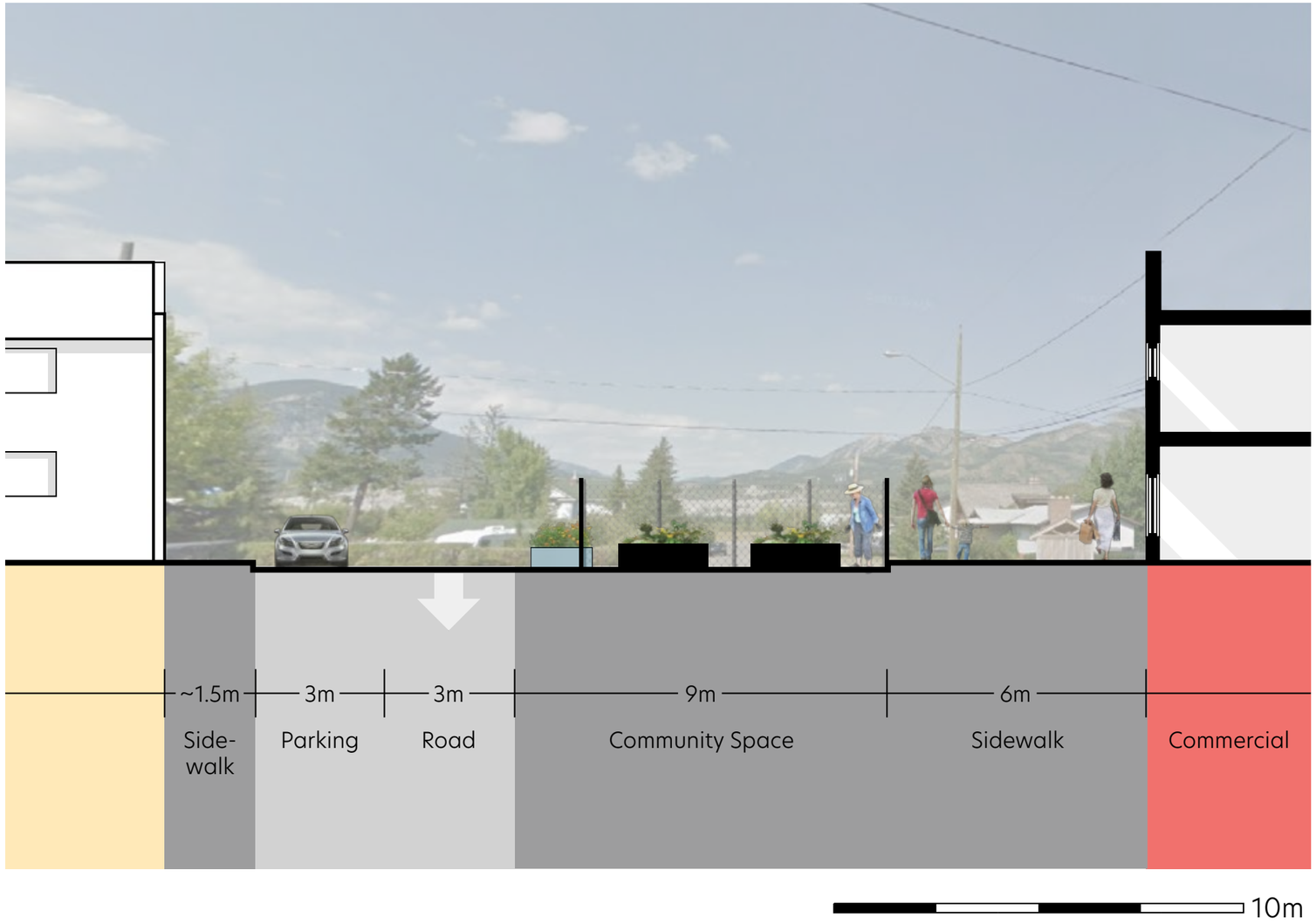


Street Phasing Options

Google Streetview. (2014)

This intervention will distinguish Hillcrest's main street in a unique way and will expand on the limited park space and amenities that Hillcrest currently has. It can be done in phases with any budget and can be determined by community members.

Hillcrest Main Street Section With Improvements



Precedent

The revitalization specifics of the street should be decided by community members. An advantage of our proposition is that it can be flexibly adapted to a small or large budget. The street could be similar to the New York example of Play Streets where kids, or even teens, adults and seniors can use the space for fun activities. It can be a place for kids to play with chalk, set up moveable furniture or games, or create permanent furniture pieces. The second precedent, parks from pavement in Portland, Oregon, could be included in the second phase and involves replacing the asphalt with vegetation.

Play Streets, New York City

Streetlab. (2020).

Streetlab. (2020).

Portland, Oregon

Holstein, A. (n.d.). Asphalt, Be Gone! *Build a Better Burb.*

Where:

- Hillcrest main street

Why:

- Add to the limited amenities and park spaces in Hillcrest
- Revitalize the old commercial street

What:

- Limit vehicle access
- Expand community spaces
- Community garden plots

How:

- Start it as a pilot project with the community's involvement
- Implement small interventions along the street
- Empower the community

Current Street Condition

11.4 Blairmore Main Street

We have considered Blairmore as the main commercial and tourism node. However, its main street is only active on one side and community members have mentioned that the proximity to the train creates an unpleasant experience. We recommend creating a linear park on the south side of 20 Ave. This linear park will create a buffer between the main street and the train tracks, activate both sides of the street, add a diversity of park types, create options for nightlife, foster more cultural experiences, and add extra parking to the area.

Blairmore Main Street Plan

Linear Park: Life on Both Sides

We recommend creating a diversity of park types along the main street, starting with an entry plaza at the Green Hill Hotel. Currently this location is a popular stop for food trucks; within this plaza space we suggest creating food truck parking spots and with various seating and table options. We also suggest adding interesting pedestrian-oriented light features. This plaza will create an area for people to gather throughout the day, enhance the main street's nightlife and build off of events taking place on the main street.

At Old Maude we suggest an open air covered structure to protect the locomotive from the elements, while also creating a seating area and 'Heritage Point'. The 'Heritage Point' can be a space where visitors can learn about the train history of the Pass while enjoying the park space. Next to Old Maude we recommend a railway inspired skate park which will showcase this community's history while bringing in a younger age group.

Further east along the linear park, new parking areas will allow for the main street to accept more visitors without inconveniencing locals. Depending on the amount of parking added, these parking lots can be used to remove on street parking. On street parking could then be used as outdoor patio space for restaurants and could lead to a more pedestrian friendly main street.

Other suggestions for the linear park can include an 'Ecology of the Pass' garden which can highlight the local vegetation and act as another informal learning area. To the east end of the street, at 133 St, we suggest a connection with Gushal Studio south of the tracks, by creating an Art Park and artist's garden where artists from Gushal Studio can showcase their work through murals, sculptures, and other mediums.

Gazebo Park is a popular central gathering spot, so our last recommendation is to enhance the assets of the space and design it to be a focal point for events. Gazebo Park can include a spill out plaza that will be central for large events that take place during street closures. This spill out plaza space can be implemented simply by painting the road the same as the plaza space, as shown in the perspective.

Food Truck Plaza (Before & After)

Gazeebo Park (Before & After)

Google Streetview. (2014)

Figure 111: Before and after park and plaza ideas

Blairmore Main Street Section With Improvements

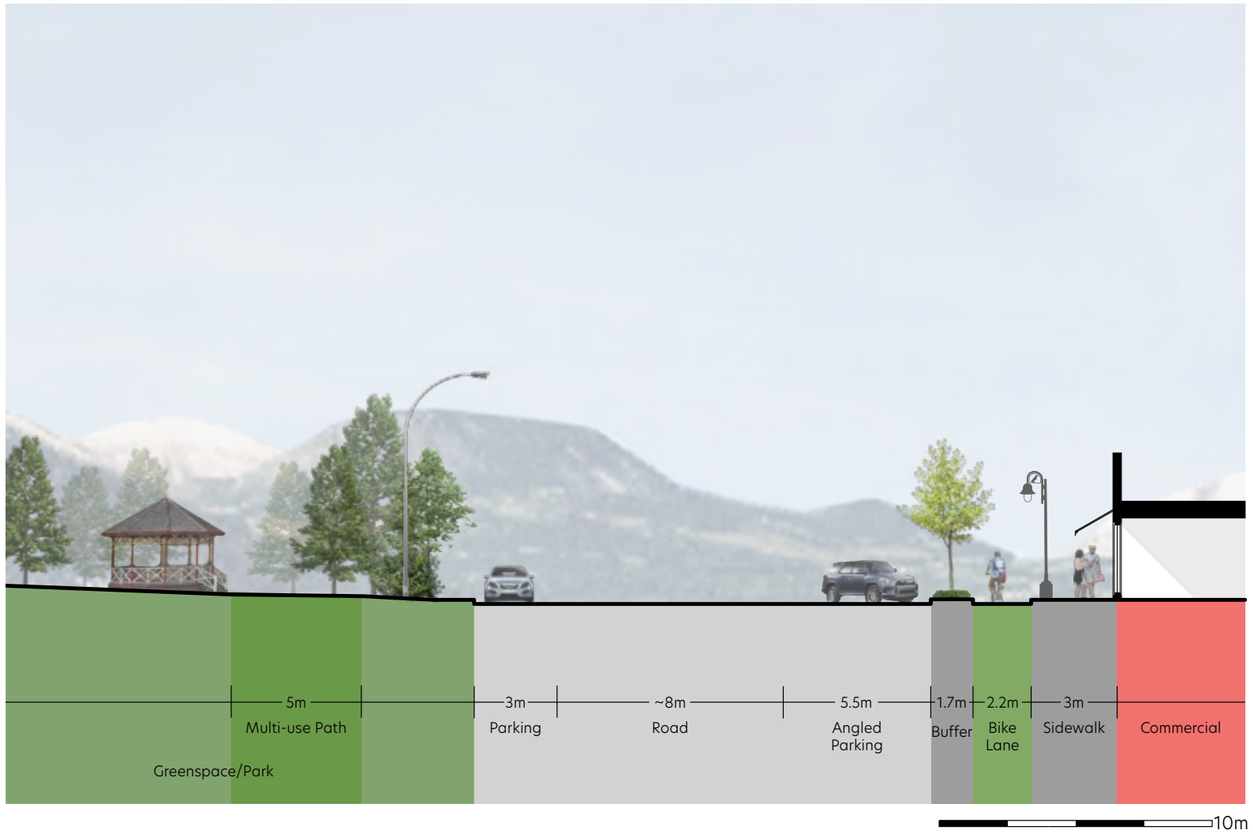


Figure 112: New street conditions.

Functional Diagrams (Before & After)

Figure 113: Functional diagrams showing before ad after conditions of the road.

Through this intervention we are able to increase the amount of vegetation and trees on the street, maintain on-street parking while also increasing the amount of parking spaces, activate both sides of the street and increase pedestrian and bike connections. The linear park can become an expansion of the community trail, connecting the trail to amenities.

Current Street Condition

Where:

- Blairmore main street

What:

- Create a linear park along the main street

Why:

- Enhance trail, bike, and pedestrian connections
- Activate both sides of the street
- Diversify the types of parks in the area
- Create a central area for community gathering
- Create a buffer between train tracks

How:

- Negotiate with CP Rail for access to that land
- Utilize underused space

Precedent: The Elgin Street Greenway

Sudbury, Ontario is starting a similar project where they are implementing a linear park along a historic main street in their downtown that faces train tracks. Sudbury's plans are to create a buffer from the train, enhance the public realm, and add parking to the downtown core. The Elgin Greenway, their linear park, is meant to create different park experiences and the plazas and parkspace interact with what is taking place across the street. The sections that have already been completed have seen an increase in use since the implementation.

The Elgin Street Greenway - Sudbury, Ontario

City of Greater Sudbury. (2014). Elgin St Greenway - Overall Concept Plan

Conclusion

These recommendations are for you, dear residents, council, and staff of the Crowsnest Pass. We appreciated all of your insights, suggestions, and ideas, and we hope that you feel meaningfully represented in this final product. Through our analysis and your feedback, issues and opportunities were identified relating to housing, recreation, heritage sites, tourism, mobility, food access, main streets, and the economy. Our recommendations consider the municipal, community, and site scale, and we identified five Sites of Opportunity. The Crowsnest Pass is a unique, special place. There should be no doubt about if the Crowsnest Pass has potential, but an incredible amount of dedicated time should be spent on the question “how can we channel our potential for the best interests of our community and our environment”: and for this question, we hope our co-created ideas are beneficial to you.

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