



Connect Nakusp

Nakusp Active Transportation Network Plan



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We acknowledge that Nakusp and the surrounding area has a rich indigenous history and we respect the indigenous peoples within whose traditional lands we live today.

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The Connect Nakusp Active Transportation (AT) Network Plan was made fiscally possible by:

- Ministry of Transportation and Transit - BC Active Transportation network planning grant,
- Village of Nakusp - Nakusp and Area Community Forest (NACFOR) Legacy Fund grant
- Regional District of Central Kootenay Area K grant
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Executive Summary

Active Transportation (AT) in simple terms is using human powered means to connect destinations. A common definition says that AT includes walking, cycling and the use of human-powered or hybrid mobility aids such as wheelchairs, scooters, e-bikes, rollerblades, snowshoes and cross-country skis, and more. Trail networks that are designed and built to established standards will accommodate more types of AT users, and provide safer and more reliable trail experiences. Over time this will lead to more trail use. Increasing Active Transportation in our communities is one key action that can be taken in reducing greenhouse gases and addressing climate change.

The Village of Nakusp is located in the West Kootenay area of the southern interior of British Columbia. Nakusp and area has the basic building blocks of an AT trail network that, if improved, could become much more imbedded in peoples' lifestyles and lead to more participation, community and individual health and happiness, and community pride. The Nakusp AT Network Plan (aka "Connect Nakusp") builds on previous conceptual planning frameworks to transition towards implementation projects and make the network a reality. Connect Nakusp is a modular plan, with stand alone route plans for individual trail segments which can be prioritized for funding and implementation. Using a modular plan approach means that implementation grant funding, as available, can be applied for in a timely and efficient manner according to community priorities.

The Connect Nakusp plan proposes to improve 46.0 km of existing routes (existing roads and trails) and construct 5.1 km of new trails over time to create a complete AT network. This comprehensive plan focuses on improving and creating much of the network for use by All Ages and Abilities (AAA). Where this is not reasonably possible because of topography or other factors, improvements are recommended to trend as much as possible towards this ideal.

This is a critical time in the future of Nakusp and area, as more people seek small town life and healthier lifestyles. Investments in solid and well integrated infrastructure now, based on a comprehensive plan, will provide a solid community trail backbone that will endure and improve the life experience of current and future residents and increasing numbers of visitors to the area.

Connect Nakusp AT network planning process

1. Fundraising - to undertake the project, the Village of Nakusp applied for and was rewarded a BC – Active Transportation Network planning grant from the Ministry of Transportation and Transit. These funds were matched by the Village via NACFOR legacy fund and by a contribution from local government Regional District of Central Kootenay (RDCK)
2. Request for Proposal – The Village issued a Request for Proposal (RFP) on the BC Bid provincial tendering platform.
3. Contractor selection and contract – True North Forestry Consulting Ltd. was awarded the RFP, and contracted to complete the project.
4. Pre-work and progress meetings with Village staff
5. Data collection and organization:
 - a. Background data collection, research, and presentation
 - b. Develop Planning Context – research and organizing of the plan according to existing planning frameworks.
 - c. Data Research – primarily internet research and raw data from various sources.
 - d. Previous plan research – review and collation/summary of previous planning efforts.
 - e. Base Mapping – Base mapping data came from government data bases, and from planning contractor.
 - f. Lidar –LIDAR and imagery was collected via drone flights to provide accurate terrain information and current imagery for select locations. Some Lidar from adjoining private land was provided in-kind.
 - g. Geodatabase – Arc Info GIS software was constructed and used for spatial data warehousing and map production.
6. Fieldwork - All potential routes were examined and documented with photos as part of gap analysis and concept network design.
7. Public Consultation – public consultation and information sharing took place throughout the process of drafting the plan.
8. Issue and Gap analysis – Issues and Gaps were collected from fieldwork observations, public consultation, and from the local knowledge of project team members and interested community members.
9. Design Criteria – ideas for standards and design were collected from the BC – AT Design Guide (MOTT) and from Village bylaws from observation of other communities AT projects.
10. Network Concept Design – was drafted in Google Earth for initial discussion and review, and then put into the Arc Info geodatabase for map and plan production.
11. Technical data collection and presentation
 - a. Overview maps
 - b. Route plan multi plot drawings
 - c. Data tables – descriptive criteria about existing and proposed routes segments and features
 - d. Typical drawings – a collection of typical standard drawings from a variety of sources to inform future implementation

- e. Concept budget – a budget was developing by segment and route as a tool to inform implementation grant funding efforts and help in project prioritization.
- 12. Implementation plan – planning tool was developed based on implementation criteria.
- 13. Maintenance plan – typical maintenance items and schedule for future planning purposes.
- 14. Action plan – a proposed plan of action to drive the implementation effort forward.
- 15. Report Writing

Background

Strategic Context of the Connect Nakusp plan:

What it is Connect Nakusp?

Connect Nakusp is a comprehensive network trail plan informed by previous conceptual planning efforts towards an implementation ready state. The plan is modular to allow for funding and implementation by segment and route based on community priorities.

The geographic scope of the plan is the Village of Nakusp and Regional District of Central Kootenay (RDCK) surrounding lands. The scope area is shown in the Connect Nakusp overview map in *Appendix A*.

How does Connect Nakusp align with B.C.'s CleanBC goals?

The Connect Nakusp plan represents part of the means necessary to realize the Provinces' Clean BC goals at a community level.

- **Clean BC** is the provincial government plan to lower climate-changing emissions by 40% by 2030 <https://cleanbc.gov.bc.ca/climate-actions/government-actions/>
- One government climate action is the **BC Active Transportation Strategy**, which is outlined in the report **Move Commute Connect** see https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/activetransportationstrategy_report_web.pdf
- One of the province's strategic goals is "to double the percentage of trips taken with active transportation by 2030" This will be carried forward by some key initiatives as shown in the following figure, paraphrased from the **Move Commute Connect** plan:

Key pathways and initiatives

1 Inspiring British Columbians to choose active transportation

ACTIVE TRANSPORTATION SHOULD BE A SAFE, EASY AND CONVENIENT WAY TO GET BRITISH COLUMBIANS WHERE THEY NEED TO GO

2 Connecting you to where you need to go

BRITISH COLUMBIA SHOULD HAVE AN INTEGRATED, SAFE AND ACCESSIBLE ACTIVE TRANSPORTATION SYSTEM THAT WORKS FOR EVERYONE

3 Working together and planning for active transportation

POLICY AND PLANNING SHOULD ENABLE THE DEVELOPMENT OF INTEGRATED, COMPREHENSIVE ACTIVE TRANSPORTATION NETWORKS

Figure 1 - Move Commute Connect - Key pathways to meet provincial goal

Some of the stated initiatives to meet the goal include:

- Eliminating serious injuries and fatalities – including using Vision Zero principles
- Incentives to encourage AT use and uptake
- Expanding AT training and education
- Providing cost-share funding to build safe AT Networks and connections and integrating AT infrastructure on highways
- Establish partnerships among all levels of government, including the federal government
- Strengthen planning and development for AT – including supporting network planning projects like this one
- Establishing common planning and design guidelines for AT – for example the BC-AT Design Guide, which is heavily referenced by Connect Nakusp, and concepts of Universal Design

Nakusp Active Transportation Vision and Goals

Vision

A community that has a greater sense of health, self sufficiency, pride, and happiness - based on a safe, efficient and comprehensive Active Transportation network that connects our community members and visitors with their homes, lodgings, key community destinations, and the natural environment.

Goals

1. Improve, upgrade and construct a comprehensive active transportation trail network for Nakusp that uses Universal Design principles to deliver All Ages and Abilities (AAA) experience wherever possible.

2. Where AAA standards are not practical or reasonably possible due to topography or other factors, improve existing trails to provide infrastructure for as wide a user profile as possible.
3. Design and improve existing and new routes with the principle of safety paramount, to increase feelings of safety amongst users to help promote wider use.
4. Look at investments in AT infrastructure as wise, long term community investments that will yield long term social, economic and environmental dividends to the community.
5. Recognize that a well used AT network will reduce reliance on vehicles, reduce greenhouse gases, improve physical and mental health, and reinforce principles of community self sufficiency and resiliency.
6. Promote and leverage the AT network to attract and entertain visitors while providing residents with efficient access to Village destinations and to the natural spaces that are within and around the community.

Community Profile

Population and demographics

The Village of Nakusp has a population of 1589 (2021 Census, Statistics Canada). The surrounding Regional District of Central Kootenay electoral area K has approximately 1681 people (2016 Census). Nakusp is the largest and central community in Area K.

Census data indicates an aging population in Nakusp, however there is also an influx / increase of young people and families.

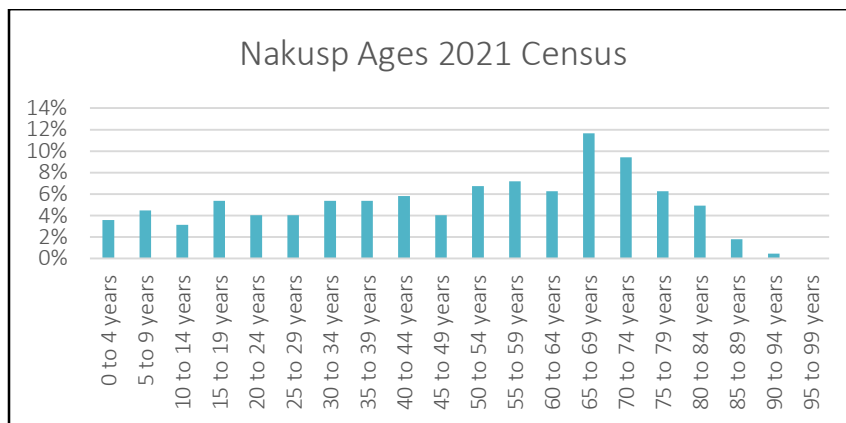


Figure 2 Nakusp Ages, 2021 Census

Seasonal visitors increase the population significantly – some main attractions of the area are beautiful natural scenery, hiking, biking, camping and other outdoor activities and quiet relaxation. When surveyed, most visitors to the area are very satisfied with their experience (Sorensen-Lawrence, 2022).

Quality of Life and Active Transportation trends

Residents of Nakusp enjoy an outstanding quality of life built upon a sustainable and increasingly diversified local economy. Many visitors like the community so much that they change their lives to become residents.

- Nakusp is experiencing an in-migration of young people and families, as well as retirees. They are attracted to:
- the mild climate and hot springs
 - the lakeside mountain beauty and recreational options (mountain biking, skiing, fishing, boating, hiking, snowmobiling, public beach, tennis, squash and curling, etc.)
 - the broad range of employment opportunities (forestry, agriculture, tourism, recreation/heliskiing, health & wellness, government services, education, arts)
 - the amenities of a regional centre serving approximately 4500 residents (hospital & health clinics, emergency services, elementary and senior schools, community recreation centre , library, daycare, community social services, downtown businesses and supermarket, banks, transit, ferries, high speed internet, municipal water & sewer
 - the convenience and safety of a vibrant small town boasting a thriving arts and sports scene
 - lower costs of living and raising children

Figure 3 - Benefits of Nakusp, from Investment Ready Nakusp website

School enrollments have increased since Covid in response to a younger demographic moving into Nakusp and surrounding communities - many seeking a different lifestyle, closer to nature.



Figure 4 - Nakusp AT trends - From Nakusp AT Plan, 2024

Walking, followed by cycling are the most common Active Transportation modes in Nakusp.

People living in the area are generally satisfied with their life. Many aspects of active lifestyles are reflected in this metric:

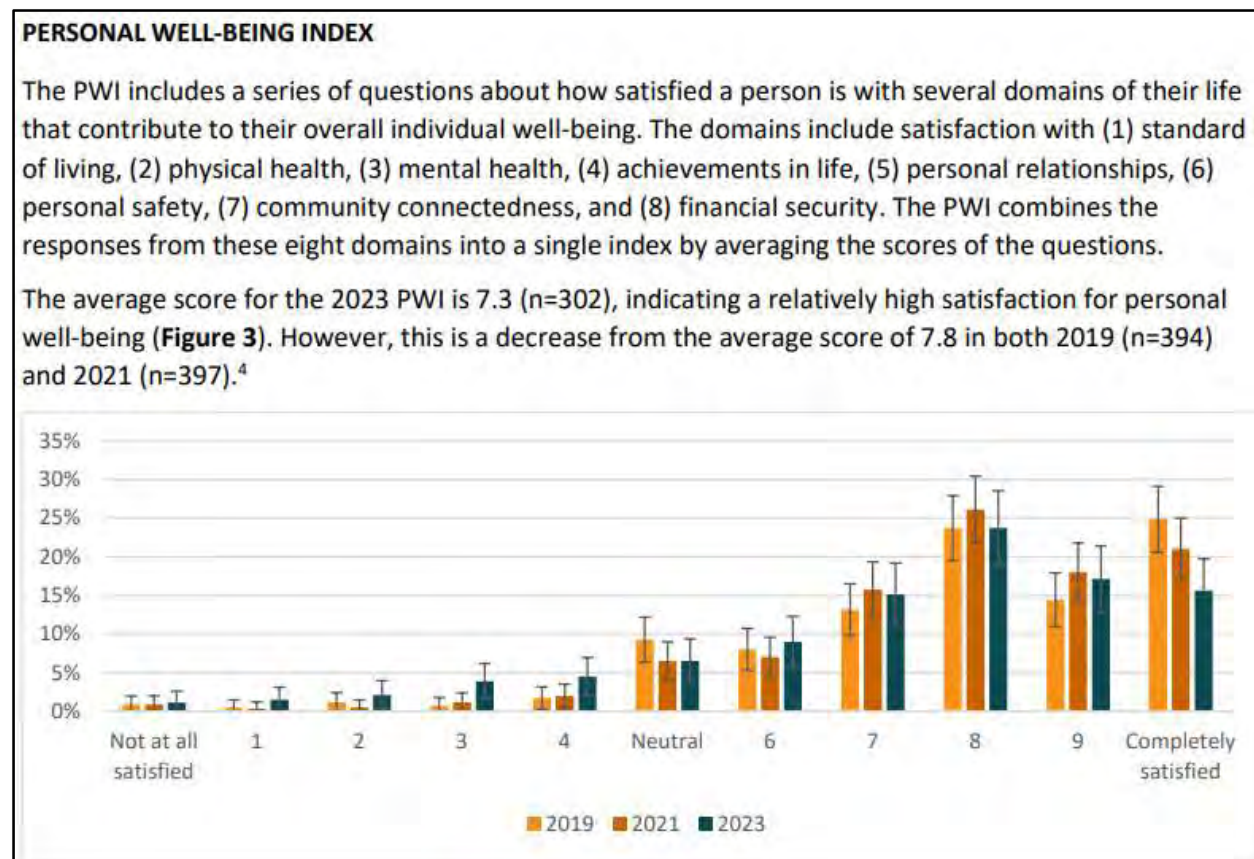


Figure 5 - PWI from State of the Basin Subjective Well Being Report, 2023

This graphic also shows that there is room to improve wellness and reverse recent downward trends. People who like the natural environment and outdoor recreation are naturally drawn to Nakusp, and quite often active lifestyles, with trails at the core, are part of their life experience. As lives seem to get more complex and stressful, being outside on trails in or near nature, as part of daily life, will remain a good antidote.

Commuting

The typical method of commuting in Nakusp is as a single passenger in a vehicle (65%). Walking and cycling are not uncommon however at 25% combined. There is good potential to increase active transportation by improving AT infrastructure.

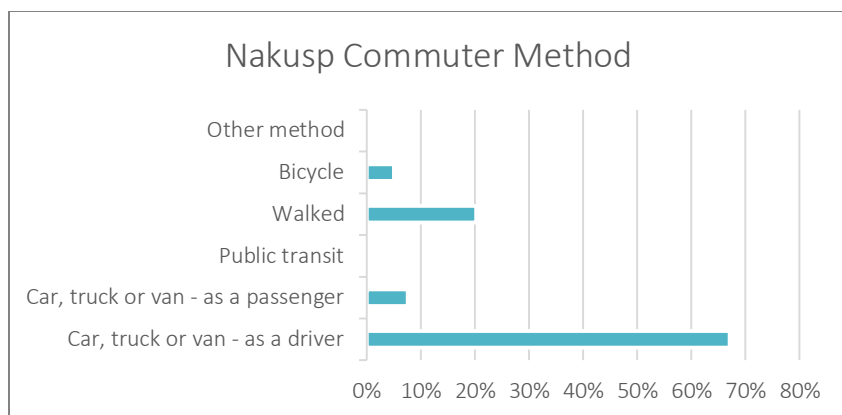


Figure 6- Nakusp Commuter Type, compiled from Stats Can, 2021

People who live in Nakusp typically have short commutes, less than 15 minutes. This, considered along with the high proportion of vehicle commuting, points to the potential to increase active transportation.

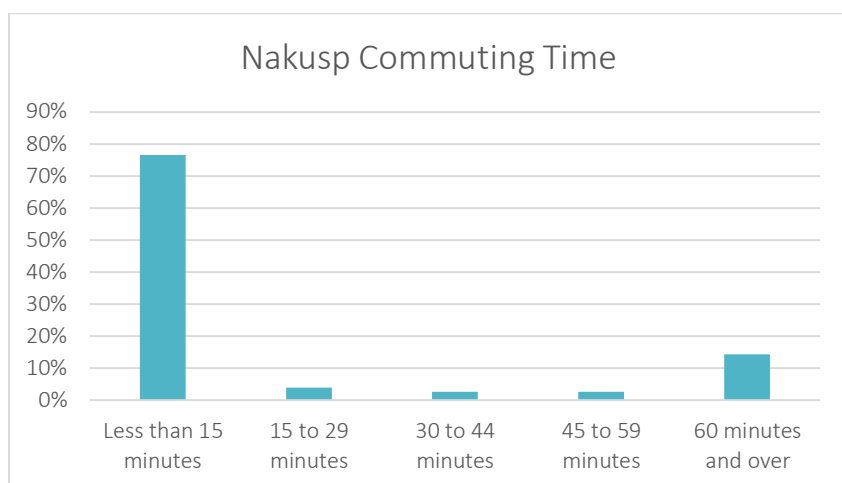


Figure 7 – Nakusp Commuting Time, compiled from Stats Can, 2021

Geography and Topography

Nakusp is situated at a confluence of main drainages on the Arrow Lakes - Kuskanax River and Nakusp Creek. The Arrow Lakes is a widening of the vast Columbia River system. The Kuskanax River bisects the village, where 10 km upstream lies the source of the Nakusp Hot Springs. The Nakusp Creek valley heads east to a height of land and a low mountain pass at Summit Lake. To the east of this pass water flows to Slocan Lake, where the municipalities of New Denver, Silverton and Slocan City are located.

Nakusp is well regarded as a picturesque place with many lake, river and mountain views available. It has a comforting small town feel where there is something new and different to see around each corner as the seasons change. The narrow interface between Village and nature runs through and surrounds Nakusp. This relatively quick and easy connectivity with “the wilds beyond” is very attractive to residents and visitors alike.

Much of the Village of Nakusp is situated on a glacial outwash delta into Arrow Lakes, a gently sloping fan of alluvial material. The long beach area ringing Nakusp to the south and west is changeable, often daily, as the Arrow Lakes reservoir rises and falls some 65 vertical feet seasonally. This creates a changing landscape along the waters edge, and for those that beach walk, a different experience every day.

Higher in elevation to the east, above the village core area, there are wide sloping bench lands, separated from the village core by steeper scarp areas. These steeper areas present a challenge to traverse with trail systems, and the historical more direct connection trail routes through the topography are not universally accessible by all potential users. There is, however, a highway corridor and parallel rail trail corridor that angles up through the scarp at reasonable grades, that with improvements, could provide more universal access.

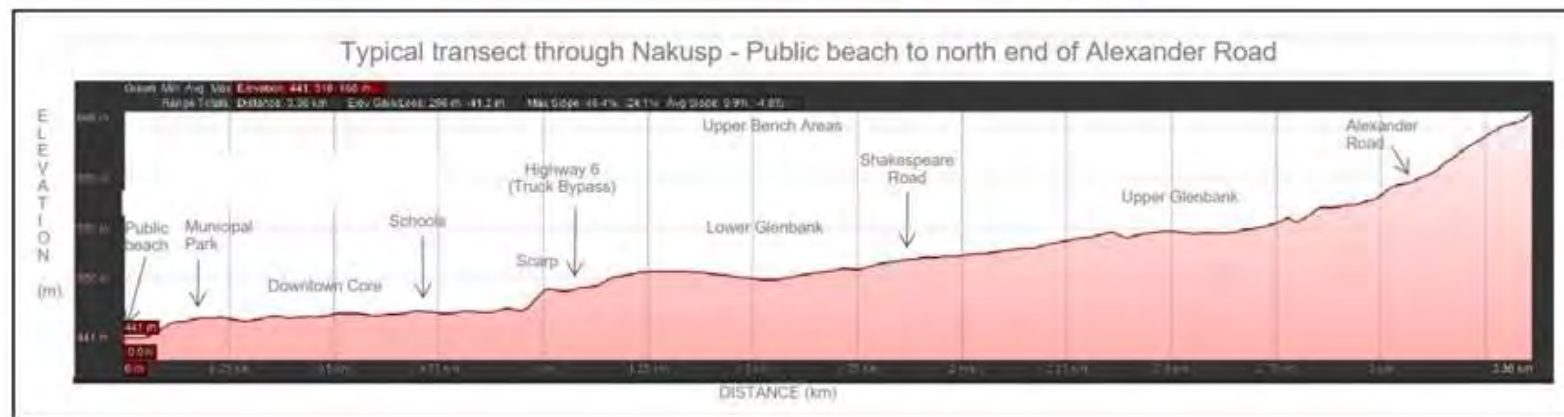


Figure 8 - Typical Transect through Nakusp

The Connect Nakusp plan aims to mitigate some of these topography challenges where reasonably possible. Realignment projects are proposed for some of the steeper existing trails to improve grades. Where grades are universally steep and there are no reasonable alternatives to mitigate the trail grades, improvements are suggested to the surface condition of the existing trail to improve trafficability and safety. In these cases, warning signage should also be used at both ends of the steep section highlighting that the trails are not suitable for all users.

Connect Nakusp aims to connect as many people as possible with their home, to their neighbourhood, the village core and the surrounding natural areas – as well as AT connection points to nearby communities. If the resulting routes can be used in a safe and efficient way then it should encourage more trail use during peoples' daily life.

Climate and weather

Nakusp has a [humid continental climate](#) (Dfb) or an inland [oceanic climate](#) (Cfb) depending on the isotherm used. The town experiences pleasantly warm summer days coupled with cool nights and moderately cold, snowy winters with annual snowfall averaging 66 inches (168 cm).

Climate data for Nakusp													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	13.3 (55.9)	13 (55)	17.5 (63.5)	24.4 (75.9)	33 (91)	41.0 (105.8)	39.4 (102.9)	37.6 (99.7)	33.3 (91.9)	23 (73)	18.3 (64.9)	14.5 (58.1)	41.0 (105.8)
Mean daily maximum °C (°F)	0.8 (33.4)	2.3 (36.1)	8 (46)	13.2 (55.8)	18.8 (65.8)	22.5 (72.5)	25.2 (77.4)	25.1 (77.2)	18.4 (65.1)	11.2 (52.2)	4.6 (40.3)	−0.1 (31.8)	12.5 (54.5)
Daily mean °C (°F)	−1.7 (28.9)	−1 (30)	3.2 (37.8)	7.5 (45.5)	12.4 (54.3)	16.2 (61.2)	18.3 (64.9)	18.1 (64.6)	12.4 (54.3)	7 (45)	1.9 (35.4)	−2.3 (27.9)	7.7 (45.9)
Mean daily minimum °C (°F)	−4.2 (24.4)	−4.2 (24.4)	−1.7 (28.9)	1.8 (35.2)	6 (43)	9.8 (49.6)	11.4 (52.5)	11.1 (52.0)	6.3 (43.3)	2.7 (36.9)	−0.8 (30.6)	−4.5 (23.9)	2.8 (37.0)
Record low °C (°F)	−24.4 (−11.9)	−24.4 (−11.9)	−18.9 (−2.0)	−9.4 (15.1)	−3.9 (25.0)	−1.1 (30.0)	1.7 (35.1)	0.6 (33.1)	−6.5 (20.3)	−11 (12)	−20 (−4)	−27.8 (−18.0)	−27.8 (−18.0)
Average precipitation mm (inches)	105.5 (4.15)	74.7 (2.94)	47.9 (1.89)	59.8 (2.35)	60.7 (2.39)	88.2 (3.47)	65 (2.6)	60.4 (2.38)	57.7 (2.27)	59.4 (2.34)	99.5 (3.92)	86.9 (3.42)	865.7 (34.08)
Average rainfall mm (inches)	40 (1.6)	49.7 (1.96)	44.1 (1.74)	59.5 (2.34)	60.7 (2.39)	88.2 (3.47)	65 (2.6)	60.4 (2.38)	57.7 (2.27)	58.8 (2.31)	78.3 (3.08)	35.5 (1.40)	698.1 (27.48)
Average snowfall cm (inches)	65.4 (25.7)	24.9 (9.8)	3.8 (1.5)	0.3 (0.1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0.6 (0.2)	21.2 (8.3)	51.4 (20.2)	167.7 (66.0)
Source: [44] [45] [46]													

Figure 9 Climate Data for Nakusp - Source Wikipedia, Environment Canada

Nakusp has a temperate climate with moderate temperatures and four distinct and pleasant seasons. Most residents and visitors like that the Nakusp seasons are definite, but not extreme. The winter temperature is quite often above zero in the day and re-freezing at night. This freeze / thaw cycle can lead to icy conditions on surfaces. Having temperatures near freezing (many winter days are plus or minus 1 or 2 degrees C) and during snow events creates easily compressible snow that can quickly turns to ice once foot or vehicle traffic has run over it. So, although temperatures are not extreme, conditions for walking, biking and other activities might be. The rapidly changing conditions from hour to hour and day to day will remain a challenge.

Main destination points

Due to the relatively small area of Nakusp (the Village contains 8.04 km²), and limitations posed by topography, typical destinations are relatively close together. Most of the popular destinations are in the village core area, close to the main street (Broadway St.) and waterfront. The small footprint and possibilities to improve and design connections to nearby areas should promote more active transportation in the future.

An easily accessed georeferenced trail map (a product of this plan) will make it easier for residents and visitors alike to make geographical connections and track progress. Through walking, biking and other forms of AT, it will be easier to discover or rediscover the sights of the village and area. The concept of loop trails, that can start and end at the same point will encourage residents and visitors to explore the village and surrounds.

Village Destinations and Amenities

Nakusp residents and rural neighbours note many local destinations for regular recreational and commuting purposes:

- Village Core: Broadway Street is Nakusp's main street. The Village core contains many of the shops and services, including, grocery store, pharmacy, post office, restaurants, museum, archives, Visitor Centre and library.
- Nakusp Schools: Nakusp Secondary School and Nakusp Elementary School are both located on 4th Street NW.
- Arrow Lakes Hospital: 1st Avenue NE (at intersection with 1st Street NE)
- Village Office: 1st Street NW
- Nakusp and District Community Complex / Campground / Seniors Centre 8th Ave NW
- Nakusp Municipal Beach, Waterfront Trail and Nakusp Marina
- Nakusp Hot Springs

The Village includes many existing amenities that support active transportation:

- Waterfront Pathway with some accessible site furnishings and possible accessible beach-mat to be installed
- Wrap around Nakusp Route
- Nakusp Municipal Rail Trail
- Downtown Revitalization sidewalk bulbs / curb cuts provide refuge for pedestrians
- Bike racks
- Benches
- Public Washrooms
- Community Support services
- Indoor walking at the Arena
- Trails at the Nakusp and Area Community Complex and campground
- Airport lands
- Village Communication tools include its website and Facebook page:
<https://www.facebook.com/VillageNakusp/>

Figure 10 – Some key destinations in Nakusp, Nakusp Active Transportation Plan, NABS 2019

Accidents and Injuries

BC Provincial ICBC crash data indicates that within the Southern Interior region, vehicle incidents result in an average of 206 injured pedestrians and 8 pedestrian fatalities, along with 143 injured cyclists and 2 cyclist fatalities annually.

Crashes and Injured Victims							
Crashes and injured pedestrians in crashes where at least one pedestrian was involved in B.C. and by region							
Region		2019	2020	2021	2022	2023	5-year average
Lower Mainland	Incidents	2,898	1,952	2,326	2,106	2,494	2,315
	Injured Victims	2,024	1,447	1,530	1,598	1,878	1,695
Vancouver Island	Incidents	486	368	373	404	356	397
	Injured Victims	352	257	267	299	254	286
Southern Interior	Incidents	338	235	266	273	273	277
	Injured Victims	244	174	203	201	208	206
North Central	Incidents	121	87	73	99	80	92
	Injured Victims	110	71	64	81	60	77
Unknown	Incidents	8	0	2	5	9	5
	Injured Victims	4	0	0	1	3	2
British Columbia (total)	Incidents	3,851	2,642	2,840	2,887	3,212	3,086
	Injured Victims	2,734	1,949	2,064	2,180	2,403	2,266

Fatal victims							
Fatal pedestrians in crashes in B.C. and by region							
Region		2019	2020	2021	2022	2023	5-year average
Lower Mainland		30	25	38	35	41	34
Vancouver Island		10	4	10	6	6	8
Southern Interior		5	5	9	6	12	8
North Central		7	3	5	4	9	6
British Columbia (total)		52	37	62	51	68	54

Crashes and injured cyclists in crashes where at least one cyclist was involved in B.C. and by region							
Region		2019	2020	2021	2022	2023	5-year average
Lower Mainland	Incidents	2,069	1,635	1,773	1,752	1,938	1,633
	Injured Victims	1,205	964	1,066	1,031	1,240	1,101
Vancouver Island	Incidents	598	402	443	423	521	477
	Injured Victims	363	248	287	266	342	301
Southern Interior	Incidents	262	217	235	228	301	249
	Injured Victims	148	132	121	129	184	143
North Central	Incidents	43	26	34	44	30	35
	Injured Victims	18	17	12	23	16	17
Unknown	Incidents	5	3	6	4	2	4
	Injured Victims	2	2	1	0	1	1
British Columbia (total)	Incidents	2,977	2,283	2,491	2,451	2,792	2,509
	Injured Victims	1,736	1,363	1,487	1,448	1,783	1,564

Fatal victims							
Fatal cyclists in crashes in B.C. and by region							
Region		2019	2020	2021	2022	2023	5-year average
Lower Mainland		3	4	1	3	5	4
Vancouver Island		3	1	2	1	1	2
Southern Interior		1	0	1	4	1	2
North Central		0	1	0	0	1	1
British Columbia (total)		7	6	4	8	8	7

Figure 11 - ICBC Crash data

While there is no known specific Nakusp and area data for cycling and pedestrian injuries, there is Connect Nakusp survey data indicating conditions where people feel unsafe. These conditions include: when in close proximity to traffic, and when crossing main streets. (See Connect Nakusp Consultation section). Some specific locations of concern mentioned are: 1st St and 6th Avenue, 1st St and Nelson Ave, Hwy 6 south and Nelson Ave (main turn into Nakusp from south), Hwy 6 (east of Nakusp) and Alexander Road, approach to 30 km zone at the east end of Broadway St, 6th Avenue especially north of 4th St NW (schools) and Government Hill (Nelson Ave and 2nd St NE).

Current and proposed AT infrastructure

Connect Nakusp proposes a network of 46 km of infrastructure, most of which exists but is proposed for improvement, and some of which would be constructed. Of this total, 15 km are actual trails and the remaining 31 km are routes that overlay or accompany existing roads. Connect Nakusp proposes an additional 5.1 km of trail construction over time in order to build out a complete trail network. By comparison, there are 41 km of existing road within the village boundaries.

Potential Greenhouse Gas (GHG) impacts

Through CleanBC, the provincial government established targets to reduce greenhouse gas (GHG) emissions to 40% below 2007 levels by 2030, 60% by 2040, and 80% by 2050. As part of this strategy, the Province released Move. Commute. Connect.: B.C.'s Active Transportation Strategy in 2019. The strategy sets targets to double the percentage of trips taken with active transportation by 2030 as a way to help the Province meet its GHG emissions targets.

<i>Provincial goal: Doubling the percentage of trips taken with active transportation by 2030</i>
--

On-road transportation accounts for the largest share of greenhouse gas emissions in BC (40% in 2020), and according to the 2010 Community Energy and Emissions Inventory, transportation is the largest source of GHG emissions in Nakusp, representing 79% of total emissions for the community (see Figure 1). Light duty gasoline vehicles and gas-powered passenger cars contributed significantly more than other transportation modes (see Figure 2).

Active transportation can play a critical role in reducing emissions in Nakusp by reducing the number of trips taken by single occupant vehicle commuters, student commutes and trips to the downtown core.

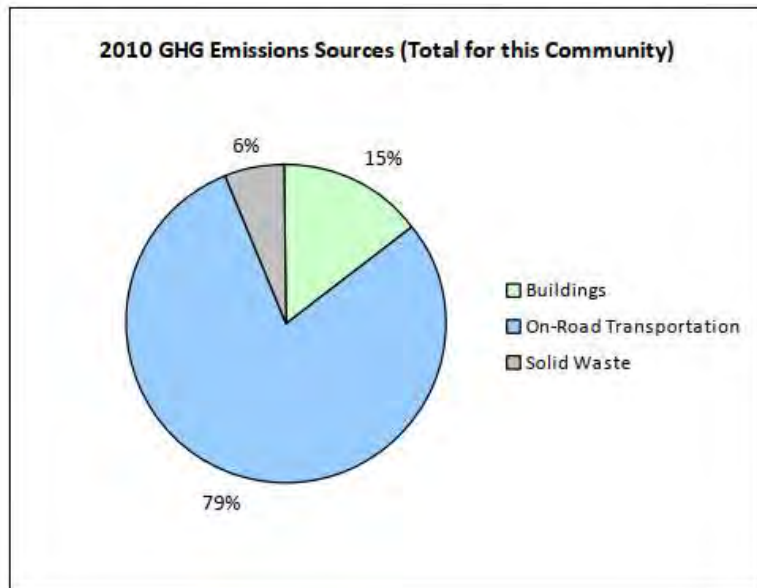


Figure 12 - GHG Emissions Sources for Nakusp Village 2010 Community Energy and Emissions Inventory, February 20, 2014

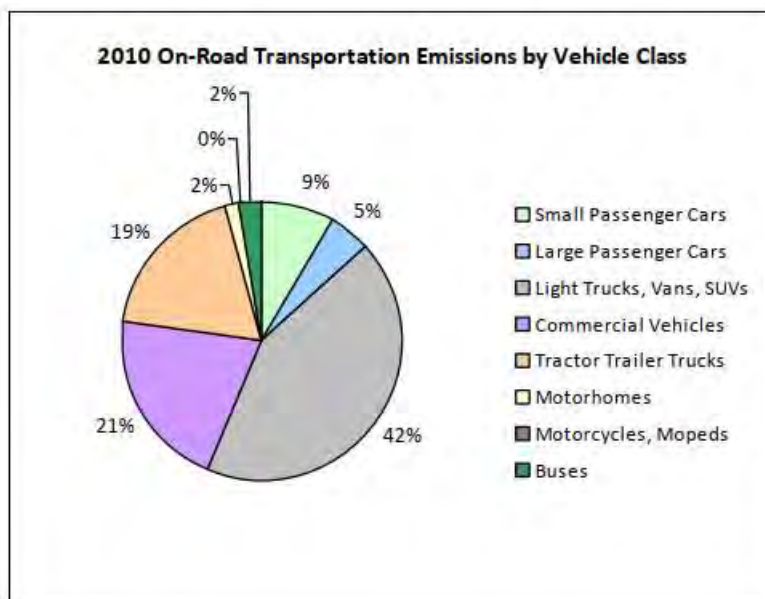


Figure 13 – On-road transportation emissions by vehicle class, Nakusp Village 2010 Community Energy and Emissions Inventory, February 20, 2014

Data on the number of active transportation trips taken in Nakusp is not available, however, the Community Energy and Emissions Inventory can be used to provide baseline transportation data of vehicle kilometers travelled, litres of fuel consumed and GHG emissions for 2021 (see Table 1). Periodic review of the CEEI data will allow the Village to monitor its progress towards meeting CleanBC targets.

Table 1 - Community Energy and Emissions Inventory Data for Nakusp, 2021


Vehicle Fuel Category	VKT	LE	GHG (CO ₂ e)
Heavy-Duty Vehicles (all fuel types)	7,069,099	1,888,009	4.59
Light-duty vehicles (all fuel types)	15,755,341	2,194,116	4.90
Motorcycles	409,910	19,687	0.04
Zero Emissions vehicles	76,626	3,494	0.00
Totals	23,310,975	4,105,307	9.53
VKT = total kilometers traveled by a given type of vehicle in Nakusp			
LE = litres of fuel			
GHG (CO₂e) = kilotonnes of CO ₂ e reported in units of carbon dioxide equivalent using conversion factors			

The 2016 Regional District Central Kootenay Strategic Community Energy and Emissions Plan (SCEEP) recommends several actions that can be considered for communities in the Regional District, including active transportation policy and planning and improving active transportation infrastructure. The SCEEP describes target distances to community trip destinations and provides cycling benchmarks where local data are not available. This information can be used with the CEEI data to calculate % energy savings for commuter or light duty vehicles.

<p>6.2 Improve active transportation infrastructure</p>	<p>Key Question: Are there major trip destinations (commercial services, schools, hospital, employers, etc.) less than 3km from a significant number of residences for walking, and within 5-8km for cycling?</p> <p>Description: Local governments can easily promote walking. Walking is suitable for trips in small and mid-size communities where distances in town are short. Most people can walk a kilometre in 10 minutes and can walk for 30 minutes, or approximately 3 km, during good-weather months. It is reasonable to target distances of 3 km or less for the promotion of active transportation (if combined with strategies to change people's perception of the time and effort it takes to walk).</p> <p>Cycling is perhaps the fastest way to make a trip of less than 5 km. It is reasonable to target distances of 5 to 8 km for cycling in an active transportation strategy.</p> <p>Cyclists travelling 8 km or more value shower facilities at their final destination, and all cyclists value safe, secure storage for their bikes. These facilities can be installed at various sites of employment in a community, such as public institutions, businesses and regional district or municipal offices. A major barrier to increasing the number of cycling trips to workplaces is lack of secure bike lock-ups and change-room facilities. Requiring these basic facilities can be made part of the development process through a community's planning bylaw.</p> <p>Online tools and guidance to estimate the demand for bike routes is available. In BC, it is estimated that 2% of all trips are by bike as a default.</p> <p>Other important parameters include percentage of cyclists using the bike route that would otherwise have driven, and average bike trip length. Where locally-specific data are not available, the following benchmarks may be used:</p> <ul style="list-style-type: none"> • % of non-recreational cyclists who would have driven, if they were not cycling: 50%. • Average BC cycling commuter distance: 5km each way, 10km return trip.
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Figure 14 - 2016 RDCK Strategic Community Energy and Emissions Plan, Section 6 Vehicle Transportation Actions

BC Climate Leaders is an initiative of the BC Municipal Climate Leadership Council (BCMCLC) and the Community Energy Association (CEA). Tools developed by the BCMCLC and CEA support communities to meet their climate and energy solutions. One of these tools, the Climate Leaders Playbook, looks at ways to *'shift beyond the car'* to help communities identify ways to work towards the provincial target of doubling the percentage of active transportation trips. Using the 2021 CEEI baseline transportation data and data gathered through pedestrian and cycling counters, the Village of Nakusp can measure its progress towards increasing active transportation trips and reducing GHG emissions.



Climate Leaders Home Playbook Institute Coaching

The Facts The Vision **The Big Moves** The Strategies

SHIFT BEYOND THE CAR

2050 VISION: WHAT DOES SUCCESS LOOK LIKE?

A complete and connected transportation system makes active transportation and zero emission transit the easy choice for residents and visitors.


2030 TARGET: WHAT'S THE CRITICAL MILESTONE?

Half of all trips taken in our communities are with active/assisted transportation or transit.

Every year between now and 2030, 600kms per resident is shifted to active transportation or transit.

THE ACTIONS: WHAT NEEDS TO HAPPEN?

- Build safe routes for walking, cycling, and other forms of zero emission mobility
- Support a zero-emission transit network
- Identify and reduce policy barriers to e-mobility on demand, such as electric scooter sharing



Community Consultation summary and recommendations

How Connect Nakusp reflects and supports community goals.

The Connect Nakusp trail network plan builds on previous planning effort, as well as plan guidance and standards from government and trail organizations. The local planning context for trails is reflected in Appendix B - Distillation of Previous Nakusp and Area Community Plans

The Nakusp Official Community Plans (OCP), Village Council and RDCK direction, bylaws and public consultation and feedback provide direction, and are the main local drivers, for trails within the Village and surrounding RDCK area.

Previous trails planning efforts were researched in order to consider and move forward historic recommendations, previous action plans, and public consultation efforts.

The goal was to capture all relevant past recommendations and consultation comments, to move forward towards implementation while minimizing redundant planning efforts.

For local trails, the recent historical trail planning framework includes the Nakusp & Arrow Lakes Trails Master Plan, completed in 2017 by Brent Harley and Associates, and the Nakusp Active Transportation Plan (NATP) completed in 2024 by Nakusp and Area Bike Society (NABS).

2017 Trails Master Plan

Key Immediate Recommendations from 2017 Trails Master Plan:

- **Future Management and Development:** Establish an Umbrella Organization, which will streamline communication and the flow of information while contributing to a cohesive vision for the Nakusp and Arrow Lakes Trails Network that represents all user groups;
- **Future Management and Development:** Create a website for the Umbrella Organization, which will act as an information hub;
- **Design Guidelines and Classifications:** Adopt the following trail designations for new trail development: Shared Use and Multi-Use (Non-Motorized)*;
- **Design Guidelines and Classifications:** Adopt the Recreation Sites and Trails BC Trail Classification and Standards;
- **Signage Standards:** Install advanced “turn off” signage on driving routes to trailheads and begin work on network-wide signage and wayfinding improvements;
- **Community Outreach, Education, and Advocacy:** Secure insurance that will indemnify trail volunteers from liability and create a means of keeping detailed records on all trail work completed by volunteers;
- **Community Outreach, Education, and Advocacy:** Identify and apply for grant funding that will enable the hiring of paid youth trail crew members by the summer of 2018;
- **Community Outreach, Education, and Advocacy:** Develop a strategy for volunteer recognition;
- **Community Outreach, Education, and Advocacy:** Use accepted standards as a guide for developing a locally relevant “Trail Code of Ethics” that encompasses all user groups.

Figure 15 - Immediate Priorities, Nakusp and Arrow Lakes Trails Master Plan, July 2017

The complete table of recommendations and public consultation results are can be located in the plan document.

The 2017 Trails Master Plan spoke to a wide range of trail types and standards over a broad area. It is a valuable compendium of the various trails in the area. The umbrella organization was not created. Without a central facilitator or organization, recommendations generally were not implemented, however individual trail organizations have implemented some of the recommendations on a trail-by-trail basis.

2024 Nakusp Active Transportation Plan

Some key recommendations from the 2024 NATP:

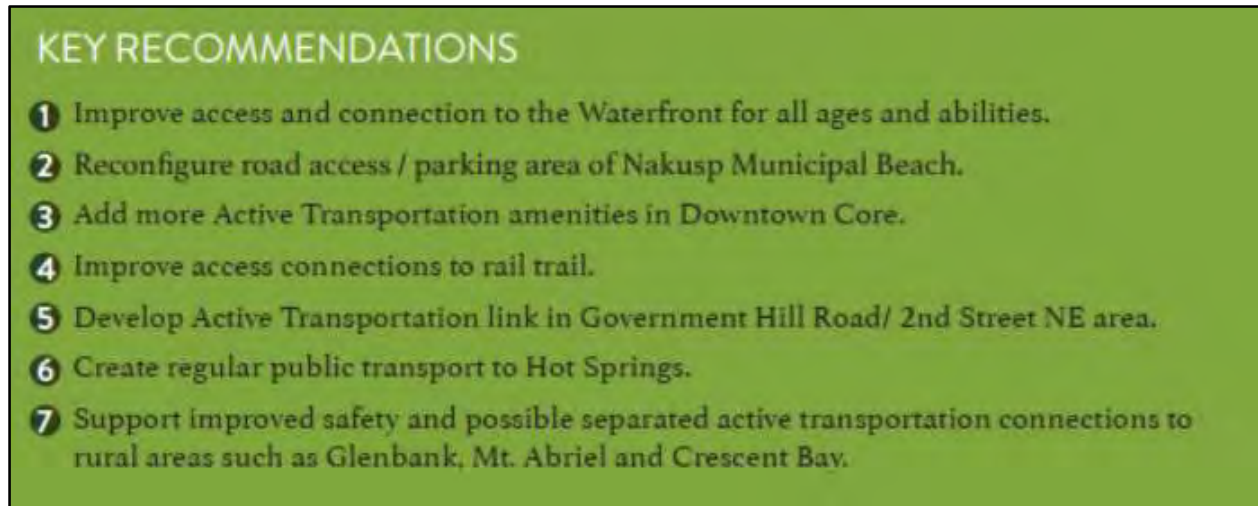


Figure 16 – Key Recommendations - Nakusp Active Transportation Plan, NABS, 2024

Connect Nakusp addresses as many of the previous recommendations as are relevant within the scope and geographical area the current plan.

Both previous plans provided a solid base of recommendations and public consultation for the Connect Nakusp AT network plan to start from.

Connect Nakusp consultation – What we heard

Nakusp Café venue

Open House at Nakusp Café – Thursday Nov 7th, 2024



Figure 17 - Connect Nakusp poster and public consultation display

The Connect Nakusp planning team presented draft materials including maps and trail standards, at the Nakusp Café, hosted by the Village of Nakusp. The Café is a semi-annual event to consult with residents of Nakusp. Approximately 50 people attended the Nakusp Café, and viewed and discussed the AT Network Plan with the project team. People were also able to link to the project survey on their handheld devices at the event, or afterwards.



Figure 18 - Connect Nakusp survey invite and link poster

Connect Nakusp Survey

A survey was designed and posted on the True North Forestry website, with links from the Village of Nakusp website. A poster was constructed with a QR code and posted in approximately 15 locations around Nakusp. There were 54 responses to the survey. The complete survey questions and results are in Appendix C. The following are some key results:

Key Connect Nakusp survey results

AT modes around Nakusp

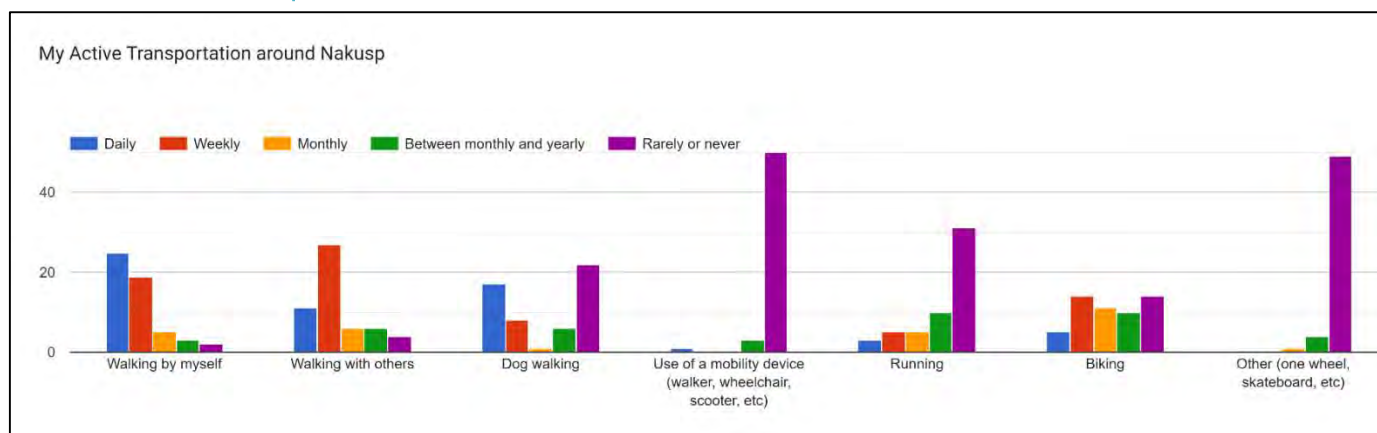
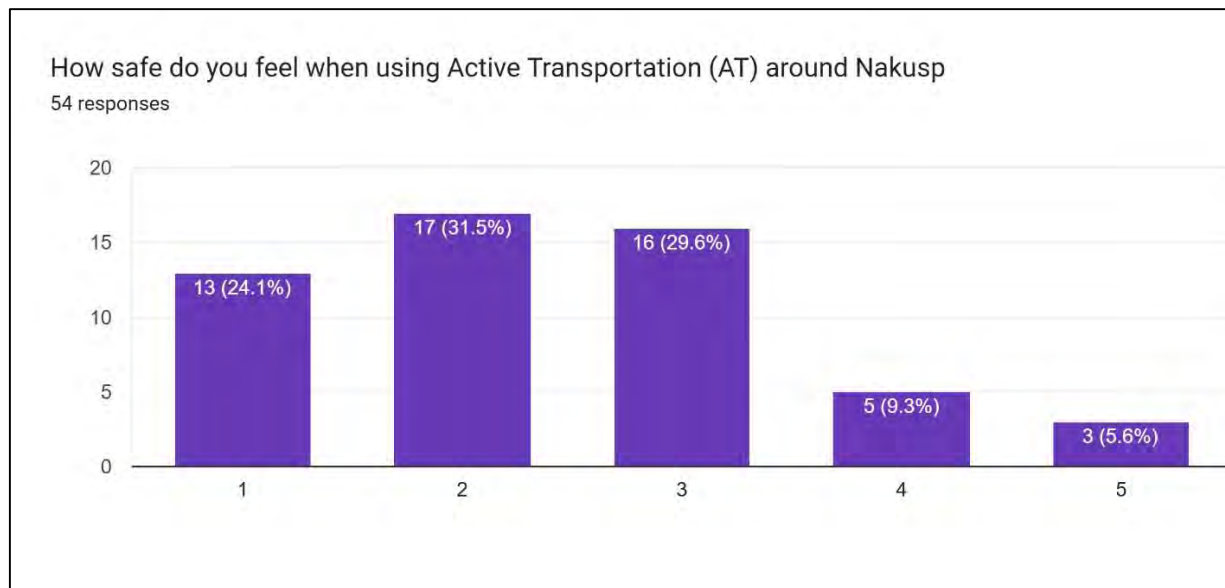


Figure 19 - Active Transportation modes around Nakusp

Daily walking alone and weekly walking with others are the most common activities

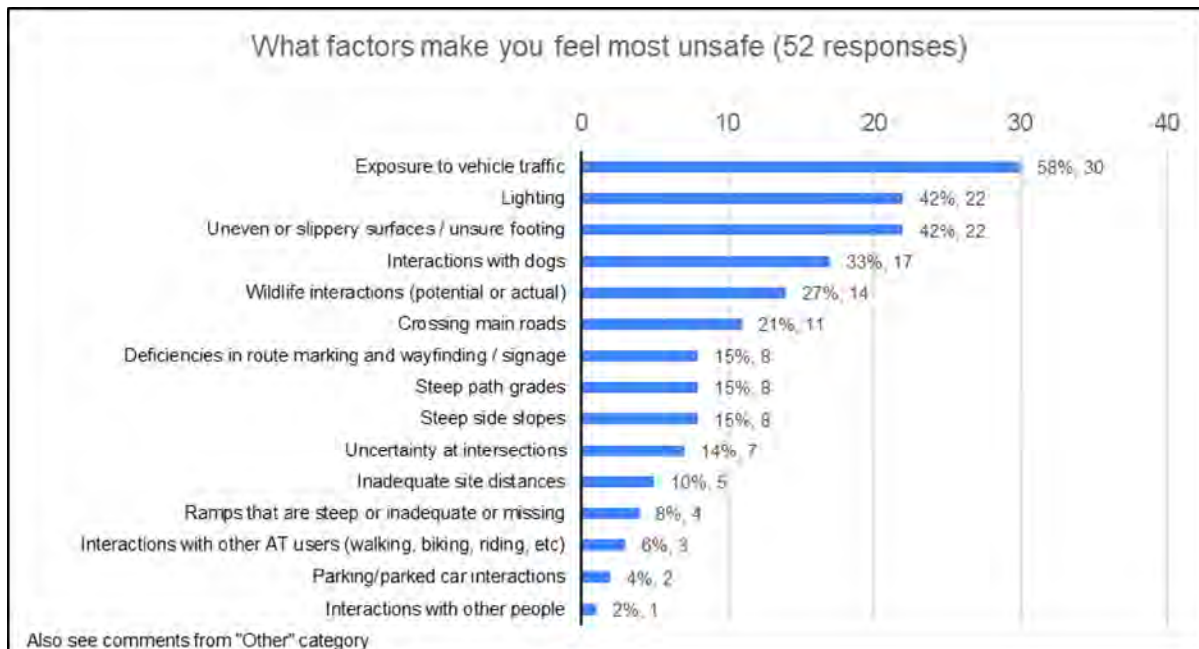
Feelings of safety:



1 is very safe, 5 is very unsafe – While a majority of people feel safe or very safe, a significant portion feel unsafe to very unsafe.

Figure 20 - Survey - How safe do you feel when using AT around Nakusp

Drilling a bit deeper into this question, respondents were asked what particular factors make them feel unsafe:



Q: What factors make you feel most unsafe?

Comments from “Other” category :

- Unauthorized motorized vehicle use on trails
- Interactions specifically with vicious dogs
- Narrow paths with steep side slopes
- Idling vehicles are unpleasant and unnecessary air pollution
- When biking debris in road and shoulder
- I am new to town, and not really sure where the trails are, where they go, or where to access them
- Nothing makes me feel unsafe

Figure 21 – Survey – What factors make you feel unsafe?

Top routes:

The following chart summarizes the results of “Top Routes” all in one chart.

This summary chart shows the most popular routes. The “Rarely or never” answer is not shown here. Each route has a complete bar chart in the complete survey results in Appendix C.

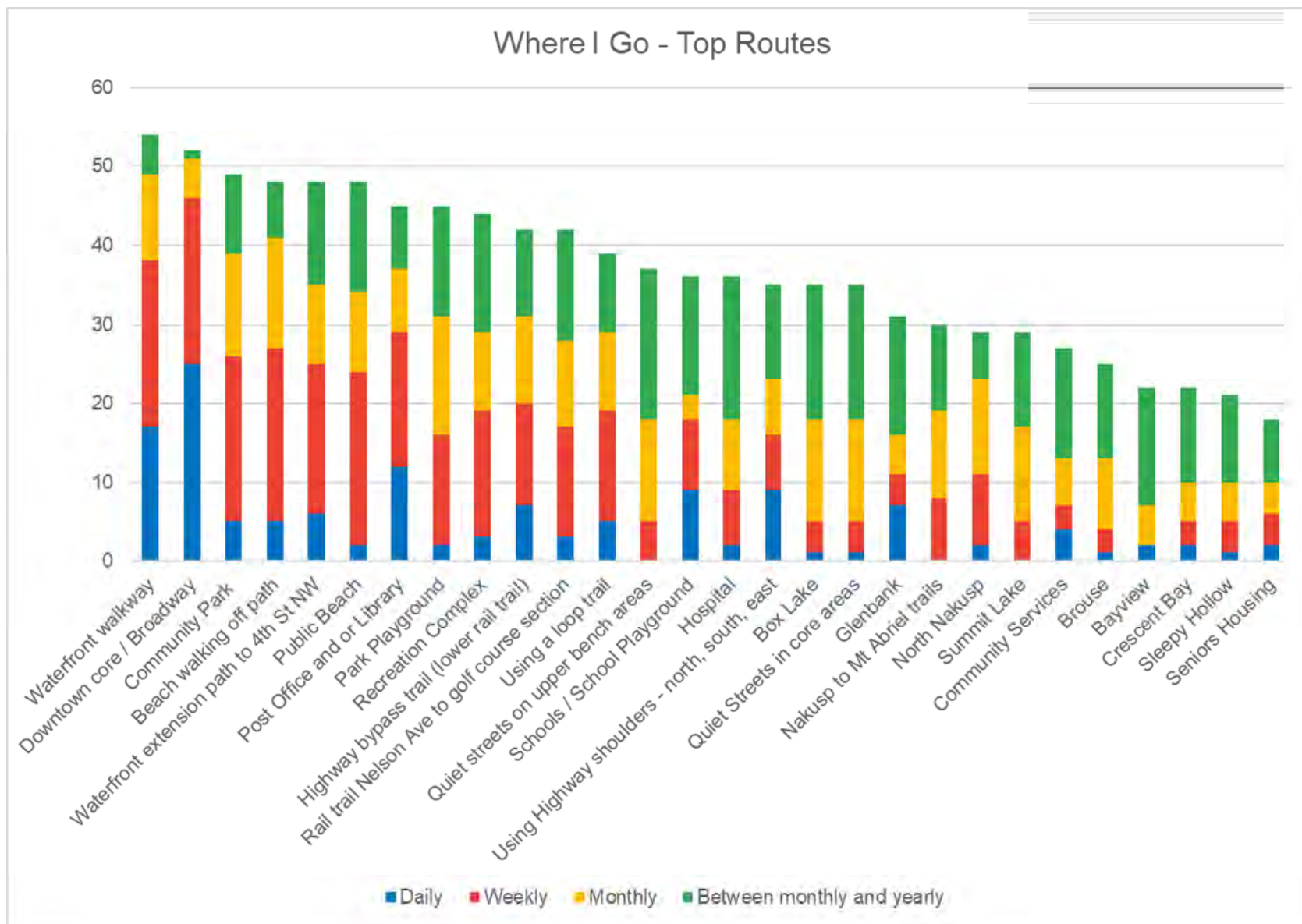


Figure 22 - Survey - Top routes around Nakusp

Other routes not shown in survey:

Other important areas or routes not mentioned here?
3rd Ave road allowance between #6 and Spains Rd/Glenbank Rd -- weekly
Campground area and forest in between ball diamonds and 10th Ave NW. Used daily for walking route. Path behind 10th Ave NW - used multiple times per week.
Government Hill, daily
Government street needs sidewalk up to highway. Often see walkers here
Highway 6 shoulder between 2nd St NE and Hilltop store, monthly use
MacDonald Creek Park monthly
Rail Trail from Nakusp Golf Course to Summit Lake and Rosebery
Vickys View, Peter Roulston, southern rail trail - golf course to summit lake, Hot Springs Trail, KFSR
Waterfront trails would be my priority
Wensley Creek cross country ski trails both skiing & cycling, weekly in winter monthly in summer
Wensley Trails
Would be nice to have a connection point across Kuskanax from existing trail. (would use it daily) We badly need the route from 4th street to the highway to be figured out with (landowner), this completes the loop! (I do use it a lot but I know I shouldn't)

Table 23 - Survey - Other important routes

Identified Gaps and Concerns from survey results as written by respondents.

Highlighted comments are addressed in the Connect Nakusp plan.

Any existing areas of concern, or mobility barriers that could be improved?
<ol style="list-style-type: none"> 1. Path between 4th St west end and highway 6/23 junction. Now claimed to be private but surely an implied easement exists due to extensive historical use. 2. 3rd Ave sandy hill is difficult to cycle due to loose and uneven surface. Level portion needs to be wider. 3. Fox farm on rail trail. Bogus ALR ruling needs to be challenged. 4. Connection between Alexander Rd and Shakespeare Rd at north end. Road allowance exists, just needs a trail made to create a loop.

Any existing areas of concern, or mobility barriers that could be improved?
<p>1.Route 4 northbound on reference map. Steep and rough uphill with steep dropoff is a big cycling risk. </p> <p>2. A connection between Shakespeare & Alexander at the north end using one of the road allowances would add a nice loop path. </p> <p>3. <blank></p>
Alternative to Nelson Ave / Government hill along highway
<p>Better lighting in the above-mentioned area.</p> <p>There needs to be a safe crosswalk to get from the hospital area over Nelson Ave. This needs to be somewhere between 1st NE and Broadway.</p> <p>Snow removal done an the around Nakusp loop in the winter, especially next to highway 23 where road clearing piles up the snow on the trail.</p> <p>Pedestrian-controlled lighting for crosswalk at North-end of town near Esso gas station.</p> <p>Lighting on path behind 10th Ave NW.</p>
Dedicated bike path on highways
Government hill
Government Hill not having a sidewalk/designated walking path going up and down it.
Government hill unsafe
Hwy 6 crossing by schools and Kal Tire / 8th Avenue is very awkward for pedestrians
<p>I have witnessed a number of seniors and individuals with mobility devices accessing the hospital via 1st Sreet NE . It would be great if a crosswalk from the village office to the funeral home were in place to mitigate pedestrian vehicle interactions . I also believe providing an adequate sidewalk from the funeral home to the hospital on 1st Street NE would allow those walking or using mobility devices to have safe passage without having to be directly on the road .</p> <p>An additional concern is the nelson Sw ,nelson N, Broadway W intersection. My concern is vehicle on vehicle interactions as well as vehicle pedestrian interactions. The north sidewalk on Broadway W ends without any crosswalk towards the marina or the hospital, nor an adequate path towards canco.</p> <p>I have also witness many near miss vehicle incidents in which people are speeding into or out of town through that intersections as well as vehicles with trailers or boat trailers trying to cross the intersection on the marina hill in and unsafe manner due to poor visibility and busy vehicle traffic during su.mer months on nelson Ave SW.</p> <p>I believe providing adequate crosswalk and potentially making that intersection a 4 way stop, may greatly mitigate the risks involved.</p>
Just my lack of local knowledge regarding the areas mentioned above.

Any existing areas of concern, or mobility barriers that could be improved?
Mostly potential hazards from vehicles, from lack of visibility or attention, and from debris either falling off vehicles or already on the road or shoulder. Drains in the shoulder that are inches deeper than surrounding pavement are also a challenge.
Narrow shoulder on highway by Zack's Road, bad potholes are very dangerous
Need places to sit so elderly can rest when walking. I do not like going out walking because of loose dogs..people need to fence their dogs or not have them if they can't look after them
no signage to find extension of lower rail trail across main highway
Portions of Highway 6 have relatively narrow shoulders leading some motor vehicles to pass too close for comfort
Rail Trail - Nakusp boundary to Nelson Ave; HWY 23 - town to Hot Springs Road,; Route from Marina to Rail Trail; Bypass rail trail - winter maintenance; Nelson ave crossing from bypass trail to rail trail; bypass trail lighting
Rail trail along hwy 6 requires most improvements
Shoulders on the highway could be wider
Sidewalk along 6th Ave from downtown to past schools needs improvement and year-round maintenance so people use it instead of walking/rolling on shoulder of street.
Sidewalk in front of old forestry building is sloping and causing a pool of water/ice / freezes, slopes from sidewalks to street not always clear
Some trails have very heavy brush right to the edge of the trails. This is not fire safe and foot traffic has the potential for catastrophic disaster. This brush is a perfect place for large predators to live/hide. This has to be a concern for personal safety as well as the safety of pets ie: dogs. Brush and low branches have proven to be a place of concealment for people with criminal intentions. Expansion of trails is great but there needs to be a lot more maintenance on the existing trails.
Speed down government street needs to be reduced. Intersection by Canco not good for this plan. Go up highway and go past hospital
The cement blocks on the wrap around nakusp trail just past the beach going towards the Esso intersection are a huge barrier for walking with a stroller or biking. I end up having to lift my bike overtop of them, and it ends up being not very safe when I've got my toddler.
The people of Crescent bay shouldn't have to be on the highway to get to town, it gets busier all the time and is unsafe

Any existing areas of concern, or mobility barriers that could be improved?

The shoulder along Highway 6 feels unsafe to walk on (needs to be wider, or ideally a separate path that parallels the highway), but I'd like to walk to and from town to my neighbourhood on Alexander Rd in an efficient way. This section of road could also have street lights (if applicable for this survey).

Too bad only one accessibility ramp along water front between each end.

From first street to Broadway along Nelson ave... that area needs a sidewalk badly (and a crosswalk across Broadway). (several days a week)

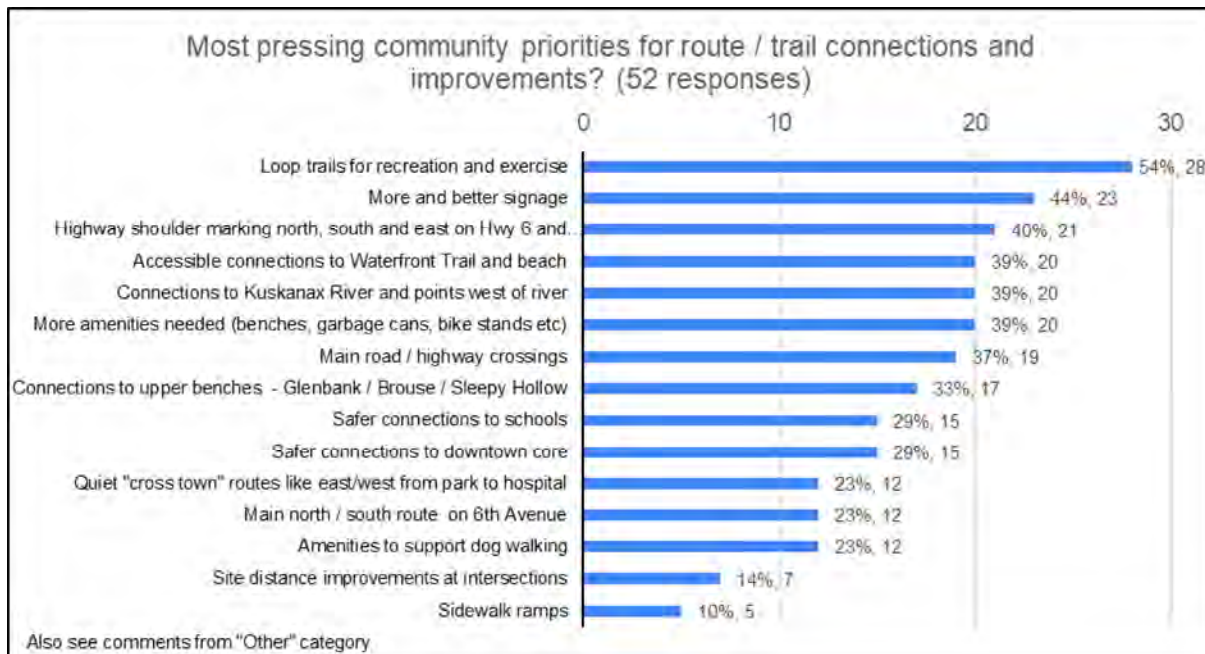
Trail from where the sidewalk ends at the beach connecting with the trail on the other side of the beach (and continues along lake/River to 4th Street) - (Daily)

Route along Highway 6 to access Hill-top, and connection point to rail trail where the washout occurred... this could encourage more business development in that area of town. (it's the only thing that stops me from walking to those locations)

We badly need walking/biking paths along the Highway within town - especially to and from the school. More than that, we need YRB to keep them clear in the winter... it's dangerous for kids!! (walk this several times a week and it sucks)

Table 2 – Survey data – Existing areas of concern or mobility barriers that could be improved

Priorities identified from survey:



Comments from "Other" category:

Pruning back large, beautiful but hazardous planting on Main Street bump outs

Connection to Revelstoke

Second vote for "Loop trails for recreation and exercise"

Improving biking routes within the entire town (not just downtown core) to encourage more biking commuting

Use of quads or side by sides on local roads in order to access the trail systems Trails connecting to existing trails (e.g. rail trail) Maps at intersections, lighting
--

Figure 24 - Most pressing community priorities for route/trail connections and improvements

Information from the Connect Nakusp consultation process reflected many of the recommendations of previous plans, but with a tighter scope area in and around Nakusp. For the Connect Nakusp plan consultation (including on-line) it was very helpful to have visual map products available showing a (draft) complete trail network within the scope area. It helped people to prioritize recommended actions.

During the Connect Nakusp project, discussions were held with various group representatives including:

- Kootenay Adaptive Sport Association (KASA)
- Nakusp Trails Society
- Nakusp ATV Society
- Some private land owners
- MOTT – initial meeting and follow up meeting
- School District 10 – NES and NSS staff discussion
- RCMP office
- Individual residents who viewed the plans with the planning team
- Interested trail users via informal conversation

Future consultation commitments and goals

It is important that there is an on-going conversation with community residents and groups as the network is implemented, as well as monitoring of the results. This will include development of a monitoring system and defining responsibilities for monitoring. This could be developing more precise methods of measuring trail usage, perhaps by counters or other means, and also measuring satisfaction of users with the trail system, and documenting maintenance and trail deficiencies in order that improvements can be made.

Proposed Connect Nakusp AT Network

Design Criteria

Universal Design

A goal of Connect Nakusp is to use Universal Design when improving or constructing trails and amenities, to accommodate All Ages and Abilities, wherever reasonably possible.

What is Universal Design?

'Universal design' means the design of products, environments, programs and services to be usable by all people, to the greatest extent possible without the need for adaptation or specialized design. 'Universal design' shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.

"Universal design ensures that the built environment is accessible to people of all ages and abilities, regardless of any type of physical or cognitive impairment. Universal design is a fundamental design principle that should be applied in all contexts but is especially important for designing active transportation facilities and accommodating people walking." (BC Active Transportation Design Guide, BC Ministry of Transport and Infrastructure, 2019 Edition)

PRINCIPLE
1: Equitable Use The design is useful and marketable to people with diverse abilities.
2: Flexibility in Use The design accommodates a wide range of individual preferences and abilities.
3: Simple and Intuitive Use Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
4: Perceptible Information The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5: Tolerance for Error The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6: Low Physical Effort The design can be used efficiently and comfortably and with a minimum of fatigue.
7: Size and Space for Approach and Use Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Figure 25 –A compilation of the principles of Universal Design, BC-AT Design Guide, MOTT

Accessibility Challenges to be addressed:

Mobility – This includes locomotion difficulties and walking speed. Better mobility is enabled by having flatter routes with regular rest stops.

Recommended distances between rest stops for different groups is shown in the following table:

GROUP	RECOMMENDED DISTANCE BETWEEN RESTING SPOTS (METRES)
Mobility impaired people using a cane	50
Mobility impaired people without walking aid	100
Wheelchair users	150
Visually impaired people	150

Figure 26- Recommended distances between rest stops, BC-AT design guide

Slower walking speed increases road crossing times which is a risk factor. One means of addressing walking speed is through curb bump outs to shorten crosswalk length and time occupied by pedestrians. This also provides a safe refuge and improves sight distance to and from vehicles.

Vision – management of obstacles and signage.

Hearing – communication and ability to hear oncoming traffic and trail users.

Strength and Dexterity – design of hand rails, trail grades, stairs and ramps.

Comprehension – either through cognitive impairment or language barriers. Clear signage and wayfinding are critical.

Universal design is key in create facilities that are attractive and useable by people of “all ages and abilities” –referred to as “AAA”. By using universal design principles where ever possible in the Connect Nakusp trail network, citizens’ diversity will be recognized and designed in to trail and amenity infrastructure. This will help to include all potential users, hopefully increase and promote trail use, change lifestyles in positive ways and ultimately build a better community.

General Design standards and accommodations

Pedestrian Operating Spaces

This figure illustrates typical pedestrian dimensions that are used to inform design of AT infrastructure:

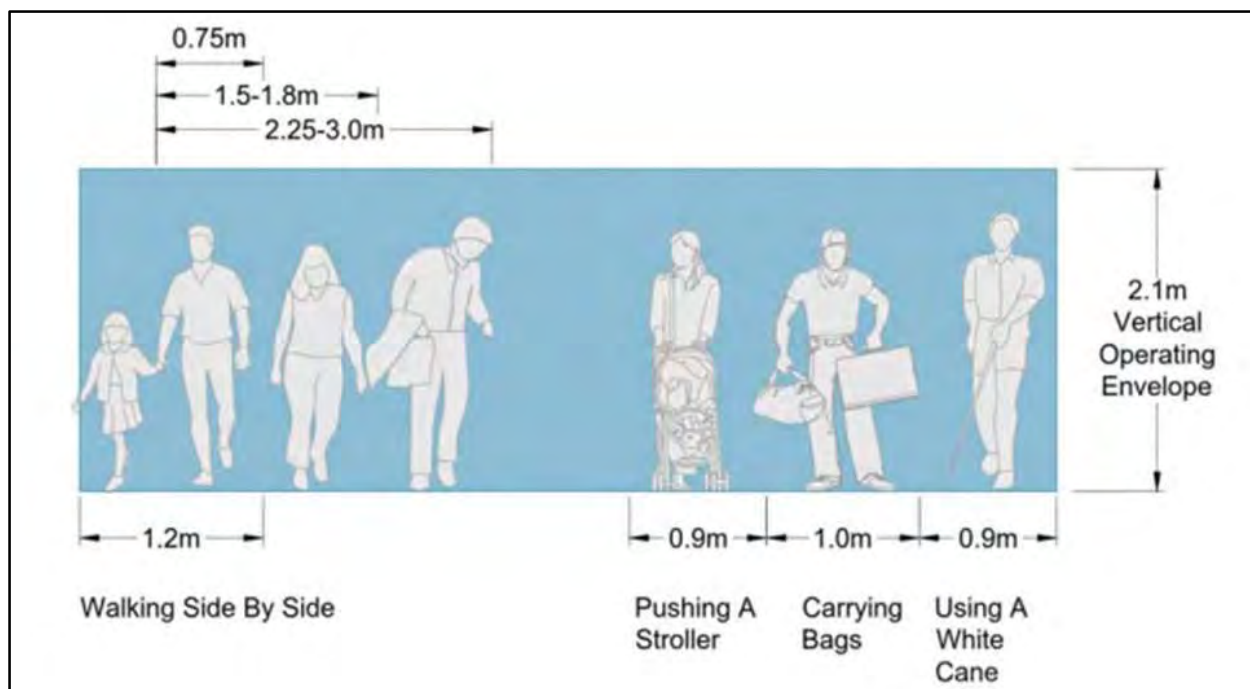


Figure 27 - Pedestrian Operating Space Requirement, BC-AT Design Guide, MOTT BC

For pedestrians, management of pathway design around objects is critical, this is especially key for visually challenged individuals. Critical dimensions are shown here:

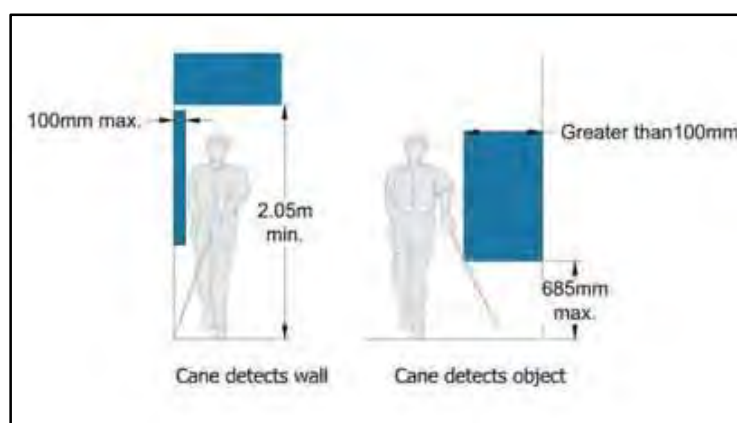


Figure 28 - Pedestrian obstructions, BC-AT Design Guide, MOTT BC

Design distances / widths are determined from minimum physical operating space, plus personal space. For pedestrians, 0.8 metres of personal space between is appropriate.

Mobility challenged space requirements

The operating envelope for wheelchairs requires 1.8 m width to operate side by side or passing. On ramps, appropriate height railings must be provided on each side, as specified by the BC Building Code.

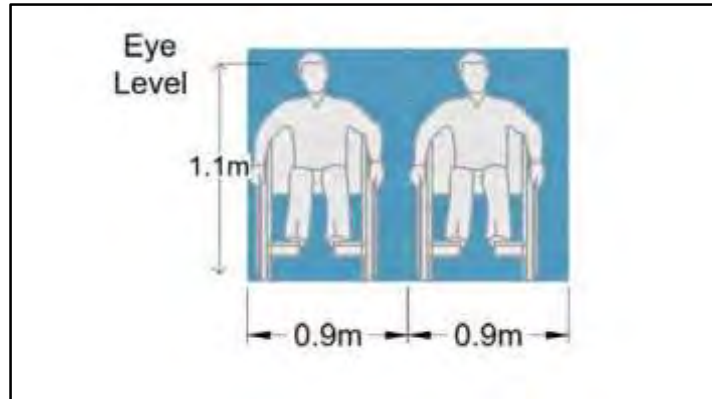


Figure 29 – Required width for two wheelchairs to travel side by side or pass each other, BC-AT Design Guide, MOTT BC

Minimum widths

Absolute Minimum widths of pedestrian pathways should be 1.5 metres – for constrained conditions and distances less than 100 metres. In these conditions a “full width” section should be provided for passing every 30 to 60 metres to allow for passing. A width of 1.5 metres is also the preferred operating space of a single cyclist (BC-AT Design Guide, MOTT BC).

Pathway and sidewalk grade

Designing paths for appropriate grades is critical for All Ages and Abilities utility of pathways and ramps.

Maximum Longitudinal Grade	Requirements
≤ 5.0%	None
> 5.0% to 8.3%	Landings should be provided every 9.0 metres
> 8.3%	Alternative accommodations recommended

Table 3 Recommended Longitudinal pathway grades, BC-AT Design Guide, MOTT BC

Resting places

Resting spots are a key design element to enable AAA use of infrastructure. Rest spot spacing distances for different AT user groups are specified in the following table. A resting spot is typically a flat area with bench.

Nakusp has a relatively large public inventory of benches which are spaced throughout the downtown core public spaces in Nakusp. Existing locations of benches in these locations were captured and added

to the geodatabase. Some more resting places along AT routes are needed during future implementation. This will be an important design consideration.

GROUP	RECOMMENDED DISTANCE BETWEEN RESTING SPOTS (METRES)
Mobility impaired people using a cane	50
Mobility impaired people without walking aid	100
Wheelchair users	150
Visually impaired people	150

Table 4 Recommended distance between resting spots for different user groups, BC-AT Design Guide, MOTT BC

Cyclist operating spaces

Cyclist dimensions and space

The following diagram shows typical cyclist dimensions that are used to inform design of AT infrastructure, and the difference between physical space, minimum operating space and desired operating space. This begins to show the rationale behind width decisions for bidirectional multi use pathways, which typically have a preferred minimum width of 3.0 metres – which is the distance that two cyclists can comfortably pass in opposite directions.

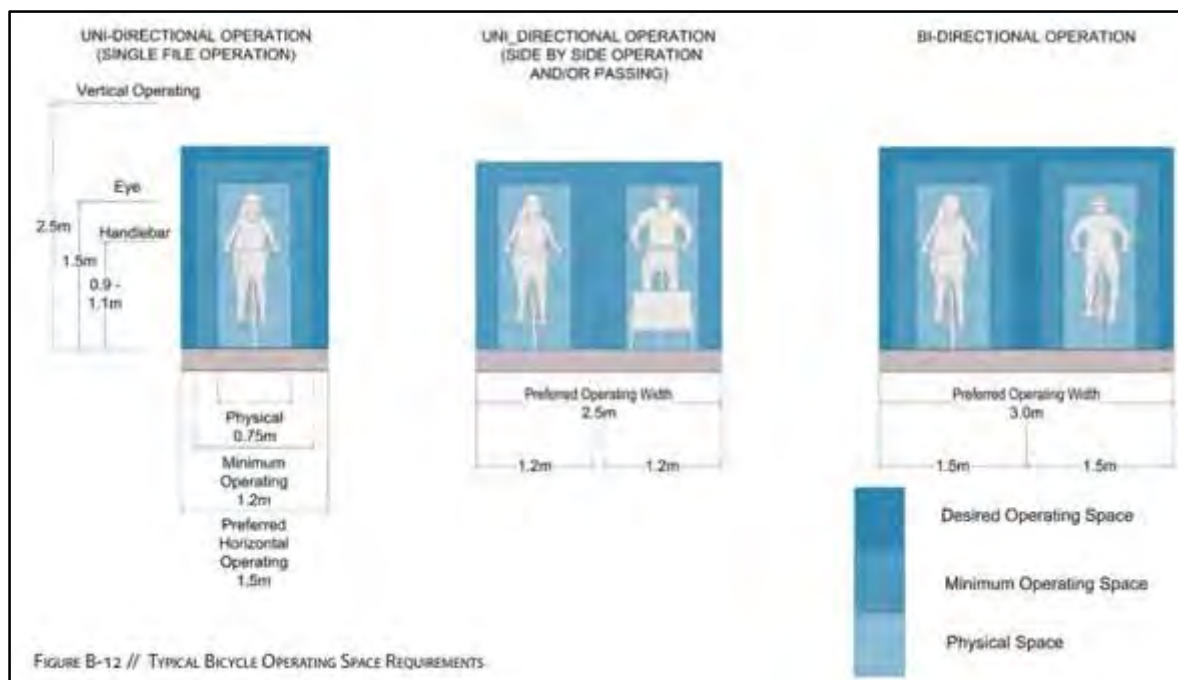


Figure 30 - Space needs for cyclists, BC-AT Design Guide, MOTT BC

Overhead operating clearances

Also key is the required overhead operating clearances for cyclists, important for passage through tunnels, underpasses and to inform vegetation maintenance practices.

PARAMETER	DESIRABLE (M)	CONSTRAINED LIMIT (M)
Vertical clearance (bicycle facility surface to overhead structures/foliage)	3.6	3.0

Table 5 - Overhead operating distances for cyclists, BC-AT Design Guide, MOTT BC

Bicycle dimensions

There are a range of bicycle styles to be accommodated in trail design, this figure shows a variety of bicycle styles and dimensions.

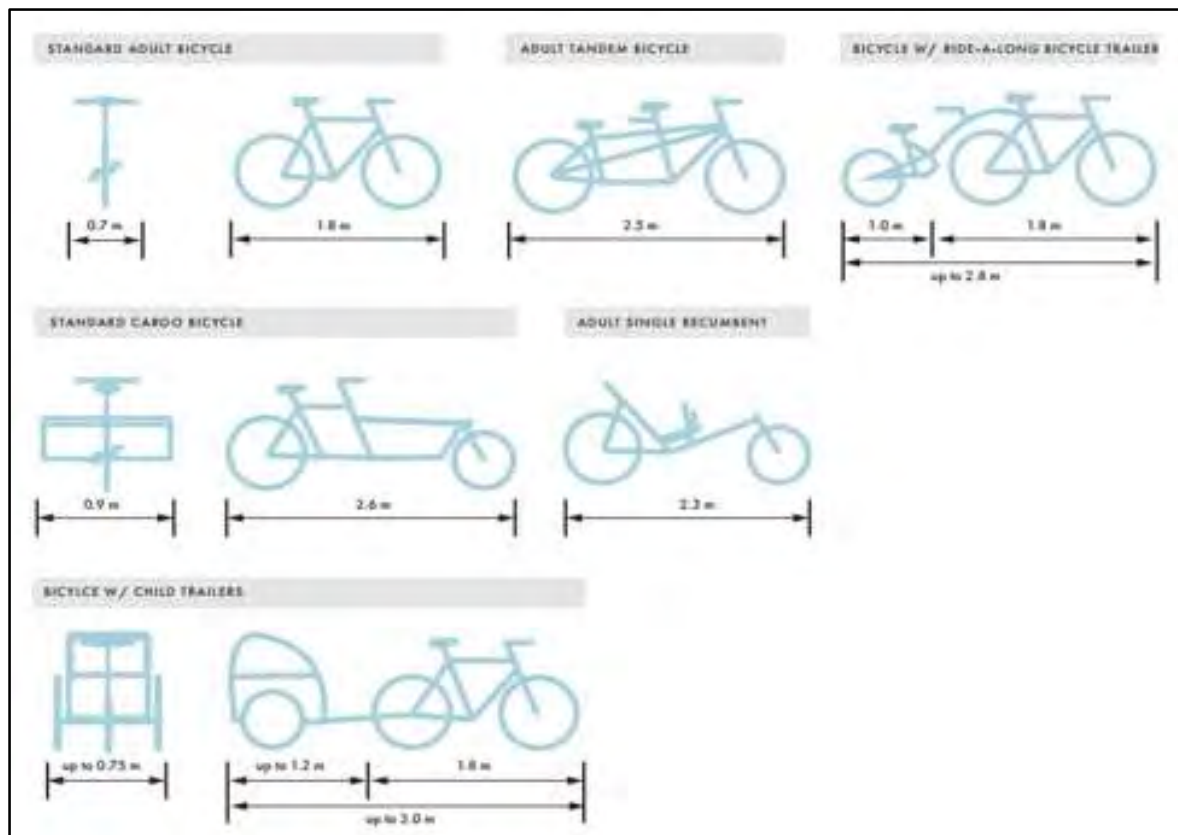


Figure 31 - Typical Bicycle Design and Dimensions, BC-AT Design Guide, MOTT BC

Recommended Bicycle Stand designs

The following styles of bicycle stands are recommended. These can be fit into the furnishing zone (the area between pathway and roadway) for efficient use of space.



RACK TYPE		NOTES
Inverted U (Also called loop or sladle rack)		<ul style="list-style-type: none">•Can support two bicycles per rack.•Can be installed alone or in a series on rails.•Many variations are available.•Can be efficiently located within the Furnishing Zone of a public right-of-way.
Post and Ring		<ul style="list-style-type: none">•Can support two bicycles per rack.•Products exist to retrofit certain parking metres to create custom post-and-ring racks.•Can be efficiently located within the Furnishing Zone of a public right-of-way.

Figure 32 -Recommended Bike Rack designs, BC-AT Design Guide, MOTT BC



Figure 33 - Bike rack in furnishing zone Nakusp

There are great examples of personalizing bicycle stands with the community or trail name:



Figure 34 - Personalized bike stands from other communities

Connect Nakusp Plan Structure

Connect Nakusp plan framework:

The Connect Nakusp Plan is organized in the following hierarchy:

Trail Network: the comprehensive group of trails that provide AT connectivity to the entire Nakusp scope area, and provides connections to destinations beyond Nakusp. The network is comprised of:

Routes: Individual trails/pathways that connect key destinations. Individual routes or a collection of routes may comprise an implementation project.

Segments: logical portions of routes based on trail standard, destination and existing or proposed status.

Features: individual elements, for example crosswalks, benches, bike stands which are identified on detail maps and as individual cost items in the budget.

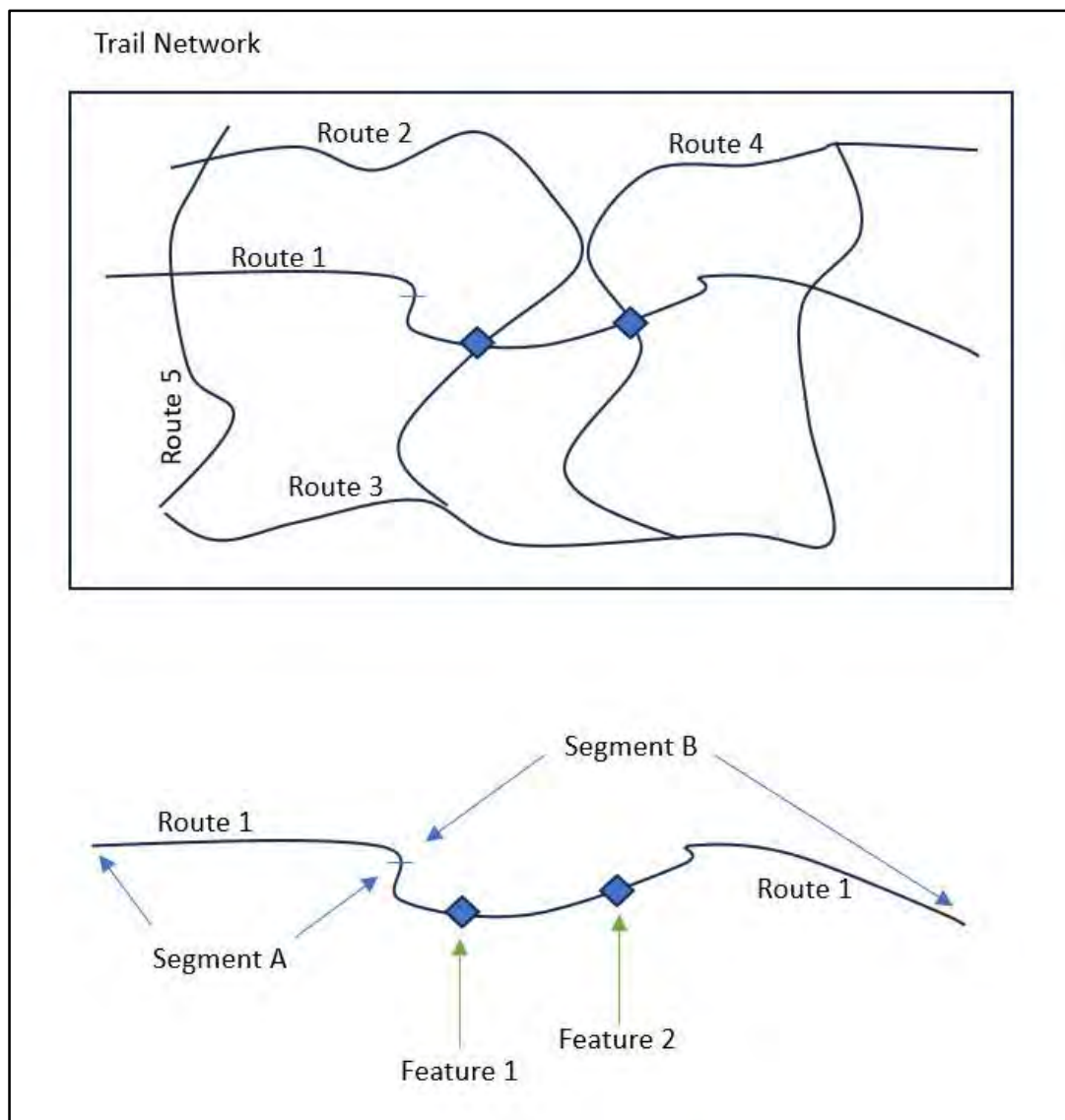
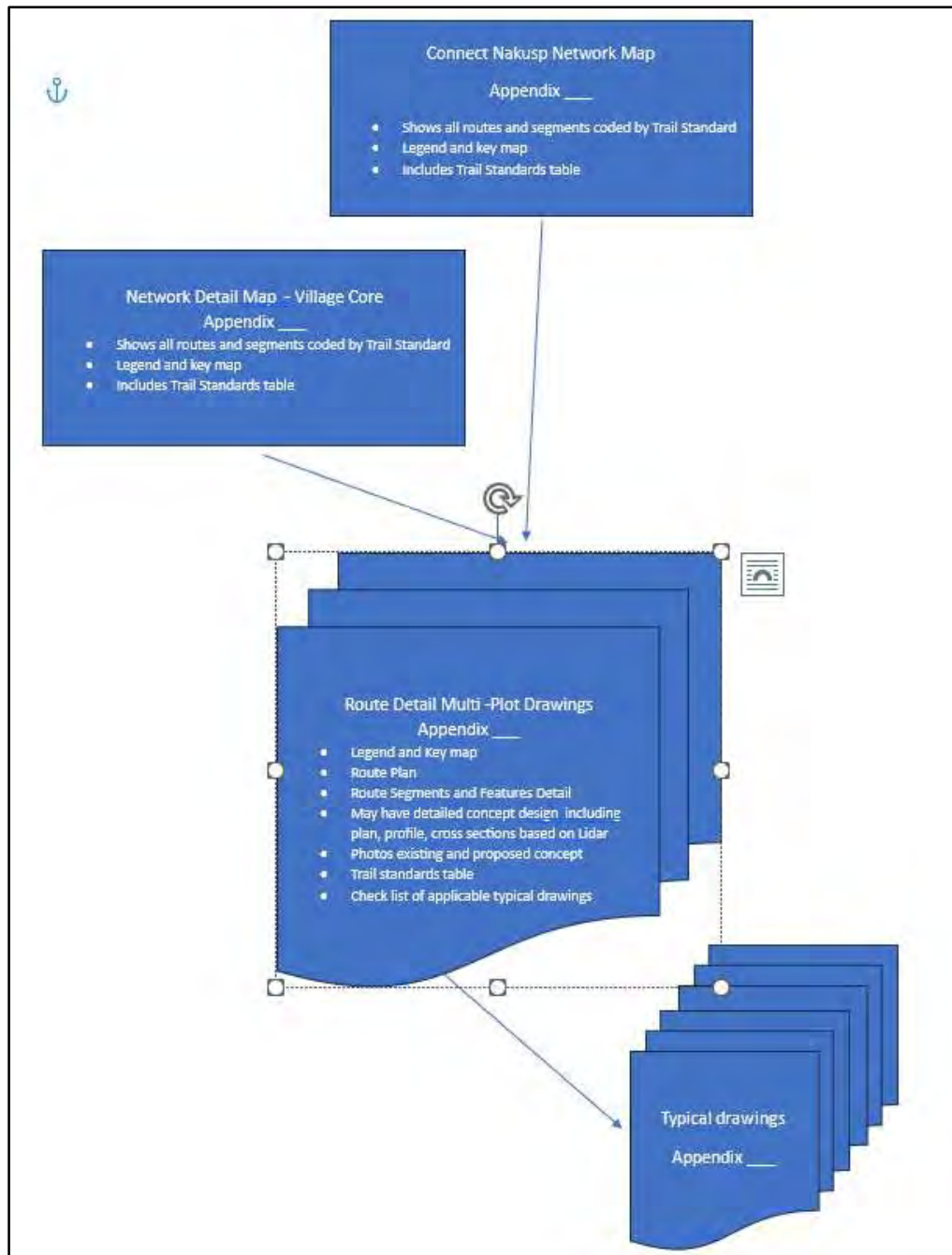


Figure 35 – Connect Nakusp Trail Components: Network, Route, Segment, Feature

Connect Nakusp technical content:



The Connect Nakusp maps and drawings are presented in a visual and friendly format. The goal is to create the necessary content and detail to inform fund raising efforts, public consultation, and implementation contract preparation on a route-by-route basis.

Connect Nakusp content detail

Overview maps

These show multiple routes and illustrate how the network serves the geography of Nakusp and area.

Connect Nakusp overview maps – Appendix A shows all of the proposed routes in the project scope area that make up a comprehensive active transportation network, as well as trail and road connections to the surrounding area. Details are illustrated with colour, symbology and legend.

Village Core Network map – Appendix A shows the central portion of the plan scope area, at a smaller scale so that details can be discerned.

“Multiplot” drawings

Most routes identified in the overview maps are shown in more detail in a “multiplot” drawing (*Appendix B – Trail Routes and Segments*) by route number. “Multiplots” are multifaceted drawings that provide project planning detail on each route with the following typical content:

Plan view drawing – to illustrate the route from the overview map at an appropriate scale and detail, including logical route segments and features.

Concept design plan views for new segments or ones requiring substantial re-alignment and upgrading.

Profile view showing existing and planned grades

Sample cross sections for planned routes

Existing infrastructure photos.

Proposed infrastructure rendering or examples from other communities.

Check list of typical drawings applicable for the route, with room to add more.

The multiplot drawings pull together available and created technical detail about the route, and show the logical segments and features that make up the route.

Typical drawings

To provide construction standards for implementation contracts, Appendix G contains a collection of typical or standard drawings has been assembled. These can be selected for inclusion in a project tender. The list and content can be augmented with other drawings. These are sourced and adapted from Village bylaws, Recreation Sites and Trails BC, Parks Canada, US Forest Service, Master Municipal Construction Documents (MMCD) and others.

Data tables

Route Description Worksheet (Network Data Table - Appendix E) – an updatable spreadsheet documenting route concepts including:

- Route #
- Common Name
- Segments and Standards
- Start, End
- Purpose / Rationale for Route, Segment
- Standards Detail
- Key Features
- Gap Analysis

- Details/Questions
- Length, existing and proposed
- Data availability and source
- Budget cost rolled up from budget worksheet
- Maintenance Notes
- Professional Reports needed

Trail Standards – worksheet tab within Network Data Table - Appendix E

Trail Surfacing Standards – worksheet tab within Network Data Table - Appendix E

Network Budget Worksheet – worksheet tab within Network Data Table - Appendix E

A budget framework was developed by segment and route based on all of the proposed network improvements. The purpose of the budget is to provide a potential scoping figure for planning purposes and implementation funding. Budget units were determined from measurement, estimate or derived from concept designs. Budget unit costs were estimated by research of similar cost items, and discussions with a range of potential suppliers, with a focus on local suppliers. Typical unit costs used in the budget are in a separate tab worksheet linked to the budget worksheet to make updating of unit costs more efficient.

Budget overhead was developed and is loaded on the trail segment costs to account for soft costs. Budget overhead includes rough estimations of the following items based on a percentage of estimated hard costs.

- Tendering costs
- Overhead, admin, supervision, traffic control
- Engineering
- Contingency

This budget tables can be easily amended and updated in digital format by trail segment (Excel).

Proposed Nakusp AT Trail types

Multi Use Pathways (MUPs) – coded as M1, M2, M3



Multi use pathways are fundamental to the Connect Nakusp network. The pathways proposed are bidirectional and as wide as possible (up to 3.0 m wide) while still generally fitting the landscape without large topographical alterations. The pathways should be designed to minimum grades, most often dictated by the topography that they are traversing across. Multi use pathway standards – width and grade – are constrained in certain areas due to topography, bordering land status (private versus public land) and other factors. The intention is to design pathways to minimize the lengths of these constrained areas. There are necessary trade-offs between what is desirable and what is logistically, environmentally or economically possible.



Figure 36 - MUP Symbology, BC-AT Design Guide, MOTT

These pathways are meant to be easy to find and connect, accessible and user friendly by most users. Multi Use Pathways form the main spines of the Connect Nakusp trail network. Creating the pathways will mean alteration and improvement of existing AT routes – good design and construction should broaden the existing user profile considerably.

Connect Nakusp – Multi Use Pathway (MUP) types	
M1	hard surface (asphalt or concrete) Multi Use Pathway
M2	aggregate surface Multi Use Pathway, built to a standard that can be possibly hard surfaced in the future
M3	Multi Use Pathway that is painted onto existing infrastructure (roadway edge)

Table 6 - Connect Nakusp - MUP types

Bike lanes - B



Figure 37 - BC MOTT signage

There are presently no designated bike lanes in or around Nakusp. The Connect Nakusp plan proposes bike lanes on highway shoulders within reasonable reach of the village core, within the areas that have reduced speeds from typical highway speeds. The purpose of these is two fold – to provide the cyclist with a route and space to cycle, and to provide a visual reminder to vehicle traffic to consider and watch for cyclists.

It is recognized that seasoned bicycle commuters may choose to ride along with and amongst vehicle traffic and are likely quite comfortable doing so with or without bike lanes. However, there is large proportion of the population that is interested in using bikes for transportation but are reluctant to do so from the standpoint of perceived risk and safety. This following figure graphic illustrates this point:



Figure 38 Cyclist Types, BC-AT design guide

This shows while a small percentage of the population are comfortable riding in traffic, a large majority of the population (enthused and confident, and interested but concerned) fall into categories that much prefer bicycle facilities and are much more likely to cycle on a pathway or designated

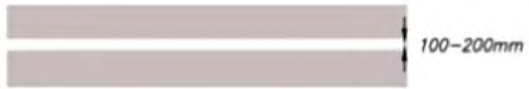

Name	Dimensions	Description
Bicycle Lane (Solid)	 100–200mm	Delineates the edge of a travel lane dedicated for bicycle use where travel is permitted in the same direction on both sides of the line.
Bicycle Lane (Dashed)	 100–200mm	Permits motor vehicles to cross the bicycle lane to perform a turning movement.

Figure 39 Marking standards for bicycle lanes, BC-AT Design Guide, MOTT

shoulder. For people who cycle or want to cycle but are uncomfortable along side vehicle traffic, there will be opportunities for bicycle travel on the multi use pathways. These will accommodate bicycle use by being designed and constructed at sufficient width. And as for the “No Way, No How” crowd - a portion of them may try cycling on the pathways, and some who may never cycle may walk or use other AT means.

Neighbourhood Street Connections - NSC



apart from some wayfinding signage and proposed crosswalks on main streets, and inclusion in geo-referenced route mapping for the village.

The quiet side streets of Nakusp offer great routes for active transportation to wander and explore the village and surrounds, link destinations and provide connections to trails and pathways. There are at least three logical groups of NSC streets – West of 6th Ave, East of 6th Ave, and Upper Benches (Glenbank and area), along with a proposed main east-west village connection on 2nd St from the rec centre to points east. The criteria for a NSC are; quiet streets with low vehicle traffic flow, low grades, wide shoulders, favourable and direct connectivity to destinations. This will not be a major infrastructure investment



Walking trails –W

Walking trails typically follow natural grades and are constructed with natural materials found on site in close proximity to the trail. They typically have sections that are not AAA accessible. They often provide a low impact access into natural areas. While “out and back” trails are quite common, loop trails that start and end at a trailhead are convenient and can provide a more quiet and interesting user experience. Along the shoreline of Arrow Lakes east of the marina there is a great opportunity to have seasonal walking trails that become paddling routes during high water conditions – with an island destination.

Sidewalk -S

Sidewalks are designed for pedestrian travel. Typical design, including specified widths (minimum 1.8 m) are specified in Nakusp Village bylaws. Critical elements for sidewalks are – maintaining a clear space free of obstacles, and a firm, even, non slip surface. Sidewalks are typically parallel to roadways and private property lines. Where sidewalks intersect with street crossings and driveways, they should be constructed with let-downs according to bylaws and civil design and construction standards to ensure they are accessible for all users.

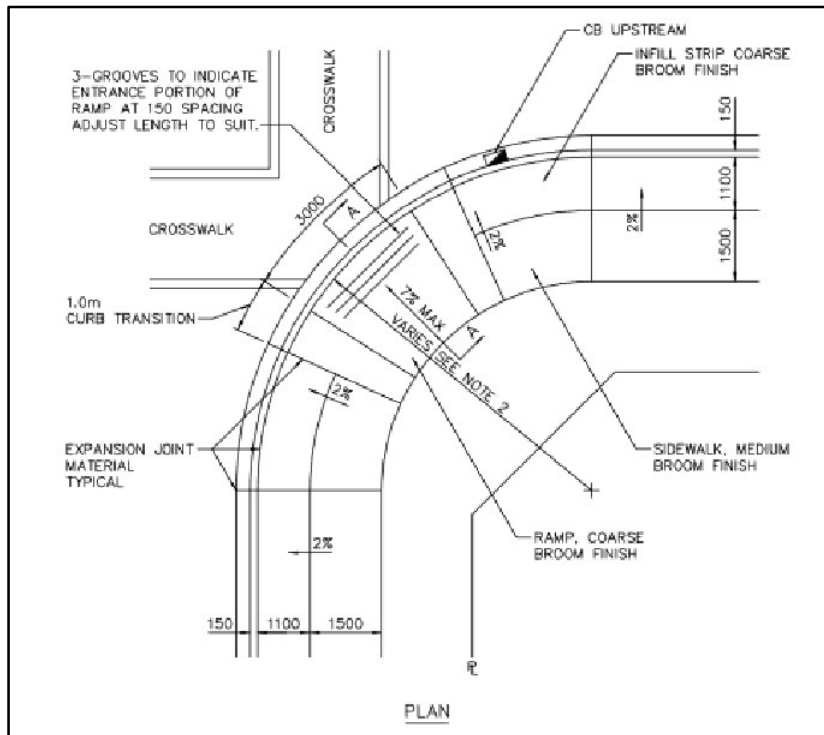


Figure 40 - Sidewalk ramp detail from MMCD drawing, MMCD, 2019

Sidewalks demand regular maintenance, most notably in winter for snow and ice clearing, and also maintenance of adjacent vegetation to maintain a clear space. These are most often shared responsibilities between Village and private residents, and imbedded in bylaws, with the goal of maintaining reliable and safe access for pedestrians and other users.



Where grades are too steep for sidewalks (for example 1st to 8th Avenue connections to waterfront trail, Broadway Street connections to public beach), alternate infrastructure like stairways are used. Stairway design and construction are also informed by civil design and construction standards. Ramps are designated a separate standard, as noted below.

Trail Connections – TC



The purpose of the Trail Connections standard is to connect main trail routes with destination short cuts. These trail connections are most often historic routes that traverse across steeper scarp areas to connect the topography of the Nakusp area. They are not universally accessible for all users. They do however present an opportunity to improve the existing route condition, provide for more reliable and safe travel for existing AT users, and attract more users. Improvements proposed are typically more to do with surface condition, improved drainage, signage and wayfinding, and improved connection to adjoining trails, rather than improving trail grade. The Trail Connections are

popular and key routes for many users and provide more direct, albeit steeper grade connections. If improved, maintained, and used with caution they can be key components of the Connect Nakusp trail network.



Ramp – R





The purpose of ramps is to provide safe, accessible, and independent connections between elevational changes for mobility challenged individuals. Ramp design and construction is regulated by the BC Building Code. This specifies standards for slope, width, landings, handrails, guards and curbs, surface type and overhead clearance. Existing and proposed ramp locations are connections with the Waterfront Pathway from the south end of 6th and 4th Avenues.

Connect Nakusp network - Description, Gaps and Issues

Fieldwork, research, and public engagement results are documented in the following table. The route numbering is for organization only and does not imply priority.

Table 7 - Connect Nakusp - Route Description, Gaps and Issues

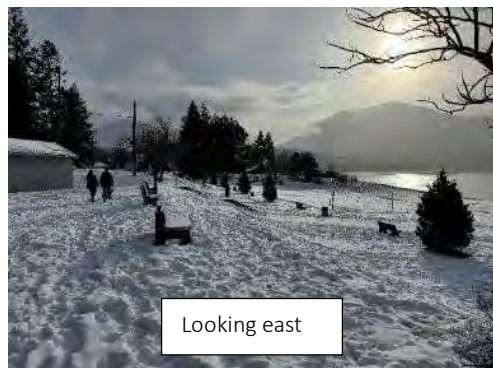
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
1	Schools to Park and Beach	A. 4th St. NW School frontages - M1 standard pathway (constrained 2.0 m width)	Elementary School	Municipal Park /Beach	Safe street connection for school children and commuters to reach park and beach, designated path past ESB , Seniors Centre and Rec Centre parking lot to give AT users space to travel safely.	4th Avenue: Improved and new pathway / sidewalk fronting schools (2.0m wide)	4th St/ 4th Ave crosswalk	Inconsistent pathways in front of schools, lack of pathway connectivity, parking issues on 4th St, no crosswalks on 4th St - could add 3 at 4th Ave, 6th Ave, 8th Ave. Concrete barriers on east side of 6th Avenue make existing walking routes along 6th Ave unclear.	School property boundary, are logs on edge of school property, zebra crossing or lines?
									
		B. 8th Avenue -M3 standard pathway (3.0 m width - painted)				8th Avenue: Painted multi use lane on asphalt, from west edge inwards - 3.0 m wide	4th St/8th Ave Zebra crosswalk	Some drainage concerns at south end of 8th Ave, eventually pools on Broadway at west end of sidewalk and drains down stairway, eroding beach.	Sidewalk at Seniors Centre could be tied into the M3 pathway, and a 0.6 to 1.0 metre buffer area added on east side of sidewalk, with periodic parallel parking for mobility challenged people east of the buffer area.

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
2	2nd Street Crosstown Route	A. Rec Centre to 1st St / 1st Ave - NSC standard route	Arena/Rec Complex	Hospital	Cross town east-west, quiet street connector for commuters, seniors, end point is hospital, with connection to east end of Broadway and marina and east end of waterfront trail (via route 11). 2nd St is a quieter and safer alternative to 1st St (Highway 6 in-town section)	Neighbourhood Street Connection / Shared street concept with inclusion in AT mapping, signage and wayfinding posts	Intersections with main traffic routes: 2nd St and 6th Avenue, Nesson Ave and 1st St	Identified need for a designated and centrally located cross town route to provide connectivity from Rec Centre to points east and ultimately the Hospital (with street connections via Route 11 to Marina and waterfront trail). Gaps are wayfinding and lack of some safe crossings of highway class roads within Village.	New intersections on highway sections within the Village, will need MOTT warrant approval.
 <div data-bbox="220 893 388 941">2nd St NW</div> <div data-bbox="546 893 724 941">2nd St / 1st Ave</div> <div data-bbox="871 893 1050 941">1st St / 1st Ave</div> <div data-bbox="1197 893 1375 941">1st St NW</div> <div data-bbox="1438 893 1669 941">1st St / Nelson Ave</div>									
2		B. 1st St/1st Ave. to Hospital - M1 widen sidewalk						Sidewalk width, curb radius and approach to 1st St/ Nelson Avenue, and lack of crosswalks at 1st St / Nelson Ave.	Installing a crosswalk at 1st St/Nelson Ave on north side of intersection is out of the main highway traffic flow, therefore approval process might be easier.

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
3	Neighbourhood Street Connections West	A. entire route - NSC Standard	6th Ave/10th Ave	Schools, campground, waterfront, beach, park	Quiet street connections to complete logical loop routes, on public lands, along quiet streets. Identifying these routes with favourable grades and conditions provide easy walking routes for tourists and residents. Basic wayfinding posts and digital georeferenced mapping will help tourists to wayfinding and create loop walks. Basic signage should help to calm traffic off of the main routes.	Shared street concept with some painted intersections on main routes, basic signage, and wayfinding using cap posts placed in convenient locations	Quiet streets, accessible grades and surfaces, safer walking and bike riding	People are unsure about quiet walking and riding routes through town and how to connect up to other existing trail routes. Inclusion in the AT Network, Basic mapping and wayfinding posts would help this.	Sign post locations, what density of signage makes sense. Optimize the amount of signage to limit cost and potential damage by snowplows etc.



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
4	Waterfront Trail Extension to Beach	A. - M1 standard (2.8 m width)	Waterfront trail west end	West end of sidewalk on Broadway	Proposed trail construction to provide accessible connection to public beach and points west. Also provides a flatter connection between the existing waterfront trail and trails west of the public beach. Would eliminate the use of stairs and steep grass slopes for mobility challenged people.	Paved multi use trail (M1) to public beach. Paved MUP 2.5 to 3.0 m wide. Design can utilize all existing benches along beach front.	Develop All Ages & Abilities connectivity to public beach from parking lot area and from Waterfront path. Opportunity for new amenities including picnic tables mid-way on flat area, addition of benches in key locations, and more and better usage of existing infrastructure at beach.	Existing very difficult access for mobility challenged people to access beach area. Awkward and steep existing connection for those wishing to connect from the waterfront pathway to points west on the waterfront extension trail to 4th St. Present lack of use of frontage area south of Japanese gardens which is a picturesque spot.	Steepest grade from conceptual design is 4%. If half of trail width is on existing sand area then existing benches at top of sand area can stay in same location, preserving as much lawn/green space as possible.



Looking east



Gate access

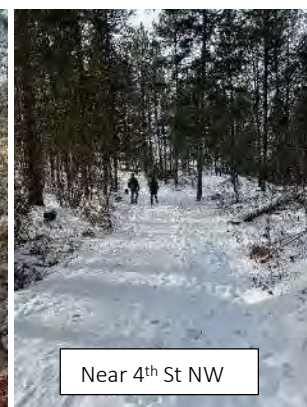
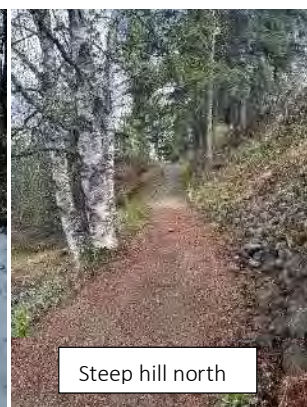
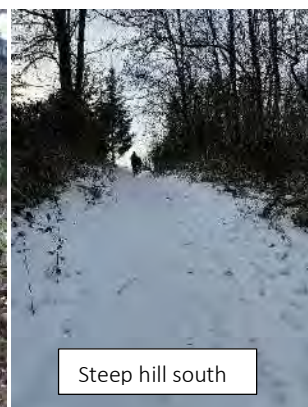
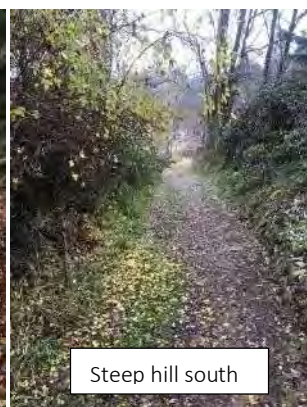
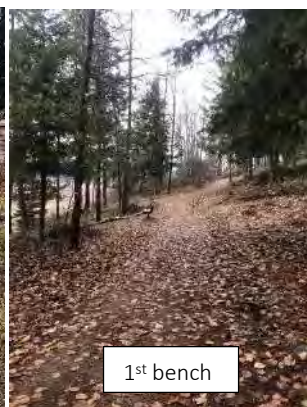
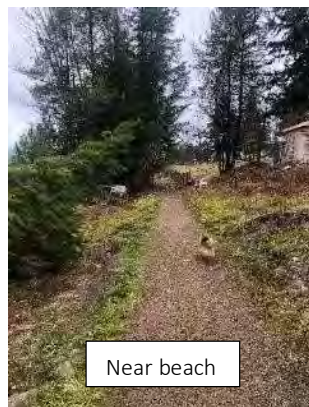


Looking east, beach level



Broadway, looking west

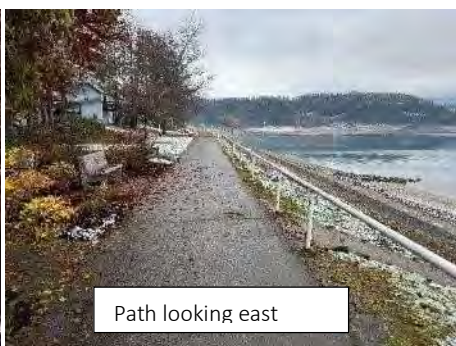
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
4a	Waterfront Trail Extension to 4th St NW	A. M2 standard	Switchback on Beach connection	4th St NW west end	Key trail segment of existing and proposed loop trails	M2 Standard Aggregate MUP - 2.5 to 3.0 m wide trail (2.0 m constrained width) - consider realigning trail to reduce steep, limiting dip section mid way. If this is done, leave existing trail intact for alternate route (some like the dip)	Connection to Kuskanax West Loop, connection to Neighbourhood Street Connections West and then to Rail Trail - all part of the wrap around Nakusp concept	Uneven surface due to erosion on steep slopes and issues with tree roots, steep grades (25% grade in and out of a dip midway) limit use and are very slippery and dangerous in winter time. The major dip in the trail prevents many potential users from using this route. Redesigned segments drop grade to maximum of 7% on north side of dip.	Property lines in vicinity of private path junction. There is potential to realign trail to reduce grade just north of this trail junction. Potential to leave both trail segments in place to give users a choice (some prefer steep!)



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
5	Waterfront Trail	A. M1 standard	Marina	Municipal park	Key village attraction, trail itself is accessible for most users but access to the trail is challenging. Waterfront Master Plan is in progress which will speak to trail design, Connect Nakusp budget includes estimate of future path and pavement only, and proposes new ramp midway at foot of 4th Ave (see Route 20).	Bidirectional/ undivided asphalt surfaced trail, increase width to 2.8 or 3.0(?) metres to accommodate more users and maintenance pickup truck access. Address limited approach improvements also to improve accessibility.	Public gardens and lake views, stairway accesses to lake. Amenities include benches, garbage cans and picnic tables, night lighting. Very popular walking route yet much more use could be promoted. Opportunities to improve access to east, west and midway points for All Ages & Abilities	Gaps to be further identified in Waterfront Master Plan effort. Few picnic table locations. Ramp maintenance at foot of 6th Avenue (below Save on Foods) is challenging in winter. Challenging access to the trail elevation from adjoining streets for reduced mobility users. Trail width is too narrow for pickup truck access, needs to be constructed wider.	Consultation information from this network plan to be passed on to Waterfront Master Plan team



Base of existing ramp



Path looking east

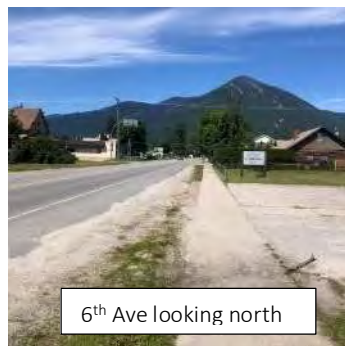


Path looking west



West entrance, steep grade

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
6	6th Avenue Pathways	A. East side of 6th Ave. - M1 standard	6th Ave/ 1st St	6th Ave/Hwy 23 north (bridge)	Safe main routes for pedestrians, cyclists and other users. The existing condition makes it awkward for travel and very limiting in winter. Would improve safety around schools and for pedestrian travel in vicinity. Could be an attractive feature that could also greatly improve village aesthetics on main access corridor to and through the village. Elements of the downtown revitalization could be applied to this route (landscaping and amenities). If improved it would be the main north south spine route.	On East side of 6th Avenue: Create new MUP with asphalt top, 2.5 to 3.0 m width, (2.5 m width + 0.6 m buffer + 3.0 m for parking or amenity) with possibility to add amenity strips and parallel parking areas south of schools to Broadway as needed. There are existing sidewalks on east side of road from Broadway north to schools, but condition is varied, let downs are inconsistent, and width is too narrow for shared use.	Intersections: Redesign intersection at 1st Street/6th Ave to put 6th Avenue cross walk on south side of 1st Avenue, consider adding zebra crossing at 2nd Street (main cross town route). 4th St School crossing requires some barrier realignments in consideration of proposed 6th Ave M1 trail and Route 1.	AT users are unsure about best and safest route along 6th Ave. Sidewalks are typically narrow (down to 1.1 m width compared to current bylaw of 1.8 m), with uneven surface. Buffer areas beside sidewalks are inconsistent. Parking is random along route. Curb let downs are inconsistent. Some collecting water in road shoulders during storms and melt. School children and parent safety issues walking on highway shoulders north of schools. Pedestrians, bikes and scooters occupy highway shoulders.	High potential to increase AT and improve infrastructure. Potential to mirror parts of Broadway redevelopment theme on this main north south conduit in Village, and to properly allow for parking along the route. If done well it would improve aesthetics and functionality of this route for AT users and other observers.



6th Ave looking north




6th Ave north towards schools



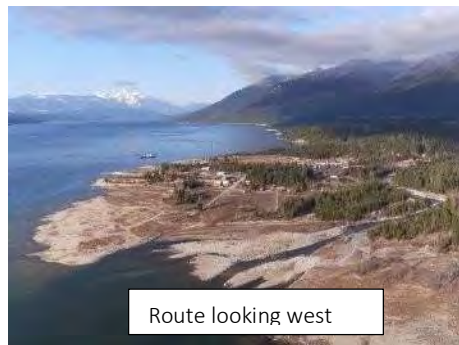
6th Ave north of schools



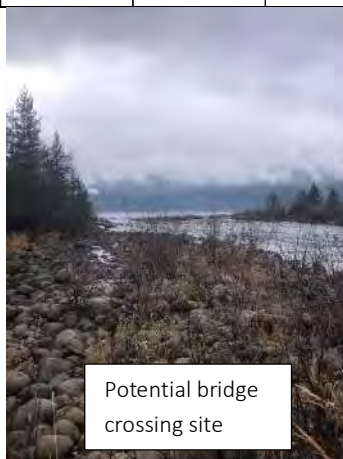
Winter challenges

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
6		B. - West side of 6th Ave. - B standard	Join with route 16 bike lane	6 th Ave / 1 st St	Dedicated bike lane southbound on 6 th Ave.	On West side of 6th Ave: Use shoulder from fog line outwards as a unidirectional bike lane. Add bike lane symbology and signage. This would still allow room for a buffer strip and parallel parking in many places on the outside of the shoulder area.	Bike lane on west side of road	Symbology needed	End bike lane at 1st Avenue. Start MUP pathway (M1 standard) on north side of 1st St (adequate sidewalk and curb and gutter between Broadway and 1st St...)
 <div data-bbox="94 548 546 889">6th Ave looking south</div> <div data-bbox="546 548 890 889">6th Ave / 2nd St looking south</div> <div data-bbox="890 548 1234 889">Hwy 23 bridge crossing</div> <div data-bbox="1234 548 1579 889">View from Hwy 23 hwy bridge looking west</div>									
7	Nest Trail	A. - M2 , PR standard	Kuskanax West loop	Future housing development lands in NW Nakusp	Proposed infrastructure that is an important for housing, active outdoor lifestyle, wise village growth.	Multi Use Path (MUP) aggregate surfaced trails, 2.5 to 3.0 metre width.	Concept trail to connect planned neighbourhood and provide AT connection to downtown Nakusp	Concept only	Part of future M2 trail network connecting residential housing to Nakusp. Easy grades for AAA access. Partnership potential with developer.

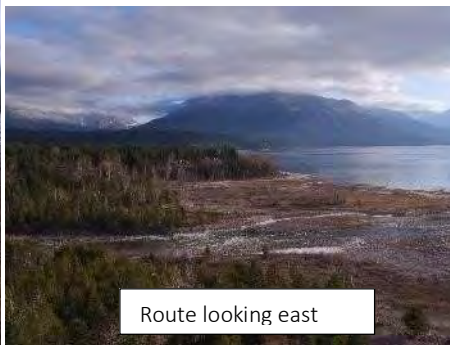
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
8	Kuskanax West Trail	A. From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point)	Waterfront Trail extension	Future Kuskanax West residential development	New proposed infrastructure that is an important for housing, active outdoor lifestyle, wise village growth.	M2 - Multi Use Path (MUP) aggregate surfaced trails, 2.5 to 3.0 metre width.	Kuskanax River crossing and connections to West Kuskanax trails. Includes Lower Kuskanax River crossing, concept suspension bridge similar to Zucherberg Island bridge (Castlegar) but with wider deck (2.0 m) to accommodate mobility devices.	Concept trail to provide AT connection from west of Kuskanax River to downtown Nakusp via Waterfront Trail Extension	Crosses crown provincial land, license of occupation and referrals to crown agencies and First Nations required. A great partnership project with First Nations as it traverses shoreline west of village core. Partnership potential with developer.



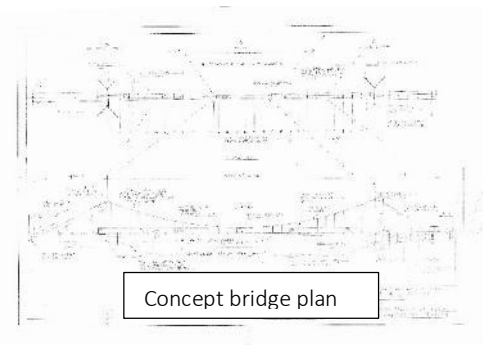
Route looking west



Potential bridge crossing site



Route looking east



Concept bridge plan

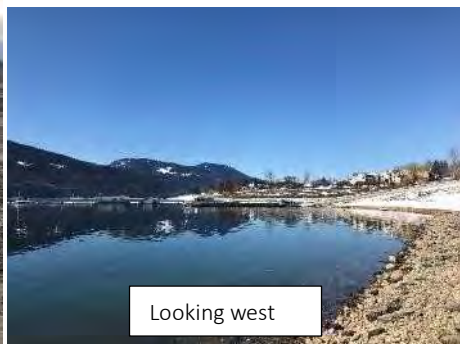
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
8		B. West Kuskanax River loop connection			Future loop connection to join to highway bridge on west side of Kuskanax River	W or M2 -walking / biking path, single or double track, natural surface with aggregate as required.		Concept trail, access negotiation with private land owner will be required to link up final section to Kuskanax Highway bridge	Spectacular walk in nature, would be very popular if constructed, making a bridge to bridge loop walk or ride in a beautiful setting.



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
9	Nature loop south	A. - W (walking path) standard	Marina	Municipal lands south	Walking route south of marina to enjoy underutilized municipal property for bird watching, lake and mountain views and perspective views back to Village. On public land it is seasonal access, but this makes an opportunity to have a seasonal paddle route from the marina to the "island" and "mainland" portions of the municipal property.	Seasonal walking trail, single or double track where possible, partially on historic road bed, part on natural ground. Add signage and wayfinding markers to improve route and avoid trespass on private lands.	Lakeshore riparian area and island, sand beaches when the lake level is favourable. Wildlife sighting and bird watching area.	Presently an informal wander route on the shore south of Nakusp, partly on old roadway when water level is down from full pondage. No signage or route information currently. Private land restricts public access except at lower reservoir level conditions. If trailhead is at top of boat ramp, then a stairway to the east should be incorporated to gain access to water level. Rock or concrete steps are recommended for durability with changing water levels.	To make all season would require easement or lease through private land and a significant infrastructure investment. Lower elevation route bypassing private land is seasonal depending on water level. However, great possibilities to have as a paddle route when water is high and destination island in the bay is above water. A great out and back destination for tourists and locals. Possible seasonal restrictions at bird nesting times?



Old causeway to island



Looking west



Island in winter

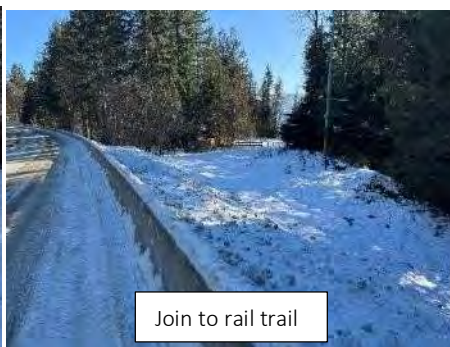
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
10	Upper Benches Connection	A. NSC then M2 standard from 4th St/ 3rd Ave northwards to rail trail	3rd Avenue and 4th St. east of elementary school	Rail Trail	Improve trafficability of existing pathway, provide safe access across (under) highway, and ultimately provide much easier route to upper benches. This would help to create an upper loop route in Nakusp.	Shared street standard where road is existing, otherwise M2Multi Use Pathway- Aggregate topped (2.5 to 3.0 m width). Grades would continue to be constraining for some uses/users.	Highway 6 underpass culvert, trail width, surfacing and potentially grade and surfacing improvements above and below Highway 6.	Improvements needed on path north of drivable pavement on 3rd avenue. Route is steep and therefore not universally accessible, however use would increase if improved and safe highway crossing established. South segment to rail trail/Hwy 6/truck bypass could be completed when rail trail is improved.	Surface water control needed to prevent erosion/washing of materials



3rd Ave trailhead

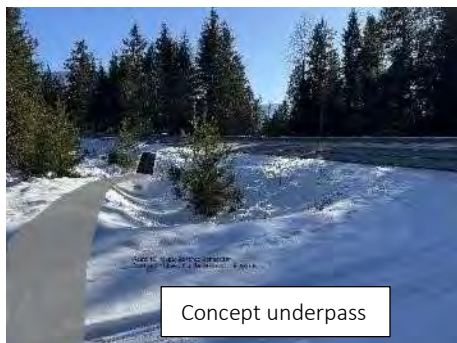


Looking north

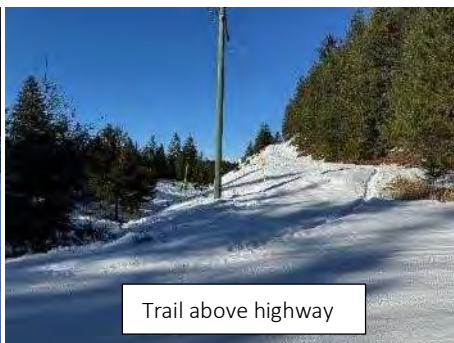


Join to rail trail

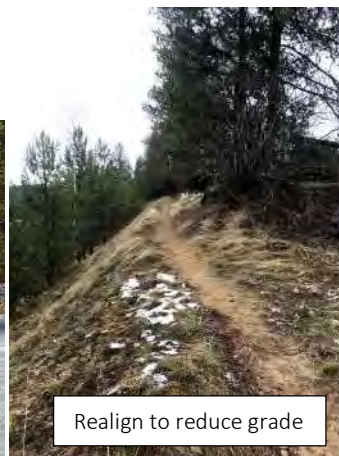
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
10		B. north of Highway 6 to connection with upper bench road system - M2 Standard	Rail trail	Upper bench areas and connections to RDCK	Semi accessible safe route to upper bench areas	Consider realigning trail above highway to reduce grade.	Better and safer connection from upper benches to Village	Existing route very steep above highway, with very sandy soils and poor trafficability unless surfaced with more granular materials.	Design and cost estimate for low cover box culvert underneath highway needed. Segment north of highway could be improved with realignment of existing trail. This was proven out by some basic fieldwork coupled with Lidar and Google Earth elevations.



Concept underpass



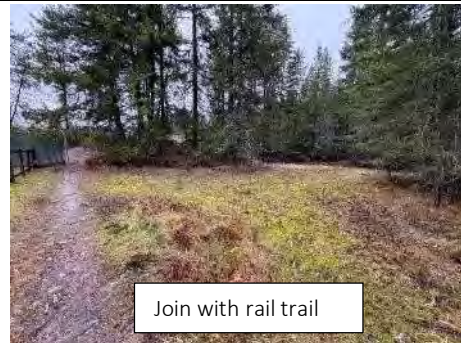



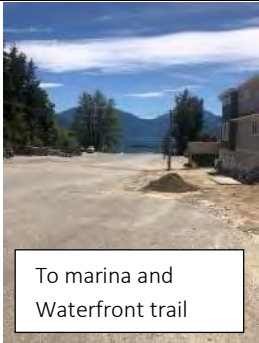
Trail above highway



Realign to reduce grade



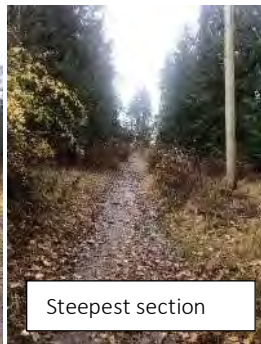
Glenbank trailhead

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
11	Neighbourhood Street Connections East	A. - NSC standard	Columbia Crescent	East Broadway and Marina	Quiet street connections to complete logical loop routes, traffic calming, safe route for schools commute and quiet, direct connection to downtown areas	Neighbourhood Street Connection /Shared street concept with some painted intersections on main routes, basic signage, and wayfinding using cap posts placed in convenient locations. New/ improved connection to rail trail.	Quiet streets, accessible grades, suggested 1st Ave/1st St zebra crosswalk, much more accessible approach route to east end or waterfront path and marina	People are unsure about quiet walking and riding routes through town and how to connect up to other existing trail routes. Basic mapping and wayfinding posts would help this. Existing connection to east end of Waterfront path needs alternate route.	Discuss with MOTT about a new painted crosswalk 1st/1st to see if it meets warrant. May need a pathway leading from proposed cross walk north and south.
    									

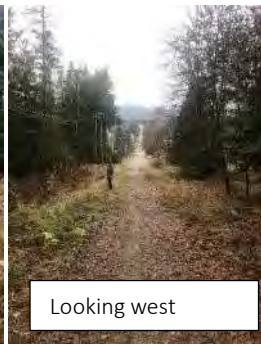
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
12	Hospital / Rail Trail Connection	A. - TC standard	Hospital	Rail Trail	Semi accessible connection from rail trail to hospital and downtown. For some people this could act as an alternative to travel on "government hill" Can connect to 2nd Ave NE	Aggregate surfaced MUP - 2.5 to 3.0 m wide trail, improve surfacing and surface drainage to limit maintenance requirements. Realign the junction with rail trail, improve signage. Grades would continue to be constraining for some many uses/users.	Improved subgrade and surfacing, better surface drainage	Existing steep grade (average 14% max 17%). Improved subgrade at junction with rail trail needed. Surface water control needed. Improved route signage needed including caution about trail grades/condition.	If slight grade changes made and resurfaced, some easily maintained surface drainage features would be beneficial. Consider belting design from USFS. Trail would remain steep but would be more trafficable with better surfacing. Longer term redesign to manage grades would have to be done under agreement with private land holder to the south.



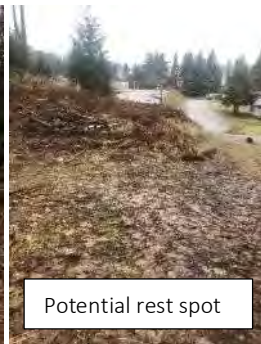
Join with rail trail



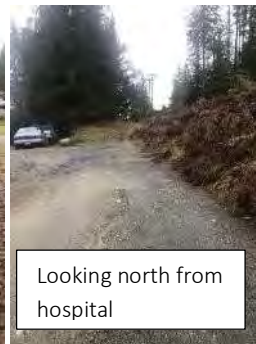
Steepest section



Looking west



Potential rest spot



Looking north from hospital

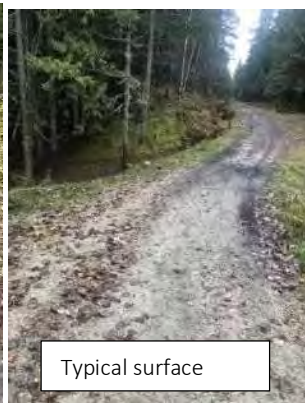
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
13	Rail trail (north truck bypass segment)	A. North of Nelson Ave, paralleling Hwy 6 (truck bypass route) - M2 standard.	6th Avenue/Hwy 6	South side of Nelson Ave intersection	A Key part of the wrap around trail, currently underutilized due to some steep grades, narrow and broken down pathway. If repaired and improved it would be a main spine route for AT traffic, a popular route for residents and tourists.	Aggregate topped multi use 2.5 to 3.0 m width, accessible grades with possibility to pave sections in the future, grade and accessibility improvements needed north of 2nd St (main intersection), these would immediately increase usage.	Main intersection Hwy 6/2nd Ave, improve grades and site distance of approaches. Realign trail north of Nelson Ave.	Trail needs subgrade and surfacing improvements. Realignment of some sections would markedly improve grades and enable use by most potential AT user groups. Issues with snow plowed onto trail from highway need to be resolved to enable year-round use. At Nelson Ave: Intersection islands and markings seem to function except for approaching site distance concerns which could be addressed by vertical realignment of trail (importing material and building up approaches on both sides of Nelson Avenue.	If improvements were done then the pathway would have to have snow removal plan that matches highway plowing to enable year-round use. Depends on proximity of trail to highway.



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
13	Rail Trail (south of Nelson Ave to golf course segment)	B. South of Nelson Ave, on historic rail grade to golf course - M2 standard	South side of Nelson Ave intersection	Golf course	Important spine of trail system and main wrap around loop trail	Aggregate topped multi use 2.5 to 3.0 m width, accessible grades. Motorized traffic along with AT users. Consider use of an aggregate binder to make a more durable but porous trail surface.	Fix subgrade, surface water issues and resurface south of Nelson Ave. An accessible connection with Gensick Road would improve the trail network. Future consideration for local government or trail group to negotiate private land access.	Trail needs spot subgrade repairs, restoration of trail and surfacing, and surface drainage improvements. Possible side barriers along newly repaired culvert section (steep side slopes). Currently some use of private land to access trail sections which will need permissions / easement or restricted access to limit liabilities.	Investigate and cost out aggregate additives to bond the trail surface and increase durability, considering that motorized and non-motorized users use this segment.



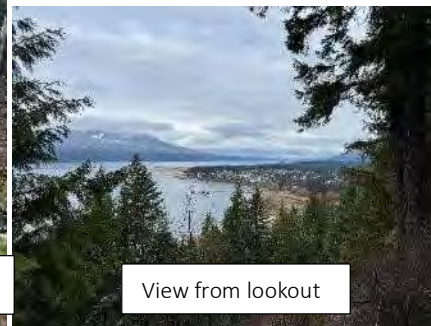
Typical surface



Typical surface



Narrow section, base of Zachs shortcut

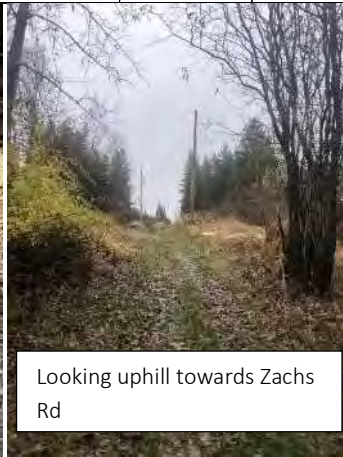


View from lookout

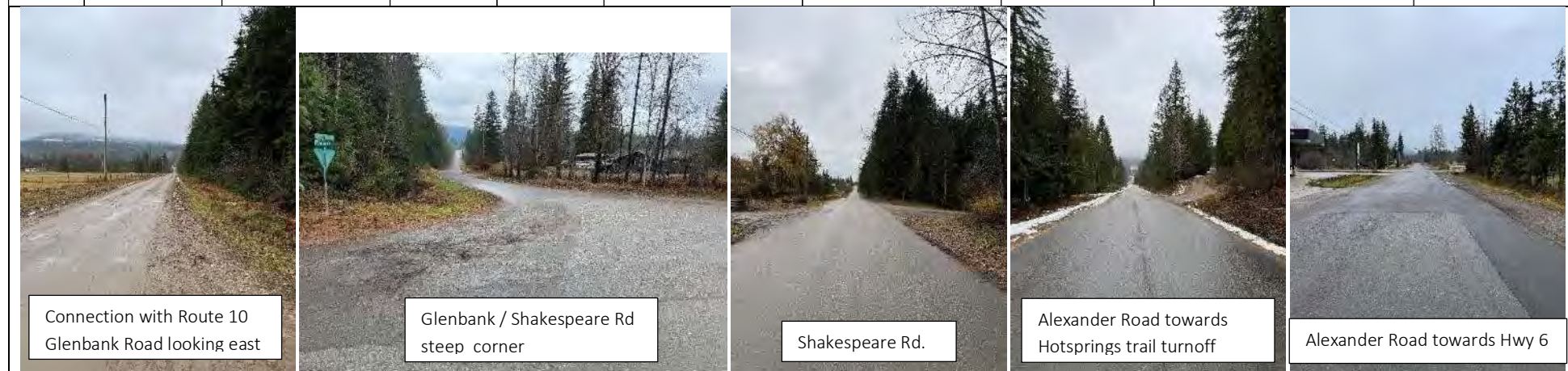


Private road crossing

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
14	Zachs / Rail Trail Connection	A. - TC standard	Hwy 6 /Zachs Rd	Rail Trail	Semi accessible connection from rail trail to Zachs Road / Hwy 6. For walkers and bikers, it could act as a short cut to the rail trail, thereby avoiding walking /biking on the shoulder of highway 6 (which is too narrow for considerable lengths)- would enable a separation from vehicle traffic.	slight realignment of trail possible to slightly reduce grade, improve to TC standard (i.e. steep M2 trail)	Hwy 6/Zachs road join and signage	Steep trail, native surface materials, muddy and slippery. Steep grade could be slightly improved, surfacing could be greatly improved to add all weather traction.	Interaction with private land boundary as trail is close to property (pin at edge of trail)



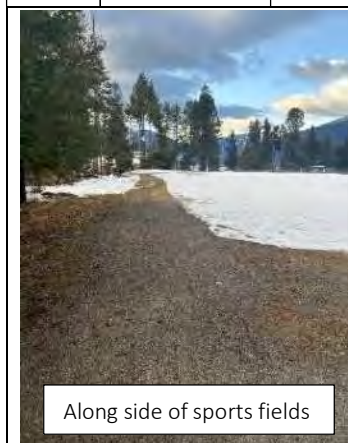
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
15	Neighbourhood Street Connections Upper	A. - NSC standard	Various locations on upper benches	Various connections to lower benches / Village core	Collector routes from upper benches. To provide quiet shared street connections.	Neighbourhood Street Connection/ Shared street concept with some route signage, capped posts showing basic destinations. Great potential for an extended loop route from proposed highway underpass to golf course / rail trail connection.		Some limited steep grades, tight corners and areas with limited site distance. Short cuts to lower benches / Nakusp core / connections to main trails could be improved to encourage AT use.	Private land agreement for potential future Gensick road connection could improve access to Rail Trail.



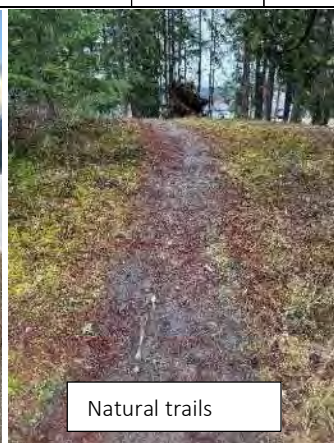
Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
16	Highway Shoulders	A. B standard	Hwy 23 north, Hwy 6 south and east sections near village	Hwy 23 north, Hwy 6 south and east sections near village	Wheeled and some possible shared AT routes on Hwy shoulders should increase driver awareness, calm traffic, improve AT user safety, and prioritize seasonal maintenance	Highway shoulders with standard bike symbology - marked for logical distances from Village - north to 23 St NW, east to Upper Brouse Road, south to Crescent Bay Road. Consider also shared use (pedestrians and bikes) on some sections which are already used by pedestrians. However, there are narrow shoulder areas where encouraging more use would not be advisable without structural improvements or separate pathway route.	Signage and symbology could be installed north, east, and south of Nakusp, and bike routes harmonized with other route types (Multi Use Pathways for example)	Narrow shoulders at some key locations on Highway 6 south and east. Improvements to rail trail connections would alleviate some issues for Hwy 6 east. Some potential to improve shoulder widths on Hwy 6 south to Crescent Bay Road. Future potential may be a separate MUP pathway south, although limited by topography. There are limited alternatives for pedestrians walking on Highway 6 shoulder south of Nakusp. If shoulders were widened a shared shoulder path may be appropriate. Harmonize highway bike routes with other pathways to offer alternative routes away from vehicles.	Potential usage of Highway shoulder or separated pathway for Hwy 6 south to Crescent Bay Rd? Note that from highway up (east) to residences also has steep grades.



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
17	Municipal Park Trails	A. W standard	Park entrance	Campground and adjoining streets	Internal municipal park trails to provide connectivity in and through park	Some existing aggregate surfaced multi use 2.0 to 3.0 m width coinciding with existing roads and trails, some grass or natural surfaced sections depending on season. Often snow cleared in winter making a very popular route for walkers and dog walkers.	No further work required beyond inclusion in AT network mapping, signage and maintenance. Signage according to Signage and Wayfinding plan is already underway or completed.	Not included in any existing trail information, yet well used by people, very popular for dog walking. Add to digital trail mapping / georeferenced map products.	Winter trail clearing and parking lot clearing results in considerably more seasonal park use. Dog users are generally respectful and pick up after their pets (personal observation).



Along side of sports fields



Natural trails



Winter clearing makes a popular daily destination for walkers



Woodsy side entrance



Main entrance

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
18	4th Avenue Sidewalks	A. S (sidewalk) standard	4th Ave / Broadway	4th Ave / 4th St	Continuous sidewalk on west side of street connecting Broadway St. with schools. Noted as an existing direct connection from schools to downtown.	No change suggested for sidewalks. Recent bylaw enforcement has resulted in vegetation clearing and better access. Curb let downs could be inspected and improved if there are accessibility concerns.	Potential to add cross walk at 4th Avenue / 1st St (Legion), presently a popular crossing. Would be a relatively easy lowcost improvement.	Not included in any existing trail information, yet is a safe route between schools and downtown. Include in mapped routes and add wayfinding posts. Popular crossing point at 1st St needs a crosswalk.	Bylaw enforcement regarding vegetation trimming has improved trafficability and use of sidewalk. Curb ramps could be looked at to see if sufficient.



Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
19	Broadway Street (Downtown Core)	A. S (sidewalk) standard -2.5 m width sidewalks both sides of roadway from Nelson to 6th Avenue. Narrower sidewalks both sides of roadway from 6th to 8th Avenue.	Nelson Ave	8th Avenue	Core downtown retail and services area where many routes lead to or originate from.	Infrastructure exists - sidewalks and amenities. Between 6th and 8th Ave were recently repaired / improved surface.	Additional bench installation between Halcyon Home and post office. Additional bike racks at locations TBD.	Concerns about walking distance without bench from Halcyon Home to post office has been voiced in past consultation. Also bike racks in furnishing zones could be added in key locations. Survey mentioned trimming vegetation in summer for sight distance. pedestrian visibility. This speaks also to traffic calming need at east end of Broadway. (Narrowing proposed at 1 st Ave/Broadway)	The downtown core after revitalization efforts gets many compliments from visitors (personal observations) and residents. Can inspire other routes, possibly along 6 th Ave?



Bench style



Bike stand in furnishing zone




Wide sidewalks



Summer full bloom



Trains and trails

Route #	Route/Trail Common Name	Logical segments and standards	Start	End	Purpose/Rationale	Suggested Trail Standards - Detail	Key features existing or proposed	Gaps/Issues	Details / questions
						Wide sidewalks			
20	Avenue Connections to Waterfront	A. Route 20 is defined as the sidewalks, stairways and ramp(s) south of Broadway, these features are individually coded in the geodatabase	Avenues South of Broadway	Waterfront Path	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave)	Sidewalks and stairs would be periodically inspected and replaced or improved. An accessible connection to the mid point of the waterfront trail at the Spicer Gardens would be beneficial.	Additional ramp structure at waterfront trail midpoint.	Potential to improve AAA access to mid points of Waterfront Trail. East and west ends are improved with potential routes #4 and #11. Typical challenges with winter maintenance - limited capacity and many priorities in Village when it snows so existing ramp and pathway can take time to clear.	Concept ramp design completed to prove out possible grades and widths. See on Route #20 multiplot.
 <div>Potential location for additional ramp – see multiplot</div> <div>South end of 4th Ave.</div> <div>West waterfront path entrance, steep grade</div> <div>Most Avenues have connecting stairways</div>									

Proposed Connect Nakusp trail standards

The purpose of developing trail standards is to provide guidance for Nakusp that is based on known and proven standards, research of existing infrastructure, and the needs of the community. Connect Nakusp proposed trail standards are based on:

- Public consultation efforts which identified needs and suggestions,
- A field examination of all existing local trail infrastructure,
- Recommended design information based on universal design and available design guides and drawings.
- Research of previous trails reports, and reports from other communities
- Conceptual design to test standards against local topography

Trail Standards

The following tables list proposed trail types and a range of standards criteria for each type. These proposed standards will provide basic benchmarks for future trail construction, reconstruction and maintenance. The goal is to provide a range of quality AT infrastructure constructed to similar and predictable standards – helping to create a safe and efficient network that will endure well over time.

Table 8 – Proposed Connect Nakusp AT Network Trail Standards

CONNECT NAKUSP NETWORK TRAIL STANDARDS													
Standard	Description	Divided	Directional	Desirable Width (m) range	Constrained Width (m)	Buffer Width (m)	Surface Type	Grade Range Goal (%)	Grade Max (%)	Clearing Width (m)	Clearing Height (m)	All Ages & Abilities Access?	Seasonal Access Constraint?
M1	Multi Use Pathway (MUP) hard surface	Undivided	Bi Directional	3.0	2.7	0.6 - 2.0	Asphalt preferred	0-3	5	5.0	3.6	yes	no
M2	Multi Use Pathway (MUP) aggregate surface	Undivided	Bi Directional	3.0	2.0 (v. limited and signed as single file)	0.6 - 2.0	Well graded aggregate, well compacted, possible binder used	0-4	5	5.0	3.6	yes	no
M3	Multi Use Pathway (MUP) painted on roadway	Undivided	Bi Directional	3.0	2.7	0.6 - 2.0	Painted on Asphalt or concrete	0-3	5	5.0	open sky	yes	no
B	Bike lane on Road Shoulder	Undivided	Unidirectional	1.5-1.8	1.2	0 - 0.6	Asphalt or concrete	0-8	12	n/a	open sky	no	no
NSC	Neighbourhood Street Connection	Undivided	Bi Directional	variable	variable	n/a	Asphalt typical	0-3	8	18-20	open sky	yes	no
W	Walking Trail	Undivided	Bi Directional	0.6 -1.5	0.5	0.3	Natural with some aggregate sections as needed	0 -20	30	2.0	3.0	no	yes
S	Sidewalk	Undivided	Bi Directional	1.8 -2.5	1.35	0 - 1.5	Concrete	0-3	8	2.0 -5.0	3.0	yes	no
TC	Trail Connections	Undivided	Bi Directional	1.5 - 3.0	1.0	0 - 0.3	Well graded aggregate, occasional remnant asphalt	0 -15	20	5.0	3.6	no	maybe
R	Ramp (Accessible) with grade breaks	Undivided	Bi Directional	1.8 - 2.5	1.8	n/a	Asphalt or concrete	0-6	8	n/a	3.6	yes	no

Definitions:

Divided- is the trail / pathway is bisected with a centre line or other means.

Directional – Direction of Travel (bidirectional = 2 way, unidirectional =1 way travel).

Constrained width – used when space limitations exist, and minimized as much as possible.

Buffer Width- horizontal distance between trail edge and adjacent features, could be width of vegetated strip or painted buffer.

The following figure illustrates standard trail terms, some features are exaggerated to help clarify terms.

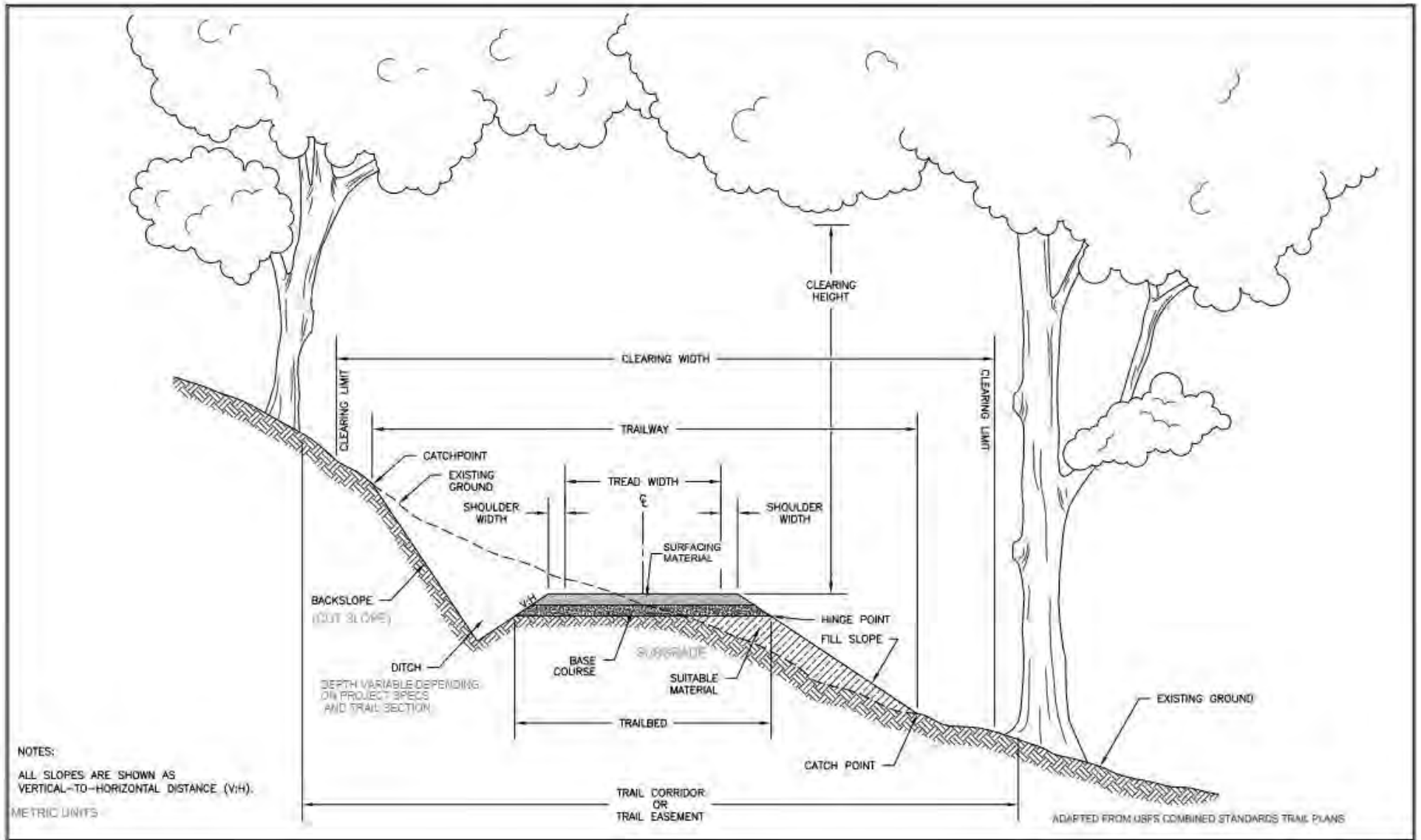


Figure 41 - Standard Trail Terms, Adapted from USFS Combined Standard Trail Plans

Trail Surfacing standards

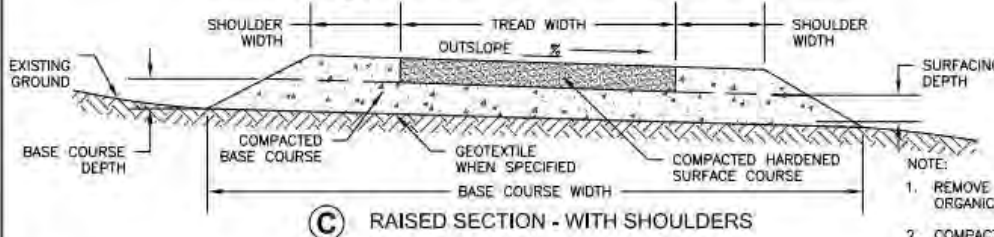
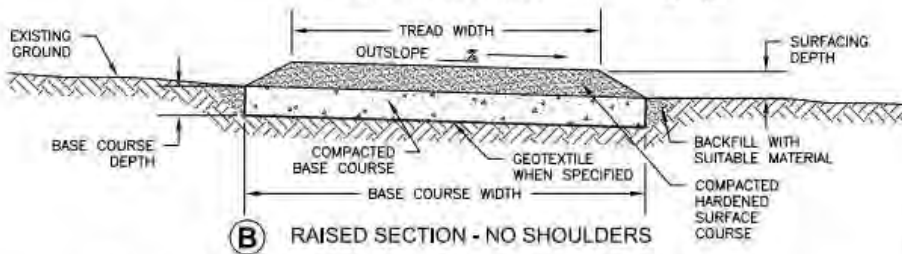
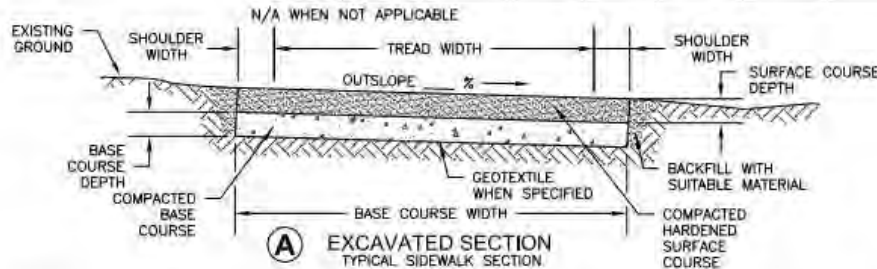
The following figure and table show recommended surfacing standards, based on common trail and municipal standards. Aggregates must be uniformly compacted to specifications prescribed by an engineer.

Table 9 – Proposed Surfacing Standards for Connect Nakusp AT Trail Network

CONNECT NAKUSP AT TRAIL STANDARDS DETAIL - SURFACING					
Standard	Path Description	L1 Surface material	L1 Surface Depth	L2 BASE (25mm product) depth	L3 SUB BASE (75mm product) depth
M1	Multi Use Pathway (MUP) hard surface	Asphalt	50mm	100mm	150mm+
		Concete	100mm	100mm	150mm+
M2	Multi Use Pathway (MUP), compacted aggregate surface	Cart path type aggregate (12mm minus crusher screenings)	50mm	100mm	150mm+
M3	Multi Use Pathway (MUP) painted on hard surface roadway	Existing asphalt or concrete	n/a	n/a	n/a
B	Bike lane painted on hard surface road shoulder	Existing asphalt	n/a	n/a	n/a
NSC	Neighbourhood Street Connection - existing asphalt	Existing asphalt	n/a	n/a	n/a
W	Walking Trail - natural surface and grade with some stabilized sections	Natural with some aggregate sections as needed	n/a	as/if needed for trafficability	as/if needed to stabilize subgrade
S	Sidewalk	Concrete	100mm	100mm	150mm+
TC	Trail Connections - compacted aggregate surface or remnant asphalt	Cart path type aggregate (12mm minus crusher screenings)	50mm	100mm	if required 150mm+
R	Ramp (Accessible) - hard surface with railings	Asphalt	50mm	100mm	150mm+
		Concrete	100mm	100mm	150mm+
Note: L1,L2,L3 specs are compiled from existing bylaws, trail standards, municipal standards, and are to be specified by project engineer					

The following figures illustrate surfacing terms and dimensions for adaptation and use to inform implementation contracts. They are part of a suite of typical drawings in *Appendix G – Typical Drawings Collection*.

HARDENED SURFACING SECTIONS

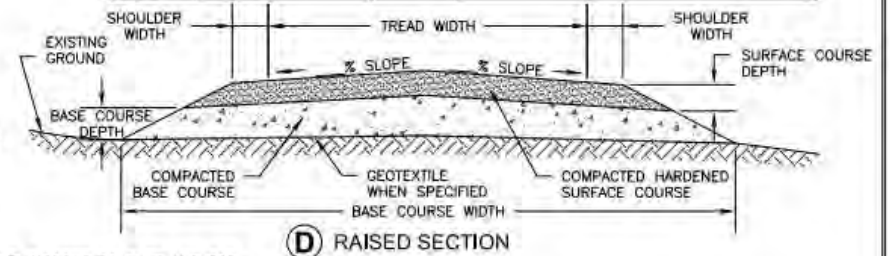
[illegible]

BASE COURSE MATERIAL TYPE

TYPE	MATERIAL	GRADATION	COMMENTS
B1			
B2			
B3			

HARDENED SURFACE COURSE MATERIAL TYPE

TYPE	MATERIAL	GRADATION	COMMENTS
HS1	HOT ASPHALT		
HS2	COLD ASPHALT		
HS3	WARM ASPHALT		
HS4	BST - CHIP SEAL		
HS5	STABILIZED AGGREGATE		
HS6	CONCRETE		
HS7			



- NOTE:
1. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.
 2. COMPACT BACKFILL IN 15 cm. LIFTS UNTIL NO VISUAL DISPLACEMENT.

NOTE: ADAPTED FROM USFS STANDARD COMBINED TRAIL PLANS

Figure 42 - Hard Surface Sections, Adapted from USFS Standard Combined Trail Plans

SURFACING SECTIONS

TYPICAL ID	SECTION TYPE	TREAD WIDTH	SHOULDER WIDTH		GEOTEXTILE TYPE	BASE COURSE		SURFACE COURSE		COMMENTS
			UPHILL	DOWNHILL		TYPE	DEPTH	TYPE	DEPTH	

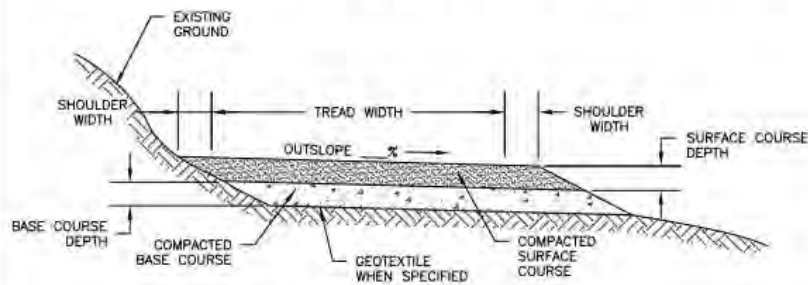
N/A WHEN NOT APPLICABLE

BASE COURSE MATERIAL TYPE

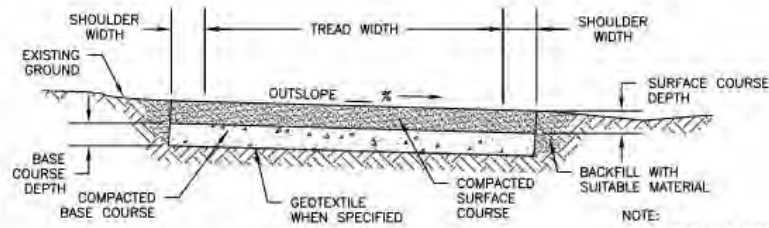
TYPE	MATERIAL	GRADATION	COMMENTS
B1	PITRUN		
B2	AGGREGATE		
B3			

SURFACE COURSE MATERIAL TYPE

TYPE	MATERIAL	GRADATION	COMMENTS
S1	PITRUN		
S2	AGGREGATE		
S3	CLAY		
S4	WOODCHIPS		
S5			

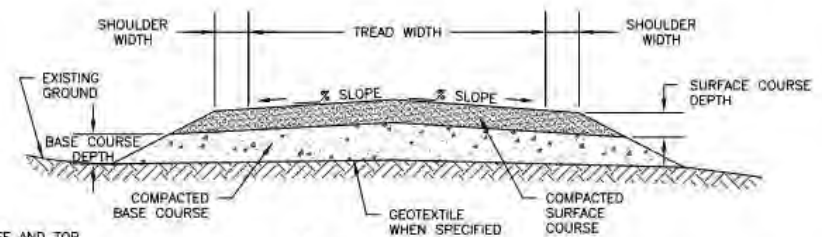


A OUTSLOPED SECTION



B EXCAVATED SECTION

- NOTE:
1. REMOVE AND DISPOSE OF DUFF AND TOP ORGANIC LAYERS DOWN TO MINERAL SOIL.
 2. COMPACT BACKFILL IN 6 INCH LIFTS UNTIL NO VISUAL DISPLACEMENT.



C RAISED SECTION

ADAPTED FROM USFS COMBINED STANDARD TRAIL PLANS

Figure 43 – Aggregate surfacing sections, adapted from USFS Combined Standard Trail Plans

Network Budget Summary – By Segment and Route

A budget summary was rolled up from a comprehensive overall project budget in *Appendix E – Network Data Table*. The purpose of the budget is to help inform project prioritization and fund-raising efforts. The project budget framework is updatable as new and better information becomes available.

Table 9 – Network Budget Summary by Segment and Route

Connect Nakusp AT network plan - Budget Summary by Segment and Route (routes are not numbered by priority)					
Route	Segment	Common Name	Description / Goals	Segment Cost	Route Cost
1		Schools to Park and Beach	Create a safe route from schools to Park and Beach		
1	A	School Frontage on 4th St - 4th St to 8th St	School frontage pathway and 4th St/6th Ave crossing improvements	\$152,799	
1	B	8th Avenue (4th St to Broadway) Crosswalk and Pathway	Zebra crosswalk and painted Pathway to Park	\$8,760	\$161,559
2		2nd Street Crosstown Route	Create a quiet street east west route from Rec Centre to Hospital		
2	A	Rec Centre 2nd St /8th Avenue to 1st St/1st Ave	Rec Centre to 1st St/1st Ave - crosswalk and wayfinding signage	\$5,100	
2	B	1st St/1st Ave past Village office to Hospital	Create a wider pathway for multi use and a safer crossing of Nelson Ave.	\$54,204	\$59,304
3		Neighbourhood Street Connections West	Create a quiet street route with connections to loop trails		
3	A		Wayfinding sign posts, signage	\$5,400	\$5,400
4		Waterfront Trail Extension to Beach	Improve beach accessibility, use of space, and connectivity between Waterfront Path and points west with a hard surface path		
4	A	Pathway extension - new construction		\$190,627	\$190,627
5		Waterfront Trail	Widen / replace aging pathway to better accommodate multi uses and maintenance vehicles		
	A	Pathway replacement		\$254,692	\$254,692
6		6th Avenue Pathways	Redesign and add multi use pathway and bike lane to themain north / route in Nakusp		
	A	Multi Use Path (MUP) east side of 6th Ave from 1st St to truck bypass	Create a wide hard surface pathway to replace and widen existing sidewalks with allowance for parking, landscaping and amenities, to provide main north south connectivity through Nakusp.	\$435,686	

Connect Nakusp AT network plan - Budget Summary by Segment and Route (routes are not numbered by priority)					
Route	Segment	Common Name	Description / Goals	Segment Cost	Route Cost
	B	Bike lane west side of 6th Ave	Create a south bound bike lane to provide a safer riding experience south bound. North bound bikes could elect to use MUP on east side, or ride on the east road shoulder.	\$9,135	\$444,821
7		Nest Trail	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route		
	A	M2 Multi use trail to future neighbourhood	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core	\$86,121	\$86,121
8		Kuskanax West route	Construct an all ages and abilities AT pathway to connect future neighbourhood with downtown core via Kuskanax West route - including lower bridge crossing on Kuskanax		
	A	From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point) future neighbourhood west of Kuskanax River on former industrial lands.	AAA pathway from existing waterfront trail to trailhead west of Kuskanax River	\$1,699,155	
	B	West Kuskanax River loop connection	AAA pathway up west edge of river from bridge to bridge	\$126,423	\$1,825,578
9		Nature loop south	Seasonal nature walk or paddle to underused municipal lands south of Nakusp		
	A	From Marina to south municipal lands (island then mainland)		\$35,505	\$35,505
10		Upper Benches Connection			
	A	From 4th St/ 3rd Ave northwards to rail trail	Some existing roadway, then an unmaintained trail north to railway grade (on historic roadway)	\$44,404	
	B	From rail trail north to Upper benches via highway underpass	Construct a highway underpass, realign existing trail to abandoned road grade to provide lower grade connectivity	\$281,800	\$326,204
11		Neighbourhood Street Connections East	Wayfinding sign posts and improved access to rail trail		

Connect Nakusp AT network plan - Budget Summary by Segment and Route (routes are not numbered by priority)					
Route	Segment	Common Name	Description / Goals	Segment Cost	Route Cost
	A	Quiet street connections east of 6th to Broadway and Marina		\$26,725	\$26,725
12		Hospital / Rail Trail Connection	Semi accessible (steep) connection from rail trail to hospital and downtown		
	A		Improve rail trail junction, improve surfacing and install surface water drainage structures	\$55,149	\$55,149
13		Rail trail			
	A	Truck Bypass trail paralleling Hwy 6 south of Nelson Ave	North of Nelson Ave, paralleling below Hwy 6 (truck bypass route) upgrade to M2 standard by horizontal and vertical alignment to improve grades, widen trail and improve surface condition.	\$349,369	
	B	Rail trail from Nelson Ave. to golf course	South of Nelson Ave, on historic rail grade to golf course - bring to M2 standard by periodic subgrade repair, resurfacing and compaction. Consider aggregate additive to improve final surface and improve durability.	\$284,877	\$634,246
14		Zachs / Rail Trail Connection	Improve semi- accessible (steep) trail, add surfacing to improve short cut trail		
	A			\$14,564	\$14,564
15		Neighbourhood Street Connections Upper	Neighbourhood Street Connection/ Shared street concept with some route signage, sign posts showing basic destinations. Potential for an extended loop route from proposed highway underpass to golf course / rail trail connection.		
	A			\$7,200	\$7,200
16		Highway Shoulders Bike Paths	Paint bike lanes and symbols on highway shoulders leading in and out of Village with the purpose of improving bike safety and warning and calming vehicles		
	A			\$37,740	\$37,740
17		Municipal Park Trails	Document and map the frequently used existing trails in park, and improve wayfinding		
	A			\$7,200	\$7,200

Connect Nakusp AT network plan - Budget Summary by Segment and Route (routes are not numbered by priority)					
Route	Segment	Common Name	Description / Goals	Segment Cost	Route Cost
18		4th Avenue Sidewalks	Add some wayfinding posts, add cross-walk at 1st St and 4th Ave.		
	A			\$3,450	\$3,450
19		Broadway Street (Downtown Core)	Add a rest stop and bench between 7th and 8th.		
	A				
20		Avenue Connections to Waterfront	Route includes the stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave) - Add a ramp with railings at the south end of 4th Ave.		
	A			\$82,268	\$82,268

Implementation Plan / Recommendations

Roles and Responsibilities

Previous plans pointed to a central committee or umbrella organization to facilitate trail work. Possible reasons this has not happened include lack of Implementing the Connect Nakusp network project, or portions of it, will be a large and complicated effort that requires energy, experience and a good network to carry out with success. Due to time and energy constraints, relying on volunteers or people who are not completely invested in the project will very likely not result in a timely or successful conclusion. This is a large, multi year task for which there may be periodic grant funding available – so it justifies a paid coordinator position or implementation contractor contracted by local government.

(could be by Village and Regional District, or one alone). Roles of the coordinator/contractor would be to champion and manage the entire process including:

- Fine tune priorities depending on shifting needs of the community
- Coordinate and/or undertake grant applications for funding to carry out works
- Coordinate with existing community groups and volunteers to optimize collective effort in creating the Connect Nakusp network.
- Coordinate contracts, tendering and contractors for implementing works.
- Manage and coordinate supervision and infrastructure inspections.
- Source resources (with a focus on local resources) to carry out construction and maintenance works - in the spirit of community self sufficiency and capacity building
- Report goals and progress to village staff and council
- Determine and carry out means of measuring future trail usage.
- Communication and consultation with the public.

Harmonizing existing and future Village Plans

Going forward, harmonization between different plans will be necessary:

Village of Nakusp and RDCK bylaws.

Zoning and development plans (as/when needed).

OCP changes as/when needed.

Wayfinding and Signage Plan (completed).

Waterfront Master Plan (tendered, in development).

Project Prioritization

The routes identified are part of a comprehensive AT network for the village and surrounding area. The amount of capital, time and capacity required to carry out the entire network project will be significant and probably daunting. Like any large project, it is recognized that prioritization is necessary to stage or phase implementation funding efforts and construction.

An implementation decision framework was developed as a starting point in this project – the framework can be changed or fine tuned as needed in the future. Partnerships that are developed or lost may impact this greatly over time.

The framework is based on the following criteria:

Public Benefit and Impact (High, Moderate, Low). What is the overall benefit and level of impact to the community.

Strategic Alignment with Vision and Goals (H,M,L). How well does the project align with the overall trail vision and goal statements.

Public Reach (Residents and visitors), (H,M,L). How wide ranging are the perceived benefits within the community. Does the project help certain groups and not others, or are the benefits more wide ranging amongst the community.

Project readiness (Now=H, 1-2 years=M, 3 years+ = L)

Ability to mitigate/manage the project risks, downsides, and complexities (H,M,L). all projects will have risks, downsides and complexities. This can change over time as solutions are developed or present themselves.

Ease of funding. Relative ease of fund raising for the project, broken into broad categories of 0-\$100k – High, \$100-500k Medium, greater than 500K, Low

Ease of future maintenance (H,M,L). Cost and logistics of future maintenance efforts compared to present state.

Overall Priority for Implementation (H,M,L, or combinations, ie H-M,M-H, etc). Cumulative rating of all categories.

Table 10 - Implementation Priority Decision Framework

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H,1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
1	Schools to Park and Beach	Safe connection for school children and AT users to reach park and beach, designated path past ESB, Seniors Centre and Rec Centre parking lot	A. 4th St. NW School frontages - M1 standard pathway (2.0 m width)	H	H	M-H	M	M	M	M	M-H	\$ 152,799
1			B. 8th Avenue -M3 standard pathway (3.0 m width - painted)	H	H	H	H	H	H	M	H	\$ 8,760
2	2nd Street Crosstown Route	Cross town east-west connector, rec centre to hospital with connections to Marina / waterfront trail	A. Rec Centre to 1st St / 1st Ave - NSC standard route	H	H	H	H	H	H	H	H	\$ 5,100
2			B. 1st St/1st Ave. to Hospital - M1 standard pathway (2.5 m width)	H	H	M	M	M	H	H	H-M	\$ 54,204
3	Neighbourhood Street Connections West	Quiet street connections to complete logical loop routes, on public lands, along quiet streets.	A. entire route - NSC Standard	M-H	H	H	H	H	H	H	H	\$ 5,400

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H,1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
4	Waterfront Trail Extension to Beach	New trail construction to provide accessible connection to public beach and points west	A. - M1 standard (2.8 m width)	H	H	H	M	H	M	M	H-M	\$ 190,627
4a	Waterfront Trail Extension to 4th St NW	Key trail segment of existing and proposed loop trails	A. M2 standard	H	H	H	M	H	M	M	H-M	\$ 109,034
5	Waterfront Trail (speaking to eventual widening and repaving)	Key village attraction, trail itself is accessible for most users but access to the trail is challenging.	A. M1 standard	H	H	H	L	H	M	M	M-H	\$ 254,692
6	6th Avenue Pathways	Safe main AT route for pedestrians, cyclists and other users.	A. East side of 6th Ave. - M1 standard	H	H	H	M	M	M	M	M-H	\$ 435,686
6		Bike lane west side of 6 th Ave	B. - West side of 6th Ave. - B standard	M	H	M	H	M	H	M	M-H	\$ 9,135
7	Nest Trail	Neighbourhood connections, important for housing, lifestyle, Village growth	A. - M2 , PR standard	M	H	M	L	M	H	M	M-L	\$ 86,121

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H,1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
8	Kuskanax West Trail	AT connection to future housing projects, important for housing, lifestyle, Village growth	A. From the Waterfront Path extension to end of 16th Ave NW (Kuskanax Point)	H	H	H	L	M	L	M-L	M	\$ 1,699,155
8			B. West Kuskanax River loop connection	H	H	M	L	M	M	M-L	M	\$ 126,423
9	Nature loop south	Walking route south of marina to enjoy underutilized municipal property for bird watching, lake and mountain views and perspective views back to Village.	A. - W (walking path) standard	M	H	M	M	M	H	H	M-H	\$ 35,505
10	Upper Benches Connection	Improve trafficability of existing pathway, ultimately provide friendlier route to upper benches	A. NSC then M2 standard from 4th St/ 3rd Ave northwards to rail trail	H	H	M	L	M	M	M	M	\$ 44,404
10		Semi accessible safe route to upper bench areas	B. north of Highway 6 to connection with upper bench road system - M2 Standard	M	H	M	M	M	M	M	M	\$ 289,300

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H,1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
11	Neighbourhood Street Connections East	Trail connections to complete logical loop routes, traffic calming, safe route for schools commute and quiet connection to downtown areas	A. - NSC standard	H	H	H	H	H	H	H	H	\$ 26,725
12	Hospital / Rail Trail Connection	Semi accessible connection from rail trail to hospital and downtown	A. - TC standard	H	H	M	H	H	H	M	H-M	\$ 58,899
13	Rail trail (north truck bypass segment)	A Key part of the wrap around trail, currently underutilized due to some steep grades and poor track. Could be a main spine for AT traffic.	A. North of Nelson Ave, paralleling Hwy 6 (truck bypass route) - M2 standard.	H	H	H	H	H	M	M	H-M	\$ 349,369
13	Rail Trail (south of Nelson Ave to golf course segment)	Important spine of trail system and main wrap around loop trail	B. South of Nelson Ave, on historic rail grade to golf course - M2 standard	H	H	H	H	H	M	M	H-M	\$ 277,677
14	Zachs / Rail Trail Connection	Semi accessible connection from rail trail to Hwy 6, to separate AT from vehicle traffic	A. - TC standard	H	H	M	H	H	H	M	H-M	\$ 14,564

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H,1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
15	Neighbourhood Street Connections Upper	Collector routes from upper benches	A. - NSC standard	H	H	M	H	H	H	H	H	\$ 7,200
16	Highway Shoulders	Wheeled AT routes on Hwy shoulders will increase driver awareness, calm traffic, improve user safety, prioritize seasonal maintenance, and calm traffic	A. B standard	H	H	M	M	M	H	M	M-H	\$ 37,740
17	Municipal Park Trails	Internal municipal park trails to provide connectivity in and through park	A. W standard	H	H	H	H	H	H	M	H	\$ 7,200
18	4th Avenue Sidewalks	Continuous sidewalk on west side of street connecting Broadway St. with schools – add crosswalk	A. S (sidewalk) standard	H	H	M	H	M	H	H	H-M	\$ 3,450

Route #	Route/ Trail Common Name	Detail/Purpose/ Rationale	Logical segments and standards	IMPLEMENTATION PRIORITY DECISION FRAMEWORK								Estimated cost rolled up from concept budget
				Public Benefit and Impact	Strategic Alignment with Vision and Goals	Public Reach (Residents and visitors)	Project readiness (now=H, 1-2 years =M, 3years+ = L)	Ability to mitigate/ manage project complexities, risks	Ease of funding <100k = H 100-500k = M >500k = L	Ease of future maintenance Easy=H Moderate=M Hard=L	Overall Present Priority for Implementation	
19	Broadway Street (Downtown Core)	Core downtown retail and services area where many paths lead to or originate from. -Add amenities including one bench at west end, and bike racks locations TBD	A. S (sidewalk) standard -2.5 m width sidewalks both sides of roadway from Nelson to 6th Avenue. Narrower sidewalks both sides of roadway from 6th to 8th Avenue.	H	H	M	H	M (TBD bike rack locations)	H	H	H	\$ 15,750
20	Avenue Connections to Waterfront	Stairways and ramp structures to provide access to Waterfront Path elevation from south end of Avenues (1st Ave to 7th Ave)- Construct a new AAA ramp from 4 th Ave to waterfront path.	A. Route 20 is defined as the sidewalks, stairways and ramp(s) south of Broadway, these features are individually coded in the geodatabase	H	H	H	H	M-H (proximity to private land)	H	M	H	\$ 82,268

Implementation Phases

Depending on funding availability and capacity to carry out projects, implementation projects could be grouped and phased. Grouping may make implementation more favourable for some segments. Some examples of logical groups of projects examples are:

Waterfront trail (Route 5) and connections (Routes 4 and 4a)

Rail trail (13a and 13b) and trail connections (Routes 12,14)

Schools to Park and Beach (Route 1) and 6th Ave Pathways (Route 6)

Upper benches (Route 10) with Upper NSC (Route 15)

Future Assessments and professional reports

The following are examples of reports and assessments which may be needed as part of the implementation phase.

- Civil Engineering – detailed trail design, harmonize works with existing infrastructure.

- Quantities surveyor / estimator to fine tune / update budget costs.

- Local planning / bylaw examination to ensure civic compliance

- Seek permissions / permitting with the Province

 - Ministry of Transportation and Transit (MOTT) – for design and works within MOTT property

 - Ministry of Forests, Lands, Natural Resource Operations (FLNRO) – Licenses of Occupation for crown provincial trail segments (example Route 8)

- Drainage Plans

- Cultural Heritage assessment

- Archaeological assessment and /or Chance Find procedure development

- Geotechnical Engineering

- Traffic Engineering and Design

- Electrical engineering / technician for lighting and other electrical needs

- Other assessments as required

Implementation Funding Sources

These are some of the potential grant fund sources for Active Transportation. In addition, facets of the projects that interface with other project types or sectors may be eligible for different grant funding sources. Partnering with other organizations and groups will be critical in realizing funds for implementation.

Table 11 - AT trails Implementation Funding Sources

Organization	Grant Name	Description	Website/Contact info
FEDERAL			
Infrastructure Canada	Active Transportation Fund	Fund closed but similar ones may be developed	https://housing-infrastructure.canada.ca/
Government of Canada	Canada Community Building Fund	Community Works Fund stream	https://www.ubcm.ca/ccbf
Federation of Canadian Municipalities (FCM)	Green Municipal Fund	Some facets of project may fit under Net Zero Transformation envelope or other envelopes.	https://greenmunicipalfund.ca/
PROVINCIAL			
BC Ministry of Transportation and Transit (MOTT)	BC-Active Transportation Infrastructure Grants Program	Intakes are generally in September - for shovel ready projects.	https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/active-transportation-infrastructure-grants#chapter-actions
Province of BC	Local Government Climate Action Program funding	Projects need to be linked to one or more of the objectives outlined in - CleanBC Roadmap to 2030 or - Climate Preparedness and Adaptation Strategy.	https://www2.gov.bc.ca/gov/content/environment/climate-change/local-governments/local-government-climate-action-program/local-government-climate-action-program-funding
Ministry of Tourism and Immigration	Destination Development Fund	completed program but ministry may develop similar ones	https://www2.gov.bc.ca/gov/content/tourism-immigration/tourism-resources/tourism-funding-programs/destination-development-fund#eligibility
REGIONAL/ OTHER			

Organization	Grant Name	Description	Website/Contact info
Vision Zero BC	BC Vision Zero in Road Safety Grant Program	Aspects of projects that involve design and installation of low-cost road safety infrastructure may qualify (see Stream 1)	https://www.visionzerobc.ca/
BC Hydro	Grants for Community Groups	Three focus areas: “Developing a clean and sustainable future “focus area may be applicable	https://www.bchydro.com/community/community-giving/grants.html
UBCM	Community Works fund	UBCM Community Works Fund is one of three funding streams of the Renewed Gas Tax Agreement. The fund provides predictable, long-term, and stable funding to local governments for investment in infrastructure projects, including active transportation, parks, trails, bicycle	Community Works Fund Union of BC Municipalities
ICBC	Community Grants Program	Projects aimed at road safety; improving safety for children, pedestrians, cyclists	Community Grants Program
SPARC BC	Local Community Accessibility Grant Program	Program supports removing barriers for people with disabilities; local government Accessibility Committee eligible	https://www.sparc.bc.ca/partnerships/local-community-accessibility-grant-program/
Columbia Basin Trust	ReDi grants	"Support for projects that benefit the broad community and public good through community-based decision-making" (CBT website)	https://ourtrust.org/grants-and-programs-directory/redi-grants-2/

Organization	Grant Name	Description	Website/Contact info
Columbia Basin Trust	Community Development Program Grant	"The Community Development Program supports the efforts of Basin residents to address community challenges and opportunities in the Columbia Basin Trust region". (CBT website)	https://ourtrust.org/grants-and-programs-directory/community-development-program/
Village of Nakusp	NACFOR Legacy Fund	Funded by dividends from the Nakusp community forest	
Land Developers	In kind works	Trail infrastructure may be part of developer commitments.	

Trail Maintenance Planning

Future maintenance scheduling and obligations are key considerations when planning trail infrastructure. Once trails are improved, increased use may drive increased maintenance needs, which will be a continuing challenge going forward. However, trails built to higher standards should be more durable, should last longer and should require more predictable maintenance actions over time. Some reasons for this are that standard proven plans and durable materials are used for construction, and that drainage considerations and maintenance needs are designed into the infrastructure.

In Nakusp, normal seasonal and winter freeze/thaw conditions create a maintenance challenge for roads and trails. Proximity of pathways to existing roads and snow plowing and snow storage are other challenges. In some areas where trails closely parallel roads, snow can get plowed onto the trail as sometimes there is no other reasonable option for temporary snow storage. Without the trail being cleared shortly afterwards, this can lead to frozen, impassable conditions that are not easily or quickly remedied. Choices need to be made if trail access is needed year round, and where it makes sense to have seasonal trail closures.

With climate change effects, including an increase in frequency and impact of extreme weather events, it is wise to plan that repair and maintenance effort and cost will increase in the future. This can be partly mitigated by constructing good quality infrastructure.

Torrential rain events may create surface erosion conditions that can quickly degrade trails. Regular maintenance practices that help trails shed and manage water and drainage will be critical to longevity and functionality of trails. Compounds that help to bind surface layers on aggregate trails may prove to be of benefit in reducing maintenance efforts. Extreme weather events may cause more windthrow of trees near trails. Hot weather and drought conditions may increase dust. All of these extreme types of weather events will have direct impacts on trails, in addition to the normal annual wear and tear from trail use, which will likely also increase over time.

After implementation comes maintenance of developed routes. Some typical maintenance tasks and schedule are shown in the following table:

Table 12 - General Maintenance Tasks and Schedule

Connect Nakusp - AT network - General Maintenance Tasks and Schedule			
Task	Detail	Timing	Responsibility
If using community groups for some maintenance obligations, make Memos of Agreement (MoA) defining responsibilities and tasks by route.	If applicable to route - Annual review and amendments based on discussions / negotiations with maintaining group. Include collecting and reporting user numbers.	Annually - Spring or Fall	Local government (Village and/or RDCK)
Inspection and Documentation	Semi annual inspection of trail infrastructure, including boardwalks and bridges	Bi-Annually - Spring and Fall	Village or User/Maintainer group
Vegetation Management	Clear path, path edges and surround of vegetation	As needed - weekly to annually	Village or User/Maintainer group
Water Management	maintain ditches, sloughs, culverts, dips and swales	Annually or as needed Spring or fall	Village or User/Maintainer group
Surface management	Repair surfacing, add materials	Annually or as needed Spring or fall	Village or User/Maintainer group
Surface repair	Crack repair on hard surface paths, aggregate surface material repairs	Spring and Fall - as needed	Village or User/Maintainer group
Grading and compaction	Grade and compact aggregate trails	Annually - spring preferable	Village or User/Maintainer group
Snow clearing	Clear snow according to defined priorities	Winter	Village or User/Maintainer group
Sweeping	Sweeping of hard surface pathways, remove organic matter from aggregate surfaces	Bi-Annually - Spring and Fall	Village or User/Maintainer group
User numbers	Collect, compile useage numbers, from kiosk, visitor logs or other means	Annually	Village or User/Maintainer group

Trash collection	If trash receptacles part of amenities	Bi-weekly during usage season	Village or User/Maintainer group
Signage, trail markings, painting	Inspection and maintenance	Annually or as needed	Village or User/Maintainer group
Bridge and boardwalk repairs	Repairs to railings, surface materials, painting, staining as needed	Annually or as needed	Village or User/Maintainer group

Action Plan / Next steps / Timelines

An Action Plan with timelines, roles and responsibilities will help to propel Connect Nakusp implementation forward.

Table 13 - Action Plan

#	Proposed Action	Timing	Partners / Parties involved
	Review draft Connect Nakusp report and mapping	May -July 2025	Village of Nakusp staff
	Present draft plan to local government	May-July 2025	Plan Contractor / Staff/ Council / RDCK rep.
	Share / present to other agencies including MOTT, local groups, funders, and potential funders	May-Aug 2025	MOTT, local groups, funders
	Finalize report and mapping and report	June-Aug 2025	Contractor
	Release public georeferenced trail mapping	Aug 2025	Contractor/Village
	Seek funding to hire / contract trail implementation coordinator	Starting June 2025	Local government staff and/or contractor
	Review implementation priorities	Starting June 2025	Local government staff and/or contractor, other interested trail groups.
	Seek partnerships for funding and implementation including indigenous groups and private landowners / developers.	Starting June 2025	Local government staff and/or contractor, FN groups, landowners/ developers
	Elevate importance of project for Nakusp to provincial and federal political representatives	Starting June 2025	Local government staff and/or contractor
	Apply for implementation funding for immediate prioritized projects	Sept 2025	Led by village staff and/or contractor
	Finalize designs, engineering as needed for immediate prioritized projects	Start Aug 2025	Led by village staff and/or contractor
	Apply and receive necessary permits from govt agencies	Start Aug 2025 and ongoing	Led by village staff and/or contractor
	Tender and initiate immediate implementation projects	2026-2027	Local government staff and/or contractor
	Seek and apply for funding opportunities for future prioritized segments and routes	2026 and ongoing	Local government staff and/or contractor
	Seek / solidify partnerships / MoU's with local groups for stewardship of some trail routes	2026-2027 and as needed	Led by village staff and/or contractor
	Mandate to undertake works (trail rehabilitation, trail construction, trail maintenance) with local workers, when possible to build local capacity.	As part of implementation phases	Led by village staff and/or contractor
	Negotiate with private land owners as needed to secure permissions, leases, or land purchase arrangements for critical access points.	As needed	Village, RDCK, Province

#	Proposed Action	Timing	Partners / Parties involved
	Develop trail monitoring plan to track present and future usage of trails, and to monitor and report on user satisfaction.	Start 2026 and ongoing	Led by village staff and/or contractor

Closing statements

Building out the Connect Nakusp AT network plan will make a more liveable and vibrant community in Nakusp and area.

Using Universal Design principles will allow people of all ages and abilities to actively participate and enjoy as much of the trail network as possible.

The modular structure of the plan will allow segments and routes to advance from concept to project funding and implementation quickly. The network can be built in an efficient and logical fashion according to the current priorities and funding availability.

Trails built to standards will be more reliable infrastructure, will last longer, and will be easier to budget for future maintenance. The trail network will help the environment by reducing vehicle use and the resulting GHG production.

Creation and use of a quality trail infrastructure will intersect in positive ways with the lifestyles of residents and visitors of Nakusp for many years to come. It will both attract visitors and greatly enhance the lifestyles of residents of Nakusp.

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Appendices

A – Connect Nakusp Overview Maps

- Network Detail Map

- Village Core Network Map

B – Trail Routes and Segments - technical details on Multiplot drawings

- Typical content:

 - Plan Drawing

 - Profile Drawing

 - Cross Sections if available or refer to standard

 - Typical Drawings

 - Photos - existing and proposed renderings

C - Previous trail plan consultation and recommendations:

- Distillation of Previous Nakusp and Area Community Plans

D – Connect Nakusp survey and results

E – Network Data Table – Route Description, Standards, Budget

F – Typical Drawings collection