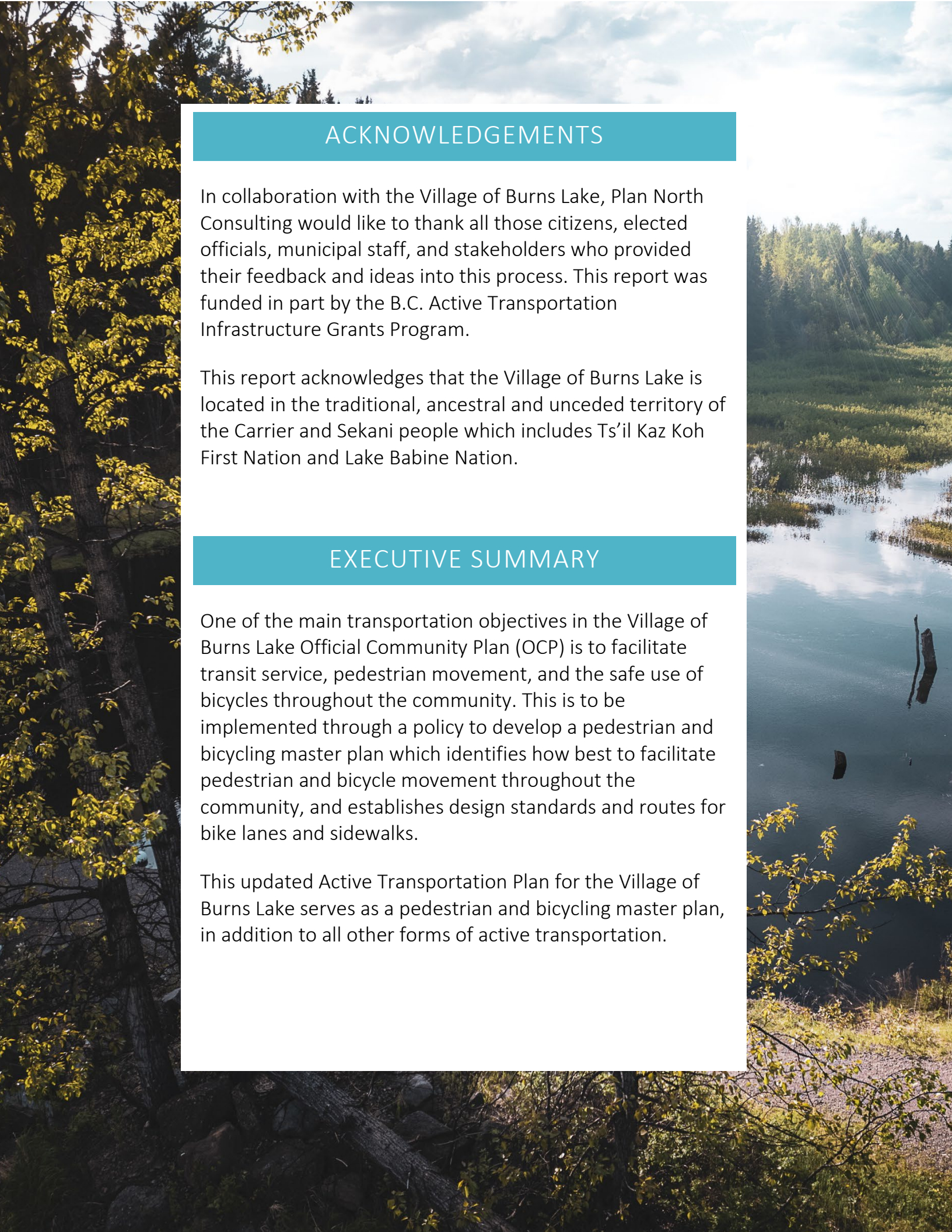
Village of Burns Lake

ACTIVE TRANSPORTATION PLAN

2023

Plan North Consulting



ACKNOWLEDGEMENTS

In collaboration with the Village of Burns Lake, Plan North Consulting would like to thank all those citizens, elected officials, municipal staff, and stakeholders who provided their feedback and ideas into this process. This report was funded in part by the B.C. Active Transportation Infrastructure Grants Program.

This report acknowledges that the Village of Burns Lake is located in the traditional, ancestral and unceded territory of the Carrier and Sekani people which includes Ts'il Kaz Koh First Nation and Lake Babine Nation.

EXECUTIVE SUMMARY

One of the main transportation objectives in the Village of Burns Lake Official Community Plan (OCP) is to facilitate transit service, pedestrian movement, and the safe use of bicycles throughout the community. This is to be implemented through a policy to develop a pedestrian and bicycling master plan which identifies how best to facilitate pedestrian and bicycle movement throughout the community, and establishes design standards and routes for bike lanes and sidewalks.

This updated Active Transportation Plan for the Village of Burns Lake serves as a pedestrian and bicycling master plan, in addition to all other forms of active transportation.

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INTRODUCTION

Active transportation is human-powered transportation that connects your destinations. It includes activities like biking to work, walking to the store, or kayaking to a picnic. Using active transportation has health benefits for individuals, families, our community, and for the environment. The Burns Lake ATP seeks to identify current opportunities and challenges residents' experience when using active transportation. Through community collaboration it creates a strategy to improve and promote local active transportation.

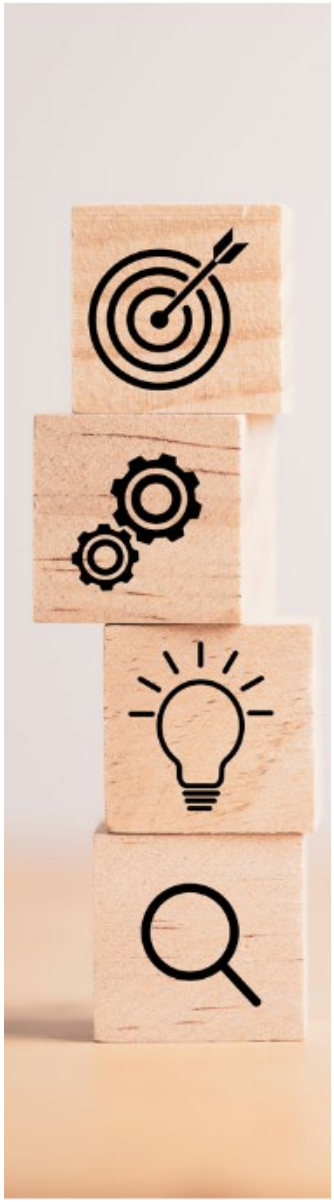
The BC government aims to double the percentage of trips taken by active transportation by 2030. In support of this goal, the BC government has created a grant program for local governments to update active transportation plans and install infrastructure in support of active transportation.

The Village of Burns Lake Active Transportation Plan identifies existing active transportation infrastructure, barriers to active transportation, and strategies to encourage active transportation use.

WORKING TOGETHER, ACTIVE TRANSPORTATION CAN BECOME A MORE ATTRACTIVE, ACCESSIBLE, AND SAFE CHOICE.

PLAN PURPOSE AND OBJECTIVES

This updated Active Transportation Plan provides a course of action that reflects the community's priorities and available resources. Since the development of the first Active Transportation Plan in 2009, the Village of Burns Lake has been working towards creating a safer, healthier, more sustainable community. In this time many of the Active Transportation goals have been met, and new opportunities have been presented. This plan reflects on these accomplishments of the previous plan and creates a new vision and framework to further support active transportation goals within the community.



KEY OBJECTIVES OF THE PLAN INCLUDE:

- Outlining policies and actions that will encourage healthy lifestyles and make active transportation a more attractive choice for residents and visitors.
- Continue developing the active transportation network with a focus on safety, convenience, aesthetics, and accessibility.
- Improving active transportation connections between neighbourhoods, key destinations, the Village commercial core, and rural areas.
- Developing a bicycle network and supporting bicycle tourism within the community.

PLAN DEVELOPMENT PROCESS

The Active Transportation Plan was developed over approximately 12 months and involved the following phases:

PHASE 1: PROJECT INITIATION AND UNDERSTANDING EXISTING CONDITIONS (JULY – SEPTEMBER 2022)

This phase involved reviewing the existing Active Transportation Plan and other related policy documents, and meeting with Village staff to understand the current context of active transportation within Burns Lake.

PHASE 2: PUBLIC LAUNCH (SEPTEMBER - OCTOBER 2022)

This phase involved introducing the public to the plan update through an open house, survey, photo contest and stakeholder interviews.

PHASE 3: PLAN DEVELOPMENT (OCTOBER – DECEMBER 2022)

This phase involved developing a draft of the plan incorporating input received from the open house, stakeholder input and survey results.

PHASE 4: REVISION AND IMPLEMENTATION (DECEMBER 2022- JULY 2023)

This phase involved refining the draft and prioritizing actions. It also involved developing the implementation plan and cost estimates.

COMMUNICATIONS AND ENGAGEMENT

Connecting with the community was a key part of updating the ATP. A detailed summary of the public engagement activities is included in Appendix A. Public engagement was conducted throughout the process. Engagement opportunities were widely advertised throughout the community through posters, invitations, hand-outs, community events, and the Village Facebook page. A broad range of voices were sought, to ensure inclusivity and reflect the needs and desires of the community.

ENGAGEMENT ROUND 1

Through the first round of public engagement, community members were invited to a public open house event held on September 21, 2022. This event presented the existing ATP, the plan process and invited feedback through interactive map displays. An online survey and photo contest were launched at the open house, which ran until October 21, 2022. Stakeholders were invited to the open house and sent links to the survey and photo contest. Individual meeting with stakeholders were held upon request.

ENGAGEMENT ROUND 2

The second round of public engagement was held to present the draft plan to the public and stakeholders. It included a public open house and stakeholder engagement.

COMMUNITY CONTEXT

This section provides a comprehensive description of the current physical and regulatory conditions within Burns Lake, within the context of active transportation.

COMMUNITY PROFILE

The Village of Burns Lake is the primary economic, social and cultural service center at the heart of the Lakes District, located near the geographic center of BC. The Lakes District is at the western edge of the Interior Plateau, which is characterized by hundreds of freshwater lakes and surrounded by forested rolling hills and low mountains.

POPULATION

The Village of Burns Lake population is 1,659 according to the 2021 Census data. The Village of Burns Lake also includes the Woyenne 27 Indian Reserve (Lake Babine Nation) with a 2021 population of 548, and the Burns Lake 18 Indian Reserve (Ts'il Kaz Koh First Nation) with a 2021 population of 33. Burns Lake also serves as the service center for a larger rural population of approximately 3,218 people.

ECONOMY

The foundation of the local economy is the forest industry and natural resource sector. Agriculture, tourism, retail, education, healthcare and government related services also provide employment for residents. Burns Lake is located on Highway 16, which is a major transportation corridor for goods and tourists.

HISTORY

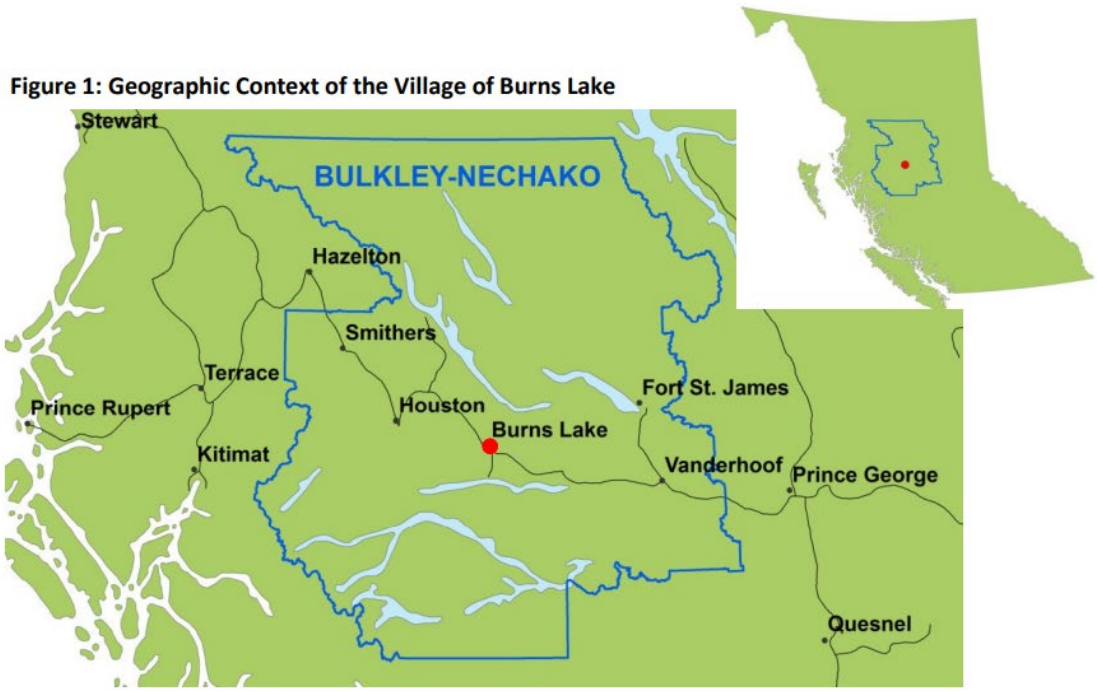
Incorporated in 1923, Burns Lake was originally settled as a construction camp for the Grand Trunk Pacific Railway in 1911. After the construction of the railway, the community grew into a service center for prospectors, miners, loggers and farmers. Six First Nations have traditional territories in the Lakes District area, having settled the area for centuries prior to European settlement.

GEOGRAPHY

Burns Lake is located near the geographic center of BC, at the western edge of the interior plateau. The terrain is characterized by low rolling hills and numerous lakes, rivers and streams. The Village of Burns Lake is located on and below a hill directly on the shore of Burns Lake.

The area is home to some of BC's largest freshwater lakes including Babine Lake, Francois Lake and Ootsa Lake. The Village is considered "The Gateway to Tweedsmuir Park," which is BC's second largest Provincial Park. It is also home to BC's smallest Provincial Park, Deadman's Island.

Figure 1: Geographic Context of the Village of Burns Lake



From Village of Burns Lake Carbon Neutral Action Plan

CLIMATE

The interior plateau has a relatively dry, continental climate, as the Coast Mountains protect the interior from moist westerly air flow.

In the Burns Lake area summers are short and warm to cool with fairly light precipitation. Winters are long and cold, with varying levels of snowfall. Average temperatures range from -15 C in winter to 18 C in summer, with occasional extremes below -40 C and above 30 C. As with many northern communities, seasonal climate influences day-to-day activities and lifestyle.

ACCESS

The main access is to Burns Lake is by road, via Yellowhead Highway 16, which is part of the Trans-Canada highway system. It is approximately 225 km west of Prince George and 500 km east of Prince Rupert. Burns Lake is also accessible by rail through VIA Rail, and by private plane through the Lakes District Airport. Burns Lake is also served by BC Transit and the Northern Health Bus.

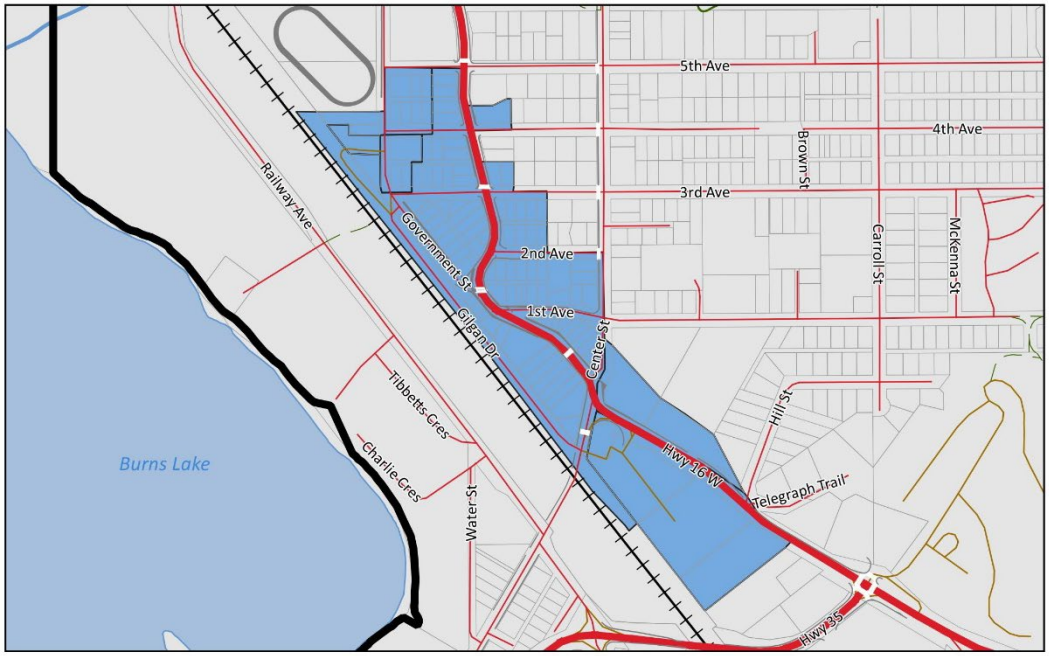
MAIN DESTINATION POINTS AND LAND USE

The Village of Burns Lake is approximately 6.5 km^2 in area and is comprised of neighbourhoods and specific destinations that define the parameters for travel within the community.

General neighbourhoods include:

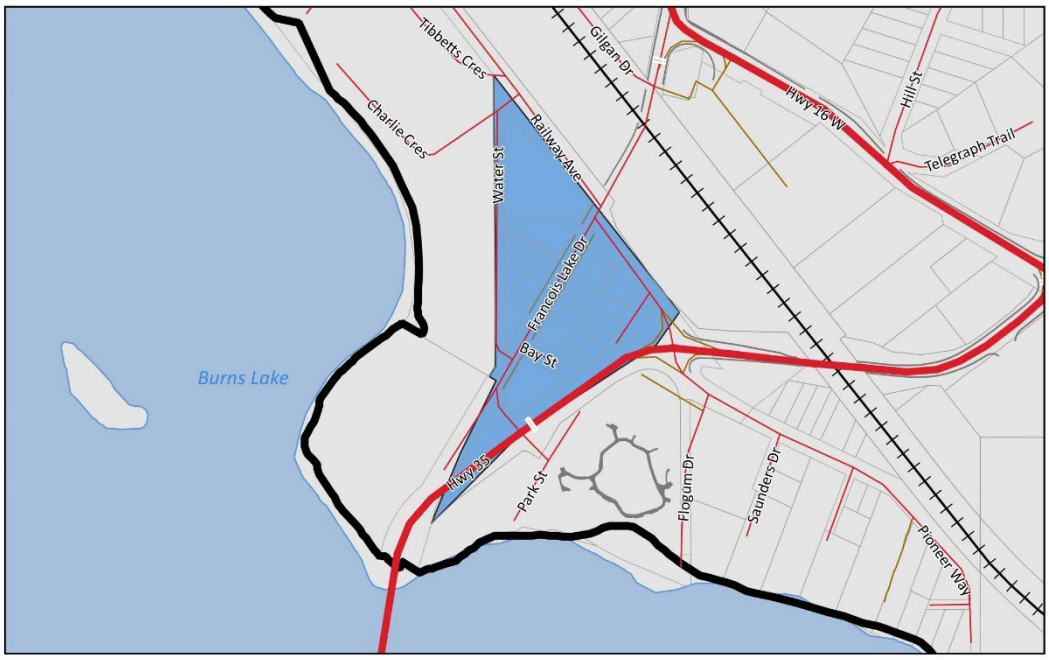
1) The downtown area that centers on Highway 16 and includes the majority of the commercial and civic land uses in Burns Lake;

Downtown Area Neighbourhood



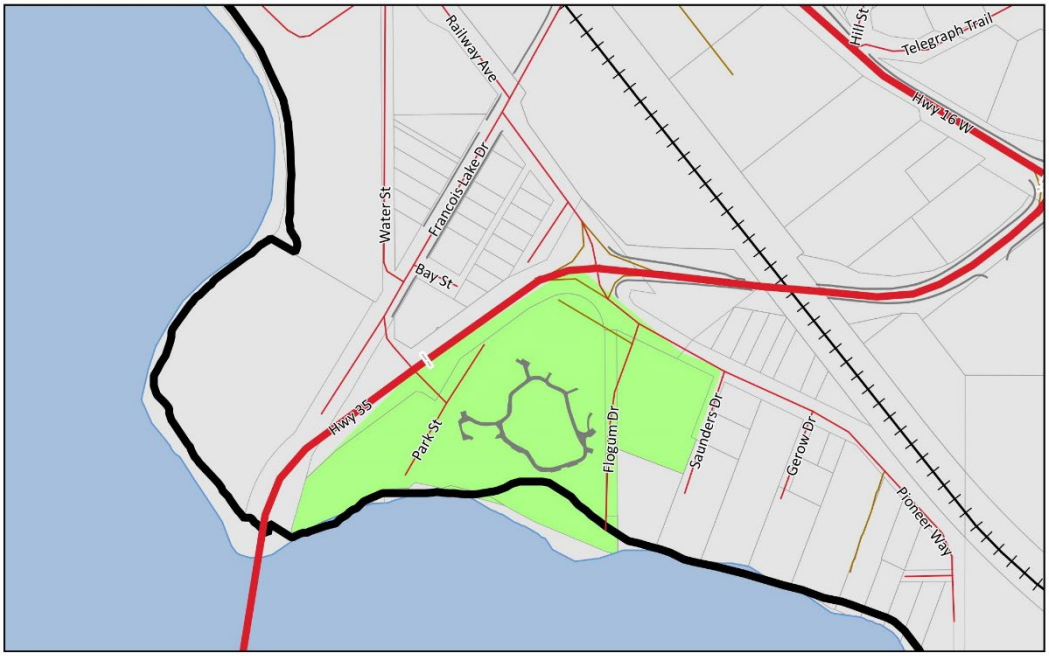
2) Commercial and light industrial lands at the southeast of the Village, centred on Highway 35 and Francois Lake Drive;

Highway 35 and Francois Lake Drive Neighbourhood



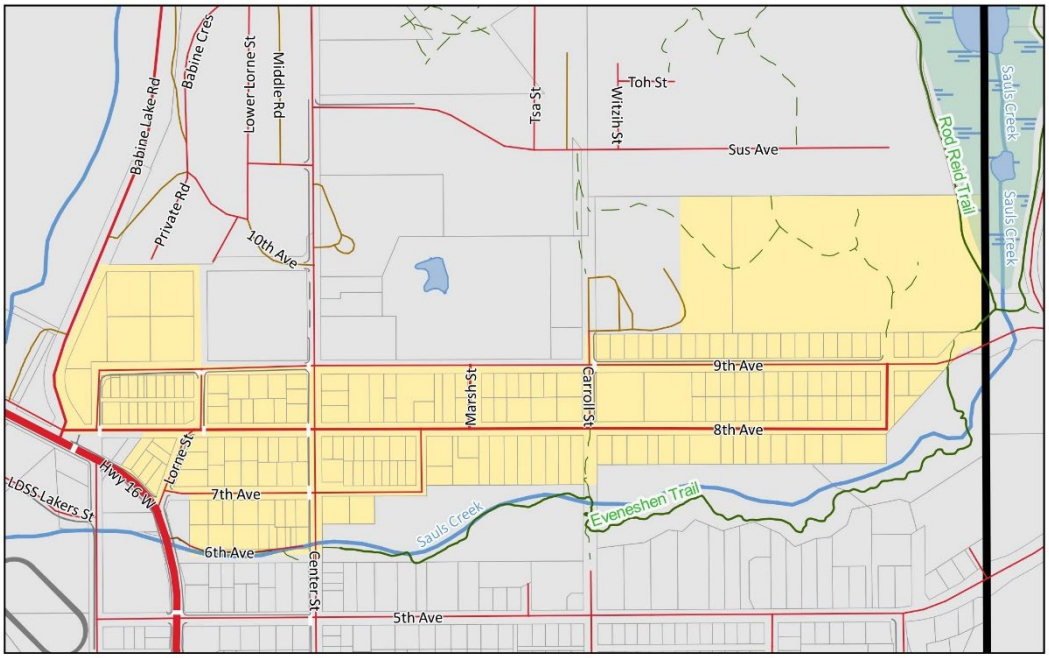
3) Community recreation and civic uses at the far southeast of the Village, bounded by Highway 35 on the west and Burns Lake on the South

Community Recreation Neighbourhood



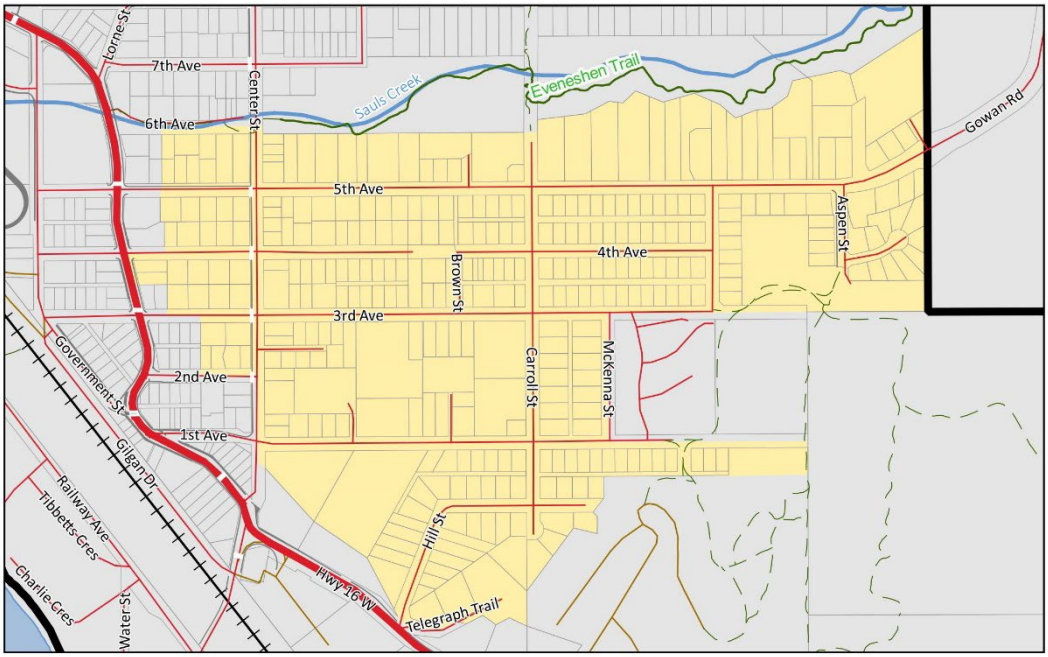
4) Residential areas northeast of Highway 16, approximately bounded by 8th Avenue on the south and Lake Babine Nation lands on the north;

Residential 8th & 9th Ave Neighbourhood



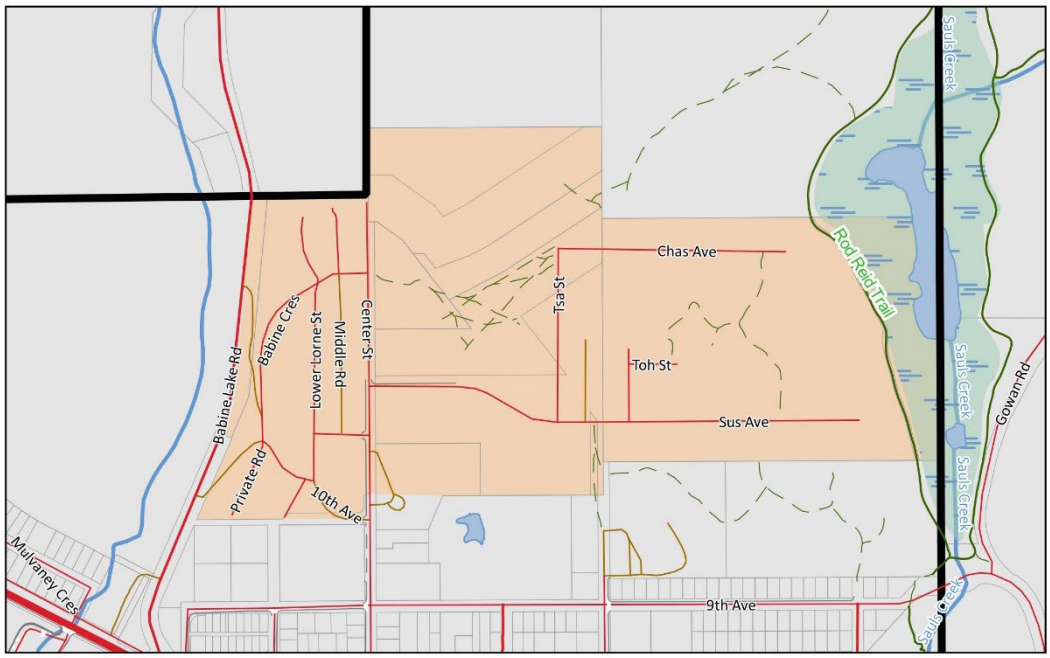
5) Residential areas north of Highway 16, approximately bounded by Hill Street/1st Avenue to the south and 5th Avenue to the north;

Residential Hill St to 5th Ave Neighbourhood



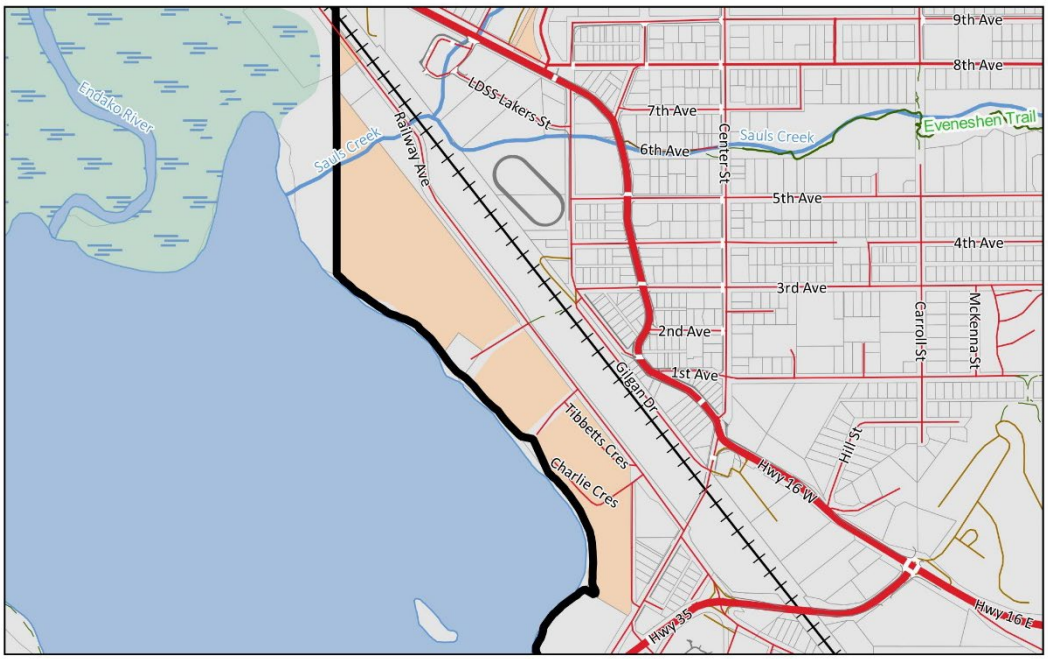
6) Lake Babine Nation lands at the northwest edge of the Village, north of 9th Avenue;

Lake Babine Nation Lands



7) Ts'il Kaz Koh lands south of Highway 16 and the CN Railway, adjacent to Burns Lake.

Ts'il Kaz Koh Lands



Burns Lake also contains numerous specific destinations that community members constantly travel to and from, which influence travel characteristics.

SPECIFIC DESTINATIONS INCLUDE

Lakes District Secondary School and the College of New Caledonia campus, both located along Highway 16.

William Konkin Elementary School located on Carroll Street and Muriel Mould Neighbourhood learning Centre located on 9th Avenue.

Lakes District Hospital and Health Centre, the Burns Lake Medical Clinic, the Link Food Centre, all located on Centre St.

Lakeside Multiplex, Tom Forsyth Memorial Arena, Spirit Square and Radley Beach community recreation area.

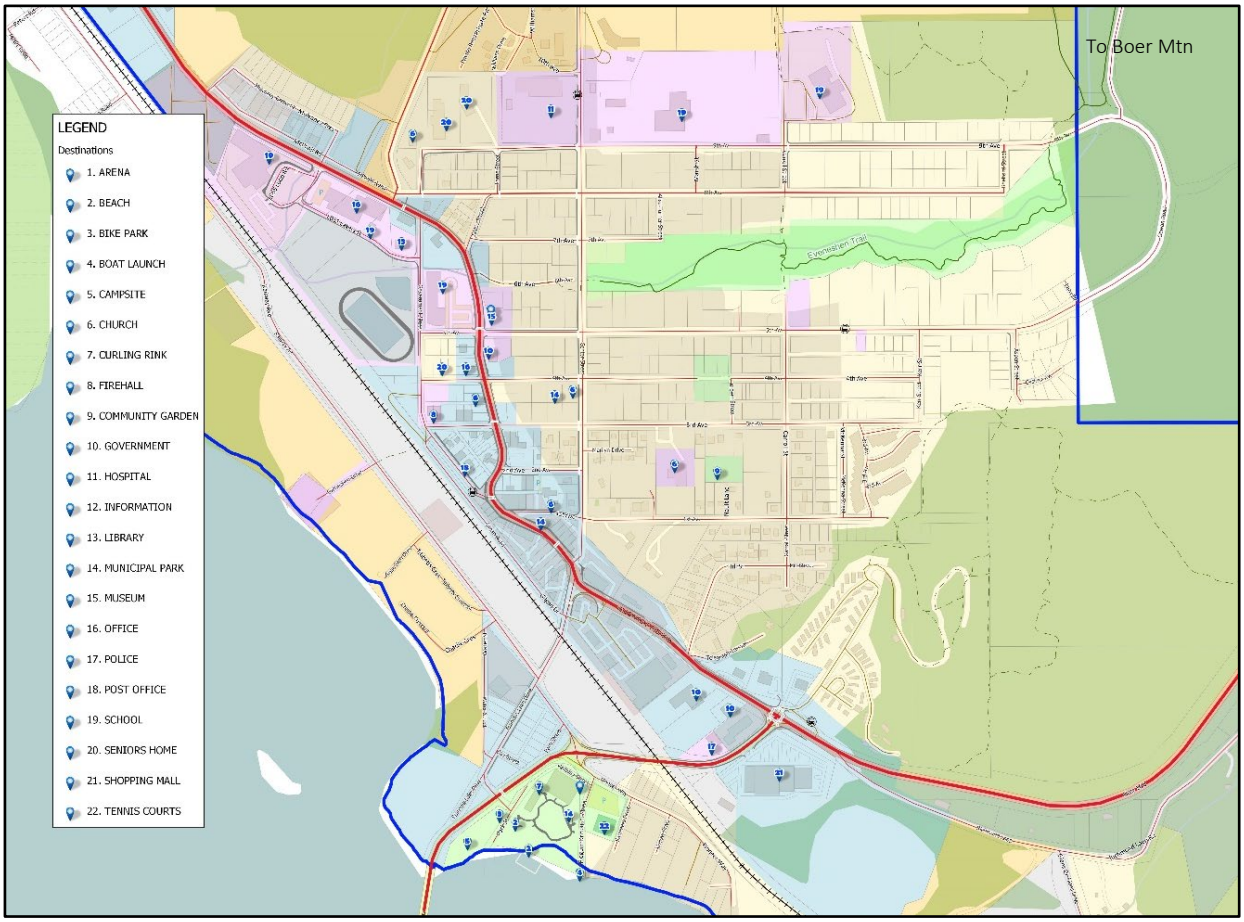
Community parks including Kinette Park, the MacEwan Dog Park, Jim Minger Little League Park, The Link Community Garden and Greenhouse, all located throughout the residential neighbourhoods of Burns Lake.

LDSS Walking Track, soccer field and baseball diamond.

The Rod Reid Trail located at the top of 9th Ave and the Eveneshen Trail that runs between 8th and 5th Avenues. The Rod Reid Trail connects to the Magee Trail, which connects to the Boer Mountain bike trail network.

The Ride Burns trail network surrounding Boer Mountain, which lies outside the Village boundary, but is accessed via 9th or 5th Avenue.

DESTINATIONS MAP



Destinations

STRATEGIC CONTEXT

How the Active Transportation Plan Supports Community Goals

The Village of Burns Lake Official Community Plan 2017 (OCP), recognizes that the ability to safely and conveniently walk or ride a bicycle in the Village is important to residents' quality of life, and efforts to reduce greenhouse gas emissions in the community. As such, one of the Transportation Objectives in the plan is facilitate transit service, pedestrian movement, and the safe use of bicycles, throughout the community. This objective has the following supportive policy: Develop a pedestrian and bicycling master plan which identifies how best to facilitate pedestrian and bicycle movement throughout the community, and establishes design standards and routes for bike lanes and sidewalks.

The Lakes District Economic Diversification and Community Development Strategy 2018 (EDS) was initiated by the Village of Burns Lake as part of a proactive approach to local economic diversification. Taking a regional approach, the municipality invited local First Nations and representatives from the Regional District of Bulkley-Nechako (areas B and E) to participate in the plan development.

One of the key themes in the EDS is Tourism and Recreation, which lists continued support for mountain bike tourism efforts as a Phase 2 Action (Urgent Priority). This includes supporting efforts to connect the bike park to downtown Burns Lake with a continuous bike path. The EDS states that increased tourism revenue can be reinvested back into the community in the form of infrastructure improvements. These improvements could include those that support active transportation.

Another of the key themes in the EDS is Local Business Matters, which lists the continuation of community revitalization (beautification, walkability/bikeability, etc.) as a Phase 2 Action (Urgent Priority). This directly relates to the ATP in that a community that is both walkable and bikeable supports healthier lifestyles, encourages alternative and safe transportation, and makes for a livelier and social village core. Ideas for revitalization relating to active transportation include: adding bike infrastructure, working to relocate crosswalks to safer locations, designating bike paths, and adding benches.

The Village of Burns Lake Carbon Neutral Action Plan 2013 was initiated in recognition of the need to take action on human driven climate change and provide an appropriate strategy for emissions reduction within the local context. While this plan focuses on internal corporate emissions reductions, it supports the ATP through the identified actions of: promotion of bike to work week, development of cycling map for the community, and departments piloting use of a bicycle for short trips.

Our Burns Lake Sustainability Plan 2013 (Integrated Community Sustainability Plan ICSP) creates a community-based sustainable vision of Burns Lake in 2040. Included in the Recreation and Leisure Desired Outcomes for 2040, is the recognition that trail linkages provide tourism and recreational opportunities, and connect prominent locations such as the lakefront, commercial village and surrounding hills and forest.

The ICSP also includes Transportation and Mobility Desired Outcomes For 2040:

1. Burns Lake's streets are attractive and inviting places to walk, cycle, rest and interact for people of all ages.
2. Walking, cycling, cross-country skiing and other active modes of transportation are commonly used for trips that are within 5 km of popular destinations.
3. Burns Lake's transportation system is transitioning to non-fossil fuel renewable energy.
4. There is an affordable, reliable and accessible public transit system.
5. Infrastructure supports the use of widespread and affordable transportation options, to the private automobile, for residents and visitors. Alternative transportation infrastructure is developed through collaborative initiatives.
6. Roads and trails are built and maintained in ways that protect natural ecosystems and natural drainage.
7. A common understanding of the need to reduce greenhouse gases exists in the community, which increases the use of renewable energy alternatives.

Short Term Sustainable Actions for Transportation & Mobility include:

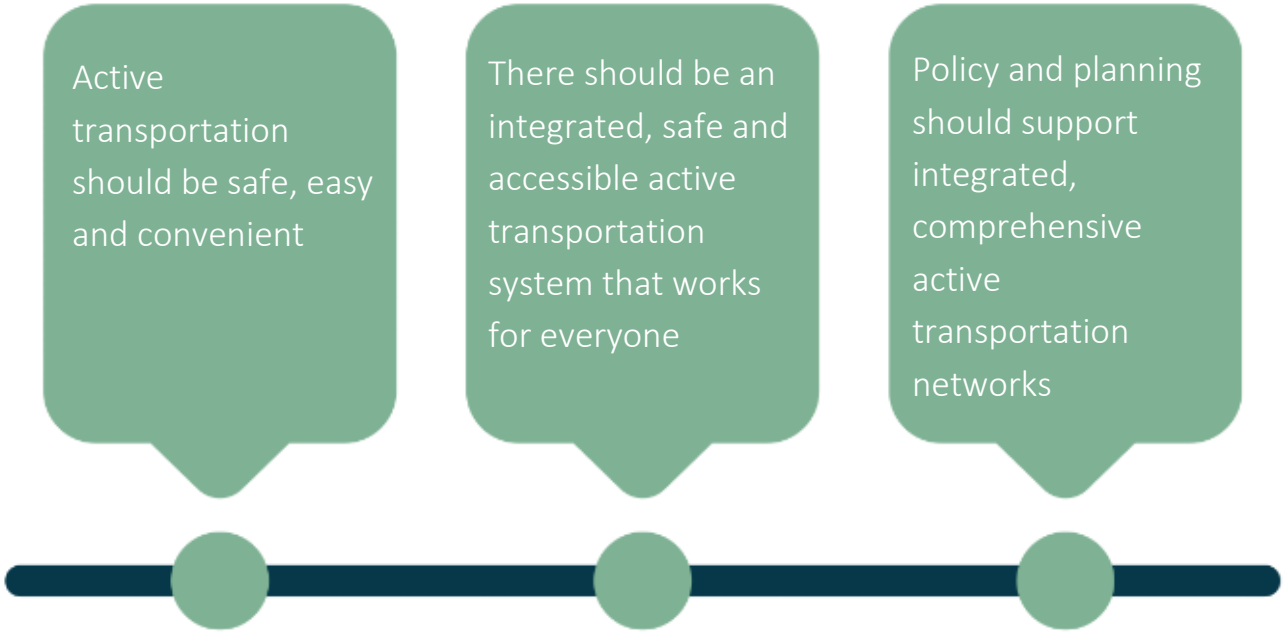
- Build safe bike lanes connecting major facilities and schools throughout Burns Lake and add more bike racks to village facilities and in the downtown area to encourage active transportation.
- Conduct electric vehicle charging station research to identify the best location for installing an electric charging station in and around Burns Lake. *(This action is completed; charging stations have been installed.)*
- Join Smithers' Mayor's bid for affordable transportation between northern communities (all RDBN to follow). *(This action is completed; Bulkley Nechako Regional Transit Service is operational.)*
- Build wider and safer sidewalks in the high pedestrian areas of Centre and 8th Ave (VBC). *(This action is completed; sidewalks have been installed along Center St and 9th Ave. After review, 9th Ave was chosen over 8th Ave.)*

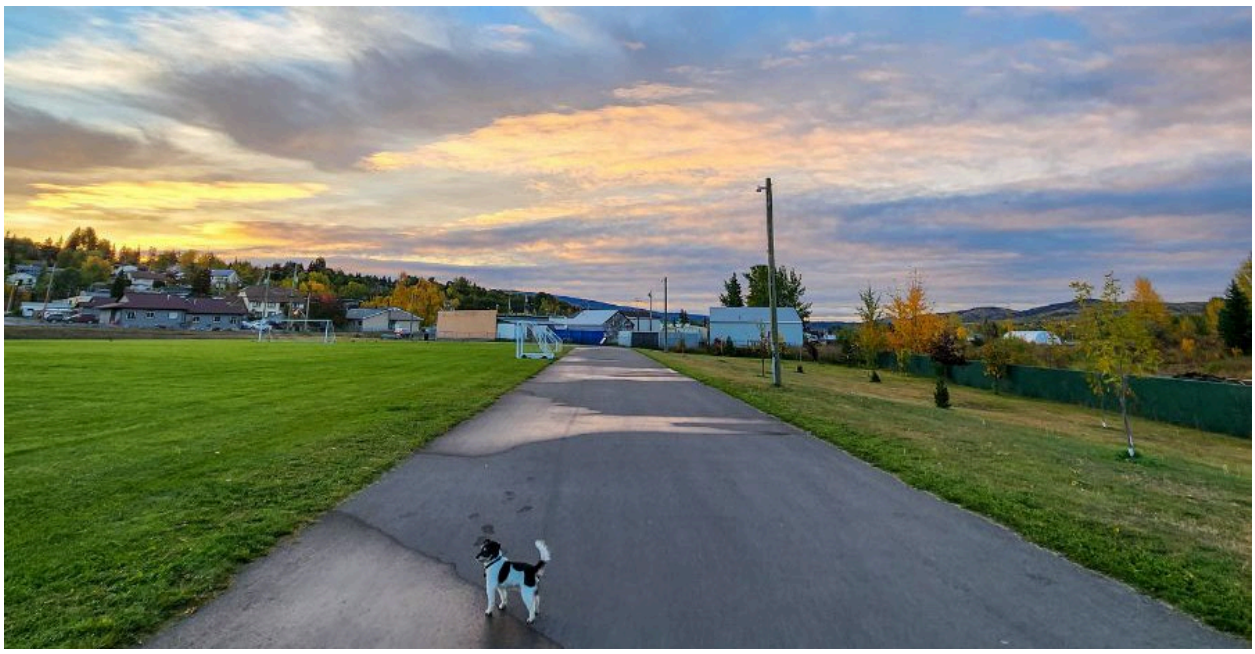
Priority #5 of the ICSP is to embrace a healthy and active community culture. Healthy communities and healthy people mutually support and enable each other. Healthy lifestyle choices are reflected in the way people develop and celebrate their bodies, minds, and interactions with each other. Healthy community lifestyles include healthy and informed choices for food, recreation, employment, transportation and participation, and require commitment and contributions from public, private and community organizations. A healthy community is also one in which recreational opportunities exist for everyone, and neighbourhoods are designed to encourage walking and biking. The Village and the ICSP advocate for active transportation, measuring the increase in active transportation infrastructure and monitors the Burns Lake direct movement towards this Priority for Success.

How the ATP aligns with BC's Active Transportation Strategy, Move. Commute. Connect.

The Village of Burns Lake ATP aligns with the BC Active Transportation Strategy by incorporating many the same actions to make active transportation more attractive and accessible. Working at the local scale, the ATP is focused on improving local active transportation networks through strategic infrastructure planning, improvements to road safety, and continued public awareness.

The key pathways of the BC Active Transportation Strategy are reflected in this ATP:





GREENHOUSE GAS EMISSIONS

Potential Greenhouse Gas (GHG) emissions reductions with active transportation infrastructure

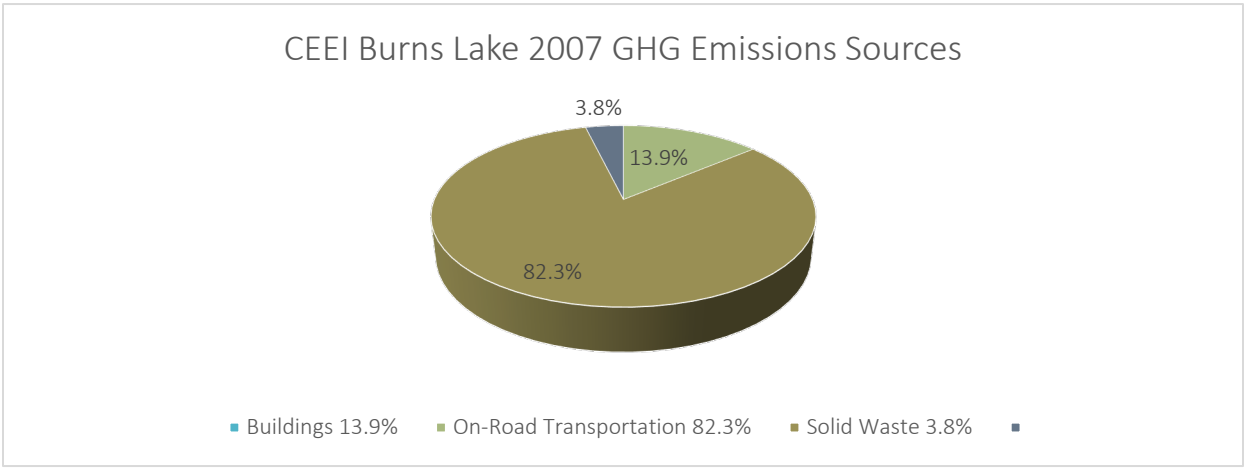
Active transportation infrastructure, such as bike lanes, pedestrian walkways, and public transit, can lead to significant reductions in GHG emissions. This is because these modes of transportation produce fewer emissions than traditional vehicles and can also encourage people to switch to more sustainable modes of transportation. Additionally, active transportation infrastructure can also help reduce traffic congestion, improve air quality, and promote public health.

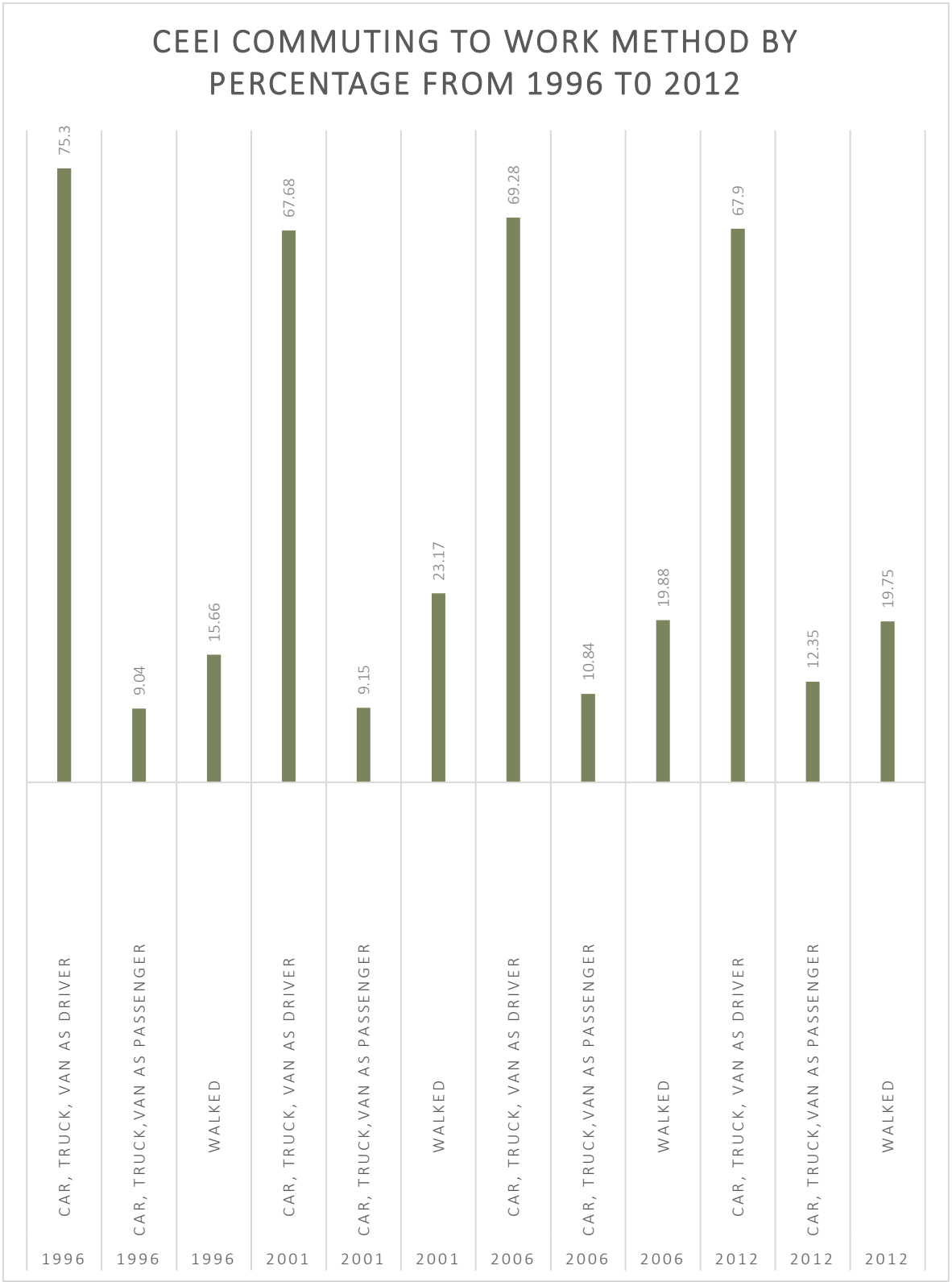
Increasing active transportation has the potential to contribute to Burns Lake's response to climate change. Transportation is one of the largest contributors to greenhouse gas emissions in the province, with motor vehicles the main culprit. Active transportation can help to lower emissions while also reducing air pollution and motor vehicle congestion.

Year over year GHG emissions reductions

CEEI is a provincial framework for tracking and reporting energy, greenhouse gas (GHG) emissions and supporting indicators at a community-wide scale. Emissions are listed in tonnes carbon dioxide equivalent (CO2e).

The Burns Lake Village Updated 2007 Community Energy and Emissions Inventory showed a total of 44,553 tonnes of greenhouse gas emissions across all sectors, with 82.3% coming from on-road transportation. This is by far the largest source of emissions in Burns Lake.

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VISION AND GOALS

The **vision** for active transportation in Burns Lake is:

> *BURNS LAKE IS A SAFE, ENJOYABLE PLACE TO WALK, BIKE AND USE ALL FORMS OF ACTIVE TRANSPORTATION FOR ALL AGES AND ABILITIES THROUGH ALL SEASONS. ACTIVE TRANSPORTATION IN BURNS LAKE SUPPORTS OUR STRONG SENSE OF COMMUNITY AND IMPROVES COMMUNITY CHARACTER, PROMOTING HEALTHY LIFESTYLES AND IMPROVING QUALITY OF LIFE. THE FUTURE NETWORK IS EASILY NAVIGATED AND COHESIVE, CONNECTING DESTINATIONS BOTH LOCAL AND RURAL.*

Goals

The goals of the ATP work toward achievement of the vision for active transportation in Burns Lake. The goals are organized into three themes with corresponding actions.

Theme 1: Connectivity

- Establish a cycling network.
- Enhance the pedestrian network to be continuous and connected.
- Enhance existing trails and develop new trails.
- Improve rural connections.

Theme 2: Safety

- Enhance the street lighting network.
- Review traffic flows and on-street parking to integrate with the active transportation network.
- Enhance trail safety.
- Develop an active transportation infrastructure maintenance plan.

Theme 3: Community Enjoyment

- Improve wayfinding for walking and cycling routes.
- Promote community-based programs and initiatives that support active transportation.

THEMES AND ACTIONS

The review of the 2009 ATP, current conditions of the active transportation network, and community consultation revealed three overarching themes that form the framework of this plan. These themes are: **Connectivity**, **Safety** and **Community Enjoyment**. Within these themes, recommended actions are described to achieve the plan vision and goals. The implementation, prioritization, and funding of these actions are discussed in the subsequent section.

THEME 1: CONNECTIVITY

Addressing gaps in the existing active transportation network was identified as a priority throughout the engagement process. Connectivity gaps make it hard to access a variety of destinations and contribute to safety concerns. There is a need for both cycling and pedestrian connections, and improved connections from the downtown core to recreation areas, residential areas, rural areas, and a continuous alternative to Highway 16. The connectivity theme includes actions to achieve the goal of a continuous and complete network, integrated with land use, transit, and recreational facilities.

Action 1.1 Establish a Cycling Network

Currently there is no formal cycling network in the municipality. Cyclists share the road with motorists, which can be stressful because local motorists are often not aware of traffic rules as they relate to cyclists. The speed and volume of motor vehicle traffic on some roads, especially Highway 16 and Highway 35, are prohibitive to the comfort and safety of cyclists. Generally, as traffic speeds and volumes increase, a greater degree of separation is required between vehicles and cyclists. A formalized cycling network will improve overall connections within the community and start to meet the needs of all ages and abilities of users. Clarity about the bicycle route options available to residents and visitors will also promote bike use overall.

Community consultation revealed that the majority of bicycle use is for recreation purposes, as opposed to commuting to school or work. Issues identified as a priority are: lack of dedicated on-street bicycle lanes, lack of bicycle routes, need for a trail to town from Boer Mountain, and improved rural connections. Once established, the cycling network can quickly be initiated through line painting and signage. The trail to town from Boer Mountain will be accomplished through the development of a multi-use path and trail through the Village Heights property. Improved rural connections at this time are concentrated on Highway 35, as traffic flows along Highway 16 are prohibitive to on-road bike lanes.

Action 1.2 Enhance the Pedestrian Network

The existing pedestrian network has good connectivity along Highway 16 in the commercial centre, and significant improvements have been made in the last few years to extend the network into residential neighbourhoods. Remaining gaps should be prioritized for infrastructure upgrades. These include 9th Avenue, 5th Avenue, and Government Street to Gilgan Drive. Community consultation also identified the gully trail connecting 8th Ave and 5th Ave along Carroll St as requiring improvements. The previous ATP recommended a pedestrian bridge in this location, however such a project is extremely cost-prohibitive. Some improvements were made in 2014, however it is recommended that additional options to improve this connection be explored.

Action 1.3 Enhance Existing Trails and Develop New Trails

Both the Rod Reid Trail and Eveneshen Trail are popular for recreational activity. There are a number of opportunities to enhance and improve these trails, including a formal connection between them. The condition of the Rod Reid trail should be assessed and an improvement and maintenance plan put in place. A study has already been completed on upgrades required for the Eveneshen Trail, and funding should be pursued for the project. After upgrades are complete, a maintenance plan should be put in place.

Community consultation identified the development of more paved and unpaved multi-use trails as a priority for residents. The Village Heights area has been identified as having a high potential for new trail development through the Village Heights Master Plan. Multi-use trails in this area will provide important connections to the commercial corridor. The development of the internal trail system as shown in the Village Heights Master Plan would provide a new active recreational opportunity.

Action 1.4 Improve Rural Connections

The Village of Burns Lake is connected to the rural Electoral Area "B" of the Regional District of Bulkley-Nechako (RDBN) in six locations:

1. Highway 16 W *(low priority)*

Highway 16 W connects to the rural communities of Decker Lake and Murphy Rd rural subdivision. Currently, no active transportation infrastructure exists in this area. The municipal sidewalk on the south side of Highway 16 ends near LDSS, and no bike route is identified. Highway 16 experiences limited active transportation use in the rural area because of the high traffic volumes and commercial truck traffic.

Improvements to connections recommended in this area include extending the sidewalk along Highway 16 to the Nash Rd intersection, directing bicycle and pedestrian routes to Nash Rd, and widening the shoulder of Highway 16 to increase the separation between traffic and pedestrians. However, due to the lower volume of active transportation flows and high cost for improvements, this connection is a lower priority.

2. Highway 16 E *(low priority)*

Highway 16 E connects to the rural subdivisions of Kerr Rd, Petersen Rd and Kelway Rd. Currently, no active transportation infrastructure exists in this area. The municipal sidewalk on the south side of Highway 16 ends near the Lakeview Mall, and no bike route is identified. Highway 16 experiences limited active transportation use in the rural area because of the high traffic volumes and commercial truck traffic.

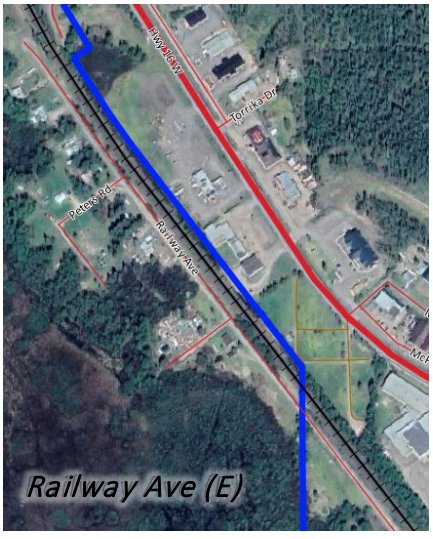
Improvements to connections recommended in this area include extending the sidewalk along Highway 16 to the municipal boundary, directing bicycle and pedestrian routes to Richmond Loop, and widening the shoulder of Highway 16 to increase the separation between traffic and pedestrians. However, due to the lower volume of active transportation flows and high cost for improvements, this connection is a lower priority.

3. Highway 35 (S) *(high priority)*

Highway 35 connects to the rural subdivisions of Gerow Island, Eagle Creek Rd, Nourse Subdivision, and Beach Rd. Currently, no active transportation infrastructure exists in this area. The municipal sidewalk on the south side of Highway 16 ends near the Lakeside Multiplex, and no bike route is identified. Highway 35 experiences relatively high active transportation use in the rural area because of the lower traffic volumes and less commercial truck traffic.

Improvements to connections recommended in this area include extending the sidewalk along both sides of Highway 35 to the municipal boundary and the addition of a bike lane. The RDBN is in the early stages of a multi-use trail development project extending from the municipal boundary to Tchesinkut Lake to the south. It is recommended that the Village coordinate with the RDBN to extend municipal infrastructure to meet up with the trailhead. This connection is a high priority based on the higher volume of active transportation flows and trail connection potential.

4. Railway Ave (E) *(low priority)*



Railway Ave connects to a small subdivision located at the end of this no-through road, past the municipal boundary. Currently, no active transportation infrastructure exists in this area. There are no sidewalks on Railway Ave and no bike route is identified. Railway Ave experiences a low volume of active transportation flows, due to the small number of dwellings in the subdivision and the existence of "short-cut" trails across the CN railway. As such, improvements to connections are not recommended in this area.

5. Babine Lake Rd (N) *(low priority)*

Babine Lake Rd connects to the rural subdivisions of Miller Rd N and S, and Wallace Rd. Currently, no active transportation infrastructure exists in this area. There are no sidewalks on Babine Lake Rd and no bike route is identified. Babine Lake Rd experiences a low volume of active transportation flows, due to the small number of dwellings it accesses. As such, improvements to connections are not recommended in this area.

6. Gowan Rd (NE) *(high priority)*

Gowan Rd connects to a number of houses at the end of the road, but also connects 9th Ave to 5th Ave, and connects to the Boer Mountain bike trails. Currently, no active transportation infrastructure exists along the road, however the mountain bike trails are connected to the Rod Reid Trail via the Magee Trail in this area. These trails are multi-use and are open to pedestrians wanting to access hiking trails surrounding Kaeger Lake. Gowan Rd experiences very high active transportation use in the rural area because it is a key connection to the very popular recreational trail network.

Improvements to connections recommended in this area include extending the 9th Ave sidewalk to the Rod Reid trailhead, and developing a multi-use trail along Gowan Rd between 9th and 5th Ave. A new bike route and sidewalk is proposed that would connect to this multi-use trail. Due to the high volume of active transportation flows and the community's desire for improvements in this area, this connection is a high priority.

THEME 2: SAFETY

Safety is a core consideration in the development of the active transportation network. By improving intersections, road crossings, and high traffic areas, active transportation can become a more attractive option.

There are various strategies to improve road safety including traffic calming, improved visibility of pedestrian/cycling routes and improving sightlines at intersections. Also, protecting pedestrian and bike lanes through various types of treatments including flexible delineator posts, wheel stops, planter boxes, raised or landscaped medians, and concrete and safety barriers is an effective way to enhance the comfort and safety of active transportation users.

Action 2.1: Enhance the Street Lighting Network

Community consultation identified the need for additional street lighting on commonly travelled routes. During the winter months, daylight hours are limited, and street lighting becomes an important safety concern. Areas identified include trails such as the Rod Reid Trail. It is recommended that the connectivity of the street lighting network be analysed for gaps and the feasibility of expanding the network in these areas be explored.

Action 2.2: Review Traffic Flows and On-Street Parking

Traffic flows in certain areas should be examined to determine appropriate safety improvements, with a focus on the following areas:

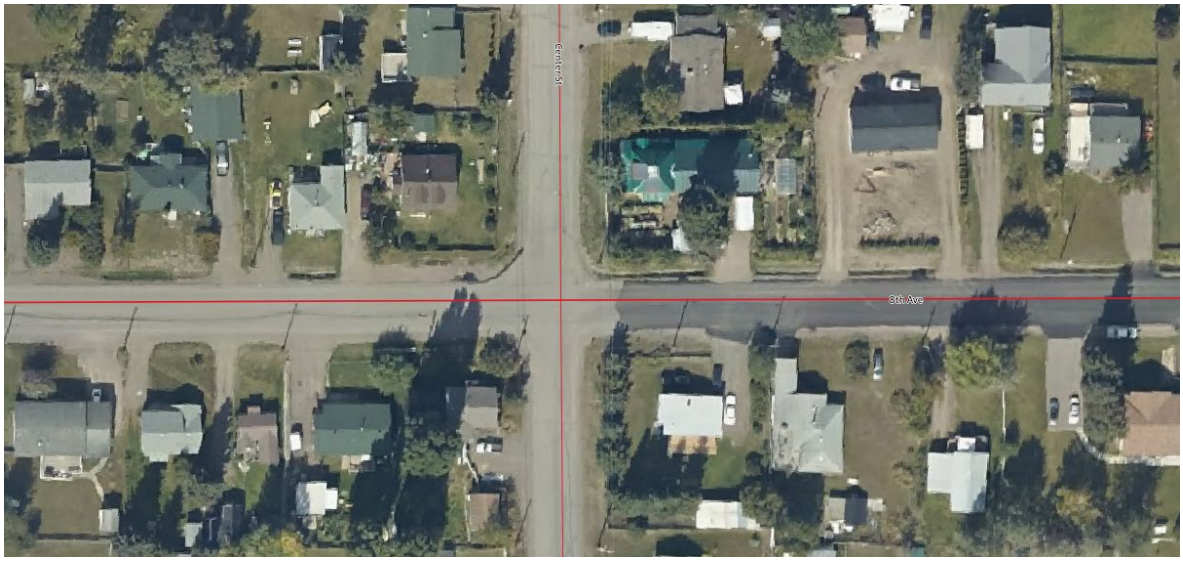
Babine Lake Rd, 8th Avenue, Mc Phail Rd, and Highway 16 intersection

This intersection was identified through community consultation as a problem area. The confluence of 8th Avenue, McPhail Rd and Babine Lake Rd is not clearly marked and traffic flows in this area have high potential for pedestrian/cyclist traffic conflict. The adjacent crosswalk across Highway 16 is frequently used by pedestrians including students attending LDSS.

Gilgan Dr, Government St, and 3rd Avenue intersection

This intersection was identified in Phase 3 of the Downtown Revitalization Plan for upgrade, and was a priority for upgrade in the 2009 Active Transportation Plan. This intersection has also been identified in this plan as part of a multi-use route for pedestrian and bicycle traffic. The intersection will require upgrades to implement this route.

Center St and 8th Avenue intersection



The Center St and 8th Ave intersection is a confluence of the main vehicle and pedestrian traffic in the residential area. It is controlled by a three-way stop sign with traffic travelling west moving freely. This is also the main access point to the Lakes District Hospital and

Health Centre, Lake Babine Nation Woyenne IR, Burns Lake Medical Clinic, and the Link Food Bank. To reduce pedestrian and vehicle interactions, pedestrian infrastructure improvements have been focused on 9th Avenue. With the new sidewalk constructed on Center St, pedestrians are crossing 8th Ave without a stop sign for traffic. A review of the traffic flows at this intersection is recommended.

<u>Gilgan Dr and Francois Lake Dr intersection, including the Balmoral Plaza parking lot</u>

This area has become a problem for traffic flows since the Francois Lake Dr and Highway 16 intersection became right-turn-only. Traffic wanting to turn left onto Highway 16 was intended to be rerouted to the lighted intersection at Highway 35, however much of the local traffic is using the Balmoral Plaza parking lot to turn left. Local traffic is also using the Gilgan Dr to Government St route to turn left onto Highway 16 at the Government St intersection. A review of the traffic flows at this intersection is recommended.

Another issue for traffic flows identified by community consultation is the speed of vehicles travelling in the residential neighbourhoods, especially on 8th Ave and 5th Avenue. The implementation of traffic calming measures, such as speed humps or curb bulges, should be considered in these areas.

On-street parking causes conflicts with pedestrian traffic in a number of areas within the municipality. Residents have reported people parking too close to crosswalks, reducing pedestrian visibility. Ensuring curbs are painted to reflect parking restrictions and enforcing parking infractions would help to limit parking conflicts. Additionally, a periodic review of the visibility at high use crosswalks is recommended.

Along Government St, users of the LDSS track and soccer fields often use the wide paved sidewalk for parking, effectively blocking the sidewalk. While the LDSS track and soccer fields have limited on-site parking, there is ample parking at the nearby CNC parking lot. It is recommended that the curb height on the asphalt sidewalk be increased and parking be re-directed to CNC. A crosswalk across Government St from 5th Ave would improve pedestrian safety from the parking lot to the fields.

Parking on Government St sidewalk

Action 2.3 Enhance Trail Safety

Trail safety can be improved through maintenance, to keep trails in good condition for their intended use. It involves repairing and maintaining the trail surface, clearing debris, and ensuring that the trail is safe and accessible for users. In the winter regular grooming, such as snow removal and packing, is necessary to maintain a smooth and stable surface for winter activities like snowshoeing and cross-country skiing. Alternatively, trails could be plowed and sanded for walkers. A trail maintenance plan should be developed for the Rod Reid and Eveneshen trails that is appropriate for all seasons.

Trails are often shared by a variety of users, including those who are motorized. Unfortunately, conflicts can arise between these users and those who prefer non-motorized activities like hiking or biking. These conflicts can be due to issues like noise pollution, safety concerns, and damage to the trails. It's important for all trail users to be respectful of others and follow any posted rules and regulations to help minimize conflicts and ensure everyone can enjoy the trail safely and responsibly.

The west half of the Rod Reid trail is frequently used by ATVs. The ATVs have been prevented from using the east half of the trail through signage and steep approaches to bridges. It is recommended that alternative methods of preventing ATV use, such a pedestrian posts, be employed so the trail is more accessible to strollers and wheelchair users. Should the entire trail be closed to ATVs, additional installation locations and fencing will be required.

Bears and other wildlife are often encountered on local trails. It is important for trail users to be made aware of the potential for wildlife encounters and how to react if the situation arises. Community consultation identified bears as being the main type of problem wildlife encounters. The Rod Reid trail and Eveneshen trail are often inhabited by bears, as there are numerous berry bushes in the area and a source of water.

Problem bears can be relocated by the conservation officer, however educating trail users is likely the most effective way to prevent issues. Reducing potential food sources may not be practical in this area, because of the abundance of berry bushes. It is recommended that bear warning signs be posted at the trail heads that include bear safety information.

Action 2.4 Develop an Active Transportation Infrastructure Maintenance Plan

Active transportation infrastructure maintenance is crucial for ensuring the safety and accessibility of bikeways, pedestrian walkways, and other non-motorized transportation systems. Routine upkeep and repairs such as repainting lines, filling potholes, and replacing damaged signage is important to create a safe and enjoyable experience for those who choose to walk, bike, or use other forms of active transportation. Regular inspections and maintenance schedules can help prevent larger, costly repairs down the line, while also promoting a more sustainable and healthy mode of transportation.

Current levels of sidewalk maintenance are very good, including ice and snow management, however as sidewalk infrastructure increases, so must maintenance budgets. There have been notable increases in public works crew staff time to clear ice and snow since the installation of the 9th Ave and Center St sidewalks.

The repainting of street markings is also an important part of maintaining active transportation routes. Over the winter most street markings are degraded or worn away, requiring annual repainting. Painted crosswalks, on-street bike lanes, parking spaces, and curbs all delineate safe pedestrian and cycling spaces. The addition of new crosswalks and bike lanes will significantly increase the amount of painting maintenance. Combining painted marking with signage would help to mark road crossings and cycling routes during times when paint is faded.

Faded crosswalk at Highway 16 and 3rd Ave

THEME 3: COMMUNITY ENJOYMENT

Active transportation should be an enjoyable experience for all community members and visitors. This can be achieved through the incorporation of universal design principles and the provision of amenities, in concert with a safe and well-maintained network. Designing using universal design principles ensures that active transportation infrastructure is accessible to all ages and abilities, regardless of any physical or cognitive impairment.

Incorporating landscaping, public art and other amenities makes active transportation more welcoming and attractive. Pedestrian amenities include landscaping, water fountains, washrooms, garbage and recycling receptacles, and street furniture. The BC Active Transportation Design Guide includes design and placement considerations for these amenities and should be referenced when considering new installations. Cycling amenities include secure bike parking, which was identified as a priority by the local biking community.

Action 3.1 Improve Wayfinding

In 2016 the Village of Burns Lake adopted a Sign Strategy to identify improved ways to inform and direct visitors and residents to key sites related to cultural and recreational amenities, business districts and services. It includes an overall signage and way-finding strategy that is cohesive, attractive, and easy to follow. Implementation of this strategy should be prioritized with an emphasis on pedestrian and cycling routes to ensure a cohesive and seamless network.

Action 3.2 Support Active Transportation Initiatives and Programs

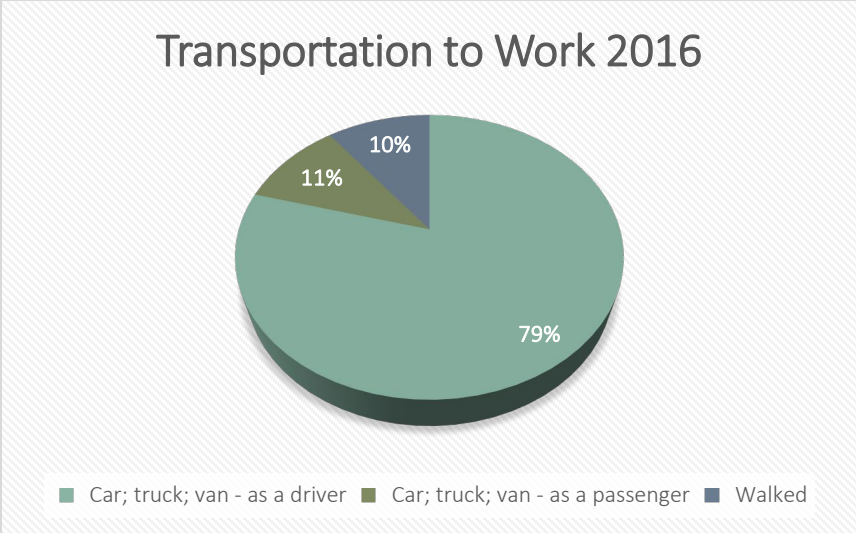
Finding ways to educate and encourage people to use active transportation is important for building a user base, and a healthier more active community. The Village has supported many programs to increase active lifestyles and healthy living. This includes support for the Ride Burns mountain bike club, active programs from the Lakeside Multiplex including equipment rentals, outdoor fitness stations, a heritage walking tour, and the youth soccer program.

These programs should continue to be expanded, with an increased focus on biking and walking to and from destinations. Programs to teach bike safety, especially to school aged children, would improve the comfort and ability of bike users. Other programs such as Bike to Work week could also be promoted within the community.

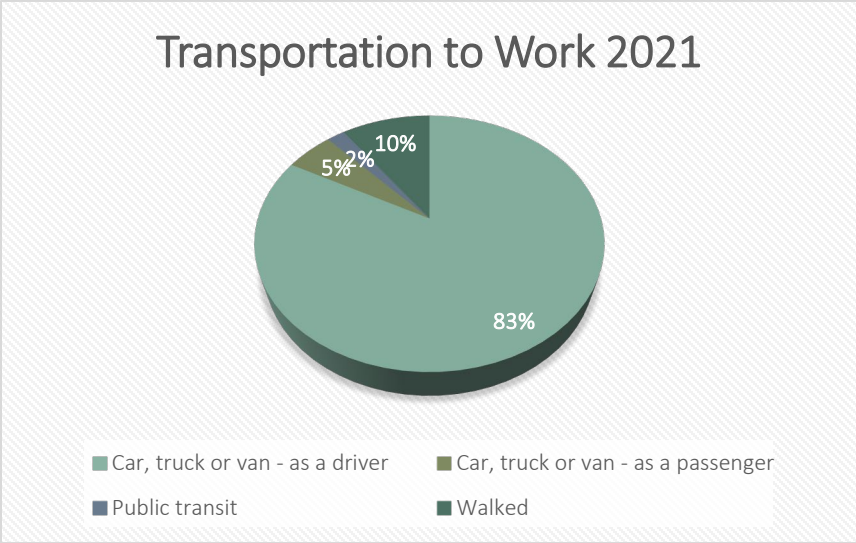
TRANSPORTATION IN BURNS LAKE

Current data for transportation methods in Burns Lake relate to commuting to and from work. Thus, it does not fully represent all destinations or purposes of transportation such as trips for recreation or shopping. However, the existing data does confirm that motorized transportation remains the dominant mode of transportation in Burns Lake.

The Census of Canada in both 2016 and 2021 includes data on commuting. The information presented below is the main mode of commuting for the employed labour force aged 15 years and over with a usual place of work. Between 2016 and 2021 the total number of commuters increased, with no change in the percentage of commuters walking to work. Commuter in a vehicle as a passenger decreased by 6%, while the new option of public transit accounted for 2% of the 2021 numbers.



Main mode of commuting 2016	
Total	735
Car; truck; van - as a driver	575
Car; truck; van - as a passenger	75
Walked	75



Main mode of commuting 2021	
Total	760
Car, truck or van - as a driver	630
Car, truck or van - as a passenger	40
Public transit	15
Walked	75

The cumulative distance of AT infrastructure is a tangible indicator of the success of ATP investments. Current cumulative distances of AT infrastructure include:

Infrastructure Type	Cumulative distance/count
Sidewalks	8.1 km
Maintained Trail	3.6 km
Unofficial "shortcut" trails	8 km
Crosswalks	0.5 km of crosswalks
Bike Racks	17 locations
Benches	52 locations
Picnic Tables	22 locations

Walking and Cycling Data

The current state (baseline) of walking and cycling in the community is established through manual counts and Stats Canada data. The Stats Canada data consists of the previously noted commuting data from 2016 and 2021. In 2016, 75 people reported that they walked to work and in 2021, 75 people reported that they walked to work. There were no people that reported cycling to work.

Manual counts were conducted in 2021 and 2022 at two intersections within the Village. In 2021 counts were collected at 9th Ave and Center St. During 9 collection periods a total of 17 cyclist, 119 pedestrians and 10 wheelchair users were counted. In 2022 counts were collected at 9th Ave and Center St and 5th Ave and Center St. During 8 collection periods a total of 43 cyclist, 128 pedestrians and 11 wheelchair and scooter users were counted.

Crash Sites and Safety Issues

The identification of known crash sites and safety issues helps to guide the active transportation network and improve general safety. Information on crash sites involving pedestrians, cycles, and motor vehicles was obtained from ICBC.

For reference, here are the total number of insured vehicles in Burns Lake:

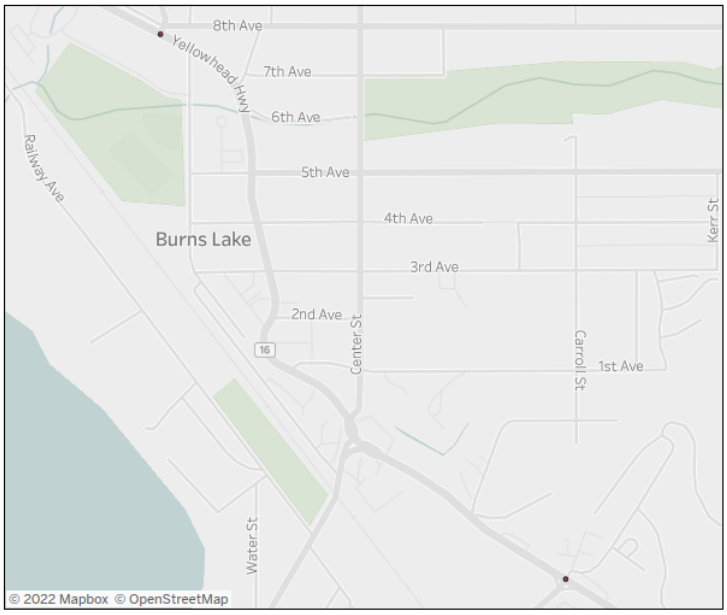
Vehicle insurance policies in force by vehicle type in Burns Lake

Vehicle Type	2017	2018	2019	2020	2021
Passenger	990	980	990	970	1,000
Commercial	1,400	1,400	1,400	1,400	1,500
Motor Home	47	53	44	41	39
Motorcycle / Moped	24	24	25	30	33
Total	2,500	2,500	2,500	2,400	2,600

There have been only 3 reported crashes invoving pedestrian and cyclists from 2016 to 2020. All incidents were located on Highway 16 as shown below, and on the next page. In comparison, there were 116 vehicle-on-vehicle crashes between from 2017 to 2021 throughout the community.

Crashes involving pedestrians - 2016 to 2020

Notes about the data:
ICBC data as of April 3, 2021. Map excludes crashes in parking lots and involving parked vehicles. Therefore, **adding figures for any municipality won't provide a complete representation of all crashes in that area**. Crashes between intersections (mid-block) are plotted in the middle of the nearest two intersections. These mid-block crashes will appear as separate points on the road and will be grouped by the road name in the "Location" table (but excludes crashes at intersections along the road segment). Crashes on boundaries will appear for both cities. Maps only include crashes where sufficient location information was available to determine a latitude and longitude. Crash location information is self reported and not always verifiable. When comparing map counts with previous publications, counts may differ due to rounding, late reporting or corrections to the data. Crash data and trends from 2020 may be impacted by the COVID-19 pandemic. 2021 ICBC crash and injury data on pedestrians is currently unavailable.



Year: (All) Month: (All)

Region: North Central

Municipality: BURNS LAKE

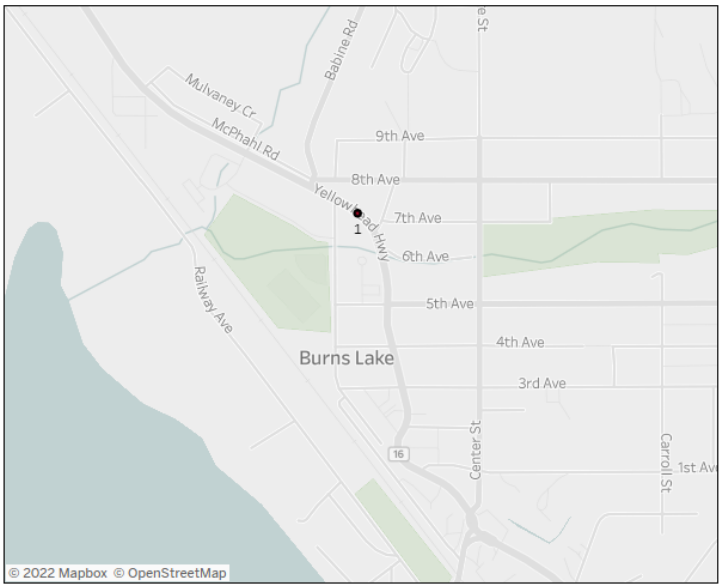
Search by street name within municipality:

Crash count

Municipality	Location	Crashes
BURNS LAKE	BABINE LAKE RD & HWY 16	1
	HWY 16 & HWY 35	1

Crashes involving cyclists - 2016 to 2020

Notes about the data:
ICBC data as of April 3, 2021. Map excludes crashes in parking lots and involving parked vehicles. Therefore, **adding figures for any municipality won't provide a complete representation of all crashes in that area.** Crashes between intersections (mid-block) are plotted in the middle of the nearest two intersections. These mid-block crashes will appear as separate points on the road and will be grouped by the road name in the "Location" table (but excludes crashes at intersections along the road segment). Crashes on boundaries will appear for both cities. Maps only include crashes where sufficient location information was available to determine a latitude and longitude. Crash location information is self reported and not always verifiable. When comparing map counts with previous publications, counts may differ due to rounding, late reporting or corrections to the data. Crash data and trends from 2020 may be impacted by the COVID-19 pandemic. 2021 ICBC crash and injury data on cyclists is currently unavailable.

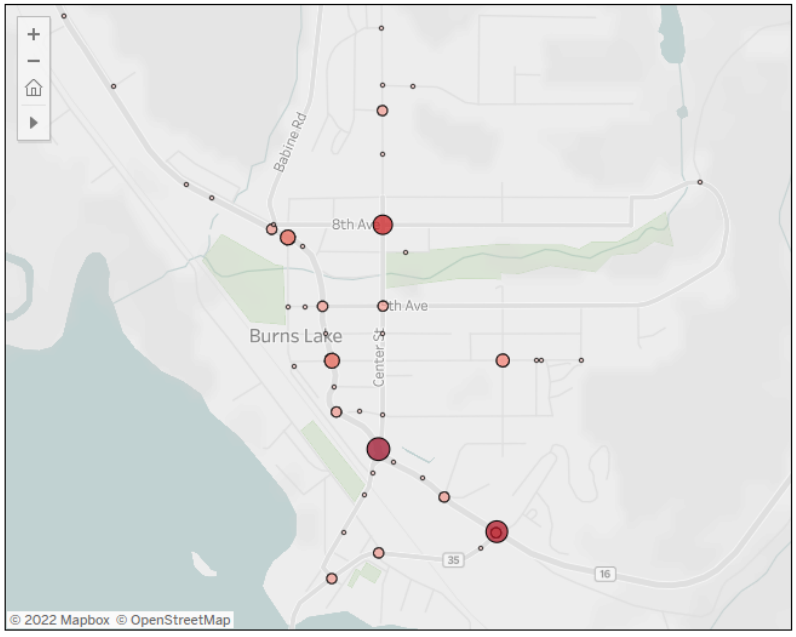


Year: (All)
Month: (All)
Region: North Central
Municipality: BURNS LAKE
Search by street name within municipality:
Crash count

Municipality	Location	Crashes
BURNS LAKE	HWY 16	1

North Central crashes - 2017 to 2021

Notes about the data:
ICBC data as of April 2, 2022. Casualty crashes are crashes resulting in injury or fatality. Property damage only (PDO) crashes are crashes resulting in material damage and no injury or fatality. Map excludes crashes in parking lots and involving parked vehicles. Therefore, **adding figures for any municipality won't provide a complete representation of all crashes in that area.** Crashes between intersections (mid-block) are plotted in the middle of the nearest two intersections. These mid-block crashes will appear as separate points on the road and will be grouped by the road name in the "Location" table (but excludes crashes at intersections along the road segment). Crashes on boundaries will appear for both cities. Maps only include crashes where sufficient location information was available to determine a latitude and longitude. Crash location information is self reported and not always verifiable. When comparing map counts with previous publications, counts may differ due to rounding, late reporting or corrections to the data. Crash data and trends from 2020 and 2021 may be impacted by the COVID-19 pandemic.



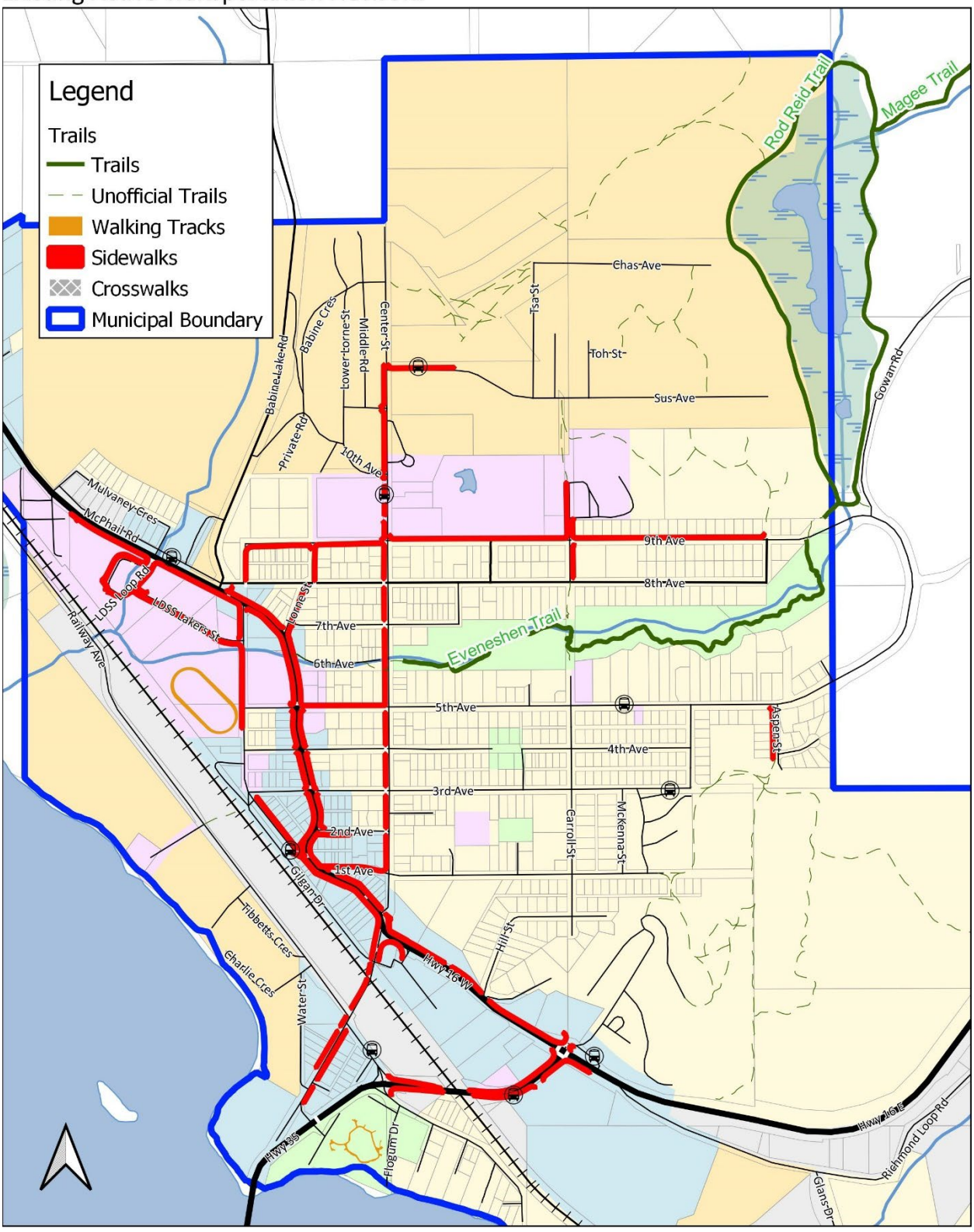
Year: (All)
Crash type: (All)
Municipality: BURNS LAKE
Search by street name within municipality:
Use slider to select count range displayed: 1 – 10
Crash count: 1 – 10

Location	Crashes
CENTER ST & FRANCOIS LAKE DR & FRANCOI..	10
HWY 16 & HWY 35	9
8TH AVE & CENTER ST	7
HWY 16	6
3RD AVE & HWY 16	4
GOVERNMENT ST & HWY 16	4
3RD AVE & CARROLL ST	3
BEATTY RD & HWY 16 W	3
EAGLE CREEK RD & HWY 35	3
HWY 16 & KERR RD	3
HWY 16 & RICHMOND LOOP RD	3

CURRENT ATP NETWORK

Burns Lake contains numerous existing sidewalks and trails that facilitate active transportation. There have been many improvements to the active transportation network since the last Active Transportation Plan completed in 2009. These improvements have been focused on the pedestrian network. There is no existing cycling network that has been formally identified.

Existing Active Transportation Network

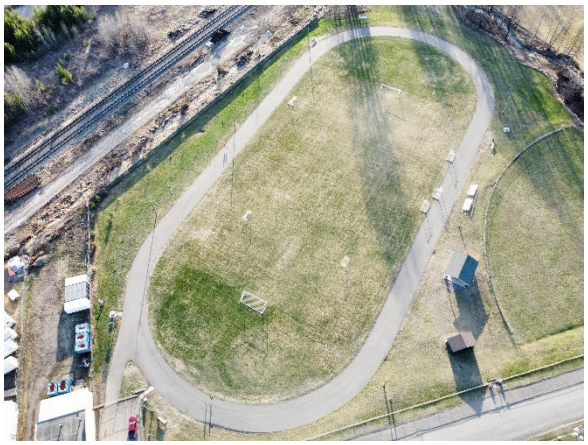


Existing Pedestrian network

The main features of the existing pedestrian network are sidewalks, walking circuits, and trails. Sidewalks extend along one or both sides of the Highway 16 corridor from the lighted intersection at Highway 35 at the east to LDSS at the west. Through the rest of the commercial area, sidewalks also extend along Highway 35, Francois Lake Drive, and Government Street. In the residential Avenues, sidewalks extend on the portions of 1st Ave, 2nd Ave, 5th Ave and Lorne Street between Highway 16 and Centre Street. These sidewalks are generally 1.5 to 2.0 metres wide, concrete surface, and separated from the roadway by a raised curb.

Recent ATP Infrastructure Grants have enabled the construction of sidewalks along Sus Avenue, Center Street, 9th Avenue and upper Lorne St in 2020, and along Centre Street in 2022. The new sidewalks along 9th Avenue and Centre Street have significantly improved connectivity and pedestrian safety between the Lake Babine First Nation, the Lakes District Hospital and Health Centre, and the downtown core. These sidewalks are 1.5 m wide, concrete surface and separated from the roadway by a raised curb. During the consultation phase of the ATP review, there was notable positive feedback about these projects.

There are two walking circuits in Burns Lake, the LDSS Track and the loop at Spirit Square with outdoor fitness stations. The LDSS Track was surfaced with asphalt in 2020. The track is lighted, and plowed in the winter with traction control. The fitness loop at Spirit Square was installed in 2009. It is surfaced with concrete pavers and has outdoor fitness stations, which are mostly used in the summer months.



Burns Lake currently has two (2) formal public trails, with a number of informal pathways on both private and public land. These off-road trails are located adjacent to natural features and are intended for recreational use. They are typically narrow and constructed with a dirt/gravel surface. These trails are:

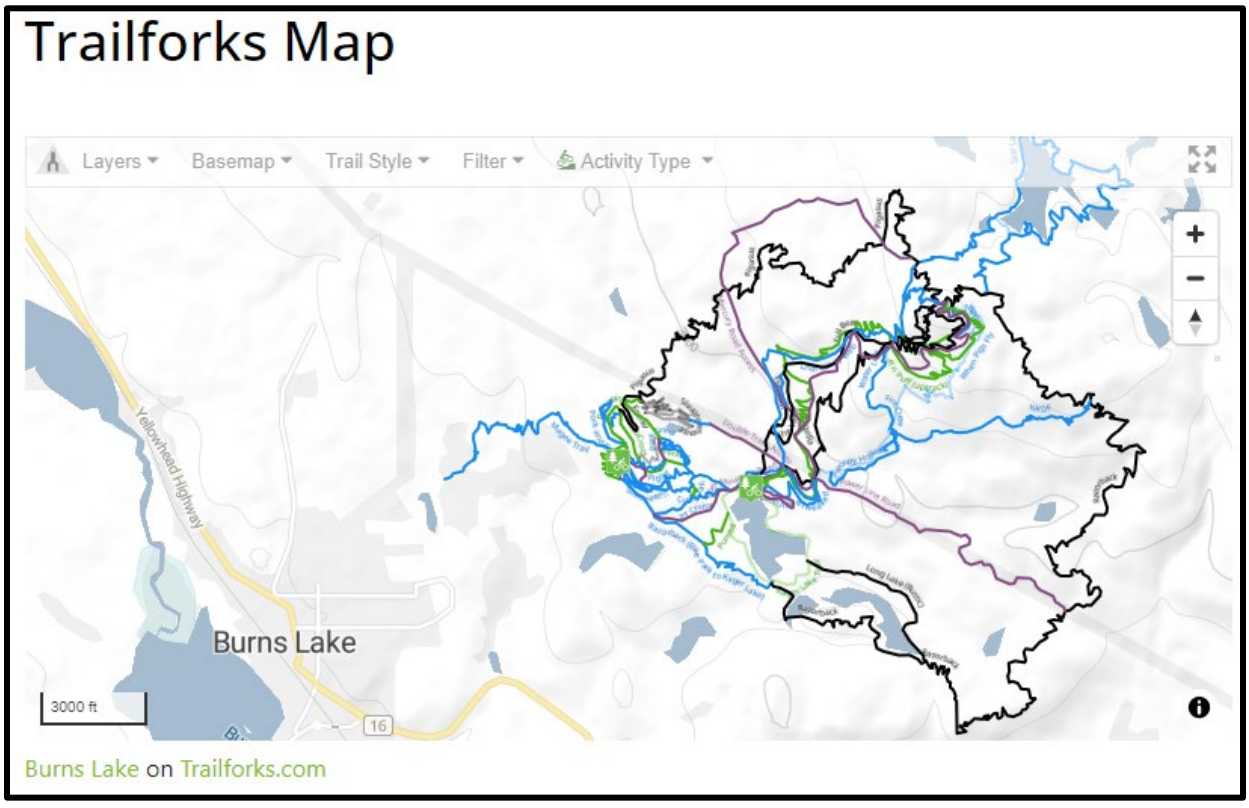
The **Eveneshen Trail** follows along Saul Creek valley from the top of 6th Avenue to the top of 9th Avenue where it connects to the Rod Reid Trail. This 1.4 km trail can be easily accessed from the Burns Lake Visitor Centre on Highway 16.

In December of 2021 the Village retained McElhanney Ltd to conduct a feasibility study of the Eveneshen Trail. The purpose of the assessment was to review the condition and alignment of the existing trail in order to determine the feasibility of upgrading it into an intermediate-difficulty (blue) mountain bike trail which would serve as a connection from the Boer Mountain trail network into the Village of Burns Lake. The study determined that the cost required to meet the design criteria made the project not feasible. The sustained steep grades, frequent rock outcrops, and slope stability concerns would require specialized/high-cost construction equipment and trail building techniques. A second option to maintain the existing character and use of the existing Eveneshen Trail was also examined, and recommended as the preferred option. The trail would be managed to be a moderately challenging, moderately developed hiking trail generally intended for occasional recreational use by residents for a quick hike/walk within the Village of Burns Lake. Mountain bikers and other winter users (e.g., snowshoers) may choose to use the trail; however, the trail would not be designed/maintained for mountain bike use. Recommendations for trail improvements and a cost estimate were provided for this option.

The Rod Reid Trail is a very popular 2.1 km multi-use trail that circles around the Loch Lomond wetland and bird watching area, accessed at the northernmost point of the Eveneshen Trail, at the top of 9th Avenue. This trail has a fairly wide, level-ground path and is ideal for children and seniors. The trail offers hikers a chance to examine wetland plants and observe the area's extraordinary birds from one of several viewing platforms. In 2021 the Rod Reid Trail was connected to the Boer Mountain Bike Trails through the Magee Trail. The Magee Trail is located outside the Village boundaries but provides a key connection from the Village to Boer Mountain. The eastern half of the trail is often used by motorized off-road vehicles, creating a safety hazard for pedestrians and cyclists. Several method have been employed to discourage motorized vehicle use on the western half of the trail. This includes signage and a bridge step-up that vehicles cannot easily navigate. This bridge step-up however, reduces the accessibility of the trail for wheelchairs, strollers or other mobility aids.

Existing Cycling network

Dedicated cycling infrastructure is limited in Burns Lake. While there is bicycle parking at various locations throughout the municipality, there are no dedicated cycling routes or lanes. However, this does not reflect a lack of cyclists within the community. There is an extensive mountain bike trail network within the Burns Lake Community Forest surrounding Boer Mountain. Located just minutes from downtown Burns Lake, this area is accessible only through the municipality. The mountain bike trails are a major tourist draw to the community and are supported by Ride Burns, a trail advocacy organization and Destination Marketing Organization (DMO) that develops and promotes the mountain biking tourism sector. These trails have a rustic campground, access to Kaeger Lake, and a shuttle service to the top of the mountain.



Users of the mountain bike trails have expressed a desire for improved connections from the trail network into Burns Lake proper. In support of this vision, the Magee Trail was recently opened (2022) that connects the trail network to the Rod Reid Trail. It was hoped to extend the connection down the Eveneshen Trail, however this trail was determined unsuitable to be upgraded for mountain bike use. Alternate routes through Village Heights or 5th Avenue are currently being explored.

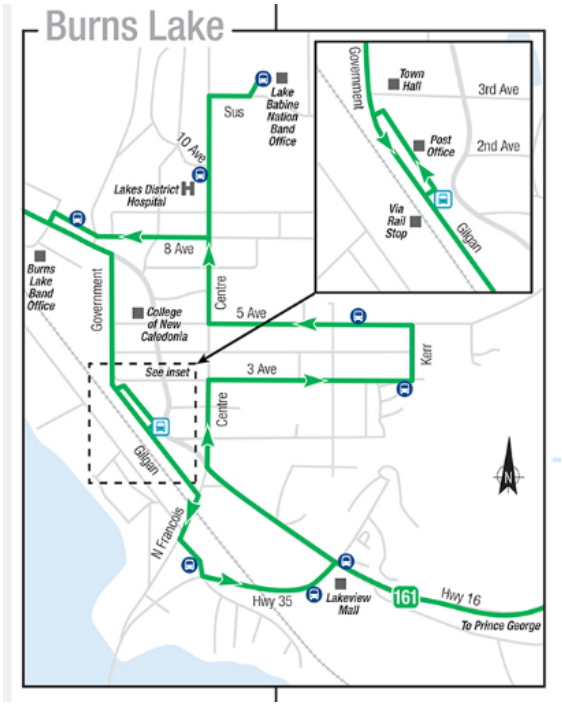
The main road through Burns Lake is Highway 16, which has high traffic volumes including large trucks. The traffic volumes and meandering nature of the Highway through town makes it relatively unsuitable to also accommodate formal cycling lanes. The safety issues around cycling on Highway 16 could be improved by directing cyclists to alternate routes and controlled crossings.

Transit

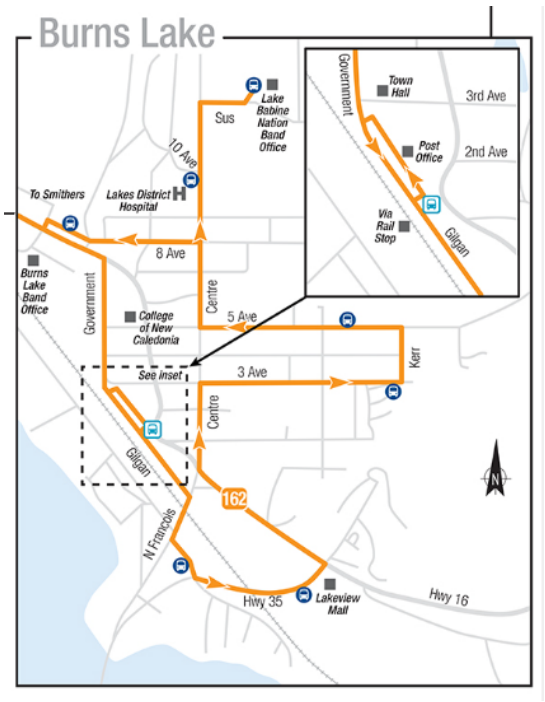
In 2017 as part of the five-point Highway 16 Transportation Action Plan, the Province of BC committed $4.2 million on a cost-shared basis with local communities, to expand BC Transit services that travel between cities along Highway 16. Part of this transit service allows people to travel to their next largest community and return home the same day, including two services from Burns Lake: Burns Lake to/from Prince George; and Burns Lake to/from Smithers.

The Village of Burns Lake is responsible for infrastructure installation and maintenance at transit stops within the municipality. There is one bus shelter at the Government St/Gilgan Dr stop, one shelter at the Lake Babine Nation Band Office, and varying infrastructure at the eight other bus stops throughout the municipality. These stops are shown on the maps below for each transit service.

161 Burns Lake-Prince George
Operates Tuesday, Thursday & Saturday



162 Burns Lake-Smithers
Operates Monday, Wednesday & Friday



In 2020 the RDBN conducted a survey to determine rider origins and complied ridership data from 2017 to early 2020. The survey found that Burns Lake has the highest numbers for rider representation, likely because it is the starting point for both the 161 and 162 routes.

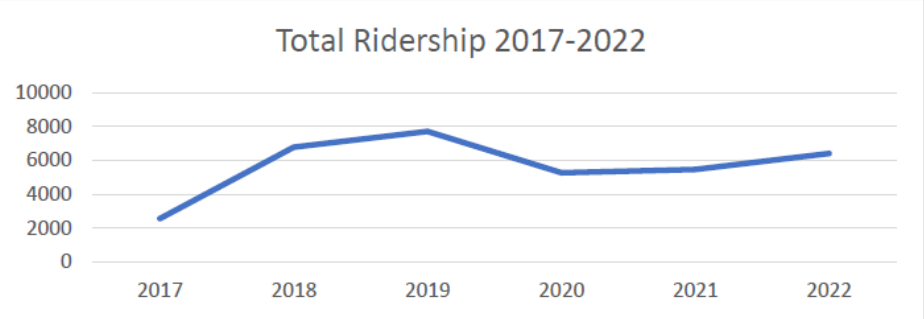
Burns Lake/Lake Babine Nation/Ts'il Kaz Koh Ridership

Route 161 – Burns Lake to Prince George

YR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	**Total**
2022	318	306	427	290	310	368	293	446	319	440	399	402	**4318**
2021	227	249	353	253	295	301	364	357	285	324	249	312	**3569**
2020	423	430	328	112	198	275	258	170	268	326	228	273	**3289**
2019	443	272	451	432	420	395	496	249	413	503	554	512	**5140**
2018	361	299	394	306	491	410	433	368	364	460	473	374	**4733**
2017							261	316	288	339	275	362	**1841**

Route 162 – Burns Lake to Smithers

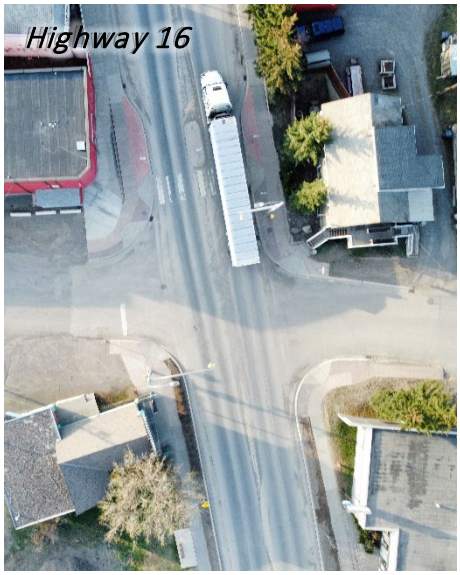
YR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	**Total**
2022	130	110	204	182	186	164	173	241	144	175	174	195	**2078**
2021	125	118	164	158	136	242	176	163	118	150	161	135	**1846**
2020	166	239	158	114	107	190	194	97	192	189	182	144	**1972**
2019	216	161	210	266	228	226	232	86	206	185	325	227	**2568**
2018	230	95	121	160	211	195	166	189	166	175	190	148	**2046**
2017							153	123	90	131	90	120	**707**



UPDATE FROM THE 2009 ATP

The previous Burns Lake Active Transportation Plan was jointly prepared by Boulevard Transportation Group Ltd. and D'Ambrosio architecture+urbanism in December 2009. Since the adoption of this plan, most of the goals have been realized. The outstanding goals in the plan are either restated here or have been reconsidered for practicality or shifting priorities.

2009 Recommended Actions and Results



1) Improvements to Highway 16 from Francois Lake Drive to 3rd Avenue, to include wider sidewalks, landscaping, traffic calming features and narrowed vehicle lanes.

   This action was completed in 2012.

2) Improved crossing of the Saul Creek ravine, either as a $2.5 million bridge or a less expensive improvement of the existing crossing.

   The Saul Creek ravine crossing does not experience enough pedestrian traffic to warrant a $2.5 million bridge. A less expensive improvement of the crossing was installed in 2014.

3) A 3.0 m roadside trail the length of Centre Street, connecting the Lake Babine Band lands, William Konkin Elementary School, Muriel Mould Primary School, and Lakes District Hospital with the Downtown.

   The Centre Street sidewalk project was completed in 2022.

4) An improved connection between Highway 16 and Gilgan Drive that includes an asphalt surface and landscaping.

   This action has not been completed, however Phase 3 of Downtown Revitalization Plan (2012) includes improvements to this area. Council has recently identified that this Phase 3 requires updating, which is scheduled for 2024. This area is also identified as a priority in the current ATP.

5) Redesign of 8th Avenue to an include a 3.0 m roadside pathway and improved stormwater management.

This project was shifted to 9th Avenue instead in order to have improved connections to senior's facilities and schools. This project was completed as a sidewalk with paved curbs instead of a 3.0 m roadside pathway. The 9th Avenue sidewalk project was completed in 2020.

6) Extension of the existing Eveneshen Trail to connect to Burns Lake, with a formal crossing of the CN Railway adjacent to Lakes District Secondary School.

This project was not completed because of the prohibitive cost of the railway crossing. While a connection in this location is desirable, the potential volume of pedestrian traffic crossing the railway at this location does not warrant the investment required for a pedestrian bridge at this location.

7) Long-term potential for a lakefront walkway providing continuous public access to Burns Lake.

The Village of Burns Lake has invited conversations with the Ts'il Kaz Koh Nation to connect Spirit Square with the Village Public Works Yard. This lakefront walkway would be shorter than previously proposed so as not to cross in front of the private properties accessed via Pioneer Way. Lakefront property owners are unlikely to support this project, and these properties are the only waterfront properties within the Village.

8) Roadside greenway routes along Government Street, Gilgan Drive, and Francois Lake Drive, connecting Radley Beach and Spirit Square with the rest of the community.

This action should be prioritized. Phase 3 of Downtown Revitalization plan includes improvements to this area.

9) A series of trails along Waldrup Creek, at the east of the Village, connecting the Rod Reid Nature Trail with Burns Lake.

This action has been refocused to trail connections through the Village Heights property.

10) Alter Village maintenance and operations protocols to better facilitate active transportation, including putting more priority on sidewalks and cycling routes in snow clearing practices, improve sidewalk maintenance, better enforce parking, incorporate landscaping into transportation infrastructure, and consider pedestrian-scaled banners.

Since 2009, the Village has increased the budget for sidewalk maintenance. New parking areas have been created downtown (near the Post Office) and the existing parking area by the Tweedsmuir Hotel has been upgraded. The Village is in the process of adopting a ticketing bylaw that will enable the bylaw enforcement officer to issue parking tickets. The Village is also in the process of completing improved wayfinding throughout the municipality, that was initiated through a Municipal Sign Strategy adopted in 2016. Improvements to pedestrian wayfinding are part of this strategy, and will be installed in 2023.

11) Pursue opportunities to acquire land and/or funding for active transportation infrastructure through land development, community donation, and Provincial or Federal grant programs.

The Village has been actively pursuing grant funding for active transportation infrastructure, especially in recent years through the BC Active Transportation Infrastructure Grant Program and the Infrastructure Canada Active Transportation Fund. The Village was successfully awarded grants from the BC Active Transportation Infrastructure Grant Program in 2020 and 2022 for sidewalk projects along 9th Avenue and Centre Street. A grant application to the Infrastructure Canada Active Transportation Fund in 2022 for a partnership project with the Lake Babine Nation to construct a lighted walking path between William Konkin Elementary School and Sus Avenue, and new sidewalks on 9th Avenue, has been approved and will be installed in 2023.

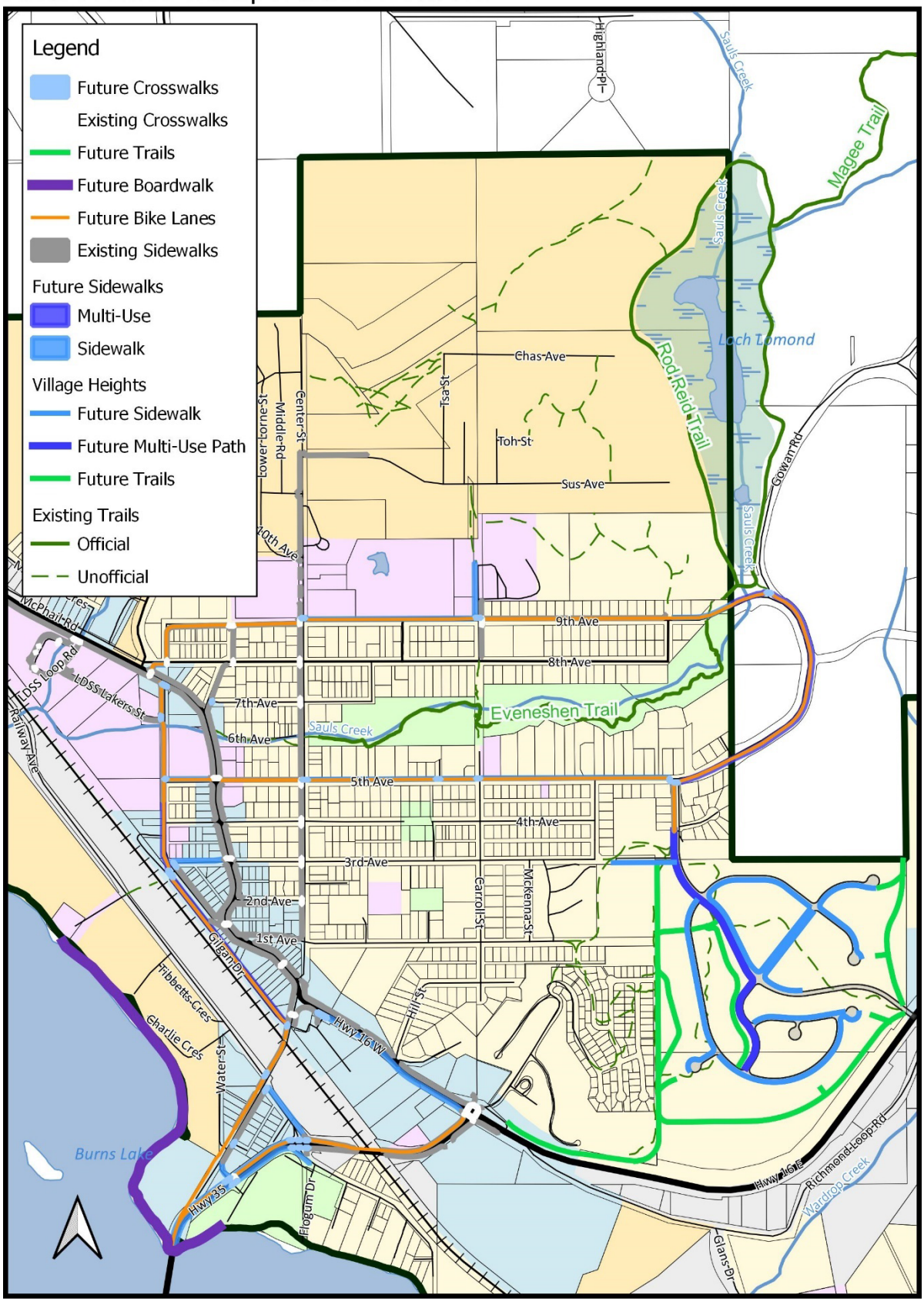
12) Promote community-based programs and initiatives to increase capacity for active transportation.

The Village has been a strong supporter of the local mountain bike club Ride Burns (formerly Burns Lake Mountain Bike Association), which has numerous community programs that promote biking within the community. This includes the kids bike camp, Babes in Balance ladies weekend, and Big Pig mountain bike races among others. The Village also promotes a walking tour of local heritage buildings in coordination with the local museum. Also, at Spirit Square, the municipal equipment rental facility (the Beach Hut) rents out kayaks and e-bikes.

FUTURE ATP NETWORK

The future active transportation plan network consists of new sidewalks, crosswalks, multi-use paths, trails and bicycle lanes. Existing network gaps are addressed to create a complete, connected, and convenient network along the most commonly travelled routes throughout the community. A new cycling network is proposed that connects the Boer Mountain bike trails with the downtown through Village Heights, spirit square, municipal campground and the rural area south of the municipality.

Future Active Transportation Network

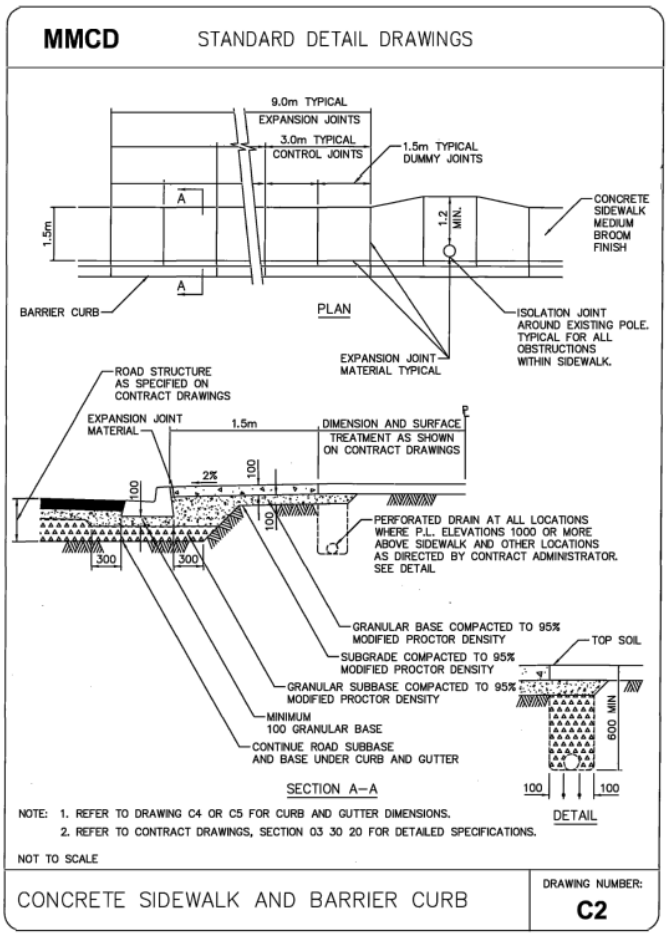


Future Pedestrian Network

The future pedestrian network will provide safe, continuous access to main destinations within the community through a combination of new and upgraded pedestrian infrastructure. The one remaining sidewalk gap along Highway 16 is addressed, and sidewalk gaps in the vicinity of Spirit Square. A new pedestrian route is proposed along 5th Ave with connections to 9th Ave along Gowan Rd, and into Village Heights from Aspen St. A new pedestrian route along Gilgan Dr and Government St will address important safety issues and provide a key connection off Highway 16.

New sidewalks are proposed in the following locations:

- The north side of 9th Ave from Shelford St to the Rod Reid Trailhead
- The north side of 5th Ave between Center St and Aspen St
- The north side of 5th Ave between Highway 16 and Government St
- The north side of 3rd Ave between Highway 16 and Government St
- The south side of Highway 16 between Francois Lake Dr and Highway 35
- The northeast side of Pioneer Way between Francois Lake Dr and Highway 35
- Both sides of Highway 35 from Pioneer Way to the bridge

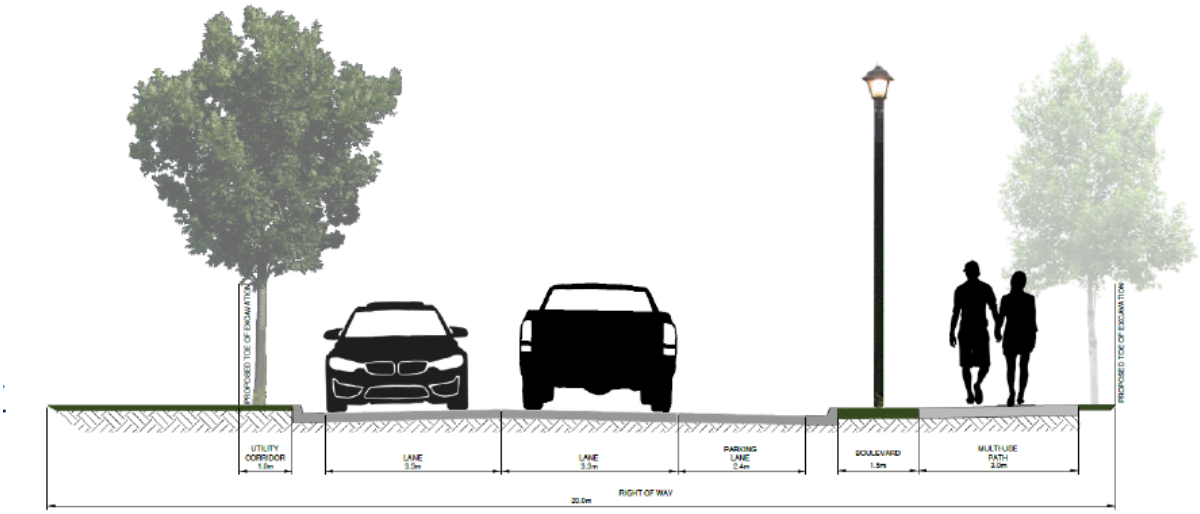


These are proposed to be 1.5 m wide Non-Separated Sidewalk located directly next to the roadway, but physically separated from the roadway by a curb. New gutters would also need to be provided for drainage. This design has been used successfully in the recent 9th Ave and Center St sidewalk projects and is consistent with existing infrastructure. The ultimate design of all new pedestrian and cycling infrastructure should be informed by the current Village of Burns Lake subdivision and development servicing bylaw, as well as the latest edition of the BC Active Transportation Design Guide.

New crosswalks are proposed between new sections of sidewalk as noted on the map, and in high-traffic pedestrian locations. No new crosswalks are proposed across Highway 16. Notable new crosswalk locations include 5th Ave across Government St, and across Gilgan Dr at the intersection with Government St and 3rd Ave.

New multi-use paths are proposed in two locations:

- The top on 9th Ave from the Rod Reid trailhead along the northeast side of Gowan Rd to the top of 5th Ave.
- Along the north side of Gilgan Dr connecting to the west side of Government St via crosswalk.



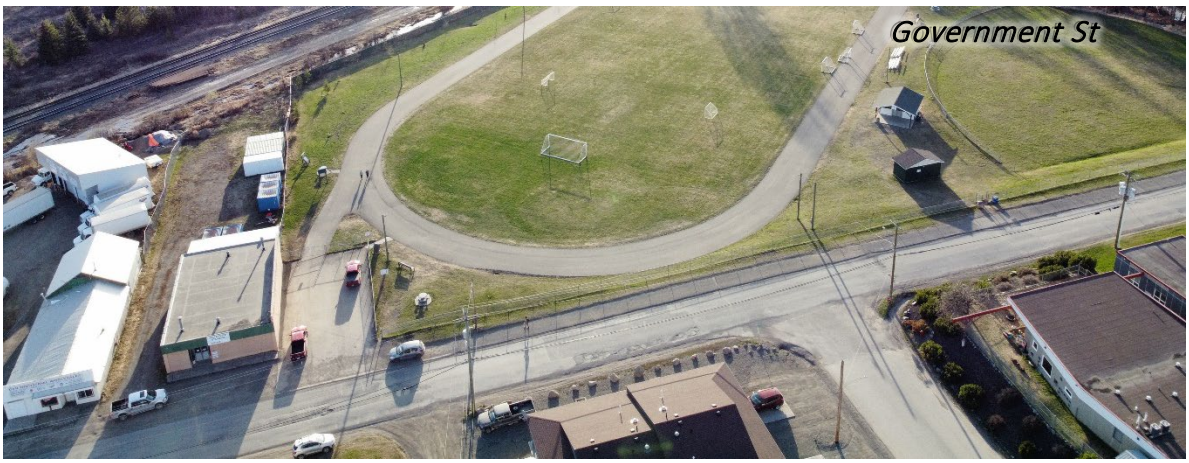
LOCAL - MULTI-USE PATHWAY

Ideally these will be 3.0 m wide enhanced separated sidewalks/pathways, with a 1.5 m boulevard between the pathway and road that could be enhanced with trees or ambient lighting. Greater sidewalk width is highly beneficial in these contexts to allow for increased pedestrian volumes, pedestrian passing movements, and enhanced pedestrian amenities. Where wider sidewalks are not possible due to right-of-way constraints, the boulevard and enhancements between the pathway and road could be reduced or eliminated.

The Gowan road right-of-way is sufficiently wide to accommodate a wide multi-use pathway. This pathway would likely see high volumes of bicycle traffic in addition to pedestrian traffic. The Rod Reid trail and Boer Mountain bike park were identified as a main destination during public consultation.

The construction of a new multi-use path along Gilgan Dr and Government St would help to reduce existing conflicts between road traffic and pedestrian/bicycle use. This was identified as a priority in the 2009 Active Transportation Plan (*Government Street Greenway*) but was not implemented. In recent years this route has become more heavily use by pedestrians, bicycles and local traffic, as traffic flows have changed and users attempt to avoid the busy Highway 16. The south side of Gilgan Dr is unpaved and heavily used by large truck parking and local overflow parking. The south side also lies within the CN Railway right-of-way, which limits the potential for redevelopment. By continuing the multi-use path along Government St, this route would connect to key destinations including LDSS, CNC, T'sil Kaz Koh offices, the public library, walking track, and more.

The portion of Government St between the walking track and public library already contains a wide asphalt sidewalk, however redevelopment would significantly increase its utility for pedestrian and bicycle traffic. During the summer months, users of the walking track, soccer and baseball fields use the sidewalk for parking vehicles, essentially blocking pedestrian flows and increasing conflicts with vehicles. While the current parking for this area is inadequate, the parking should be directed off the sidewalk to the large parking lot at the CNC nearby. The proposed new sidewalk and crosswalk at this location would facilitate pedestrian flow between these areas.



A new boardwalk along the lakeshore extending from Radley Beach to the Village works yard property is proposed to increase public access to the lakeshore and provide a new amenity for recreational active transportation users. This boardwalk would travel through the T'sil Kaz Koh First Nation property and would require collaboration with the T'sil Kaz Koh Chief and Council. A more extensive lakefront boardwalk was proposed in the 2009 Active Transportation Plan (*Lakefront Walkway*), but was not implemented. However a scaled-down version of this concept should be pursued. Burns Lake is perhaps the community's greatest natural asset, yet it presently is only accessible to the public from Radley Beach. A waterfront boardwalk would further connect the community to the lake and potentially act as a catalyst for new lakefront development. It would be a considerable asset to both the municipality and the T'sil Kaz Koh Nation, and should be pursued.

The Village Heights area consists of two properties owned by the Village comprising approximately 35 Ha (86 acres). It takes its name from being the highest point in the Village and contains some challenging topography, including steep slopes along the south and east. A Master Plan was developed for this property in March 2022 to inform future planning and design at a site-scale level, and identify land use and development opportunities. The roads, sidewalks, multi-use paths and trails identified in this area correspond with the Village Heights Master Plan. Village Heights contains the only new trails identified in the Active Transportation Plan.

New trails identified in the Village Heights area are intended to be multi-use for both bicycles and pedestrians. The trail connecting Aspen St through the property to the Highway 16 and Highway 35 intersections will provide a key connection for trail access to and from the Road Reid trail, Eveneshen Trail and Boer Mountain bike park. This trail should be prioritized over trails internal to the property. Due to the steep terrain, this trail will require an engineered design and likely include switchbacks and/or stairs. Impressive views from the top of Village Heights provide an opportunity for viewing platforms as an attraction.

The existing Eveneshen Trail and Rod Reid trail are heavily used and require maintenance for user safety and enjoyability. The Eveneshen Trail was evaluated in 2021 and a report detailing the required maintenance and safety upgrades was provided. It is recommended that the Village pursue these upgrades to increase the useability of the trail. The Rod Reid trail is in better condition, however portions of the trail are susceptible to flooding, and the abrupt ascent to several bridges limits the accessibility of the trail. This trail also has conflicts with motorized off-road vehicles, which should be addressed. This could be accomplished with a combination of fencing, narrowed walk-throughs, or other barriers. Upgrades to the Rod Reid trail would be welcomed by the community as it is the most used trail within the municipality.

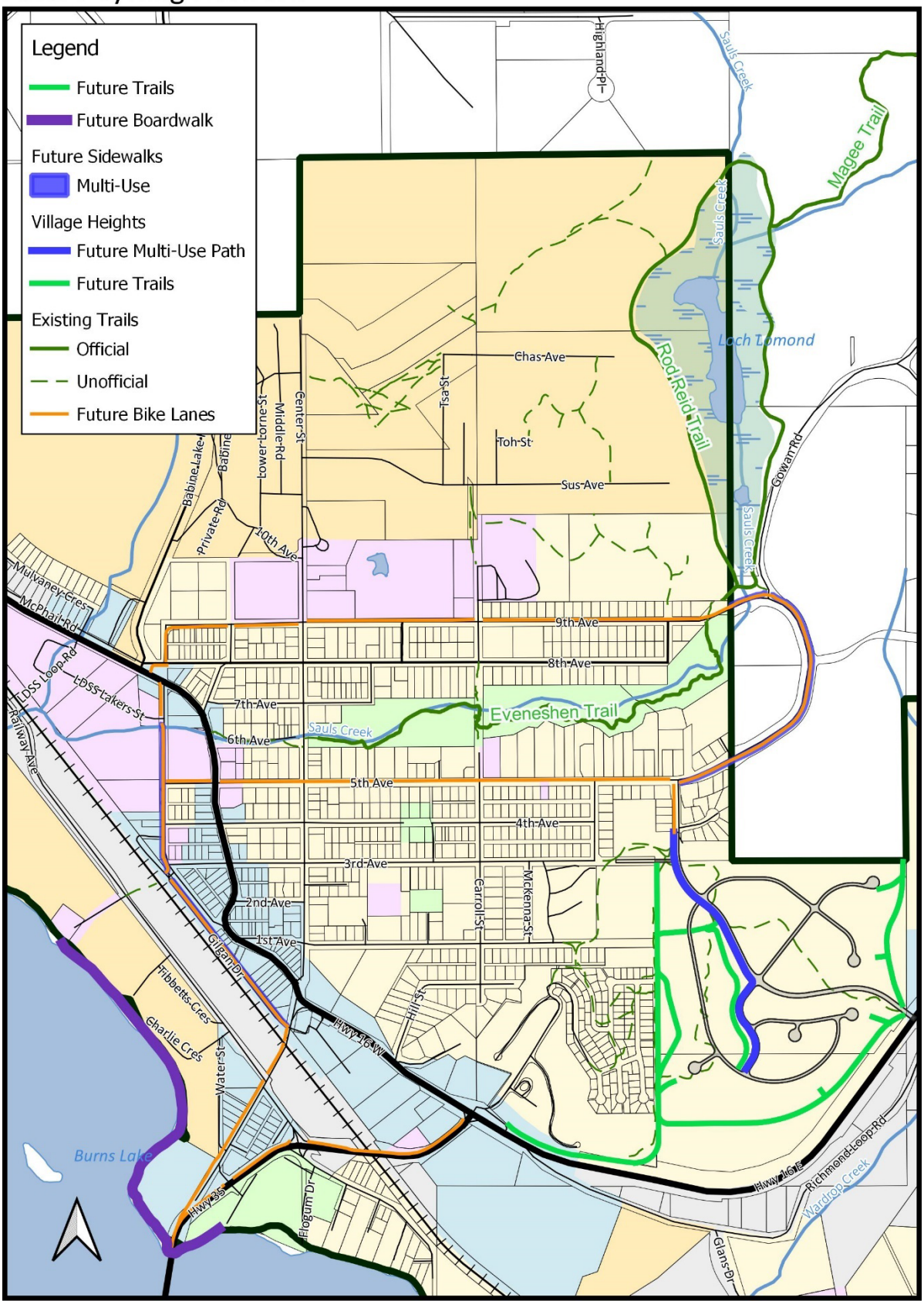
Future Cycling Network

The future cycling network will provide safe, continuous access to main destinations within the community through new on-road bike lanes and off-road multi-use pathways and trails. Bicycle traffic is directed away from Highway 16 for safety reasons. The 2009 Active Transportation Plan did not identify a cycling network, and with the increasing popularity of mountain biking and mountain biking tourism within the community, a formal cycling network will be greatly beneficial.






Future Cycling Network



On-road bicycle lanes are envisioned along streets with low motor vehicle volumes and speeds, suitable for sharing the road. They may include treatments such as signage, pavement markings, and traffic calming to prioritize bicycles and make the facilities comfortable for people of all ages and abilities. A protected bicycle lane may be required in areas with higher traffic volumes, such as Highway 35. Protected bicycles lanes have a travel lane physically separated from motor vehicles and pedestrians by vertical and/or horizontal elements. Bicycle use is not encouraged along Highway 16 at this time, due to high traffic volumes and the availability of alternate routes.

On-road bicycle lane (painted) proposed locations:

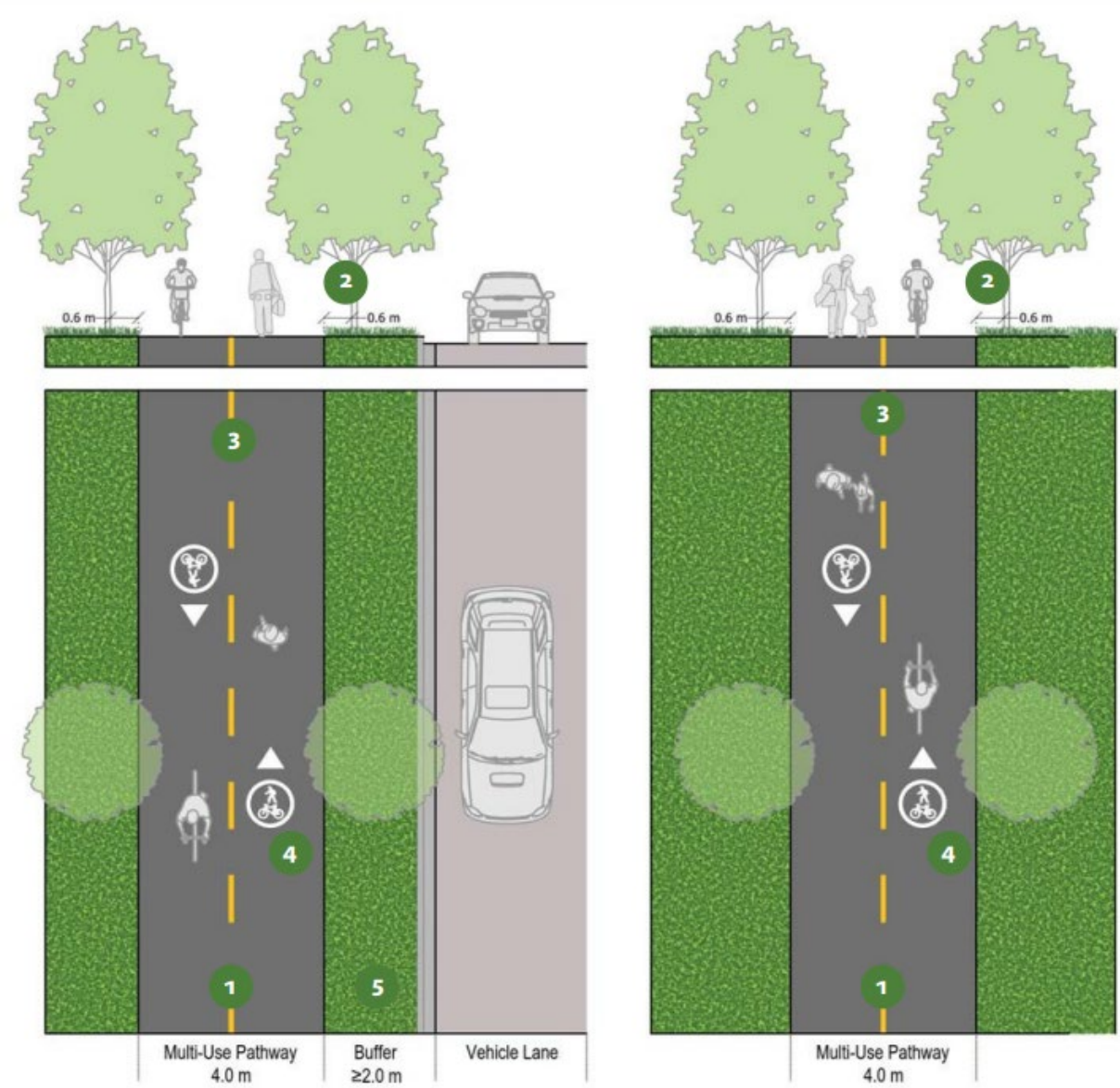
- 9th Ave to Highway 16
- 5th Ave to Government St, crossing Highway 16 at an existing crosswalk intersection
- Aspen St to access Village Heights trails
- Government St from Highway 16 to LDSS Lakers St
- Francois Lake Drive
- Highway 35 (protected lane if required)

Multi-use path (for both bicycle and pedestrian use) proposed locations:

- Gowan Rd (connecting 9th and 5th Avenues)
- Government St and Gilgan Dr
- Village Heights (pending road development)

In addition, the lakefront boardwalk is envisioned as a multi-use facility, wide enough to accommodate two-way pedestrian and bicycle traffic.

Multi-use trails are proposed in the Village Heights area, to provide an off-road connection from the village centre to the Boer Mountain bike trails. This would also create a continuous, circular cycling route around the municipality. The terrain within the Village Heights property is challenging and contains steep slopes. Switchbacks or other terrain modifying features will need to be included in the trail design. It is recommended that a study be conducted to determine the most appropriate route and design for a multi-use trail.



From: British Columbia Active Transportation Design Guide

Other infrastructure necessary to accommodate bicycle use within the community is secure bicycle parking. While there are 17 locations throughout the community that have bike racks, many of these are unused. This is likely due to their location and that users are unaware of their existence. Feedback from bike users within the community revealed the importance of bike rack locations. Most bikes suitable for use at the Boer Mountain trails are expensive, and bicycle theft is a significant concern. Bike racks should be located within eyesight of stores/restaurants with windows, and be secured to the ground. There are also several important destinations within the community that would benefit from the addition of bike parking.

Recommended additional bike parking locations:

- Lakeview Mall
- Real Canadian Wholesale Club
- City Centre
- Public library

IMPLEMENTATION PLAN

The development of the new ATP network, including infrastructure, through the recommended actions is guided by an implementation framework including: timeframe/priority, responsibility, and implementation approach. The Village will have to prioritize certain routes and infrastructure over others to ensure projects are manageable. The implementation plan identifies the priority level for each recommended action, with short term being 1-5 years, medium term being 5-10 years, and long term being 10+ years. However, these terms may change depending on the availability of funding and staff resources.

	THEME 1: CONNECTIVITY	PRIORITY	TIME FRAME	RESPONSIBILITY		APPROACH
				Primary	Secondary	
1.1	**Establish a cycling network**	High	Short-term	Village	N/A	Policy; adopt Cycling Network Map
1.1a	Install on-road bike lanes on 9th Ave and 5th Ave to Government St, with Hwy 16 crossings	High	Short-term	Village	MOTI	Capital Project
1.1b	Install on-road bike lane on Francois Lake Dr	High	Short-term	Village	N/A	Capital Project
1.1c	Install on-road bike lane on Hwy 35	High	Short-term	MOTI	Village	Capital Project
1.1d	Develop a paved multi-use path along Government St and Gilgan Dr	Medium	Medium-term	Village	N/A	Capital Project
1.1e	Develop a multi-use path along Gowan Rd connecting 9th Ave and 5th Ave	Medium	Medium-term	Village	RDBN	Capital Project
1.1f	Develop multi-use trail from Aspen St through Village heights to Hwy 16/Hwy 35 intersection	Medium	Medium-term	Village	Ride Burns(?)	Capital Project
1.1g	Install secure bike parking at destinations	Medium	Short-term	Village	Business	Capital Project
1.2	**Enhance the pedestrian network**	High	Short-term	Village	N/A	Policy; adopt Pedestrian Network Map
1.2a	Install new sidewalks to close network gaps on 9th Ave	High	Short-term	Village	N/A	Capital Project
1.2b	Install new sidewalks on 5th Ave; and sidewalks on 9th to the Rod Reid trailhead	Medium	Medium-term	Village	N/A	Capital Project

1.2c	Install new sidewalks on 3rd Ave between Hwy 16 and Government St	low	Medium-term	Village	N/A	Capital Project
1.2d	Install sidewalks on the south side of Hwy 16 between Francois Lake Dr and Hwy 35	Medium	Medium-term	Village	MOTI	Capital Project
1.2e	Install sidewalks on both sides of Hwy 35 to the bridge, and the northeast side of Pioneer Way between Francois Lake Dr and Hwy 35	Medium	Medium-term	Village	MOTI	Capital Project
1.2f	Install new crosswalks as needed to connect sidewalks	High	Short-term	Village	N/A	Operations and Maintenance
1.2g	Install new crosswalks including signage across Government St at 5th Ave and across Gilgan Dr at the intersection with Government St and 3rd Ave	High	Short-term	Village	N/A	Operations and Maintenance
1.2h	Develop a lakeshore boardwalk from Radley Beach to the Village works yard	Low	Long-term	Village	T'sil Kaz Koh FN	Capital Project
1.2i	Investigate options for an improved connection between 8th Ave and 5th Ave along Carroll St (the gulley trail)	Low	Long-term	Village	N/A	Capital Project
1.3	**Enhance existing trails and develop new trails**					
1.3a	Assess condition of Rod Reid trail and perform maintenance	High	Short-term	Village	Rotary Club, RDBN	Operations and Maintenance
1.3b	Implement recommended upgrades to Eveneshen Trail	High	Medium-term	Village	N/A	Capital Project
1.3c	Develop trails in Village Heights as directed by the Village Heights Master Plan	Low	Long-term	Village	N/A	Capital Project
1.4	**Improve rural connections**					
1.4a	Improve Hwy 16 W rural connection	Low	Long-term	Village	MOTI	Capital Project
1.4b	Improve Highway 16 E rural connection	Low	Long-term	Village	MOTI	Capital Project
1.4c	Improve Highway 35 S rural connection	High	Medium-term	Village	MOTI	Capital Project
1.4d	Improve Gowan Rd rural connection (see 1.1e, 1.2b)	High	Short-term	Village	MOTI	Capital Project

	THEME 2: SAFETY	PRIORITY	TIME FRAME	RESPONSIBILITY		APPROACH
				Primary	Secondary	
2.1	**Enhance the street lighting network**					
2.1a	Analyse the street lighting network for gaps	High	Short-term	Village	N/A	Operations and Maintenance
2.1b	Analyse feasibility of lighting the Rod Reid trail	Medium	Medium-term	Village	Rotary Club, RDBN	Operations and Maintenance
2.2	**Review traffic flows and on-street parking**					
2.2a	Conduct traffic studies at identified problem intersections	High	Short-term	Village	MOTI	Capital Project
2.2b	Install intersection upgrades at Gilgan Dr, Government St and 3rd Ave (i.e. roundabout)	High	Long-term	Village	N/A	Capital Project
2.2c	Install traffic calming devices on 8th and 5th Ave	Medium	Long-term	Village	N/A	Capital Project
2.2d	Paint curbs and add signage to no parking areas	High	Short-term	Village	N/A	Operations and Maintenance
2.3	**Enhance trail safety**					
2.3a	Develop a trail maintenance plan for the Rod Reid and Eveneshen trails	Medium	Long-term	Village	N/A	Capital Project
2.3b	Install fencing, pedestrian posts to limit ATV access to the Rod Reid trail	Medium	Medium-term	Village	N/A	Capital Project
2.3c	Post bear/wildlife warning signs at trailheads	High	Short-term	Village	N/A	Operations and Maintenance
2.4	**Develop an infrastructure maintenance plan**	Medium	Medium-term	Village	N/A	Operations and Maintenance

	THEME 3: COMMUNITY ENJOYMENT	PRIORITY	TIME FRAME	RESPONSIBILITY		APPROACH
				Primary	Secondary	
3.1	**Improve wayfinding**					
3.1a	Implement 2016 Sign Strategy	High	Short-term	Village	N/A	Capital Project
3.1b	Install signage along new cycling and pedestrian routes as needed	Medium	Medium-term	Village	N/A	Operations and Maintenance
3.2	**Support Active Transportation Initiatives and Programs**					
3.2a	Continue support for active programs from the Lakeside Multiplex	High	Short-term	Village	N/A	Operations and Maintenance
3.2b	Offer a bike road safety course to children and youth	High	Short-term	Village	RCMP	Operations and Maintenance

Funding

Funding for active transportation infrastructure and programs comes from a variety of sources including municipal budgets, grant funding, private partnerships and community groups. The provincially funded Active Transportation Infrastructure Grant program has been a major source of funding for recent active transportation projects within the Village. It is important for the Village to remain informed about new grant funding opportunities and actively pursue these opportunities as they arise.

Operations and maintenance projects, along with select high-priority projects, are most likely to require funding from general revenues. The municipal financial plan should incorporate recommendations from the Active Transportation Plan where possible. The Village should also seek to incorporate active transportation infrastructure into other capital projects, such as road upgrades, where appropriate.

Conceptual capital cost estimates (e.g. engineering D Level cost estimates) for each proposed project are not provided in this plan. However, unit cost assumptions are shown in the table below, which can be used to extrapolate project costs.

FACILITY	UNIT COST (includes % for contingency and design)	NOTES
Linear Facilities		
Sidewalk (one side)	$850 / m	Rate includes curb & gutter
Multi-Use Pathway	$1,500 / m	
Painted Bicycle Lane	$1 / m	
Lakefront Boardwalk	$2,000 / m	
Trail (unpaved)	$250 / m	
Intersection Treatments		
Marked Crosswalk	$1,000	Includes painting and signage
Enhanced Crosswalk	$7,500	Includes lights and controls
Curb Extensions (one side)	$850	
Amenities		
Benches	$1,500 to $2,500	
Planters	$200	
Washroom (fully serviced)	$400 / sq ft	
Washroom (not serviced)	$10,000	
Wayfinding		
Pedestrian Map Panel	$800	
Pedestrian Kiosk	$15,000	
Directional Signage	$250	

NEW ACTIVE TRANSPORTATION FACILITY	LENGTH (KM)	UNIT COST (PER M)	COST ESTIMATE	ESTIMATED MAINTENANCE COST PER KM
Sidewalk (one side)	3.0	$850	$9,000,000	$5,900
Multi-Use Pathway	1.5	$1,500	$2,250,000	$5,900
Painted Bicycle Lane	5.4	$1	$5,400	$5,400
Lakefront Boardwalk	1.0	$2,000	$2,000,000	$9,000
Trail (unpaved)	8.2	$250	$2,050,000	$2,100
TOTAL	**19.1**	-	**$15,305,400**	**$28,300**

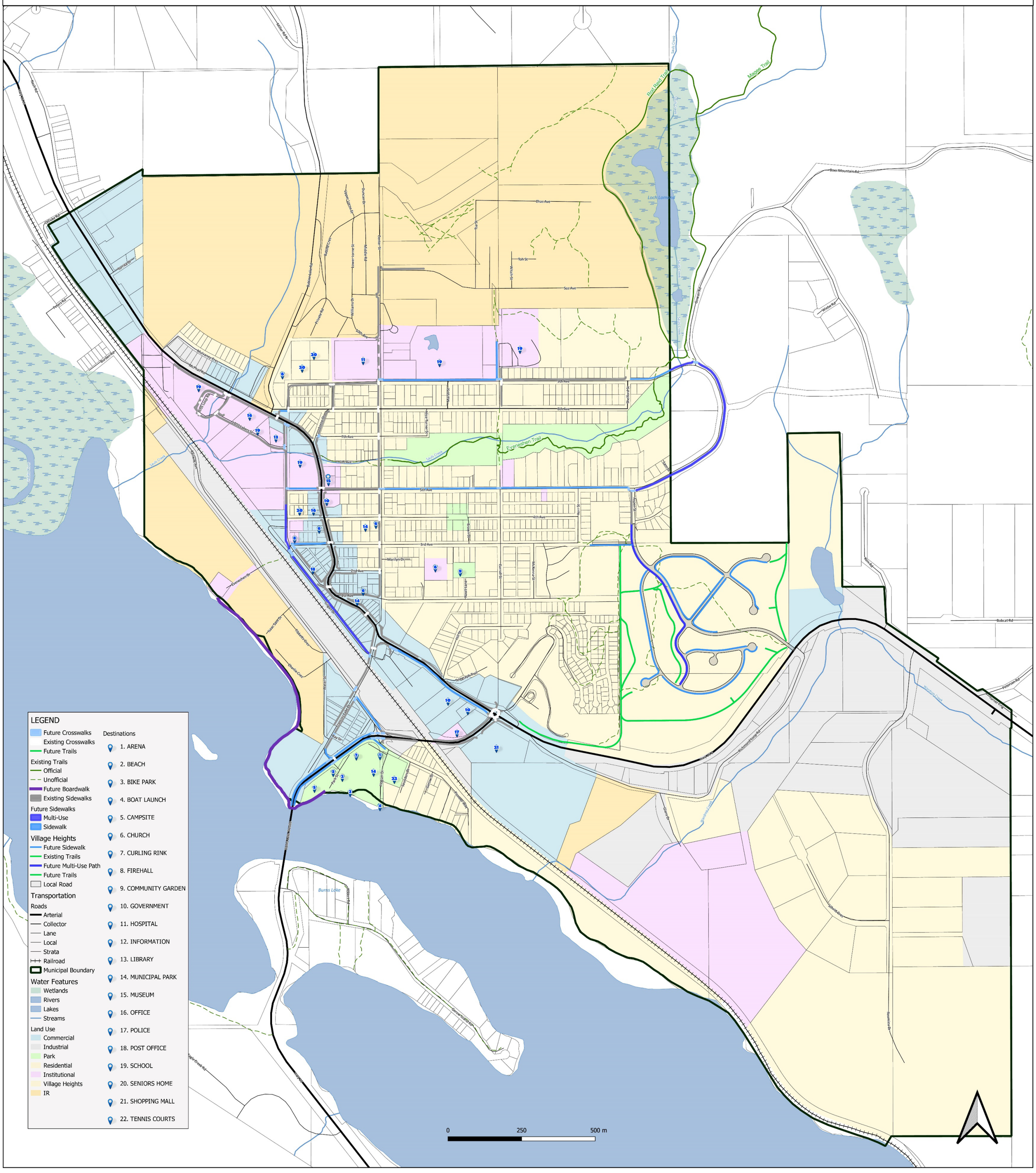
As summarized in the table above, the total cost to implement all recommended active transportation facilities is approximately $15,305,400. This total does not include intersection treatments, amenities, or maintenance costs. Estimates for each active transportation facility should be determined through a detailed design process that considers current bylaws and design guidelines.

CLOSING

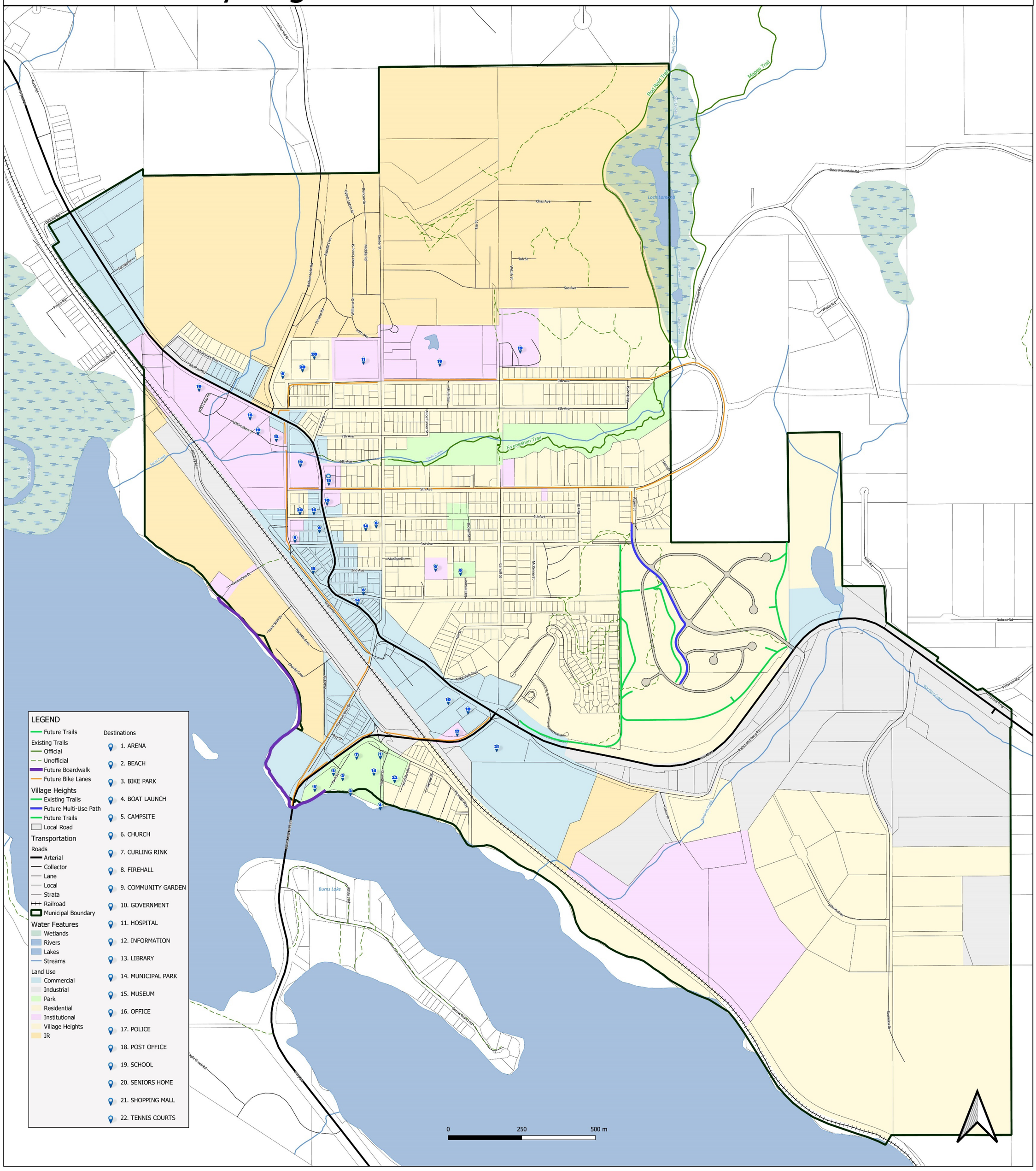
The new Village of Burns Lake Active Transportation Plan aims to improve access and safety for pedestrians, cyclists, and other non-motorized modes of transportation. The plan includes the creation of new bike lanes, pedestrian crossings, and multi-use trails. Additionally, it proposes the implementation of traffic calming measures to reduce vehicle speeds and increase safety. By establishing a vision and goals supported by an implementation guide, this plan will promote a healthier and more sustainable community.

Developed through community collaboration, the plan creates a strategy to improve and promote local active transportation and guide the future of active transportation within the community for the next 15-20 years. The combination of infrastructure upgrades and support for community programs will encourage residents and visitors to choose active transportation as a safe and practical option. The new ATP aims to improve connectivity, safety and community enjoyment of active transportation within Burns Lake.

Village of Burns Lake Active Transportation Plan 2023
Future Pedestrian Network



Village of Burns Lake Active Transportation Plan 2023
Future Cycling Network



Village of Burns Lake

Active Transportation Plan 2023: Community Consultation Summary

Plan North Consulting